Foreword

At the beginning of this new millennium, regional economies are confronting momentous changes. The globalisation of trade and economic activity is increasingly testing their ability to adapt and maintain their competitive edge. There is a tendency for income and performance gaps to widen between and within regions, and the cost of maintaining social cohesion is increasing. Rapid technological change and greater use of knowledge are offering new opportunities for local and regional development but demand further investment from enterprises, reorganisation of labour and production, more advanced skills and environmental improvements.

Amid this change and turbulence, regions continue to follow very different paths. Some regions are doing well and are driving growth. Others are less successful at capturing trade and additional economic activities. Many territories with poor links to the sources of prosperity, afflicted by migration and ageing, and lagging behind with respect to infrastructure and private investment, are finding it difficult to keep up with the general trend.

At the same time, central governments are no longer the sole provider of territorial policy. The vertical distribution of power between the different tiers of government needs to be reassessed, as well as the decentralisation of fiscal resources in order to better respond to the expectations of citizens and improve policy efficiency. Public authorities need to weigh up current challenges, evaluate the strategies pursued in recent years, and define new options.

Responding to a need to study and spread innovative territorial development strategies and governance in a more systematic way, in 1999 the OECD created the Territorial Development Policy Committee (TDPC) as a unique forum for international exchange and debate. The TDPC has developed a number of activities, including a series of national Territorial Reviews. These studies follow a standard methodology and a common conceptual framework, allowing countries to share their experiences and disseminate information on good practices.

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Acronyms and abbreviations

ABDI	Brazilian Agency for Industrial Development (*Agencia Brasileira de Desenvolvimento Indústrial*)
ABM	Brazilian Association of Municipalities (*Associação Brasileira de Municipios*)
ACOA	Atlantic Canada Opportunities Agency
AIF	Atlantic Innovation Fund
ANATEL	National Telecommunications Agency
ANEEL	National Electricity Regulatory Agency
ANOREG	Notary Association (*Associação dos Notários e Registradores do Brasil*)
APL	Local production system (*arranjo produtivo local*)
BASA	Bank of Amazonia (*Banco da Amazônia S.A.*)
BCIS	Brazil, China, India and South Africa
BNB	Bank of the Northeast (*Banco do Nordeste do Brasil*)
BNDES	National Bank for Economic and Social Development (*Banco Nacional do Desenvolvimento Económica e Social*)
BRL	Brazilian real
CAF	Council for the Australian Federation
CAF	Federal Co-ordination Committee (*Comitê de Articulação Federativa*)
CAPES	Brazilian Federal Agency for the Support and Evaluation of Graduate Education (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*)
CEDEPLAR	Centre for Regional Development and Planning (*Centro de Desenvolvimento e Planejamento Regional*) (Minas Gerais)
CEPAL	Economic Commission for Latin America and the Caribbean (*Comisión Económica para América y el Caribe*)
CGEE	Centre for Management of Strategic Studies (*Centro de Gestão e Estudos Estratégicos*)
CGPAC	Committee for the Management of PAC (*Comité de Gestão do Plano de Aceleração do Crescimento*)
CIB	Bipartite multi-level commission (*Comissões intergestores bipartite*)
CIT	Tripartite multi-level commission (*Comissão intergestores tripartite*)
CNDI	National Council for Industrial Development (*Conselho Nacional do Desenvolvimento Indústrial*)
CONDEL	Deliberative Council of the SUDENE (*Conselho Deliberativo da SUDENE*)
CNI	National Confederation of Industry (*Confederação Nacional da Indústria*)

CNM	National Confederation of Municipalities (*Confederação Nacional de Municipios*)
COAG	Council of Australian Governments
CONASEMS	National Council of Municipal Secretaries of Health (*Congresso Nacional de Secretárias Municipais de Saúde*)
CONASS	National Council of State Secretaries of Health (*Conselho Nacional de Secretários de Saúde*)
COREDES	Regional development councils (*Conselhos regionais de desenvolvimento*)
CORETT	Mexican Commission for the Regularisation of Land Tenure (*Comisión para la Regularización de la Tenencia de la Tierra*)
COSEMS	Council of Municipal Secretaries of Health (*Conselho de Secretários Municipais de Saúde*)
CRC	COAG Reform Council
CSG	European Union Community Strategic Guidelines
DBDG	Brazilian Directory of Geospatial Data (*Diretório Brasileiro de Dados Geoespaciais*)
DNIT	National Department of Transport Infrastructure (*Departamento Nacional de Infraestrutura de Transportes*)
EDA	Economic Development Administration (United States)
EMBRAPA	Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária*)
ENEM	High-school examination (*Examen Nacional do Ensino Médio*)
EFRD	European Fund for Regional Development (original name)
ERDF	European Regional Development Fund (current name)
ESF	European Social Fund
ETENE	Technical Office of Economic Studies of the Northeast (*Escritório Técnico de Estudos Econômicos do Nordeste*)
FAPEAM	Foundation for R&D support of Amazonia
FAPEMIG	Foundation for R&D support of Minas Gerais
FAPERJ	Foundation for R&D support of Rio de Janeiro
FAPESC	Foundation for R&D support of Santa Catarina
FAPESP	Foundation for R&D support of São Paulo
FAPESPA	Foundation for R&D support of Pará
FAT	Workers' Assistance Fund (*Fundo de Amparo ao Trabalhador*)
FCO	Centre-West Constitutional Fund (*Fundo Constitucional de Financiamento do Centro-Oeste*)
FDI	Foreign direct investment
FIOCRUZ	Oswaldo Cruz Foundation (*Fundação Oswaldo Cruz*)
FNDF	National Fund for Forestry Development (*Fundo Nacional de Desenvolvimento Florestal*)
FNDR	National Fund for Regional Development (*Fundo Nacional de Desenvolvimento Regional*)

FNE	Northeast Constitutional Fund (*Fondo Constitucional de Financiamento do Nord-Este*)
FNO	North Constitutional Fund (*Fundo Constitucional de Financiamento do Norte*)
FNP	National Association of Prefects (*Frente Nacional dos Prefeitos*)
FPE	State Participation Fund (*Fundo de Participação Estadual*)
FPM	Municipality Participation Fund
FUNDEB	Fund for Maintenance and Development of Basic Education (*Fundo de Manutenção e Desenvolvimento da Educação Básica*)
FUNDEF	Fund for Maintenance and Development of Education (*Fundo para Manutenção e Desenvolvimento do Ensino Fundamental*)
GDP	Gross domestic product
GERD	Gross domestic expenditure on research and development
GPRA	US Government Performance and Results Act
GST	Goods and Services Tax
GTDN	Working Group for the Development of the Northeast (*Grupo de Trabalho para o Desenvolvimento do Nordeste*)
GTPAPL	Permanent Working Group for APLs (*Grupo de Trabalho Permanente –* APLs)
IBAMA	Brazilian Institute for Environment and Renewable Natural Resources (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis*)
IBGE	Brazilian Geographical and Statistical Institute (*Instituto Brasileiro de Geografia e Estatística*)
ICMS	State value-added tax on goods and services (*Impostos sobre Comercialização de Mercadorias e Serviços*)
ICS	Social Control Council (*Instância de Controle Social*)
ICT	Information and communications technology
IDEB	Basic Education Development Index (*Índice de Desenvolvimento da Educação Básica*)
IFM	Average annual inflation rate
IGDE	State Decentralised Management Index (*Indice de Gestão Descentralizada Estadual*)
IICA	Inter-American Institute for Co-operation in Agriculture
ILPES-CEPAL	Institute for Economic and Social Planning of the United Nations Economic Commission for Latin America and the Caribbean
INCRA	Institute for Colonisation and Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária*)
INDA	National Spatial Data Infrastructure of Brazil (*Infraestrutura Nacional de Dados Espaciais*)
INEP	National Institute of Research on Education (*Instituto Nacional de Estudos e Pesquisas Educacionais*)
IOC	International Olympic Committee

IPEA	Institute for Applied Economic Research (*Instituto de Pesquisa Econômica Aplicada*)
IPVA	Vehicle tax (*Imposto Propriedade sobre Veiculos Automotores*)
IRS	Increasing returns to scale
LGT	Regional spending indicators (*Localizadores de Gastos Territoriais*)
MCT	Ministry of Science and Technology (*Ministério da Ciência e Tecnologia*)
MCT-FINEP	Ministry of Science and Technology/Research and Project Financing (*Ministério da Ciência e Tecnologia/Financiadora de Estudos e Projetos*)
MDA	Ministry of Agrarian Development (*Ministério do Desinvolvimento Agrario*)
MDGs	United Nations Millennium Development Goals
MDS	Ministry of Social Development and the Fight Against Hunger (*Ministério do Desinvolvimento Social e Combato à Fome*)
MEC	Ministry of Education (*Ministério da Educação*)
MF	Ministry of Finance (*Ministério da Fazenda*)
MIDIC	Ministry of Industrial Development and Trade (*Ministério do Desinvolvimento, Indústria e Comércio Exterior*)
MIN	Ministry of National Integration (*Ministério da Integração Nacional*)
MME	Ministry of Mining and Energy (*Ministério de Minas e Energia*)
MPOG	Ministry of Planning, Budget and Management (*Ministério do Planejamento, Orçamento e Gestão*)
NGO	Non-governmental organisation
NIT	Nuclei for Technological Innovation (*Núcleos de Inovação Tecnológica*)
NSRF	European Union National Strategic Reference Framework
OCA	Olympic Co-ordinating Authority (Sydney Olympics, 2000)
OEMAs	State environmental agencies (*Órgãos estaduais de meio ambiente*)
OGU	Federal budget (*Orçamento Geral da União*)
PAC	Growth Acceleration Programme (*Programa de Aceleração de Crescimento*)
PAIF	Integrated Support to Families Programme (*Programa Atenção Integral a Família*)
PAPPE	Research Support in Enterprises Programme (*Programa de Apoio à Pesquisa em Empresas*)
PBF	Programa Bolsa Família
PCT	Patent Co-operation Treaty
PDE	Plan for Education Development (*Plano de Desenvolvimento da Educação*)
PDP	National Production Development Policy (*Política de Desenvolvimento Produtivo*)
PDR	Regional Dynamisation Policy (*Política de Dinamização Regional*)

PETI	Fight Against Child Labour (*Programa de Erradicação do Trabalho Infantil*)
PII	Minas Gerais Programme for Incentives to Firms (*Programa de Incentivo à Inovação*)
PISA	Programme for International Student Assessment
PITCE	National Strategy for Production Development, Trade and Innovation (*Política Industrial, Tecnológica e de Comércio Exterior*)
PNAD	Brazilian Census (*Pesquisa Nacional por Amostra de Domicílios*)
PNDR	National Policy for Regional Development (*Política Nacional de Desenvolvimento Regional*)
PPI	Integrated and Agreed Plans (*Programação Pactuada e Integrada*)
PPP	Purchasing power parity
PROGER	Employment and Income Generation Programme (*Programas Geração de Emprego e Renda*)
PRONAF	National Programme for Strengthening Family Farming (*Programa Nacional de Fortalecimiento da Agricultura Familiar*)
R&D	Research and development
RDA	Regional development agency
RENAPI	National Network of Industrial Policy Agents
RIDE	Integrated Development Region (*Região Integrada de Desinvolvimento*)
RMI	Minas Gerais Innovation Network (*Rede Mineira de Inovação*)
RMPI	Minas Gerais Intellectual Property Network (*Rede Mineira de Propiedad Intelectual*)
SAE	Secretary for Strategic Affairs (*Secretaria de Assuntos Estratégicos*)
SAF	Sub-Secretariat of Federal Issues (*Subchefia de Assuntos Federativos*)
SASF	System of Federal Advising (*Sistema da Assesoramento Federativo*)
SDLR	Secretary for Local and Regional Development (*Secretaria Desenvolvimento Local e Regional*)
SEBRAE	Support Service for Micro and Small Enterprises (*Agência de Apoio ao Empreendedor e Pequeno Empresário*)
SENAI	National Service for Industrial Training (*Serviço Nacional de Aprendizagem Indústria*)
SENAR	National Service for Rural Learning
SENARC	National Secretariat of Citizen Revenues (*Secretaria Nacional de Renda de Cidadania*)
SESI	Social Services for Industry (*Serviço Social da Indústria*)
SIAB	Primary Care Information System (*Sistema de Informação da Atenção Básica*)
SIAFI	Federal Financial Administration System (*Sistema de Administração Financeira*)
SIBEC	Benefits Management System (*Sistema de Benefícios ao Cidadão*)
SIBRATEC	Brazilian System for Technology (*Sistema Brasileira do Tecnologia*)

SIMI	Innovation System of Minas Gerais State (*Sistema Mineiro de Inovação*)
SMEs	Small and medium-size businesses
SNPA	National System of Agricultural Research
SPR	Special Secretariat for Regional Policies (*Secretaria Especial de Políticas Regionais*)
SPU	Federal Assets Office (*Secretaria do Patrimônio da União*)
SRI	Secretariat of Institutional Relations (*Secretaria de Relações Institucionaes*)
SUDAM	Superintendency for the Development of Amazonia (*Superintendência de Desenvolvimento da Amazônia*)
SUDECO	Superintendency for the Development of the Centre-West (*Superintendência de Desenvolvimento do Centro-Oeste*)
SUDENE	Superintendency for the Development of the Northeast (*Superintendência de Desenvolvimento do Nordeste*)
SUFRAMA	Superintendency of the Free Zone of Manaus (*Superintendência da Zona Franca de Manaus*)
SUS	Unified Health System (*Sistema Único de Saúde*)
TCU	Federal Audit Authority (*Tribunal de Contas da União*)
TL2	Territorial level 2
TL3	Territorial level 3
USD	United States dollar
VAT	Value added tax

Assessment and recommendations

Key facts and policy issues

Key facts

- Brazil is a fast-growing economy and is currently experiencing an unprecedented catching-up process. It therefore faces a window of opportunity to implement its twin goals of sustained economic growth coupled with a reduction of social and regional disparities.
- Population and economic activity are highly territorially concentrated by OECD standards, though concentration has been declining since the 1980s.
- Territorial disparities have decreased since 1995 but are still high compared to OECD countries. This contrasts with most catching-up economies where disparities tend to rise during the catching-up process.
- Most unsatisfied needs are concentrated in lagging regions. There has been a process of convergence over the last three decades, but this catching up has been driven mainly by resource-intensive regions.

Key policy issues

- **Overcoming the multi-dimensional fragmentation of policies.** The government carries out a number of interesting programmes, especially in poverty-reduction (e.g. the Bolsa Família), but these are fragmented and lack a co-ordinated whole of government and regionally designed approach.
- **Dealing with sub-national governments' financial and political autonomy to achieve policy co-ordination.** The 1988 Constitution gave municipalities the status of federal entities, at the same level as the states. This special status implies that neither the federal government nor the states can compel or prohibit actions by municipalities. In addition, municipalities enjoy a large share of tax revenues, and have important spending responsibilities in key areas such as education and health.
- **Moving from a perspective of addressing needs to a strategy of identifying local assets for endogenous growth.** Regional development policy is still generally perceived as a redistributive, compensatory policy, rather than as a policy which could generate opportunities for national growth by tapping into local growth potential.
- **Building institutional and administrative capacity at sub-national level and increasing civil society participation.** Municipalities often lack the capacity to carry out their role effectively for what concerns public service delivery and public investment. In addition, they do not know how to access information about

existing programmes, and do not have the capacity to understand how they could benefit from them, or the capacity to apply for these programmes or signal themselves to the federal authorities to receive help. This creates an important bottleneck for regional development.

- **Improving monitoring and evaluation.** Brazil is fairly advanced in indicators revealing needs and resources, as well as in the use of process indicators, which indicate whether the agreed procedures are being implemented. By contrast, outcome indicators are not yet well developed, and could help better target and prioritise policies.

Key recommendations

From poverty reduction to inclusive growth

Poverty reduction cannot be sustainable without creating local jobs and growth. Social policies should therefore be complemented with policies aiming at creating local jobs and endogenous growth.

Inequalities have decreased within all but one macro-region (Centre-West) and in a majority of states. Federal policies have placed both economic competitiveness and social inclusion at the core of national strategy. Brazil is currently implementing a double agenda, with actions to support internal demand and mass consumption, and actions targeting exports and international competitiveness. These two sets of policies are carried out in parallel: on the one hand, supporting the transformation of the country's production system, to make it a leader in the global scientific and technological arena; and on the other hand, prioritising universal access to, and the quality of, services such as education, health and housing, together with higher social inclusion and better employment opportunities. Such redistributive social policies, however, are not sustainable without: *i*) ensuring access to public services across the territory; and *ii*) improving competitiveness in all the regions to generate local sources of employment, and growth. Social inclusion and balanced growth that benefits all regions are therefore two inseparable objectives.

Needs are concentrated in specific territories. Social policies therefore have regional impacts, which need to be recognised and addressed in a consistent way.

Some policies have an explicit territorial target, such as regional development policies, rural and urban development policies, etc. Others target all the citizens of a given country or particular social categories, but may have unintended territorial impacts. For example, if poor people are concentrated in specific regions, a policy targeting the poor will necessarily have a territorial impact on the places where they are most concentrated. In the same way, a policy targeting territories with high concentrations of poor people (such as lagging regions) and aiming to bridge the various gaps that prevent these regions from growing (infrastructure gap, trained workforce, etc.) will have an impact on the social outcome and help to reduce poverty.

In Brazil, social needs such as poverty, low access to basic public services such as schools and hospitals, and infrastructure gaps (such as roads, telecommunication, water, energy, sanitation) tend to be concentrated in given territories. On the other hand, territories which confront one of these gaps tend to confront others too. Given the size and heterogeneity of Brazil, here more than anywhere else, one-size-fits-all policies cannot generate regionally balanced growth. This requires a territorially differentiated approach, to exploit complementarities and reduce trade-offs at the appropriate level. Therefore, place-based policies such as regional development policy, which take into account local needs and assets, are a possible tool to reach this double objective. Regional development policy aims at addressing all the needs present in territories and co-ordinating the actions of the different sectoral ministries and other actors in order to achieve growth in all territories. This can help address both regional disparities and social disparities.

Brazil could develop a place-based approach co-ordinating sectoral policies in territories, to achieve higher complementarities between social and other sectoral policies.

In Brazil, regional development policy is fragmented into a variety of approaches, carried out by different ministries. Recent work by the OECD has shown that better results could be achieved by not segregating different sectoral policies but rather exploiting complementarities between them. For example, a people-based policy such as Bolsa Família could have maximum lasting impact if it were combined with labour-market policies or microcredit programmes to help generate employment opportunities for the newly educated generation. The policy could also be facilitated if living conditions were improved by the construction of sanitation and water infrastructure, or by increasing the network of paved roads and the number of households connected to electricity. Improvements in public infrastructure, for example in transport connectivity (roads, railways, ports, airports), electricity and water, could similarly help to attract private firms and create a critical mass for the region to move forward. All these policies are complementary: the impact of one is greater when the others are present. But the relevant policy mix and needs differ from one region to the other, depending on their specific problems and assets.

Regional development policy could be a useful tool for co-ordinating these different sectoral policies in the territory, to make the most of potential synergies and achieve greater growth and social inclusion in all regions. It could also help reduce disparities between different regions. Such space-based policies require space-based planning, therefore, ensuring coherence between regional development plans between and within the states.

The SUDENE and other regional development agencies could be used for collecting relevant information and co-ordinating federal investment in regions

Agencies are often used in OECD countries as the key intermediary bodies between the central government and the regions. In Brazil, the SUDENE is the Superintendency for the Development of the Northeast, a deconcentrated federal institution. It was first created in 1957, then abolished in 2001 and finally re-established in 2007. The SUDENE could become a “new generation” institution for multi-dimensional co-ordination: *i*) vertical co-ordination between the federal government, the states, the municipalities, the private sector and civil society (through the Deliberative Council in particular); *ii*) horizontal co-ordination at federal level to co-ordinate sectoral policies on a regional level; *iii*) and finally, horizontal co-ordination at sub-national level, by fostering dialogue and partnerships between states (role of the Regional Committee for the Co-ordination of Federal Bodies and Entities). In practice, the SUDENE is still having difficulties in defining its role, as the federal government has re-established it, but has not given it the institutional tools to fulfil its mission properly.

A first step towards taking on this co-ordination role could be to position itself as an information collection body: accurate metrics for monitoring social and economic development trends and governmental action in the territories is a prerequisite for carrying out policies where they are most needed. They are also imperative for monitoring the delivery of policies and assessing their impact. The information gap in Brazil is multi-dimensional, and the SUDENE could help to reduce it. Quite apart from the classical asymmetries of information (where local governments tend to have more information than the federal government about local needs and preferences, but little information about federal preferences and intentions), Brazil faces several other information challenges, in particular:

- limited information at the central government level about where federal sectoral budgets are spent (location of **spending**);
- incomplete information at the central level about where the needs lie (location of **needs**);
- insufficient capacity on the part of some sub-national governments to evaluate which programmes could benefit municipalities; what the prerequisites for them are; whether they are eligible for them; how to apply to the particular programme; and how to present a project with a structured budget;
- limited public awareness of programmes implemented by the federal and sub-national governments in their region and of the benefits citizens can claim (thus calling for citizen participation); and
- under developed evaluation of the outcomes of policies carried out, which prevents building and sharing knowledge and experiences.

In principle, expenditure by sectoral ministries on specific actions must be broken down by location in the budget procedure, but ministries often prefer not to declare in which region they spend their budgets, since it would open them up to criticism if they do not keep their promise to prioritise given states. The Ministry of Planning, Budget and Management attempts to collect this information, but it has no tools to create incentives or to force ministries to make such declarations (no sanctions if they do not comply and no rewards if they do). Brazil is fairly advanced in indicators revealing needs and resources, as well as in the use of process indicators, which indicates whether the agreed procedures are being implemented. By contrast, outcome indicators, which quantify the results a given policy is expected to achieve, are not yet well developed. The SUDENE could use its existing bodies and network to collect and disseminate this type of information for the Northeast region.

The OECD supports the move to complement the Bolsa Família Programme with related programmes for promoting social and economic inclusiveness of the extreme poor.

The Bolsa Família Programme has been the flagship of the social development agenda of Brazil since 2003. The biggest conditional cash transfer programme in the world, it targets around 11 million families at a cost of approximately 0.4% of Brazil's GDP. It has been recently complemented by a new programme, Brazil Without Poverty (*Brasil sem Miséria*), launched in June 2011. The latter aims to promote social and productive inclusion of the extreme poor, i.e. the beneficiaries of Bolsa Família. The Bolsa Família Programme is a direct income transfer with health and education requirements that aims to break the cycle of poverty. The beneficiaries receive a direct cash transfer which depends on the monthly income of the family, the number of children under 15, and the number of children aged 16 and 17 enrolled in school. The beneficiaries must comply with health and education requirements to keep receiving programme benefits. A census of all low-income families was carried out and compiled in a Single Register, which gathers data on about 20 million families and makes it possible to create statistics of poverty distribution by municipality.

The poor are highly concentrated in the Northeast, which receives more than 50% of the total income transfer under the Bolsa Família programme. The programme had an important impact in the region, mobilising resources and creating incentives for poor municipalities to increase their capacities to deliver services to their citizens. The Bolsa Família Programme can act as a driver for regional development if synergies with other policies are properly exploited. In addition to providing a minimum income to citizens, the Bolsa Família Programme has several positive externalities:

1. The programme acts as a "platform of access to constitutional rights". Access to education and health are constitutional rights in Brazil, but many places lack these public services. By creating a strong demand for them, the Bolsa Família Programme increases pressure on municipalities and sectoral ministries to provide such services across the territory.
2. The Bolsa Família Programme acts as an "entry door" for public policies for marginalised citizens. The Single Registry makes it possible to identify and target citizens previously "invisible" to public policy. Families that qualify and are registered with the programme can apply to other social policy programmes (such as microcredit programmes, education and sanitation policies, housing policies, etc.).
3. The Single Registry has been a fruitful source of information externalities. It makes it possible to identify the municipalities with the greatest concentration of poor people, and the gaps in public service delivery. Several programmes have been attached to the Bolsa Família programme. For example, the Ministry of Employment implemented a series of policies targeting beneficiaries of Bolsa Família to create employment opportunities in certain places.
4. The programme reveals potential gaps in institutional capacities at the municipal level. Municipalities play a crucial role in the implementation of the Bolsa Família programme, in particular in the management of the programme and the Single Registry. Municipalities receive a transfer from the federal government to manage and update the Single Registry. These transfers depend on a performance

indicator that takes into account the accuracy of the information (regular updating) and the percentage of families registered. Municipalities with low scores on this indicator benefit from special attention from the Ministry of Social Development to increase their administrative capacity.

From fragmented public investment to national inclusive growth strategy

A larger share of public investment should aim at tapping future growth opportunities rather than only addressing existing bottlenecks. Increasing the share of regional development resources allocated to public investment is a necessary but not sufficient condition.

The Growth Acceleration Plan (or PAC) launched in January 2007 aims at addressing existing infrastructure bottlenecks for growth. It provides considerable resources for public investment (USD 306 billion for the first phase, 2007-10, and USD 582 billion for the second phase, 2011-14), but more than 65% of the resources finance projects in the two richest macro-regions (Southeast and South). Investments by federal public enterprises and for lending by the National Development Bank (or BNDES) follow the same pattern.

While the competitiveness of the richest places of the country deserves a specific and continuous attention from national authorities, this approach should be balanced with growth strategy in other places. A larger share of public investment should thus be allocated to address these issues and develop infrastructure in lagging regions to tap possibilities for endogenous growth.

There are three major federal sources for regional development funding. First, the three Constitutional Funds (for the development of the Centre-West, the Northeast and the North) introduced by the federal Constitution of 1988 are the largest funds and the main instrument of the National Policy for Regional Development (PNDR). The resources come from the earmarking of a share of several taxes, which makes them pro-cyclical. Secondly, fiscal incentives to attract private investment are applied in priority macro-regions. Finally, two regional development funds (one for the Northeast and one for the Amazon) were created in 2001 to finance infrastructure to attract private investment in lagging regions.

Most of these regional development funds are used to remediate the difficult access of private enterprises to financing: constitutional funds represent 72% of federal regional development resources and are distributed as subsidised loans to rural producers or individual firms and co-operatives operating in the agricultural, mining, agribusiness, tourism, infrastructure, trade and services sectors. Fiscal incentives, which represent 27% of regional development funds, also target private firms. Only the two regional development funds, which represent 1% of resources for regional development, aim to finance public investment. Over time, it would be better to use regional funds for their specific purposes of investing in soft and physical investment with regional development targets.

Contemplate new instruments to make sure that public investment reaches lagging regions.

The creation of the Ministry of National Integration in 1999 increased the effectiveness of the constitutional funds, but resources still face difficulties in reaching lagging regions. Before the creation of the Ministry of National Integration, no specific ministry was responsible for the management of the constitutional funds, which faced low execution and were subject to high default rates. In 2000-01, several laws were passed reforming the management of constitutional funds, giving greater prerogatives to the Ministry of National Integration. The Ministry of National Integration reformed the selection and priority criteria (taking into account the typology developed under the National Policy for Regional Development), the allocation process (including new stakeholders in the discussions) and the operationalisation of the funds (reducing interest rates, passing from floating to fixed rates, giving preferential treatment to small entrepreneurs, and granting a "bonus for compliance" to borrowers who delivered their payments on time). As a result, the execution rate of the constitutional funds increased, the rate of default decreased, and the allocation of the funds was diversified, while economic growth increased the amounts available (as the constitutional funds are linked to tax collections).

Designing strategic planning at the regional level and attracting public investment and financial resources in lagging regions remains a challenge. This is probably due to the fact that these resources are often allocated on the basis of projects presented by the states and municipalities. The regions that are most lagging are least able to tap these programmes, and the individuals who are the worst off often do not know of their existence. In addition, they do not have the capacity to design and develop projects to propose.

Furthermore, providing public services and infrastructure in lagging and remote regions is more complex, particularly in view of capacity gaps at local level, and it is often more costly than providing the same public services or building the same infrastructure in more developed and better connected areas of the country. Yet the performance indicators used to monitor and evaluate the actions of sectoral ministries do not take these factors into account. Sectoral ministries therefore have little incentive to provide services and invest in lagging regions, as it's easier and cheaper to do so in more developed ones, and the additional effort when investing in lagging area is not reflected in performance indicators.

The current model based on conventions and parliamentary amendments is insufficient for the size of the challenge of regional development policy in Brazil, and more resources (financial and human) should be allocated to it.

Enhancing public administration capacity for effective multi-level governance

Sustain and enlarge programmes for capacity building at the state and municipal level for addressing the main bottleneck of effective implementation of regional development policy.

Brazilian federalism attributes wide spending responsibilities to municipalities, but they often lack the capacity to carry out their role effectively. Insufficient capacity at municipal level is considered one of the important bottlenecks for the implementation of policies in lagging regions, for the insufficient level of public investment, and for the difficulties in generating endogenous growth in these regions. Some progress has been made in identifying the municipalities with the greatest capacity problems. This is a prerequisite for being able to target capacity-building programmes to the neediest municipalities. Programmes such as Bolsa Família or the School Census and Basic Education Development Index have helped identifying lagging municipalities.

Once the needy municipalities are identified, programmes have to be developed to help support capacity building among their officials. The rapid rotation of municipal staff requires maintaining such capacity-building efforts effectively. Several federal ministries have developed capacity-building programmes for municipal staff. For example, the Ministry of National Integration is actively involved in delivering training courses to sub-national entities, in partnership with major international organisations such as the Institute for Economic and Social Planning of the United Nations Economic Commission for Latin America and the Caribbean (ILPES-CEPAL), which was founded in 1962 to support training and capacity building in local administrations, and the Inter-American Institute for Co-operation in Agriculture (IICA). The training courses are organised on a core module, and a targeted training is given in a topic of interest of the locality hosting the training. The course includes applied planning techniques for developing proposals for applying for regional development funds. The Sub-secretariat for Federal Issues also carries out an agenda to support municipal management capacities (*Agenda nacional de apoio à gestão municipal*). In 2007, the Federal Co-ordination Committee (*Comitê de Articulação Federativa*, or CAF) created a working group for institutional strengthening and qualification for the management of municipalities. Twenty-two federal bodies participate in this group, together with representatives from the municipalities. The objective is to support municipal capacity building for improving public policy implementation.

The administrative map of Brazil at the intermediary level between municipalities and states needs to be simplified and unified.

Heterogeneity inside states and fragmentation of municipalities both plead for targeting public service delivery at an intermediate level between states and municipalities. Today, several federal and state ministries have created their own regional sub-divisions, pooling municipalities together according to different criteria (all seeking to take into account local identities, but very few actually involving states and municipalities in the design of the regions). This has led to an accumulation of different regional sub-divisions, reflected in a multiplicity of regional co-ordinating bodies. A single municipality may belong simultaneously to a state, a macro-region, a meso-region, a differentiated meso-region, a Territory of Citizenship, a health region, a regional development council and more, and thus has to provide representatives for territorial colleges, forums, councils, etc. The number of institutions operating in the same municipalities complicates communication and co-ordination, creates overlaps an inefficiencies, increases operating costs, reduces transparency and puts a further strain on human resources, in a country where many municipalities face difficulties in attracting qualified civil servants.

Implementing a space-based approach and increasing the coherence of federal (and state) policies in territories requires that all government bodies use a similar regional map. In addition, such a unified regional map would allow measuring the effectiveness of policies and evaluating their impact. Leadership for such a reform should come from very high level. For instance, *Casa Civil* or the Ministry of Planning, Budget and Management could propose such a map, which should be designed with the participation of the states and municipalities, and which could then be used by other sectoral ministries. Even if they used a unified regional map, each sectoral ministry would define different priority areas according to their policy needs and relevant criteria.

An institutional streamlining is required to improve the co-ordination among levels of government.

Brazil's government structure is highly complex. From a vertical perspective, it is composed of three levels of government, which enjoy wide financial and political autonomy. From a horizontal point of view, Brazil's institutional culture is one of "silo"-type ministries, where each sectoral ministry has its own territorial vision and does not necessarily co-ordinate with other ministries. Each of these ministries controls or is related to agencies and publicly owned enterprises, creating a highly complex arena with a great number of stakeholders. This complexity is aggravated by the fact that Brazil is traditionally governed by coalition governments, making co-ordination between ministries more difficult. The same observation is also true at state level. State governments are also constituted of sectoral ministries, state agencies and state-owned enterprises. This creates potential policy and objective gaps, where each ministry, state, agency or publicly owned enterprise pursues its own strategy and policy objectives on the territory. Different initiatives therefore run the risk of not being sufficiently co-ordinated and not exploiting all the potential complementarities and synergies. In such a context, effective instruments for co-ordination, both horizontal at the federal level, and vertical between levels of government, are crucial.

Brazil has a great number of co-ordinating institutions and bodies (permanent working groups, committees, councils, etc.), but their contribution to public policy outcomes is difficult to assess, and the effectiveness of those institutions varies across fields of policy and according to the co-ordinating institution. In many cases, these institutions lack the policy tools to make sure their agreements are effectively implemented by the different stakeholders involved. Besides, even in cases where agreements are signed between different levels of government (such as *convenios* or pacts), stakeholders often lack incentives for making actors commitment as credible as possible, instruments to sanction actors that do not respect their obligations or reward those who do. Experience shows that the higher the political level of the institution responsible for co-ordination, the more effective it is. In addition, a high level of the representatives of the different stakeholders also helps co-ordination, as they have more decision-making power and can truly speak for their constituencies and commit for them. But if a co-ordinating body depends on a specific institution to be convened, it runs the risk of not being able to meet, as was the case with the National Integration and Regional Development Policies board, which was created in 2004 and chaired by the Chief of Casa Civil, but which has not met since 2007.

An institutional streamlining is required. After identifying the co-ordination gaps that need to be addressed, existing co-ordinating bodies should be listed, their relevance assessed, and their impact and effective capacity to generate actual co-ordination evaluated. This streamlining should aim to keep only the co-ordinating bodies, which answer a real co-ordination need and count with effective instruments.

Stabilising regional development policy funding.

In most countries, the value-added tax is among the main revenue sources for central governments. In Brazil, the tax on goods and services (*Impostos sobre Circulação de Mercadorias e Prestação de Serviços*, or ICMS) – which is equivalent to a value-added tax – is allocated to the states, which are free to set its rate within certain limits. States have always used this tax as a tool to attract private investment by granting enterprises fiscal incentives. During the 1990s, states intensified the use of such fiscal incentives, leading to what has been known as a "tax war". One of the reasons this is particularly intense in Brazil is the insufficient explicit regional policies. Because they did not have regional development funds to finance public investment, states that wanted to attract private investment had no option but to rely on fiscal incentives.

Using fiscal incentives as a tool for regional development presents some drawbacks:

- Since all the states pursue the same strategy, their fiscal incentives no longer influence where firms choose to locate, while all states forgo the revenues from the ICMS.
- Indeed, if all the states grant similar fiscal incentives, the main drivers of investment-location decisions remain the traditional considerations regarding access to market, quality of infrastructure, availability of raw material, etc., which tend to be more attractive in richer, more developed states. Thus, the tax war has tended to increase regional disparities. To overcome their disadvantages in terms of general conditions, poorer states would have to offer even greater fiscal incentives than richer ones. But precisely because they are poorer and have more financial problems, they are unable to do so.
- Finally, in many cases, firms negotiate with several states to get the largest possible fiscal exemptions, and states sometimes grant fiscal incentives without properly evaluating their expected returns. The costs incurred in lost taxes may thus be higher than the benefits obtained from attracting a firm.

In conclusion, the main winners in the tax war are private firms that do not really base their decision on where to locate on the tax incentives but nevertheless benefit from reduced taxation.

In 2008, the Ministry of National Integration (MIN) proposed a double reform: first, the creation of a National Fund for Regional Development (*Fundo Nacional de Desenvolvimento Regional*, or FNDR), which would have financed economic and social development programmes throughout the country, not just in the North, Northeast and Centre-West regions, in order to ensure broad support for the policy. Secondly, a tax reform aimed at ending the tax war was proposed: this would have given the states a share of the FNDR, as an explicit regional development instrument, in exchange for their agreement to unify the rate on the state tax on goods and services and end the tax war. In addition, this would have further involved the states in national policy for regional development, and increased co-ordination between levels of government.

The resources for the FNDR would have come from the revenues from the discovery of deep-sea oil (*pré-sal*), which is expected to generate considerable royalties. This discovery opened debate on the redefinition of the spatial allocation of royalties from natural resources. In 2010, the federal Congress approved the creation of a Social Fund (*Fundo Social*, or FS) that will collect and save about two-thirds of the oil revenues. Details regarding the specificities of the fund are still under discussion. Current plans suggest that its real returns will be spent on non-earmarked but mostly education-related measures, although some may be allocated to a broader range of social and environmental areas. The MIN has proposed using part of these resources to create the FNDR, but this proposal did not go through.

Chapter 1

Regional trends and development in Brazil

This chapter examines the regional dimension in Brazil, measuring sub-national trends, benchmarking the performance of Brazilian regions with that of other OECD regions, examining links between the regional and aggregate dimension, and finally, assessing the key factors for growth in Brazilian regions. Some key findings reveal that the recent decline in inequality is mainly driven by advances in resource-intensive regions, while progress has not arrived in many lagging regions, particularly in the Northeast. The process of urbanisation in Brazil has been slower than in other emerging economies. Brazil's predominantly rural regions have performed above OECD standards, while a number of its intermediate and predominantly urban regions have underperformed. Finally, regions with the lowest socio-economic outcomes have important gaps in key drivers for growth, such as human capital and infrastructure, and are unlikely to make progress in the medium and long term unless improvements are made in these critical areas.

Introduction

As Brazil looks ahead, its capacity to sustain growth in the medium and long term and balance goals of competiveness and equity will largely depend on how regional policies are designed and implemented. The balancing of strong growth and social equity in recent years has been driven by a catching-up of resource-intensive regions and the implementation of social programmes based on transfers and subsidies for the most vulnerable citizens. An over-reliance on natural resources could dampen Brazil's competitiveness in the medium and long term and will not bring progress and opportunities to all regions and the citizens living in them. Brazil's rate of urbanisation, less intense than that of other emerging economies, can be partly attributed to the successful implementation of social policies, which to some degree contain urbanisation by inducing citizens to remain in rural and peripheral areas rather than migrating to cities.

Social policies in Brazil have been highly successful in fighting poverty and improving the lives of many disadvantaged citizens, providing them with much-needed basic public goods and services. In the future, however, these policies could be enhanced by polices targeting development in such areas and addressing critical bottlenecks for growth in the medium and long term. As this chapter shows, Brazil's lagging regions have significant gaps in some critical areas for growth, mainly in human capital and infrastructure. Without improvement in these critical areas, opportunities for citizens living in these areas will remain limited. Moreover, social policies can potentially generate relationships of dependency among the citizens and regions receiving the transfers, with the risk that they perform below their potential. A policy that can overcome this problem, as suggested in Chapters 2 and 3, are place-based policies aimed at mobilising regions' endogenous assets and resources, combining bottom-up and top-down approaches and ensuring that policies have coherence and complement each other in positive ways.

Placed-based policies can not only address problems in lagging regions, but can be important tools for national economies. This is particularly important for Brazil, where a number intermediate and predominantly urban regions have been performing below their potential, when benchmarked to similar OECD regions. As this chapter will show, aggregate gains would have been significantly higher, by 0.3 percentage points annually, had these regions performed at the average growth rates of OECD regions, and even more, by 1.15 percentage points, had they performed at the rate of growth of their peer regions in Brazil.

Chapter 1 is divided into five main sections. The first highlights the main macroeconomic trends in Brazil and focuses on its challenges. The second section examines sub-national trends in demographic and economic concentration, trends in regional inequality in Brazil as well as demographic patterns. It also applies the OECD regional typology – defining predominantly urban, intermediate and predominantly rural regions – to regions in Brazil for comparative purposes. The next section benchmarks the performance of Brazilian regions to OECD standards and examines the links between the regional and aggregate dimension. The following section focuses on the key elements driving regional growth in Brazilian regions, and the last section draws attention to some points relevant for policy.

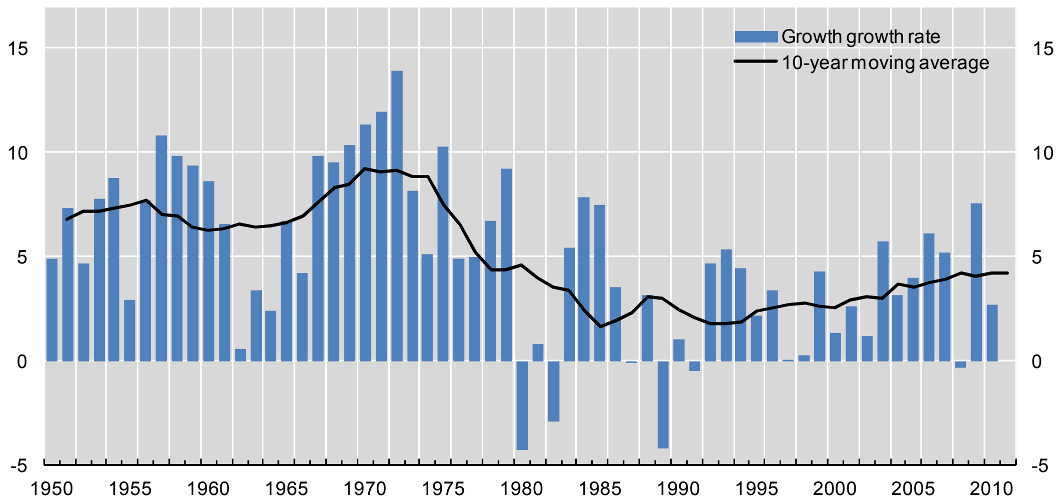
Macroeconomic trends

The first section summarises the main macroeconomic trends and challenges in Brazil, paying special attention to the structural changes of recent decades. The main focus will be on labour productivity, human capital, innovation and finally, the impact of the global economic crisis.

Brazil's economy has grown faster than those of OECD member countries

Real gross domestic product (GDP) grew on average by nearly 7.5% per year in real terms in the 1960s and 1970s, the period of the so-called "Brazilian miracle", but growth slowed to about 2.5% per year on average from 1980-2005. High-growth spells over this 25-year period were volatile, with contractions during the early 1980s and the early 1990s.

Figure 1.1. **Brazil's long-term growth performance**

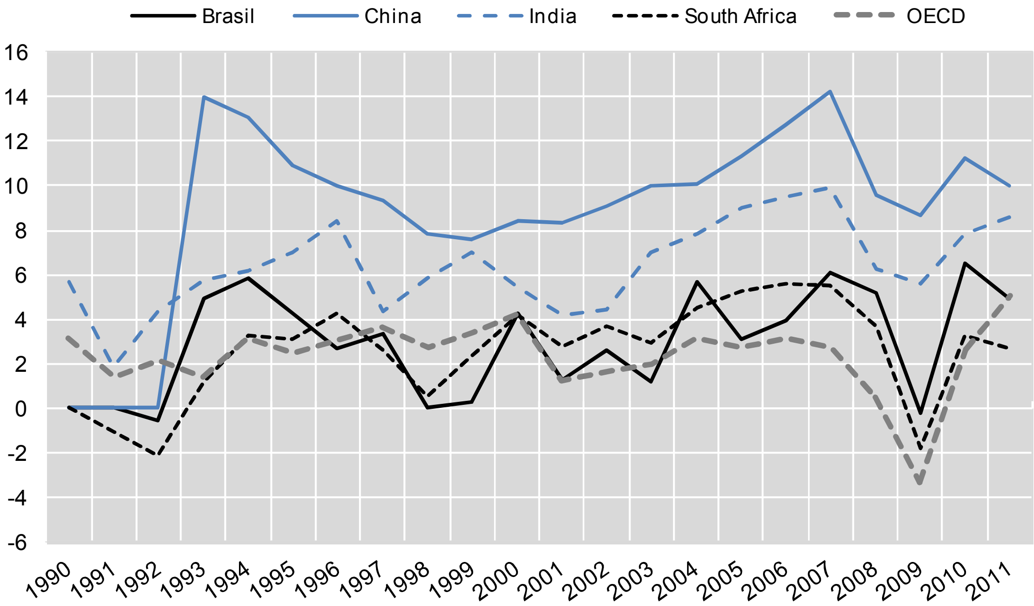


Source: Based on data from the Brazilian Geographical and Statistical Institute (IBGE).

Nevertheless, Brazil has been growing faster than OECD member countries, particularly in recent years. While its growth during the 1990s drifted to around the OECD average, it accelerated after 2000, surpassing the average growth rate of OECD countries. This was supported by major macroeconomic reforms introduced in the early 1990s, as well as by significant productivity gains and a rapid integration into the world economy, which gave Brazil greater access to new technology and financial markets. Consequently, its relative weight in the world economy rose from 2.1% in 1990 to 2.7% in 2008.

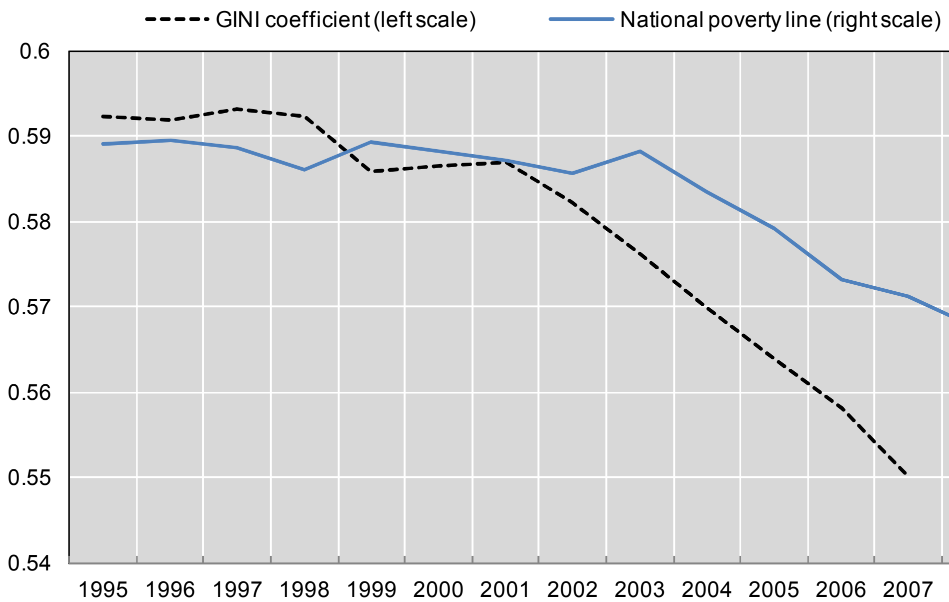
Brazil's economic dynamism has helped to alleviate poverty and reduce inequality. This, together with improving labour-market conditions and a fall in inflation since the mid 1990s – which resulted in considerable gains in real earnings – has contributed to the gradual reduction in the percentage of the population living below the poverty line, which dropped below one-quarter in 2007 (Figure 1.3). Income distribution in Brazil, as measured by the Gini index, is currently among the most unequal in the world, but it has also improved significantly, its Gini coefficient declining by about 0.7 percentage points per year from 2001-07. Among emerging economies (known as BRICS or enhanced engagement countries in the OECD), Brazil was the only emerging economy to experience declining income inequality (OECD, 2010c), and it has been notably successful in its fight against poverty and social exclusion.

Figure 1.2. **Growth of real GDP in the OECD and BCIS (Brazil, China, India and South Africa) economies**



Source: OECD (2010), *Tackling Inequalities in Brazil, China, India and South Africa: The Role of Labour Market and Social Policies*, OECD Publishing, Paris, doi: *10.1787/9789264088368-en*; and *OECD-EU Database on Emerging Economies*.

Figure 1.3. **Poverty and income distribution indicators (1995-2008)**

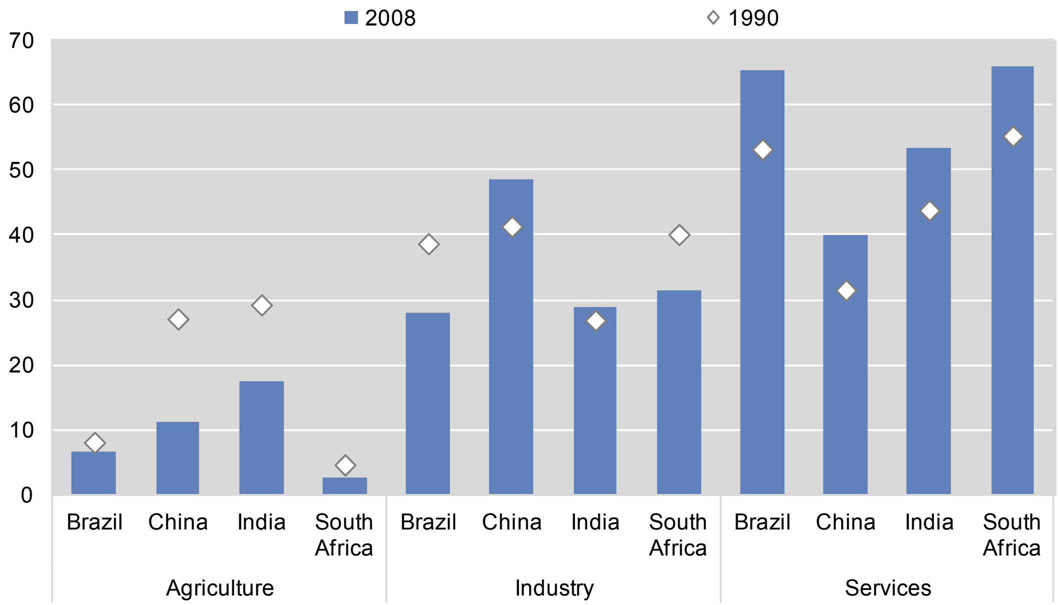


Source: Based on data from OECD (2010), *Tackling Inequalities in Brazil, China, India and South Africa: The Role of Labour Market and Social Policies*, OECD Publishing, Paris, doi: *10.1787/9789264088368-en*.

Brazil has been undergoing gradual structural change, particularly since the early 1990s. The role of agriculture in the economy has declined and the importance of the service sector has increased. An important factor behind the recent favourable growth trend was the economic reform undertaken during the early 1990s to open up the economy to greater trade and competition. Measures were taken to eliminate all non-tariff barriers and to significantly reduce import tariffs. Reforms in the 1990s also sought to curb rampant inflation, which had risen to double digits in 1990 but was cut to less than 10% by 1997. In 2005, the average inflation rate was 6.9%. Other major reforms included the floating of the exchange rate of Brazil's currency, the real, in 1999, and measures to reduce high levels of government debt. These reforms resulted in greater economic stability, encouraged foreign capital inflows and an increase in productivity, and saw a major shift in the workforce from low-productivity agriculture to higher-productivity manufacturing and services.

Brazil's economy today is not only large but diversified. Its natural resources include major oil and gas reserves and large mineral deposits. Brazil is the world's eighth-largest steel producer, and it has developed a large and diverse manufacturing sector that produces an array of products ranging from machine tools and cars to telecommunications equipment and aircraft. Brazil is also the world's fifth-largest agricultural exporter, exporting coffee, soybeans, sugar, oranges, tobacco, cocoa, meat and poultry. Nevertheless, the service sector represents about 56% of GDP. The diversity in Brazil's production base is a result of the great variety of the resources and assets spread across its territory.

Figure 1.4. **Value added by sector of activity in BCIS countries, percentage share of total (1990-2008)**

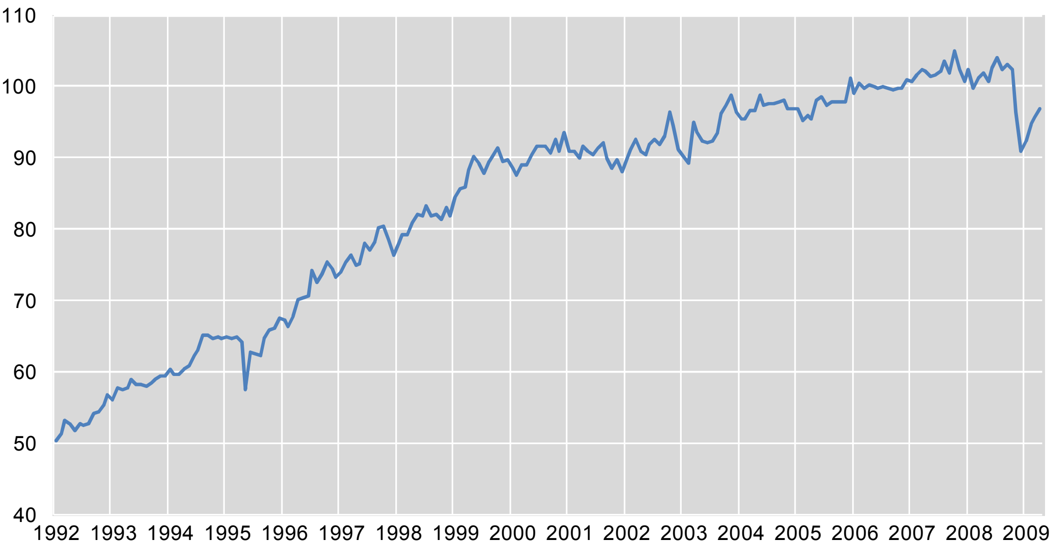


Source: World Bank Development Indicators Database.

Brazil's industrial sector experienced significant structural change in the period from 1996-2004. Industrial value added during this period increased in petroleum manufacturing, the metal mining industry, chemical, rubber and plastic products, the food and beverage industry, wood products, basic metals and other transport equipment and recycling. In contrast, value added contracted in machines and electrical equipment manufacturing, and in metal products it did not change, while in machinery and equipment, office equipment and precision equipment the increases were modest (Annex 1.A4, Table 1.A4.1). Employment increased almost across the board in industries that registered a rise in labour productivity – whether the industry was expanding or contracting in terms of real value added (Annex 1.A4, Table 1.A4.2). Clearly, this was good news from the point of view of aggregate productivity.

In recent years, however, labour productivity growth in the industrial sector appears to have been losing momentum. Sustainable productivity growth critically depends on improvements in human capital and innovative activity. As will be shown below, Brazil performs particularly poorly in human capital by comparison with OECD countries, and its innovation activity could benefit from greater private sector involvement. Labour force growth is slightly lower for women, which creates some room, albeit limited, for raising labour utilisation through increases in participation. Further labour formalisation would probably have a beneficial impact on labour productivity.

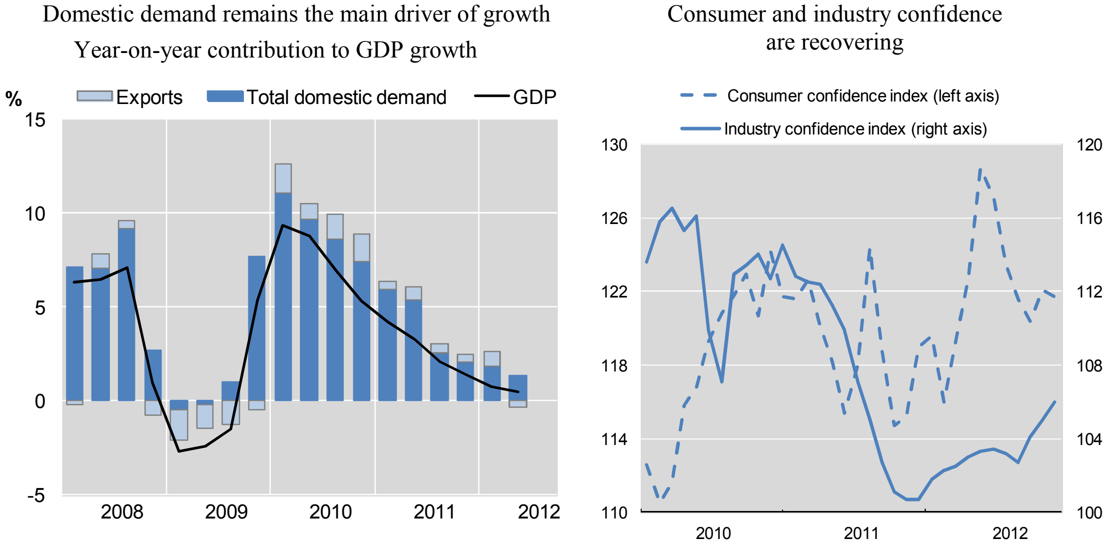
Figure 1.5. **Trends in labour productivity, 1992-2009, industrial production per hour worked (average 2006 = 100)**



Source: IPEA (Ipeadata) and OECD calculations.

Brazil was one of the first emerging economies to begin to recover from the global crisis. In 2009, its economy shrank by only 0.2%, as opposed to the average contraction of 3.9% in OECD countries. The labour market remained resilient, and unemployment fell from 7.9% in 2008 to 7.4% in 2009, below the OECD average value in 2009 of 8.3%. The recovery has been quite robust, with growth in 2010 of 7.6% (Figure 1.6). Growth slowed in 2011 (2.7%) and 2012 (1.5%) but is expected to rebound in 2013. The effects of strong monetary and fiscal stimulus are gradually lifting the economy out of below-trend growth. Forward-looking confidence indicators look promising and unemployment is low. Inflation has declined and stabilised, albeit somewhat above the midpoint of the target range.

Figure 1.6. **Macroeconomic outlook in Brazil (2008-2012)**



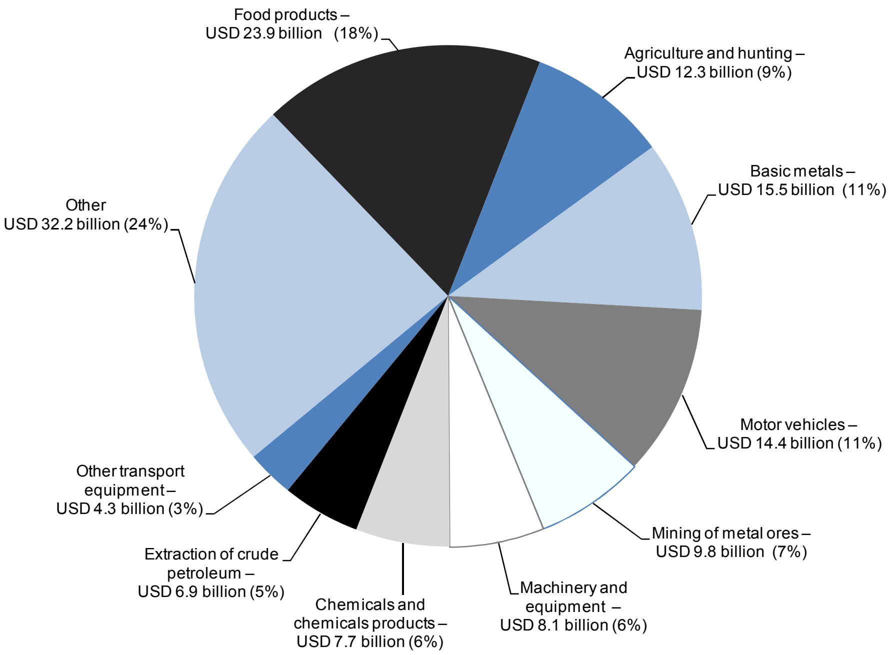
Source: OECD (2012), *OECD Economic Outlook*, Vol. 2012/2, OECD Publishing, doi: *10.1787/eco_outlook-v2012-2-en*, based on IBGE; Getulio Vargas Foundation.

Continuing improvements in terms of trade bring benefits to Brazil, but this could become a liability if they generate too great a reliance on primary resource sectors. As noted above, Brazil's exports are highly diversified. It enjoys comparative advantages in a wide range of sectors, including in selected food and agricultural products, mineral resources and a broad non-food manufacturing base consistent with its resource base and the size of its domestic market. In 2006, Brazil's agricultural exports represented 9% of the total, with the food manufacturing sector adding a further 18% of export value, for a total of 27% (Figure 1.7). Other primary exports from the mining industry contributed 7%, crude petroleum 5%, and the remaining 61% from a diverse range of non-food manufactures. The recent growth of China has accelerated the growth of bilateral trade between these two countries, which has been rising faster than trade with the United States and the EU, and this has contributed to a shift towards resource-based products (rather than light manufacture) in the export portfolio.

Despite strong macroeconomic performance, innovation and human capital are weak spots

Brazil's science and technology profile shows a number of weaknesses, but some areas have improved in the past couple of years. In 2008, gross expenditure on R&D (GERD) was 1.1% of GDP, significantly below the OECD average, though higher than in India, the Russian Federation and South Africa. Business expenditure on R&D (BERD) stood at 0.5% of GDP, significantly below OECD levels, meaning that Brazil not only spent much less than the OECD average on R&D, but also that most of its spending – in contrast to the best OECD performers – was financed by the government rather than by private enterprise. Patent performance relative to R&D is also relatively poor, with only 0.3 triadic patents per million population. Publication of peer-reviewed scientific articles has risen sharply in recent years, but remains below the OECD average *per capita*. In 2006, there were only 1.5 researchers per thousand total employment. Science and engineering degrees increased to 11% of all new degrees in 2007, but this was still around half the OECD average. A comparatively low 11% of the population aged 25-64 is qualified at the tertiary level. However, there is a rising trend in doctorates awarded. Despite low graduation rates, Brazil, like the Russian Federation, awards more doctorates *per capita* than the OECD average.

Figure 1.7. **Brazil's key merchandise exports (2006)**

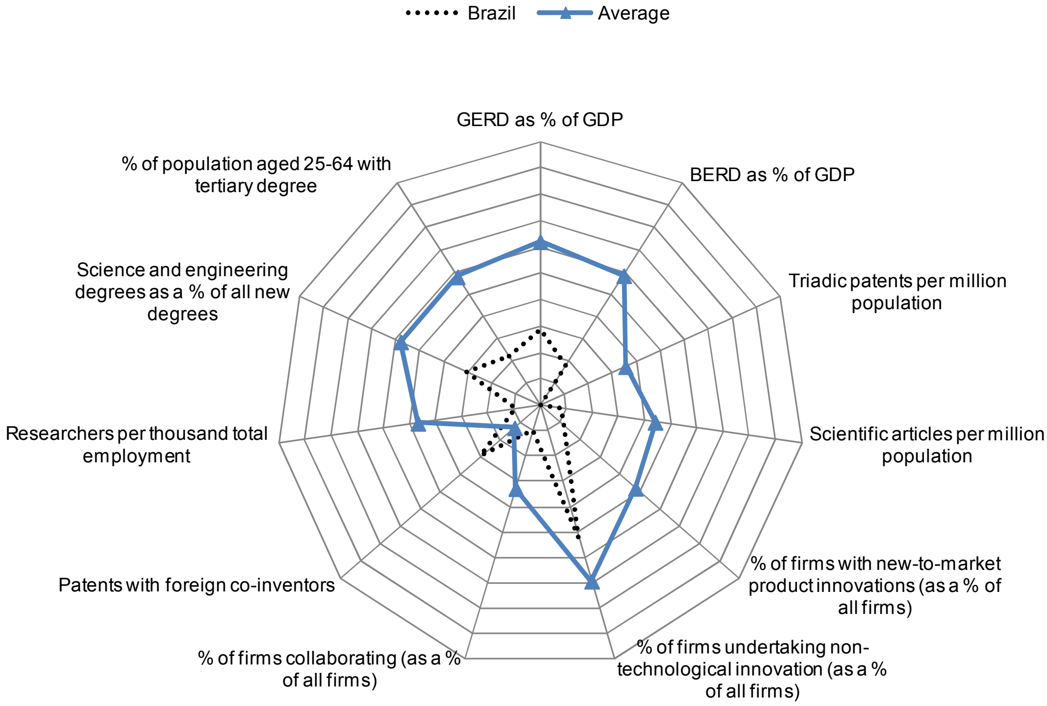


Source: UN ComTrade.

Despite Brazil's weak technology profile, international integration in innovation-related activities appears stronger than its overall international integration might suggest. For instance, while the average ratio of exports and imports of goods and services to GDP increased in all OECD countries between 1980 and 2007, in Brazil it fell considerably in the 1980s and early 1990s before recovering, and it was still fairly low at the end of the period, at less than 30%. By contrast, the percentage of Patent Co-operation Treaty (PCT) applications with foreign co-inventors in 2005-07 in Brazil was 18%, well above the OECD average of 7.7%.

Brazil's level of human capital is comparatively poor by OECD standards. Attainment rates both in upper secondary and tertiary education are among the lowest when compared to OECD countries, as are indicators of student performance measured by the Programme for International Student Assessment (PISA) scores (Figure 1.9). Over time, attainment indicators have risen, especially among the younger cohorts, suggesting that progress has been made over the years in basic education, but that the gap in tertiary educational attainment with the OECD area appears to be widening. The largest payoff from growth-enhancing reforms is likely to come from further improvements in human capital, with special emphasis on basic skills. In addition, there is a broad consensus on the need to tackle informality through a variety of channels. In particular, enhancing human capital through education would contribute to increasing formality in labour relations.

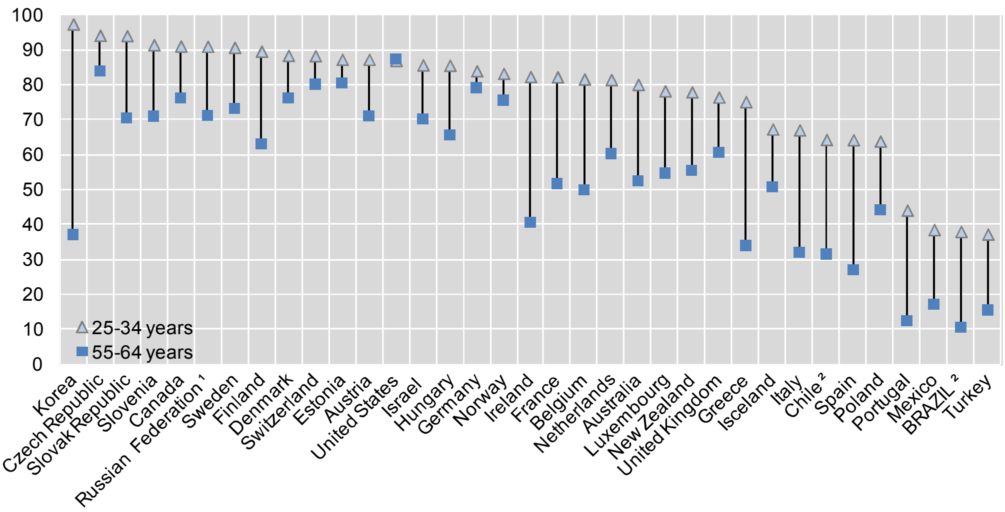
Figure 1.8. **Brazil's science and innovation profile**



Source: OECD (2010), *OECD Science Technology and Industry Outlook 2010*, OECD Publishing, Paris, doi: *10.1787/sti_outlook-2010-en.*

Figure 1.9. **Human capital indicators: International comparisons (2006)**

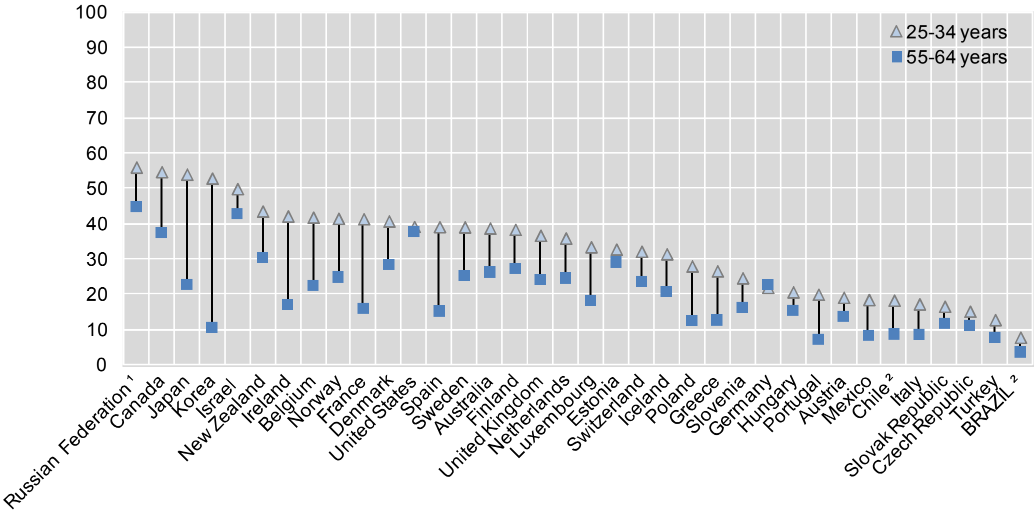
A. Population that has completed at least upper-secondary education



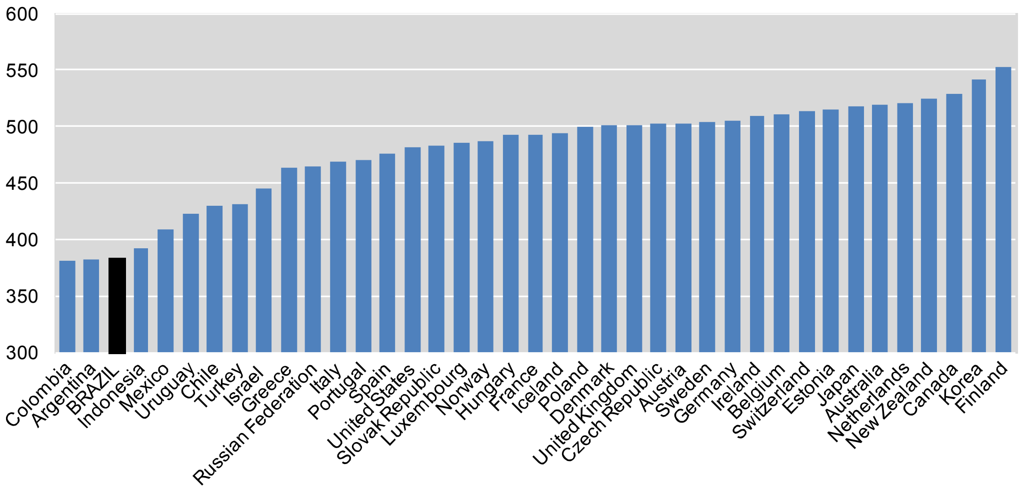
Notes: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law. 1. The year of reference is 2003. 2. The year of reference is 2004.

Figure 1.9. **Human capital indicators: international comparisons (2006)** (*cont.*)

B. Population that has completed tertiary education



C. Average PISA scores



Notes: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law. 1. The year of reference is 2003. 2. The year of reference is 2004.

Source: OECD (2009), *OECD Economic Survey: Brazil 2009*, OECD Publishing, Paris, doi: *10.1787/eco_surveys-bra-2009-en.*

Regional development gaps in Brazil

This section first reviews the degree of heterogeneity in Brazil's geography, its economy and settlement patterns. It applies the OECD taxonomy defining predominantly urban, intermediate and predominantly rural regions in Brazil for comparative purposes. It then analyses the degree, and evolution over time, of demographic and economic concentration among Brazilian TL2 regions and concentration within them. It then proceeds to examine inequality in Brazil.

Brazil's large territory has resulted in heterogeneous settlement patterns

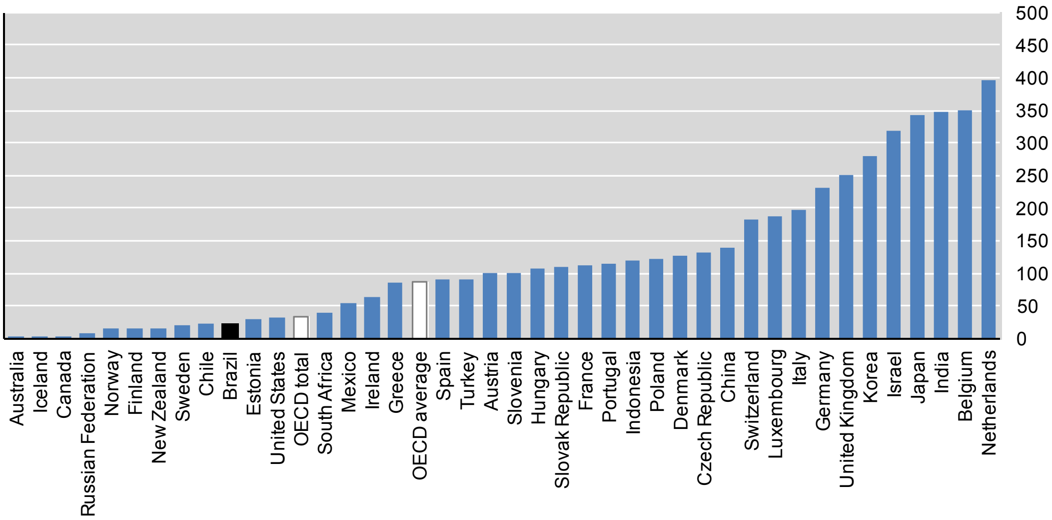
In any sub-national analytical study, the choice of the territorial unit is of prime importance, given that the word "region" can mean very different things within and between countries. For instance, the smallest OECD region (Melilla, Spain) has an area of less than 15 square kilometres whereas the largest region (Northwest Territories and Nunavut, Canada) is over 3 million square kilometres. Similarly, population in OECD regions ranges from about 400 inhabitants in Balance ACT (Australia) to more than 47 million in Kanto (Japan). To address this issue, the OECD has classified regions within each member country. The classification is based on two territorial levels: Territorial Level 2 (TL2) broadly corresponds to the first tier of sub-national government comprising 335 regions, and Territorial Level 3 (TL3) is composed of 1 679 micro-regions. This classification facilitates greater comparability of regions at the same territorial level. Indeed, these two levels, which are officially established and relatively stable in all member countries, are used in OECD publications as a framework.

For comparative purposes TL2 Brazilian regions in this territorial review correspond to 26 states and one Federal District, and TL3 Brazilian regions to 137 *mesorregiões*. The analysis will compare the sub-national trends and benchmark the performance of these regions with respect to OECD TL2 and TL3 regions. In addition, analysis will also focus on Brazil's five statistical regions (North, Northeast, Southeast, Centre-West and South) and its 5 565 municipalities. Chapters 2 and 3 will discuss the 120 Territories of Citizenship. This section also applies the OECD regional taxonomy to Brazil's TL3 regions for the first time (see Annex 1.A1), allowing a comparison of the share of population living in predominantly urban, intermediate and predominantly rural regions with the share in other OECD countries, changes over time and performance of these types of regions to the same types of OECD regions.

Brazil is the fifth-largest country in the world in terms of surface area, after the Russian Federation, Canada, China and the United States. It covers 8 514 204.90 square kilometres and was home to 191 million people in 2008. Despite its large population, it is not very densely populated, with 22.5 inhabitants per square kilometre, in comparison to an OECD average of 87 and an average for the enhanced engagement countries of 113 (Figure 1.10).

Brazilian topography is quite diverse and has led to a wide range of settlement patterns. The topography includes hills, mountains, plains, highlands, basins and scrublands. In addition to mountain ranges, Brazil's central highlands include a vast plateau. The rest of the territory is primarily made up of sedimentary basins. Brazil has a dense and complex system of rivers, one of the world's most extensive. The coastal zone is noted for thousands of kilometres of tropical beaches interspersed with mangroves, lagoons and dunes, as well as numerous coral reefs. This diverse landscape has determined settlement patterns, and by extension, economic activity, resulting in very sparsely and very densely populated areas. Brazil's variation in population density among its TL3 regions ranges from 0.29 inhabitants per square kilometre in the Norte Amazonense region to 2 223 in Metropolitana de São Paulo. The variation, relative to its national density average, is the fifth highest among OECD countries. Only Canada, Australia, France and Mexico have a larger range in regional population densities (Figure 1.11). Geographic diversity can represent an asset by providing the possibility for a diversified productive base, but it can also represent a challenge for the delivery of goods and services, especially on such a large geographic scale.

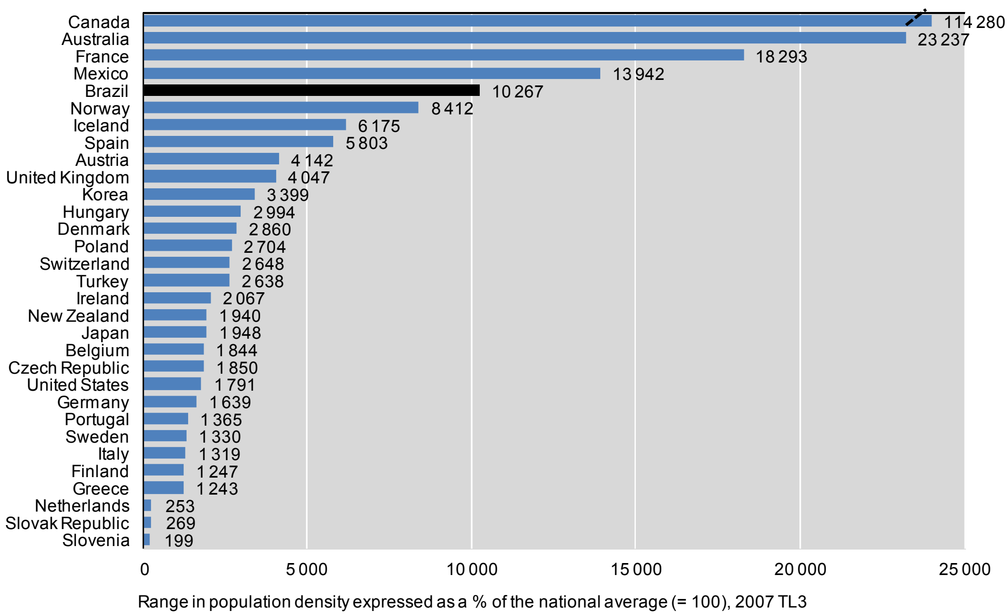
Figure 1.10. **Inhabitants per square kilometre in OECD countries (2008)**



Notes: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: Based on *OECD Regional Database* (2009).

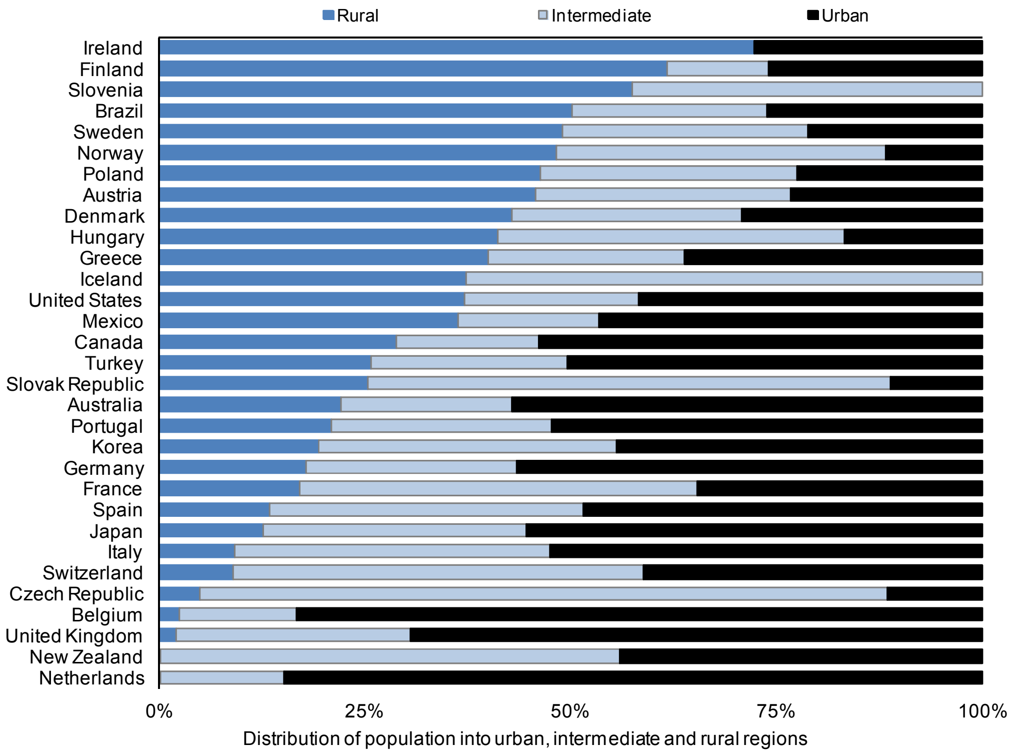
Figure 1.11. **Range of variation in population density among OECD TL3 regions (2007)**



Source: Based on *OECD Regional Database* (2010).

A large proportion of the national population lives in predominantly rural regions. If the OECD's regional classification is applied to Brazil's TL3 regions (Annex 1.A1), there are 108 regions classified as predominantly rural, 22 as intermediate and 7[1] as predominantly urban. These three types of regions hosted 50%, 24% and 26% of the national population respectively, in 2010.[2] The proportion of the national population living in rural regions is thus relatively high by OECD standards (50% as opposed to 23%). Only in Ireland (72%), Finland (62%) and Slovenia (57%) does a larger share of national population live in predominantly rural regions.

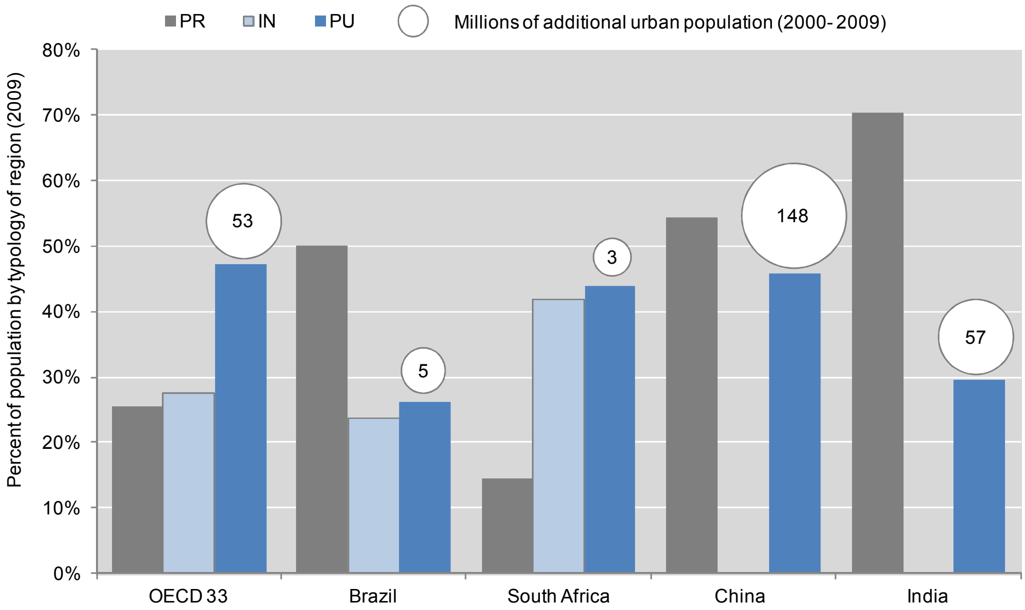
Figure 1.12. **Range of variation in population density among OECD TL3 regions (2007)**



Source: Based on data from the Brazilian Geographical and Statistical Institute (*Instituto Brasileiro de Geografia e Estatística*, or IBGE) and *OECD Regional Database* (2010).

Unlike other enhanced engagement countries, Brazil has not witnessed a significant increase in the share of the population living in predominantly urban regions during the past decade. Over the period 2000-09, the population living in predominantly urban regions in Brazil increased by 5 million (or 3% of total population in 2009), much lower (even in percentage terms) than in India (57 million, or 5% of the total population) or China (140 million, or 11% of the total population), and lower in percentage terms than the average for OECD countries during the same period. Even in South Africa, the share of inhabitants living in urban regions rose from 58% to 62% (i.e. by 4 million in a country with a much smaller population) as opposed to Brazil, where the share was unchanged over this period (Figure 1.13). Furthermore, over the period 1996-2010, Brazil's population growth (of 34 million, from 157 million to 191 million) primarily occurred in predominantly rural regions, at 39%, followed by intermediate areas at 34% and urban areas at 27% (Table 1.1).

Figure 1.13. **Share of national population living in predominantly urban regions (1995-2007)**



Source: OECD (2011), *OECD Regions at a Glance 2011*, OECD Publishing, Paris, doi: *10.1787/reg_glance-2011-en*.

Table 1.1. **Population and population growth by type of TL3 region in Brazil (1996-2010)**

	Population (2010)		Population growth (1996-2010)	
	Total (millions)	% of total	Total (millions)	% of total
Predominantly urban	50.79	27%	9.09	27%
Intermediate	55.36	29%	11.56	34%
Predominantly rural	84.58	44%	13.02	39%
Total	190.73		33.66	

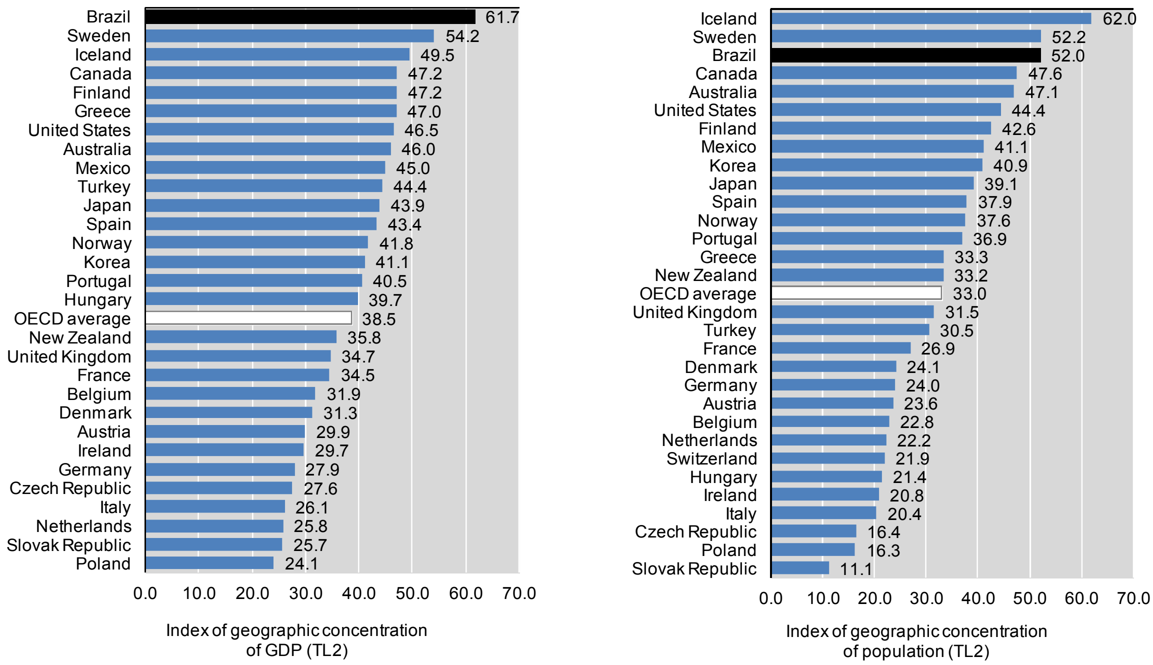
Source: Based on data from IBGE and *OECD Regional Database* (2010).

Concentration in Brazil is quite high but has been gradually declining

Population and economic activity are nevertheless highly concentrated in Brazil. According to the geographic concentration index, which compares the geographic distribution of GDP and population of all TL2 regions, Brazil's economy has a higher concentration index (61.7) compared to other OECD countries – almost twice the OECD average and well above the second most concentrated economy (Sweden, 54.2). Population is also very concentrated in Brazil (52), surpassed only by Iceland (62) and Sweden (52.2) in 2007.

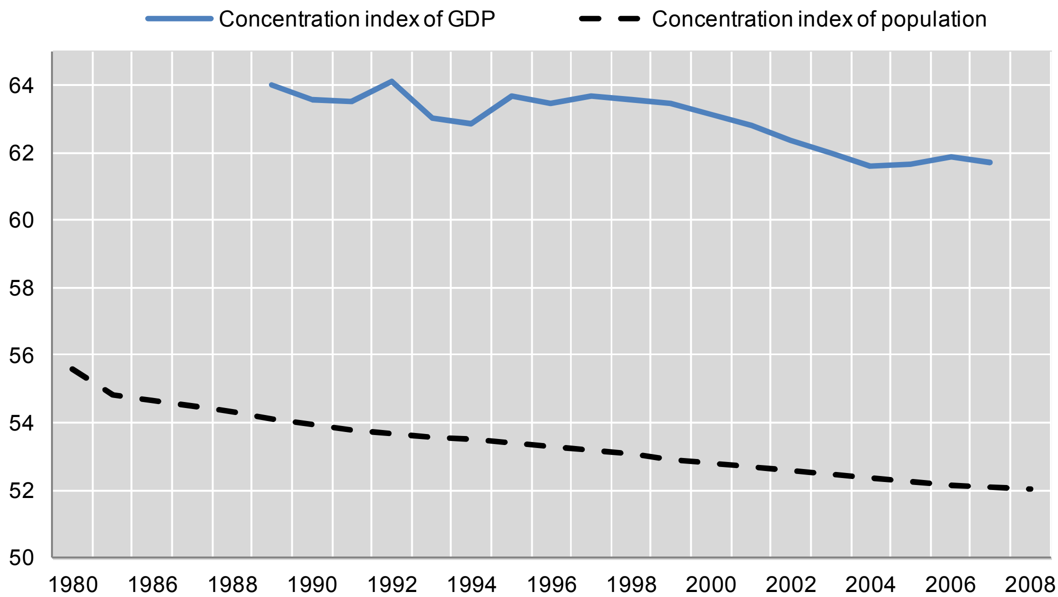
Although Brazil's concentration index is amongst the highest in the OECD, it has been declining in recent decades. The GDP concentration index fell from 64 in 1989 to 61.7 in 2007, and the population concentration index (for which a longer run of data is available) declined from 55.5 in 1980 to 52 in 2008 (Figure 1.15). Indeed, Brazil's most populous TL2 region, São Paulo – home to 21% of the national population – saw its GDP share fall from 38% in 1989 to 34% in 2007. The decline in concentration of production seems to reflect the growing importance of resource-intensive economic activities in recent years, which has led to a rise in the relative weight of some sparsely settled areas.

Figure 1.14. **Geographic concentration index of GDP and population (TL2), 2007**



Source: Based on *OECD Regional Database* (2010) and data provided by IBGE.

Figure 1.15. **Concentration index of GDP and population in Brazil among TL2 regions (1980-2008)**



Source: Based on data from IBGE and *OECD Regional Database* (2010).

Concentration in Brazil has given rise to pockets of dense settlement and economic activity due, among other things, to the centripetal forces (e.g. forces of attraction) associated with benefits of economies of agglomeration (Box 1.1). These benefits, however, are neither linear nor infinite, and in many metropolitan regions, diseconomies of congestion and other negative externalities associated with very large cities can undermine efficiencies associated with agglomeration effects. In Brazil, the high degree of concentration at the outset of the period under study (Figure 1.15) and the low rate of population growth in predominantly urban regions suggest that centripetal force (e.g. forces of repulsion) can be at play, due either to the large size of cities or to their under-performance.

Box 1.1. **Agglomeration dynamics over time in OECD countries**

Economic activity tends to concentrate in OECD countries, mainly due to benefits associated with economies of agglomeration when a firm enjoys increasing returns to scale (IRS) in a particular place. This could either be because of the presence of natural advantages (i.e. natural resources, location, etc.), monopolistic protection, political reasons, (e.g. the decision to create a capital city) or for other reasons. Increasing returns to scale also induce other firms to locate there as people come in search of higher wages, job opportunities and cultural values. More than 100 years ago, Alfred Marshall adduced three main reasons for location:

- concentration of several firms in a single location offers a pooled market for workers' industry-specific skills, ensuring both a lower probability of unemployment and a lower probability of labour shortage;
- localised industries can support the production of non-tradable specialised inputs;
- information spill-overs can give clustered firms a better production function than isolated producers.

The benefits of agglomeration economies are circular. Firms prefer to locate where other firms are already located, thanks to the benefits of forward and backward linkages. In turn, people want to live where firms – and therefore job opportunities – are concentrated. This further induces firms to locate where demand – and therefore population – is large. Studies related to this phenomenon include François Perroux's notion of "growth poles" (1955), Gunnar Myrdal's analysis of "circular and cumulative causation" (1957), Albert Hirschman's concept of "forward and backward linkages" (1958), and more recently the emerging field of the New Economic Geography, which has formalised such cumulative causation mechanisms since Paul Krugman's seminal paper in 1991.

The benefits of economic concentration typically translate into higher living standards, higher productivity rates and higher employment rates. Indeed, in OECD metropolitan regions, productivity in comparison to the OECD average is higher in metropolitan regions compared with the national average in 80% of cases; similarly, they also support higher *per capita* income levels, surpassing the national average in 80% of cases.

These benefits, however, are neither linear nor permanent, due to the congestion costs, diseconomies of scale and oversupply of labour that can emerge in agglomeration economies. In fact, only 45% of metropolitan regions outperformed the national average in growth rates during the decade 1995-2005, and in several OECD countries, pockets of concentration are not necessarily the most dynamic economies:

Box 1.1. **Agglomeration dynamics over time in OECD countries** (*cont.*)

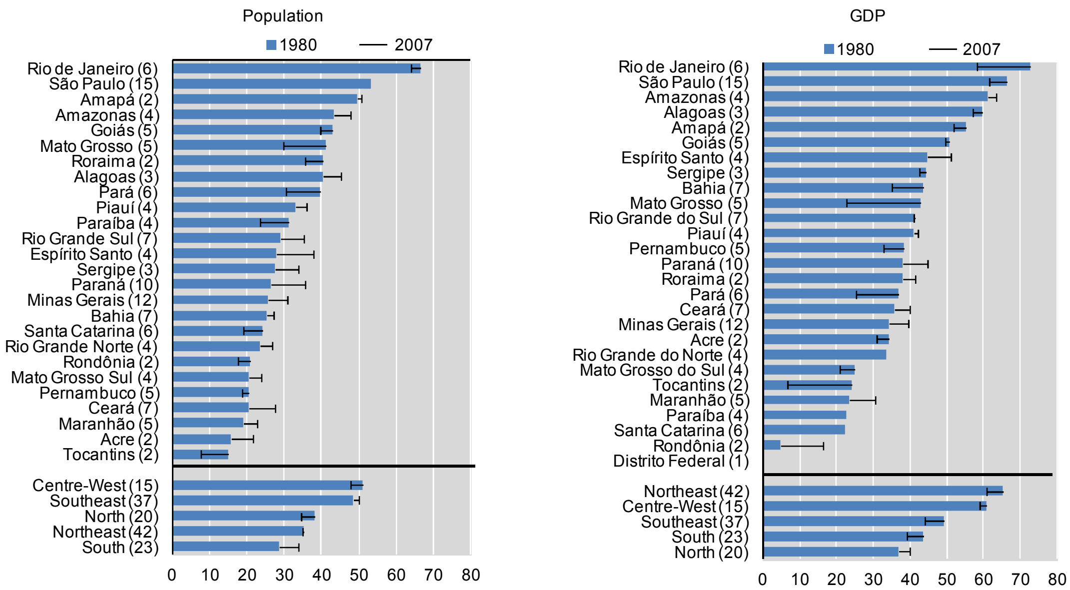
- In Spain, the regions with the highest density of output – Madrid, Barcelona and Vizcaya – are also generally the most productive regions. However, they are not the most dynamic Spanish regions in terms of GDP *per capita* growth (with the exception of Vizcaya). The southern regions of Badajoz, Almeria, Cadiz, Huelva and Malaga have higher pockets of growth.
- In Poland, the territories with the highest density of output – Warsaw, Poznań, Kraków, Lódż and Wrocław – also display the highest levels of productivity in the country, but not necessary the highest growth rates.
- In Germany, Mexico and Korea, the territories with the highest economic density do not necessarily have the highest level of productivity. For example, in Germany, output is mostly concentrated in the city-regions of Hamburg, Berlin, Bremen, Düsseldorf, Dortmund, Cologne and Stuttgart. While Hamburg, Bremen and Stuttgart are amongst the most productive regions in Germany, Cologne, Dortmund and Berlin are not. Furthermore, in terms of GDP *per capita* growth, none of the city-regions is amongst the top 20 performing regions in Germany.
- In Mexico, the capital region (México Distrito Federal) and its outskirts concentrate the highest density of output, while the most productive regions are both northern (Nuevo León, Campeche and Chihuahua) and southern (Quintana Roo and Coahuila). Furthermore, in terms of GDP *per capita* growth, Distrito Federal and its outskirts are amongst the lowest-performing Mexican regions, while pockets of growth are distributed across the entire Mexican territory, and especially in the south and north.
- Finally, in Korea, the economy is concentrated mostly in Seoul and its surrounding region, Incheon, while the southern region of Ulsan has the highest productivity, along with the predominantly rural regions Chungcheongnam-do, Jeollanam-do and Gyeonsangbuk-do. These three regions are amongst the highest-performing Korean regions in terms of productivity.

Source: OECD (2009), *Regions Matter: Economic Recovery, Innovation and Sustainable Growth,* OECD Publishing, Paris, doi: *10.1787/9789264076525-en.*

Within TL2 regions, different patterns in concentration emerge: on the one hand, population is becoming more concentrated, and on the other hand, GDP is becoming less concentrated. Over 1980-2007, population became more concentrated in the majority (15 out of 26) of TL2 regions (Figure 1.16), although GDP grew less concentrated in the majority of them (15 out of 26). These simultaneous trends suggest how important medium-sized cities are as attractors of population within states, and, as previously mentioned, the importance of resource-intensive production in spreading growth to less densely populated places. Indeed, all eight of the states where population is becoming more concentrated and GDP less so are specialised either in resource-intensive activities or in public administration (Table 1.2).

Forces of agglomeration driving economic and demographic concentration also play a role in shaping inter-regional disparities. For example, when a leading region enjoying the benefits of agglomeration economies pulls ahead of the rest, inequality will increase. This increase is not necessarily bad news, given that no region is worse off and that the leading region is better off. Its dynamism, moreover, may spur growth elsewhere. Inequality, however, can also rise independently of concentration, as when lagging regions fall farther behind over time. This is clearly undesirable. The next section therefore explores Brazil's degree of inequality and trends over time, both among TL2 regions and within them.

Figure 1.16. **Concentration index of GDP and population in Brazilian regions within TL3 regions (1980-2008)**



Note: The numbers in parentheses indicate the number of TL3 regions within each region. The region of Distrito Federal has been excluded, since it only includes one TL3 region.

Source: Based on data from IBGE and *OECD Regional Database* (2010).

Table 1.2. **Concentration index of GDP and population and specialisation in the sectors (1980-2008)**

Regions	Change in concentration		Specialisation index		
	Population	GDP	Agriculture	Mining	Public admin.
Acre	5.98	-3.11	3.15	0.03	2.12
Alagoas	4.86	-2.56	1.34	0.56	1.72
Amapá	1.22	-3.26	0.64	0.34	2.93
Bahia	1.95	-8.83	1.45	0.70	1.07
Mato Grosso do Sul	3.25	-4.10	2.81	0.36	1.25
Rio Grande do Norte	3.07	0.00	0.77	2.89	1.75
Rio Grande do Sul	6.12	-0.60	1.78	0.06	0.86
Sergipe	6.18	-1.94	0.88	3.02	1.55

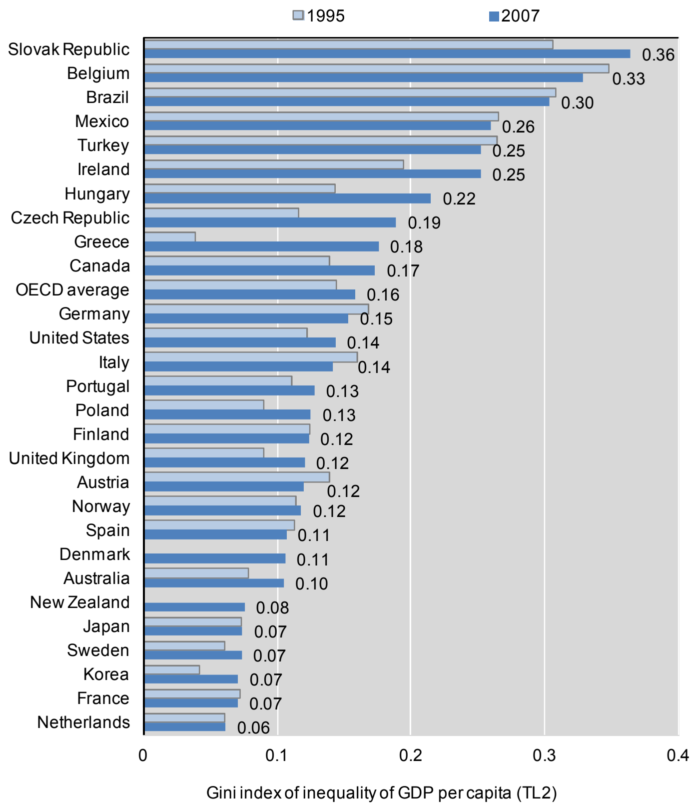
Source: Based on data from IBGE and *OECD Regional Database* (2010).

Inequality is still a concern, although it has been decreasing

Territorial inequality among Brazil's states is very high by the standards of OECD TL2 regions. In 2007, GDP *per capita* in Brazil's capital region, the Distrito Federal (USD 28 594), was almost three times the national average (USD 10 038). At the bottom of the scale, Piauí's GDP *per capita* (USD 3 199) was one-third of the national average. These marked variations yield a Gini coefficient of 0.30 among Brazilian TL2 regions (states), almost twice the OECD average value (Figure 1.17). Even when comparing inequality in Brazil to other OECD federal countries, regional inequality is twice as high as in any large federal state in the OECD except Mexico, with an inter-regional Gini of 0.26 at TL2 level. This is hardly surprising, given that inter-regional inequality tends, other things being equal, to be lower in high-income countries.

Inequality in Brazil has been declining steadily since 2004. From 1980 to 1986, inequality in GDP *per capita* among the states experienced a large decline, but then increased again until 1989. During the decade that followed, territorial inequality fluctuated but has been trending downwards since 1998. The trend in territorial inequality strongly resembles the trend in interpersonal inequality, suggesting that the performance and development of different locations are highly linked to overall trends.

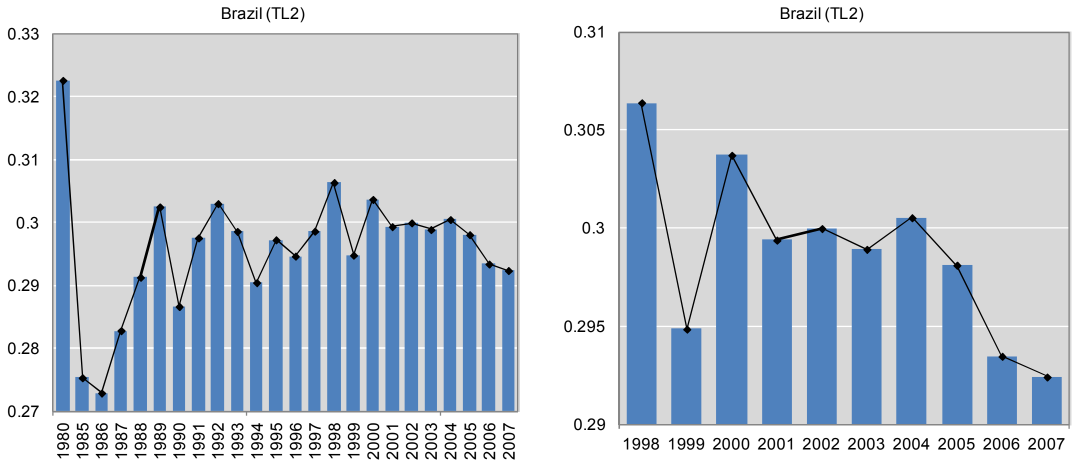
Figure 1.17. **Territorial disparities in GDP *per capita* within countries (TL2), 2007**



Source: Based on data from IBGE and *OECD Regional Database* (2010).

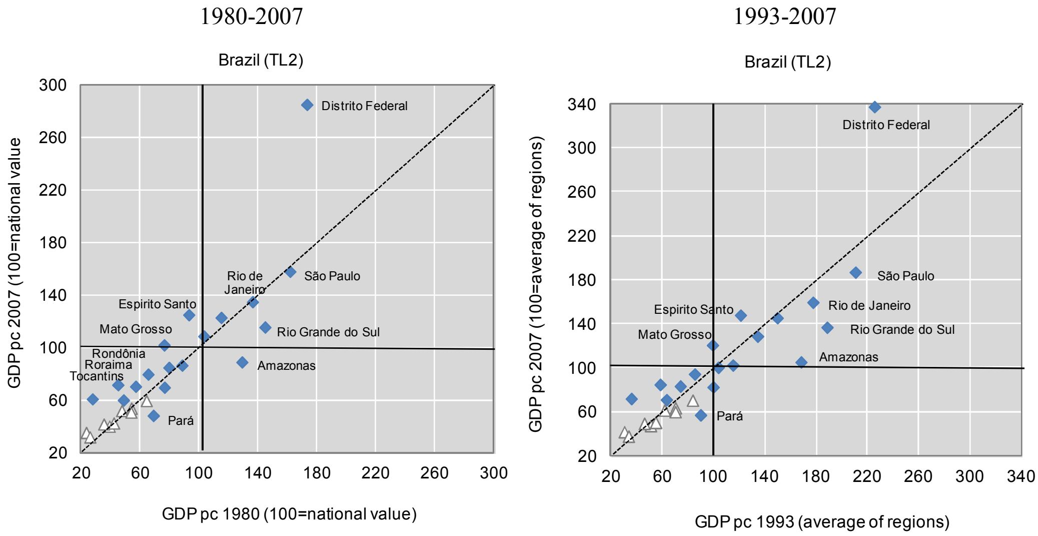
Inequality in Brazil has been decreasing in recent years due to advances in regions with relatively low incomes. Although the strong performance of the capital region pulled inequality upwards (Figure 1.18), the decrease in inequality over the period 1998-2007 is driven by the strong performance of a number of lagging regions: Tocantins increased its GDP *per capita* from around one-third of the national average to close to two-thirds of the national average, Roraima from 46% to 72%, Rondônia 64% to 70% and Mato Grosso from 82% to 103%. Despite these favourable developments, the position of lagging regions from the Northeast remains stagnant, at around 50% of the national average in both 1980 and 2007. Such fragmentation represents an aggregate loss, because growth potential is not being realised. Moreover, such regions start to depend on external resources instead of endogenous assets and become a drag on national growth. They will incur future costs in terms of delivery of goods and services, as well as high remediation costs – costs that will later be necessary to re-integrate lagging regions and their citizens. As will be shown in Chapter 2, lower GDP *per capita* is strongly correlated with poorer socio-economic outcomes, particularly poverty.

Figure 1.18. **Gini index of inequality of GDP per capita across TL2 regions (1980-2007)**



Source: Based on data provided by IBGE.

Figure 1.19. **Regional performance in GDP per capita over time (1980-2007)**



Note: Regions indicated by triangles are from the Northeast.

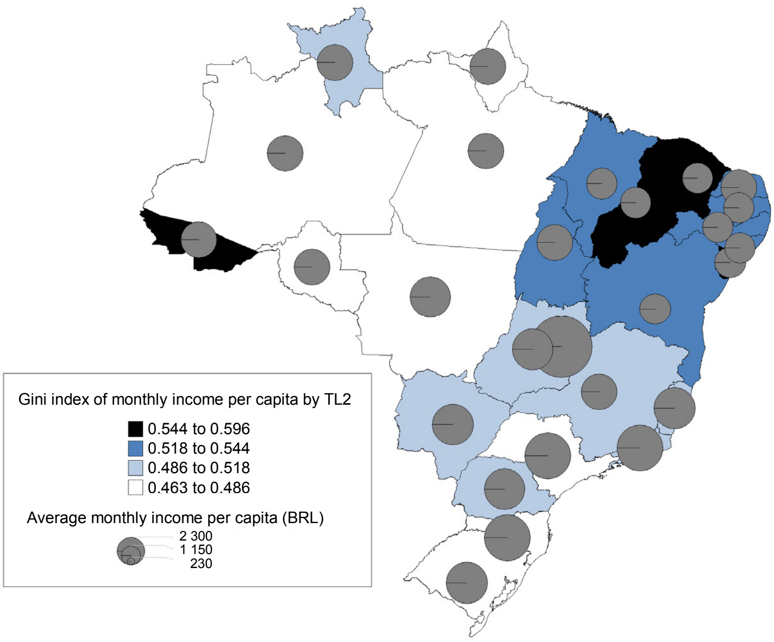
Source: Based on data provided by IBGE.

Inequality within Brazil's TL2 regions (*estados*) tends to be higher in regions with lower average incomes *per capita* (Figure 1.19) particularly in Piauí and Maranhão in the Northeast and Acre and more generally in regions from the Northeast. Over the past decades, inequality within regions has been declining:

- Inequality within Brazil's TL2 regions (*estados*) among the TL3 regions (the *mesorregiões*) declined in the majority of regions: in 19 out of 26 TL2 regions, inequality decreased during 1980-2007 (Figure 1.21).
- Inequality also declined in all but one (the Centre-West) of Brazil's five large regions.

Figure 1.20. **Average income per capita and inequality by state (2008)**

Average personal income from work and Gini index of personal income by state

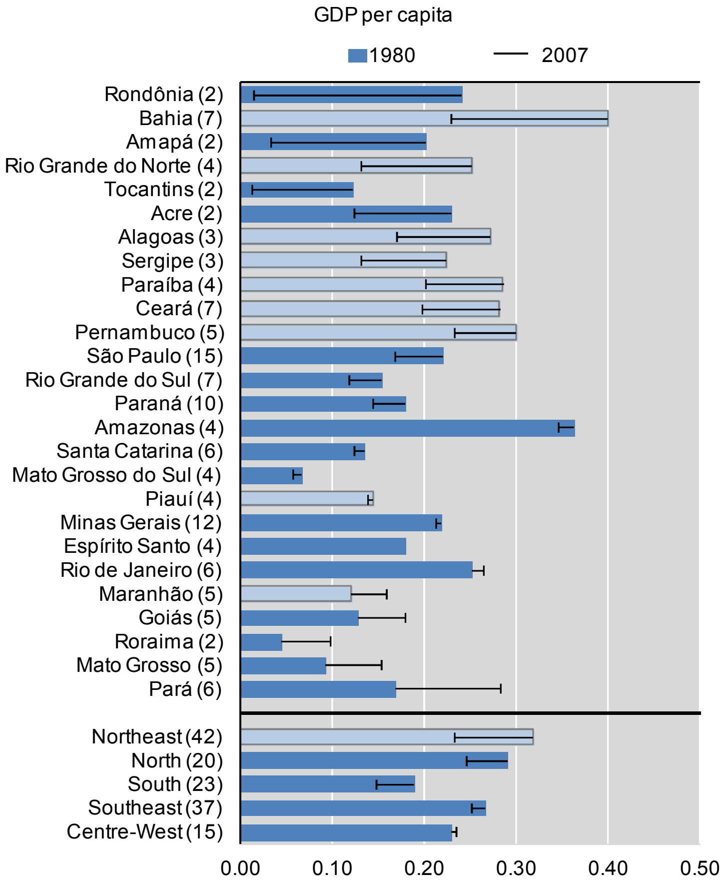


Note: Inequality is measured by each TL2 by using the Gini index of monthly income from work of employed people of at least ten years old.

Source: Based on data from *Pesquisa Nacional por Amostra de Domicilios* (PNAD) (2009).

Trends in concentration and inequality in Brazil are unique among the enhanced engagement countries and Eastern European countries experiencing a catching-up process. Brazil in recent years has been achieving both social and economic goals simultaneously, reducing inequality during a period of strong national growth. In South Africa, China and India, inequality has been rising during the catch-up phase, and in Poland, the Czech Republic, the Slovak Republic, Slovenia and Hungary, high national growth rates have been accompanied by rising concentration in population and GDP and rising inequality, driven primarily by a few dynamic regions that benefit from agglomeration effects.

Figure 1.21. **Gini index of inequality of GDP within TL2 regions among TL3 regions (1980-2007)**



Note: Regions from the Northeast are marked in light blue.

Source: Based on data provided by IBGE.

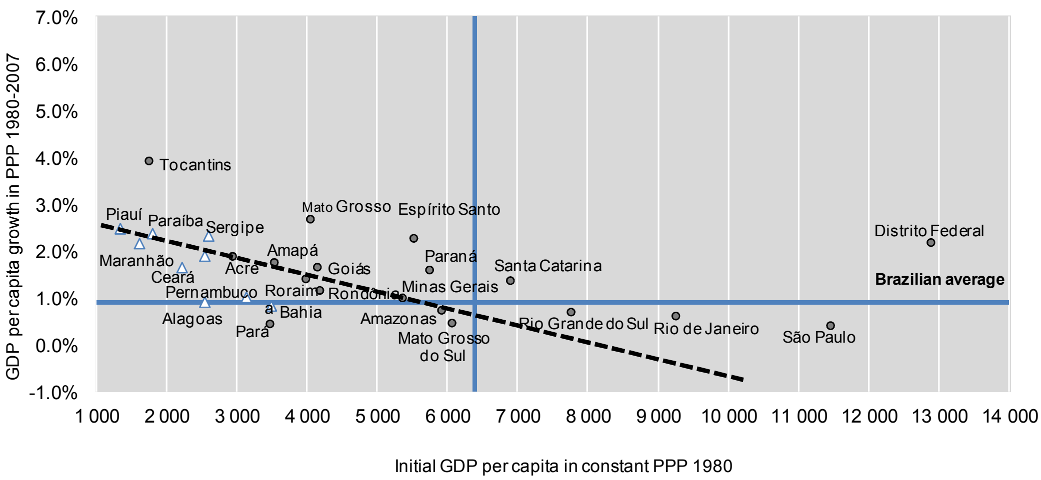
Assessing the performance of Brazilian regions and links to national growth

Sub-national dynamics are highly connected to the overall process of development and to national growth (OECD, 2011b). This section assesses the performance of Brazilian TL2 and TL3 regions, paying special attention to GDP performance. Performance is benchmarked nationally but also against other predominantly urban or rural OECD regions. The section also examines links between density and growth and between industry specialisation and growth. Finally, it examines the links between regional and aggregate performance.

Brazil's TL2 regions are converging and catching up with OECD standards

Over the past three decades, Brazilian TL2 regions have entered into a process of convergence, although in more recent years, a number of regions appear to have been left behind. During 1980-2007, the majority of TL2 regions with initial GDP *per capita* below the national average grew faster than the national average, and regions with higher levels grew at below-average rates, except for the Distrito Federal (Figure 1.22). In recent years (1995-2007), however, a number of low-income regions have been growing at a lower rate than the national average (Amapá, Pernambuco, Pará and Ceará).

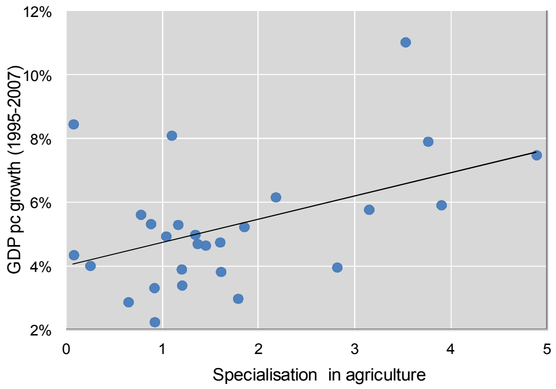
Figure 1.22. **Level and growth of GDP per capita in TL2 Brazilian regions (1980-2007)**

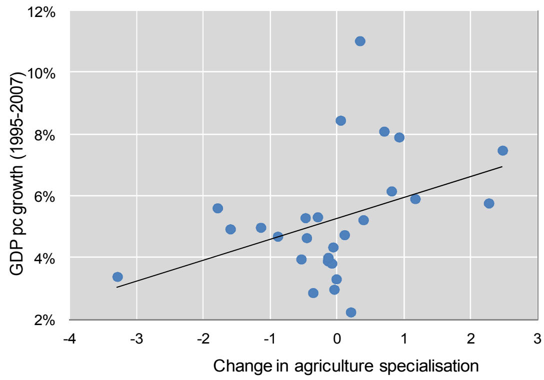


Source: Based on data provided by IBGE.

High growth in converging regions is associated with resource-intensive economic activities. During the past decade, Brazil's fastest-growing regions, (except Distrito Federal and Roraima), were specialised in agriculture-related activities. In addition, regions becoming more specialised in these types of activities also recorded faster growth than those becoming less specialised (Figure 1.23). This positive correlation – between GDP *per capita* growth and industry specialisation and between GDP *per capita* growth and changes in industry specialisation – is not present in the other main sectors (Annex 1.A3). Only the specialisation of public administration (in levels) and GDP *per capita* growth is positively correlated – change in the degree of specialisation in public administration is not associated with higher or lower growth.

Figure 1.23. **Level and growth of GDP per capita in TL2 Brazilian regions (1995-2007)**

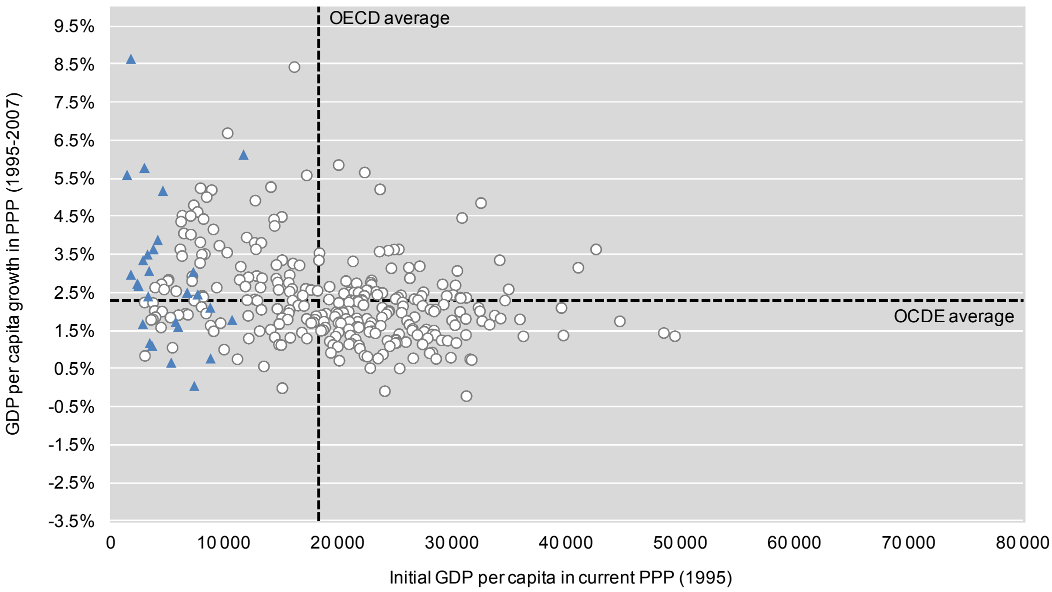




Source: Based on data provided by IBGE.

All but one of Brazil's TL2 regions outperformed the average rate of growth of OECD TL2 regions during 1995-2007 (Figure 1.24). Amazônas was the sole under-performer. Even the lagging regions that have fallen further behind the national average (chiefly in the Northeast) are gradually converging with OECD output levels.

Figure 1.24. **Initial level and growth of GDP per capita in OECD regions (TL3), 1995-2007**

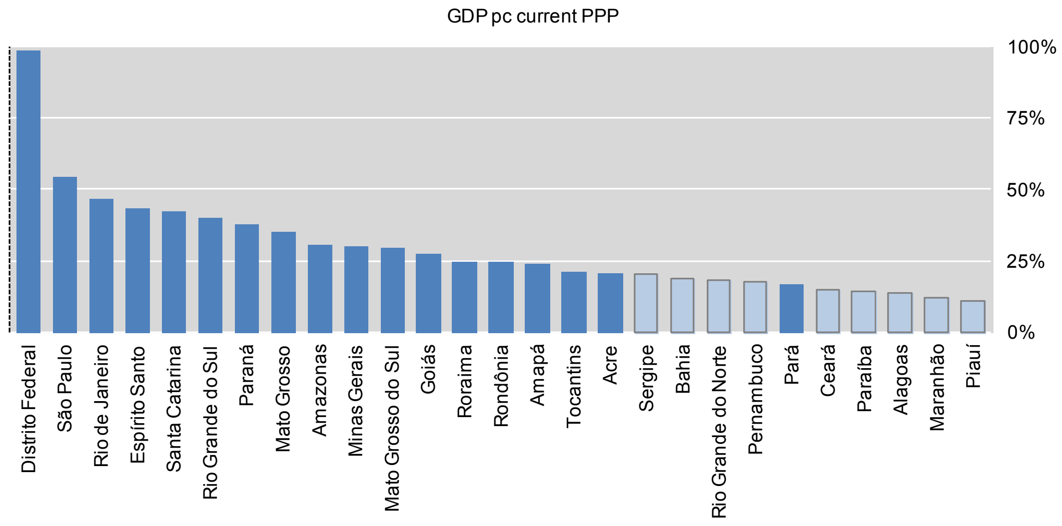


Source: Based on data from IBGE and *OECD Regional Database* (2010).

The catching-up process still has a long way to go: more than half of Brazilian regions have GDP *per capita* levels below 25% of the OECD average. In the Distrito Federal, GDP *per capita* in 2007 was 9% below the average value of OECD TL2 regions, followed by São Paulo, where GDP *per capita* was about half of the OECD average. In ten regions, GDP *per capita* was between and 25% and 50% of the OECD average, and in the remaining 15 (55% of TL2 regions), GDP *per capita* was below 25% of the OECD average value in 2007.

Examining the characteristics of the fastest-growing Brazilian TL2 regions reveals that the top 25% in terms of growth tend to have smaller populations and lower population density (Figure 1.26). Urban centres typically tend to be key drivers of growth in catching-up economies, due to the benefits of agglomeration. In Brazil, however, the fastest-growing regions are neither the largest in population size nor the most densely populated.

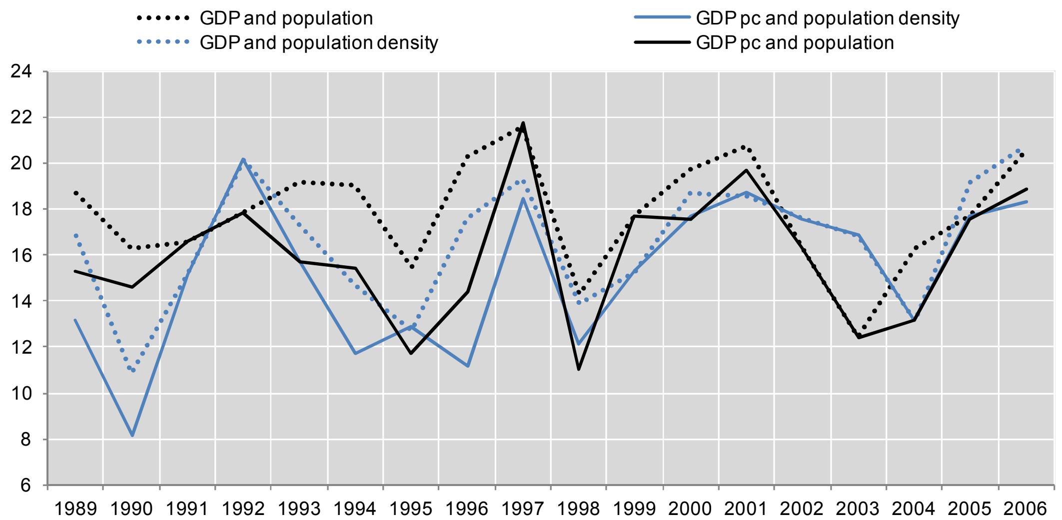
Figure 1.25. **GDP per capita gap, Brazilian regions with respect to OECD TL2 average value**



Note: Regions from the Northeast are indicated in light blue.

Source: Based on data from IBGE and *OECD Regional Database* (2010).

Figure 1.26. **Population and population density of the 25% fastest-growing TL2 regions (1989-2007)**



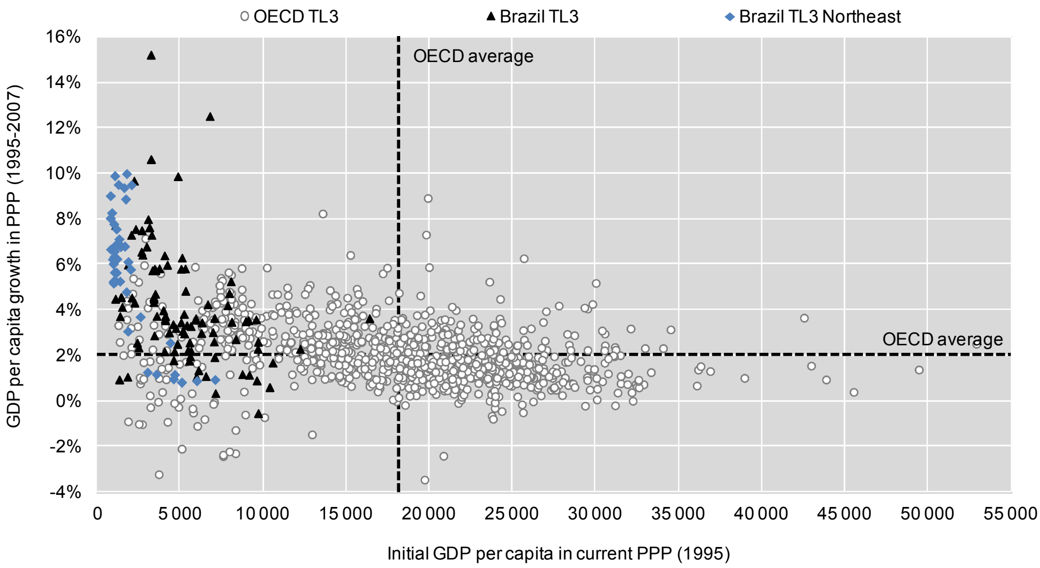
Note: The figure represents the average rank of the top 25% fastest-growing regions, ranked from low to high in population and population density. An increase in the average value implies that fast-growing regions are less populated and less densely populated.

Source: Based on data provided by IBGE.

Rural regions have performed better than intermediate and urban regions

Although the majority of TL3 regions in Brazil have also entered into a process of convergence with respect to OECD standards, several are being left behind. Almost all TL3 regions (83%) grew on average at a faster rate than the OECD TL3 average, and approximately one-third of those that grew more slowly are in the Northeast.

Figure 1.27. **End level and growth of GDP per capita in OECD regions (TL3), 1995-2007**



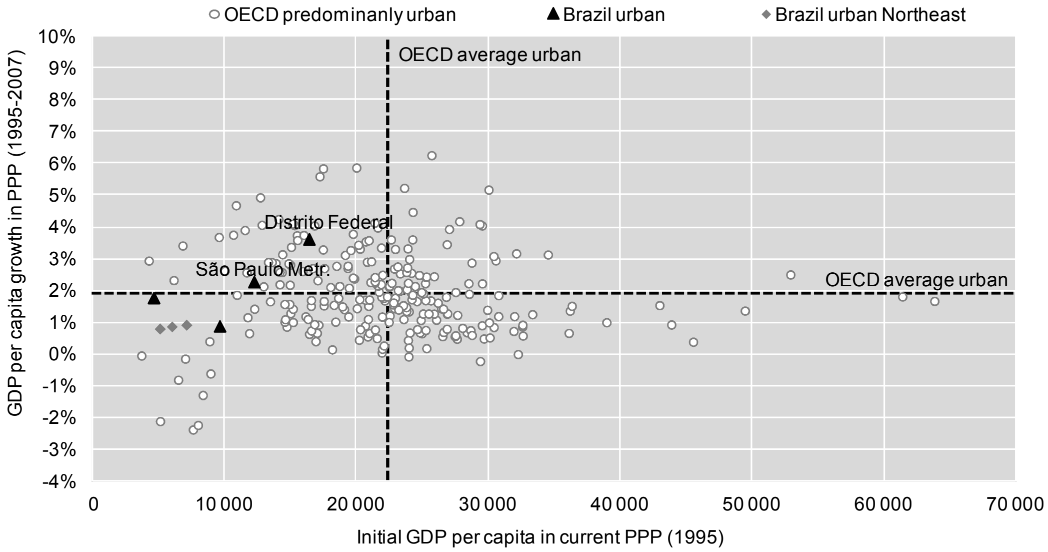
Source: Based on data from IBGE and *OECD Regional Database* (2010).

Brazil's predominantly urban regions appear to be growing slowly by OECD standards. Comparing the performance of predominantly urban regions reveals that only two Brazilian regions (Distrito Federal and Metropolitan São Paulo) grew faster than the OECD average, and the latter grew only slightly faster. The remaining five regions performed below OECD standards, in particular Metropolitan Rio de Janeiro and the three metropolitan regions from the Northeast (Salvador, Fortaleza and Recife). This is particularly worrisome given that these four regions alone represent 13% of the national population. Improving the performance in these urban centres could represent an important increase in national growth.

Brazil's intermediate and rural regions are performing above OECD standards for comparable regions. Over 1995-2007, 64% of intermediate regions and 86% of predominantly rural regions grew faster than the average rates of growth of OECD intermediate and rural regions. Among intermediate regions in the Northeast, only one (Leste Sergipano) outperformed the OECD average. Improving the performance of intermediate regions falling behind OECD growth rates can represent an important source of growth, since they are the home of 12% of the national population.

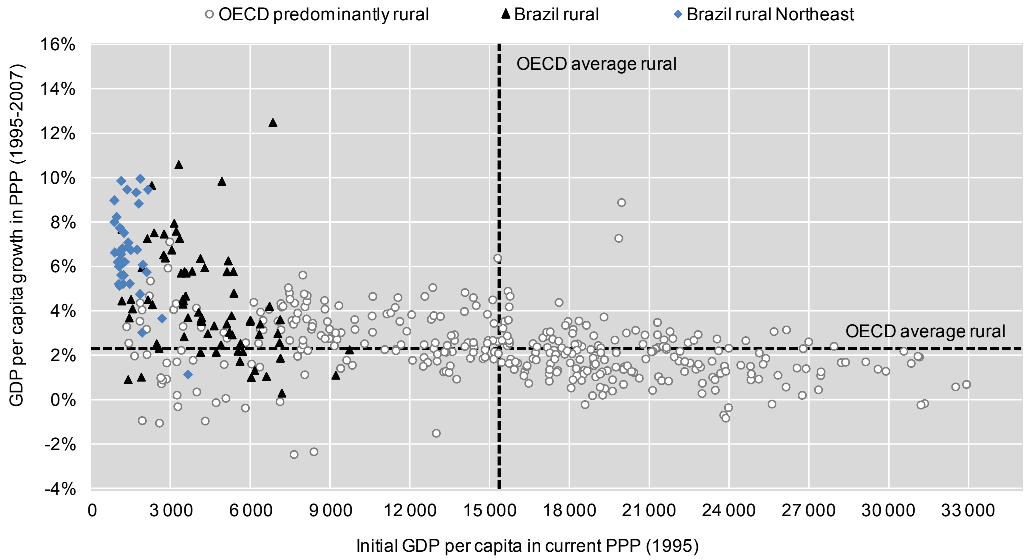
Thus, while Brazilian rural regions have performed well by OECD standards, this is not the case with predominantly urban and intermediate TL3 regions, and in particular those located in the Northeast. The inability of urban and intermediate centres in the Northeast to generate economic dynamism can partly explain the overall poor performance of TL2 regions in that region. Given the large population share living in these populated areas, improving their performance through endogenous means can on the one hand reduce dependency relationships – and therefore future remedial costs – as well as have a significant impact on national growth, as the following section shows.

Figure 1.28. **Level and growth of GDP per capita in OECD predominantly urban regions (TL3), 1995-2007**



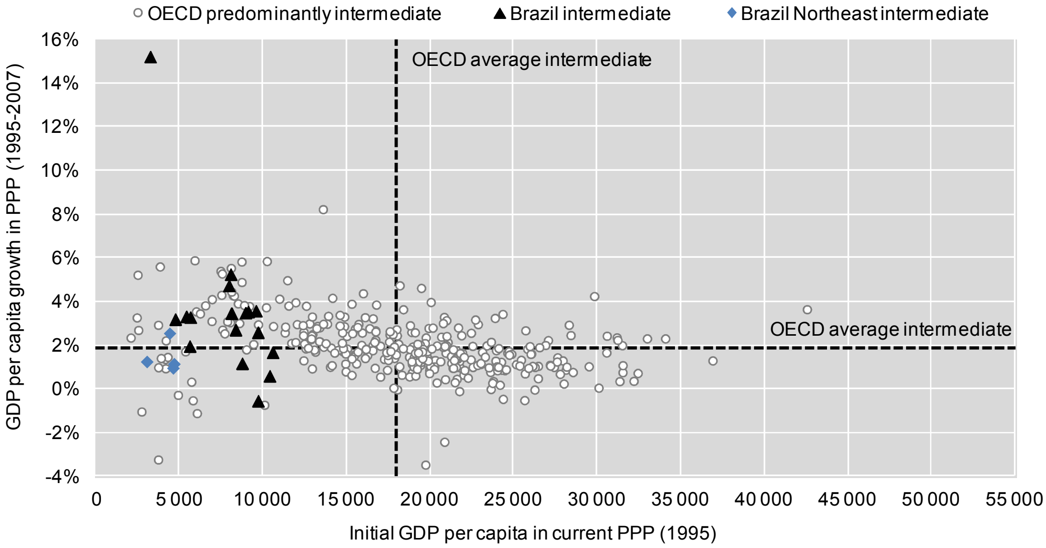
Source: Based on data from IBGE and *OECD Regional Database* (2010).

Figure 1.29. **Level and growth of GDP per capita in OECD predominantly rural regions (TL3), 1995-2007**



Source: Based on data from IBGE and *OECD Regional Database* (2010).

Figure 1.30. **Level and growth of GDP per capita in OECD intermediate regions (TL3), 1995-2007**



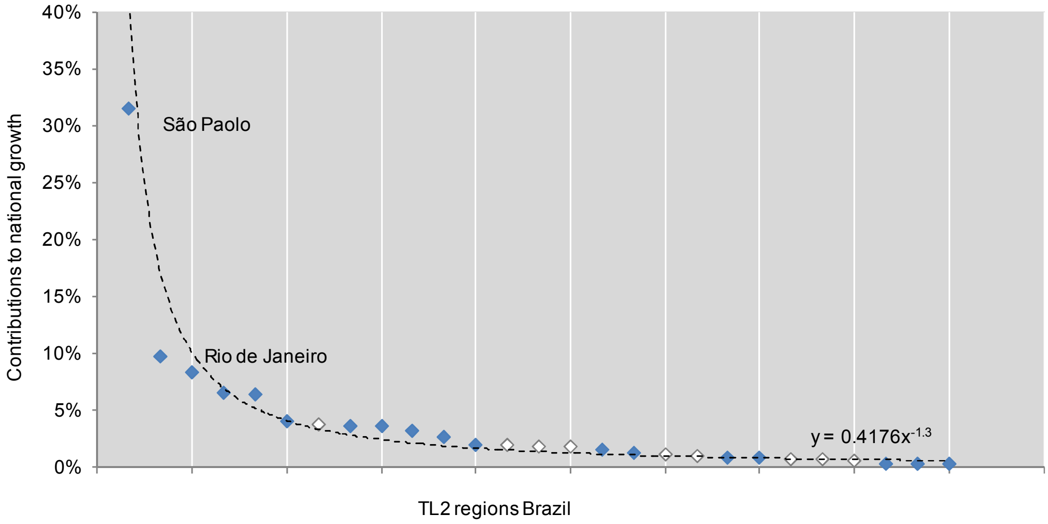
Source: Based on data from IBGE and *OECD Regional Database* (2010).

Brazil's national growth depends on the performance of many regions

A region's contribution to aggregate growth depends on two factors: its dynamism – measured by the rate of GDP growth over a given time period – and the size of its economy relative to the whole. Contributions to aggregate growth by Brazilian TL2 regions resemble a power-law distribution. As in most OECD countries, a few regions make a disproportionately large contribution to aggregate growth. The bulk of the remaining regions do not contribute much individually, but their aggregate contribution is substantial. In Brazil, São Paulo accounted for approximately one-third of aggregate growth during 1980-2007, followed by nine regions (Minas Gerais, Rio de Janeiro, Paraná, Distrito Federal, Rio Grande do Sul, Santa Catarina, Bahia, Goiás and Espírito Santo) which together contributed almost half. The remaining 17 regions (62% of the total) contributed 20% of aggregate growth. The contribution of regions from the Northeast to aggregate growth during 1980-2007 totalled 14%, which is about half their population share (28%).

Among Brazilian TL3 regions, contributions to aggregate growth also follow a power law, with just one region – Metropolitan São Paulo – contributing 15% of aggregate growth, followed by the Distrito Federal (5.4%), Metropolitan Rio de Janeiro (4.2%), Metropolitan Belo Horizonte (3.9%) and Metropolitana Curitiba (3.3%). The combined contribution of predominantly urban regions amounts to 31%, while the remaining two-thirds of national growth come from predominantly rural (37%) and intermediate regions (32%) (Figure 1.32).

Figure 1.31. **Contributions to national growth in Brazil (TL2), 1980-2007**

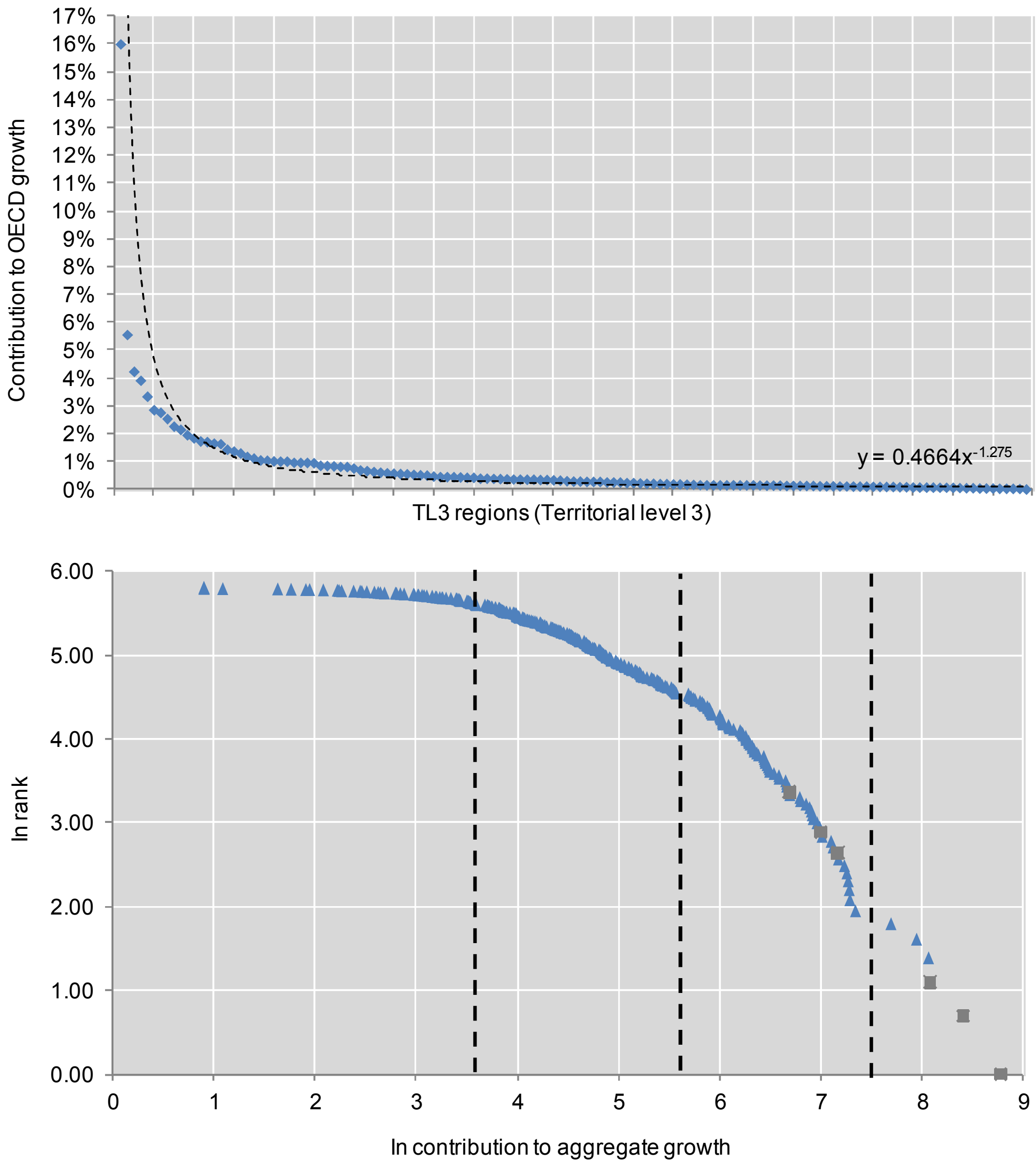


Source: Based on data provided by IBGE.

This type of distribution carries important policy implications. First, it reveals that the bulk of aggregate growth comes from a number of non-urban regions, and given their large numbers, improving the performance of all regions rather than any one individually is an important source of aggregate growth. As will be shown later in this chapter, the contribution by Brazilian regions specialising in resource-intensive activities over the period 1995-2007 has been close to half of aggregate growth. This suggests that policies that aim to tap the growth potential in all regions, rather than focusing on just a few winners, or policies designed to improve complementarities and synergies within a geographic space, as will be discussed in Chapters 2 and 3, can be important tools for aggregate growth. The shape of this distribution also suggests that average values do not carry much meaning and therefore sectoral policies that do not take into account the spatial dimension can miss their targets.

Improving the performance of a number of underperforming intermediate and urban regions in Brazil can bring significant aggregate gains. The relatively poor performance of a number of Brazilian urban and intermediate regions, when benchmarked to OECD standards, suggests that these regions are performing below their potential. Had five predominantly urban and eight intermediate regions in Brazil performed at the same rate of growth as the OECD over the period 1996-2007, Brazil's growth would have been 0.30 percentage points higher annually on average over the entire period. Moreover, had these underperforming regions recorded the average rate of growth of peer Brazilian regions, aggregate gains would have been 1.15 percentage points higher, leaving aggregate growth at 5.60% instead of 4.40% over 1997-2007 (Figure 1.33).

Figure 1.32. **Contributions to national growth in Brazil by TL3 regions (1980-2007)**



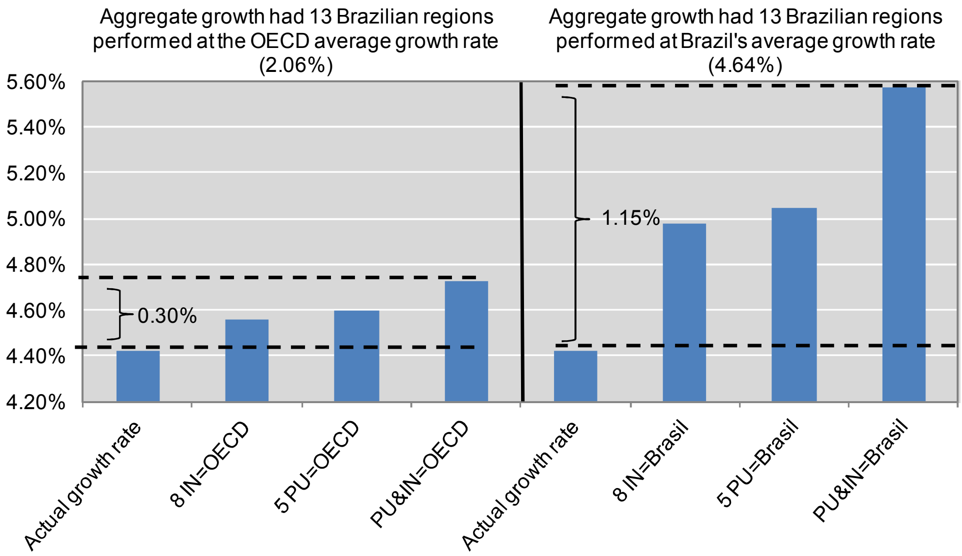
Note: The contribution of predominantly urban regions is shown in dark grey.

Source: Based on data provided by IBGE.

Tapping growth potential in Brazil's regions

This chapter examines the critical drivers of growth at the regional level among Brazilian regions, focusing on infrastructure, human capital, industry specialisation and finally innovation. The drivers of regional growth are typically influenced by a myriad of interconnected factors, such as the region's amenities, geographic location, size, demographics, industry specialisation and agglomeration effects. Although patterns of growth in Brazil may differ from those in OECD regions, given their different development phase and context, recent analysis investigating the main drivers of growth among OECD regions (Box 1.2) can shed light on some critical factors needed in Brazilian regions to sustain medium- and long-term growth.

Figure 1.33. **Hypothetical national growth if lagging intermediate and urban regions had grown at the OECD and Brazilian average rate (1996-2007)**



Source: Based on data provided by IBGE.

Infrastructure is a necessary but not sufficient condition for high GDP per capita levels

Infrastructure investments alone, unless they are accompanied by investments in human capital and innovative activities, will probably not generate growth and development. In fact, if undertaken in isolation, they can produce potential unintended consequences such as "leaking by linking" effects (OECD, 2009b). These "leaking" effects can occur when infrastructure investments are undertaken in underdeveloped regions without investing in other critical areas, and can induce firms and business to move out of the region and supply the goods and services to the region from elsewhere at lower transport costs.

In Brazil's five large regions there are big disparities in road density per unit of population. Centre-West has the highest value of paved road per inhabitant, more than twice the road density in the Southeast region and almost twice the amount in the Northeast (Figure 1.34). Furthermore, the disparities have been incremental over the period, with Centre-West constructing more roads in proportion to its population than the rest of the regions. Among TL2 regions (*estados*) disparities are even greater with the main metro-regions (Rio de Janeiro, São Paolo and Distrito Federal) recording values of paved road density seven times higher than regions with the lowest GDP *per capita*, Piauí and Maranhão, and more than 20 times higher than Mato Grosso, Roraima, Pará, Amapá and Amazonas (Figure 1.35).

Box 1.2. **Endogenous drivers of regional growth**

OECD studies find that regional performance varies substantially. While a significant number of urban regions outperformed urban ones in the past decade, the reverse is also true, suggesting that possibilities for growth exist in both types of regions. OECD analysis quantifying endogenous effects of growth at the regional level through econometric techniques identify a number of critical factors as key drivers of regional growth, including infrastructure, human capital, innovation, economies of agglomeration and accessibility to markets. More importantly, the endogenous factors complement each other, highlighting the benefits of an integrated approach.

The first critical factor generating growth is human capital. The presence of highly skilled workers in a region's workforce and the absence of low-skilled workers can both have a positive influence on regional growth. The effects of human capital also appear to persist for around a five-year time span.

The second factor is infrastructure. Improving infrastructure will not automatically lead to higher regional growth rates; investment in infrastructure needs to be combined with improvements in education and innovation. One possible explanation for this is that investments in public infrastructure do not stimulate growth in the absence of workers with the requisite levels of education and innovation activity. This suggests that it could be productive to co-ordinate policies for building human capital, enhancing innovation and providing infrastructure. The effects of infrastructure appear to last around three to five years.

The third critical element driving growth is innovation, as measured by focusing on the science and technology component of innovation, for which data are available. Innovation appears to produce positive effects over a longer time span, of approximately ten years.

Economies of agglomeration also have a positive impact on growth, although they will not by themselves generate growth, and do not constitute a sufficient condition for sustaining high growth rates. Only 45% of metropolitan regions grow faster than the national average, and the trend of divergence among urban regions implies that agglomeration economies are complex systems that work efficiently in some cases and less in others.

Finally, accessibility to markets has a positive effect on regional growth, although this effect is not very robust among the different model specifications.

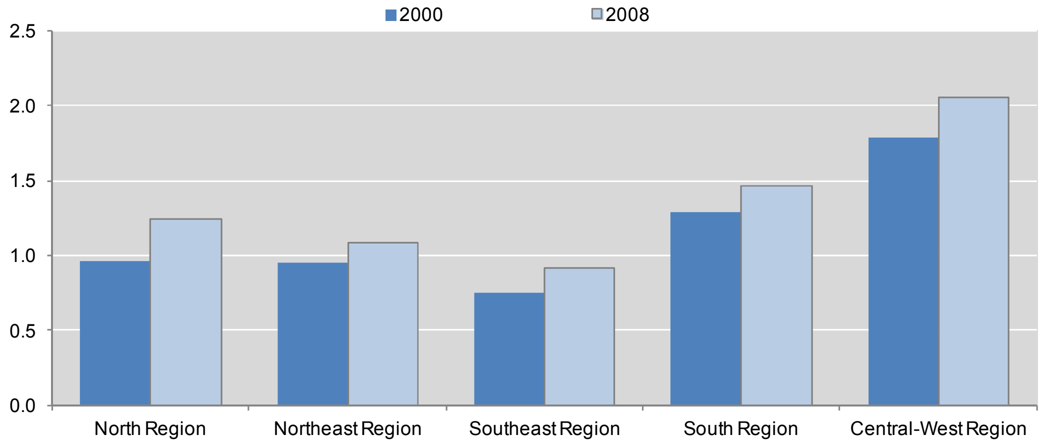
What is clear in these studies is the importance of endogenous elements driving growth at regional level and benefits associated with complementarities and an integrated approach.

Source: OECD (2009), *Regions Matter: Economic Recovery, Innovation and Sustainable Growth*, OECD Publishing, doi: *10.1787/9789264076525-en* and OECD (2009), *How Regions Grow: Trends and Analysis*, OECD Publishing, Paris, doi: *10.1787/9789264039469-en*.

Infrastructure density in Brazilian TL2 regions is a necessary but not a sufficient condition for high levels of GDP *per capita*, as depicted in Figure 1.35: regions with the highest level of *per capita* GDP (labelled B) all have density values above 5%, with the exception of Rio Grande do Sul, suggesting a necessary condition. However, among low-income regions there are a few (labelled A) with high paved density suggesting that infrastructure is not a sufficient condition for higher levels of development, and that other elements are indeed important.

Figure 1.34. **Extension of paved road density in five Brazilian regions**

Kilometres of paved road in 2000 and 2008



Note: Paved roads refers to *Rodovias Federais, Estaduais Transitórias (Estaduais Coincidentes), Estaduais e Municipais Pavimentadas, por Região e UF*.

Source: DNIT (2009), National Department of Transport Infrastructure, *www.antt.gov.br/InformacoesTecnicas/aett/aett_2009/1.1.1.asp*.

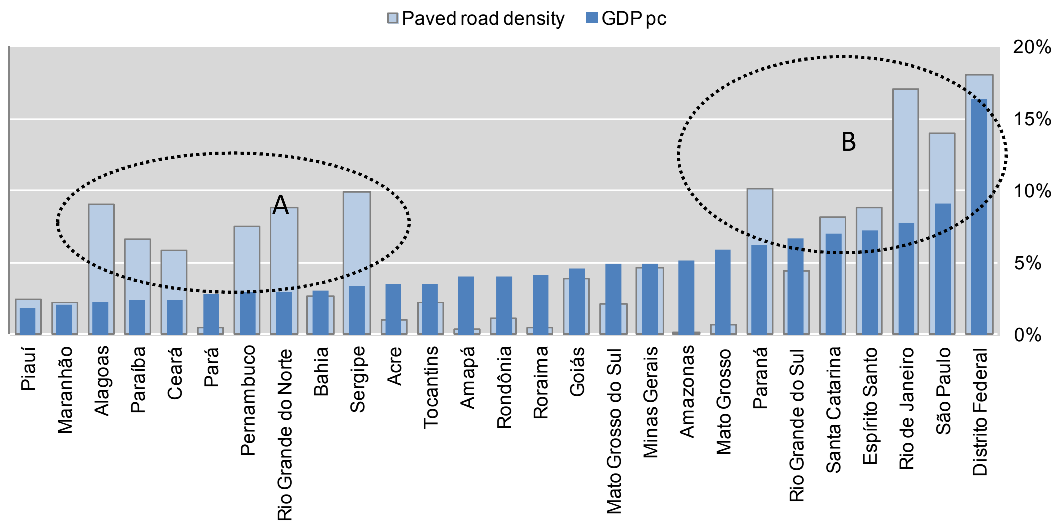
Improving human capital is a key priority for Brazilian regions

At the regional level, developing human capital is perhaps the most critical factor of growth in OECD regions, both because it has a direct effect on regional growth and an indirect effect when it interacts with infrastructure investments and innovation-related activities (OECD, 2009c). For lagging regions, inadequate levels of human capital can be a major bottleneck to development; both when regions have a large proportion of low-skilled workers in their labour force and a low proportion of high-skilled workers.

Indeed, the gains of improving human capital in Brazilian regions are quite apparent, as depicted by the positive correlation in Figure 1.36 even at the level of basic education, such as enrolment in primary schools. The figure shows how low-growth regions are associated with lower primary enrolments and higher-growth regions with higher primary enrolments.

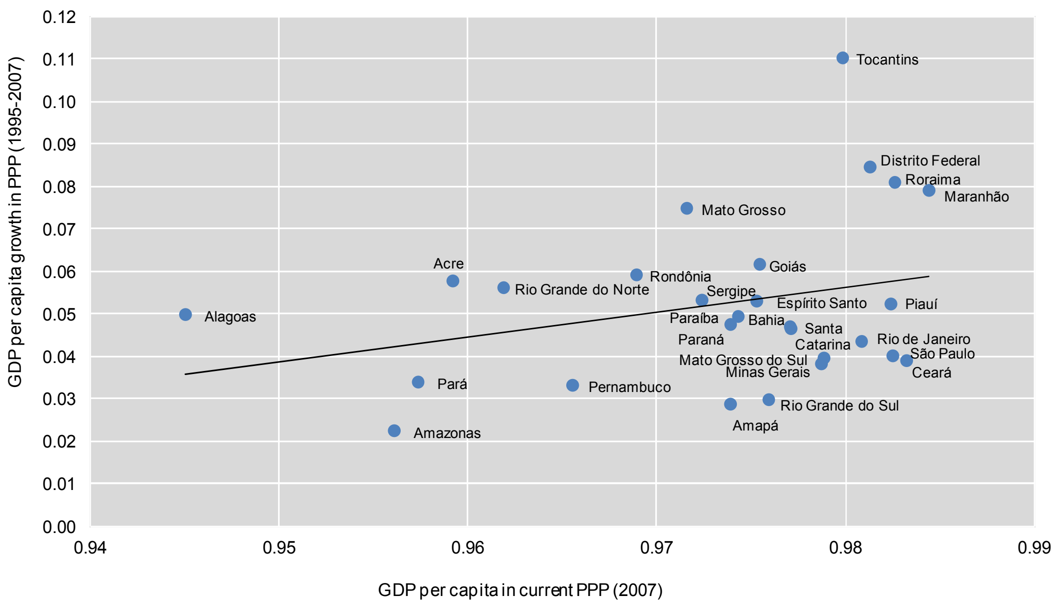
According to OECD evidence (Box 1.2) inadequate levels of human capital are a key bottleneck for development among OECD regions. It is therefore no surprise that Brazilian regions with lower levels of human capital – such as those in the Northeast – also display significantly lower levels of GDP *per capita*. As Table 1.3 shows, in São Paulo, almost 26.7% of young people are enrolled or are studying in a professional training programme. The share is 22.8% in Minas Gerais (Southeast), 21.5% in Santa Catarina (South), while it is much lower in the Northeast, with 18.2% in Paraíba (Northeast) and 9.2% in Alagoas (Northeast).

Figure 1.35. **Paved road density and GDP per capita in TL2 Brazilian regions (2008)**



Source: DNIT (2009), National Department of Transport Infrastructure, *www.antt.gov.br/InformacoesTecnicas/aett/aett_2009/1.1.1.asp.*

Figure 1.36. **GDP per capita growth and primary enrolments in Brazilian regions**



Source: Based on data provided by IBGE.

Table 1.3. **Professional training, selected states in Brazil (2007)**

Number and share of people aged ten or more enrolled in or taking a professional training course

	Alagoas (Northeast)	Paraíba (Northeast)	Minas Gerais (Southeast)	Santa Catarina (South)	São Paulo (Southeast)
Enrolled in professional training (in thousands of people)	232	546	3.823	1.119	9.597
Have taken a professional training course (% of total population)	9.2%	18.2%	22.8%	21.5%	26.7%

Source: Pacheco, C.A. (2010), "Sistemas Locais de Inovação no Brasil: Um Estudo Comparado dos SLI de Alagoas, Paraíba, Minas Gerais, Santa Catarina e São Paulo", paper produced for the OECD.

Industry specialisation

Structural change in the past decade has been a critical driver of productivity and growth. The competitiveness of resource-intensive sectors has brought growth to regions specialised in agriculture and related activities or to regions beginning to specialise in other primary sectors. Among Brazil's most dynamic regions, as defined by growth rates above the national average, all except one (Distrito Federal) are specialised in agriculture or mining activities, and all except two (Distrito Federal and Roraima) are highly specialised in resource-intensive activities (e.g. with a specialisation index[3] above 2 in agriculture or mining activities).

Resource-intensive activities have been critical drivers of overall output. Highly specialised regions (e.g. with a specialisation index above 2) in agriculture or mining activities contributed to 16% of Brazilian growth over the period 1995-2007); and regions specialised in agricultural or in mining activities (e.g. with a specialisation index above 1), which include regions with a more diversified production structure around primary activities, contributed to almost half of national output (48%), highlighting the importance of resource-intensive sectors to Brazil's overall growth.

The public sector has also played a critical role in several fast-growing regions such as in Distrito Federal and Roraima. Nevertheless, the strong presence of public sector activities is not a sufficient cause of high growth, as Table 1.4 makes clear. Few Brazilian regions specialise in manufacturing and financial services. As Brazil transforms its productive base into a modern economy, improving the stock and quality of its human capital, infrastructure and capacity to innovate will be critical factors for growth and development, especially in lagging regions that currently depend on national transfers.

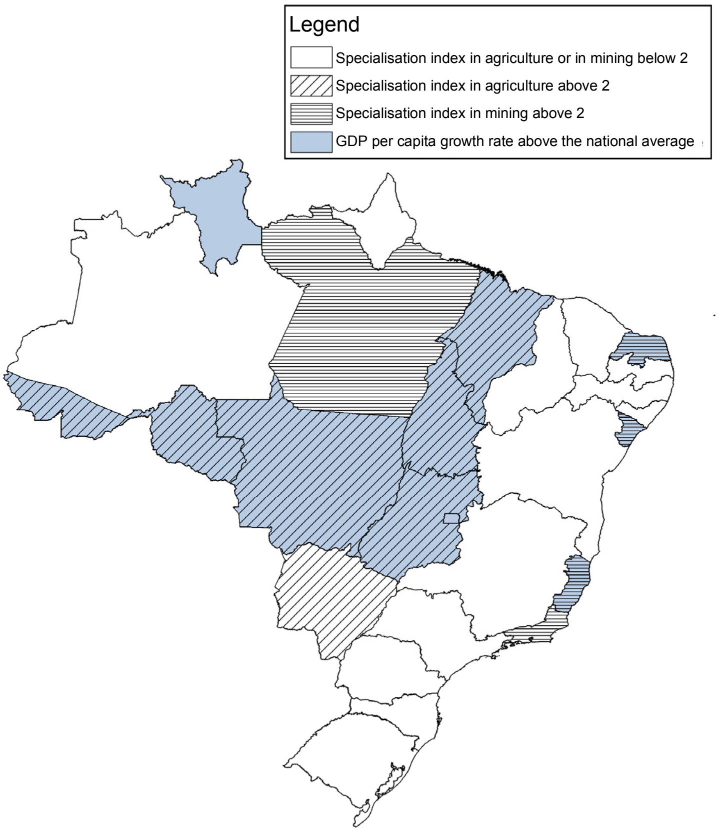
The concentration of industrial activity in Brazil's Southeast region is well known. However, even though disparities are still extremely high, the total value added in industrial activity by these regions has gradually decreased over time (Table 1.4). In the manufacturing industry for example, the Grande São Paulo's share of total national value added declined from 43.4% in the 1970s to 17.1% in 2008. With the exception of Rio de Janeiro, all regions increased their participation in national manufacturing value added, for example, Centre-West and North (8%), Minas Gerais (4%), Paraná e Santa Catarina (3%), Rio Grande do Sul and Bahia (1.7%), and Northeast (1.4%). However, the area that most increased its participation was the interior of São Paulo, whose share rose from 14.7% to 26.6% (Pacheco, 2010).

Table 1.4. **Industry specialisation in TL2 regions in Brazil (2008)**

Region	Shares	Agriculture	Mining	Public utility	Manufacturing	Public admin.	Housing	Business	International finance	Other hotels and food	Other social services	Other health and education	Other domestic	Communication	Transport	GDP per capita growth
Tocantins	0.5%	3.52	0.13	2.14	0.19	1.51	0.60	0.99	0.36	0.62	0.41	0.64	1.10	0.40	0.48	11.0%
Distrito Federal	4.0%	0.07	0.01	0.26	0.12	3.40	0.69	0.55	1.44	0.86	0.83	0.89	0.57	0.95	0.48	8.5%
Roraima	0.2%	1.09	0.08	0.46	0.17	3.00	0.90	0.82	0.44	0.82	0.59	0.24	0.57	0.66	0.49	8.1%
Maranhão	1.3%	3.76	0.84	0.58	0.35	1.24	0.95	1.09	0.38	0.92	0.51	0.39	1.19	0.47	1.33	7.9%
Mato Grosso	1.8%	4.89	0.05	0.96	0.48	0.86	0.94	1.31	0.49	0.78	0.45	0.67	0.70	0.46	0.72	7.5%
Goiás	2.6%	2.18	0.33	1.66	0.83	0.90	1.02	1.20	0.61	1.24	0.73	0.57	1.50	0.73	0.85	6.2%
Rondônia	0.6%	3.90	0.07	0.65	0.37	1.77	0.94	1.17	0.35	0.43	0.46	0.42	0.80	0.50	0.53	5.9%
Acre	0.2%	3.15	0.03	0.47	0.20	2.12	1.06	1.02	0.35	0.88	0.43	0.25	0.89	0.56	0.41	5.8%
Rio Grande do Norte	0.9%	0.77	2.89	0.70	0.46	1.75	0.93	1.12	0.50	1.49	0.58	0.64	1.35	0.63	0.69	5.6%
Sergipe	0.7%	0.88	3.02	2.51	0.54	1.55	0.93	0.84	0.51	0.84	0.58	0.53	0.89	0.55	0.88	5.3%
Espírito Santo	2.2%	1.16	4.99	0.25	0.75	0.87	0.70	1.05	0.51	1.23	0.75	0.78	0.71	0.52	1.47	5.3%
Piauí	0.6%	1.85	0.06	1.18	0.42	1.79	1.12	1.27	0.49	0.93	0.58	0.56	1.55	0.53	0.71	5.2%
Alagoas	0.7%	1.34	0.56	1.61	0.66	1.72	0.92	1.04	0.50	1.37	0.54	0.70	1.18	0.82	0.78	5.0%
Paraíba	0.9%	1.03	0.12	1.76	0.59	1.99	0.96	1.14	0.50	1.13	0.54	0.50	1.35	0.62	0.63	4.9%
Paraná	6.0%	1.60	0.06	1.49	1.04	0.69	0.95	1.28	1.03	0.96	0.90	0.85	0.96	0.76	1.25	4.7%
Santa Catarina	4.1%	1.36	0.12	1.81	1.40	0.70	1.04	1.21	0.61	1.01	0.77	0.66	0.73	0.73	0.91	4.7%
Bahia	4.1%	1.45	0.70	1.73	0.79	1.07	1.06	1.02	0.53	1.32	0.87	1.01	1.17	0.66	1.01	4.6%
Rio de Janeiro	11.2%	0.07	4.76	0.53	0.59	1.13	1.12	0.75	0.78	1.24	1.25	1.10	1.10	1.31	0.99	4.3%
São Paulo	32.0%	0.25	0.04	0.80	1.36	0.59	1.04	0.98	1.60	0.96	1.33	1.31	0.94	1.41	1.09	4.0%
Mato Grosso do Sul	1.1%	2.81	0.36	0.70	0.50	1.25	1.00	1.21	0.68	0.81	0.61	0.56	1.47	0.66	1.02	4.0%
Ceará	2.0%	1.20	0.19	1.75	0.74	1.40	1.01	1.18	0.70	1.38	0.73	0.90	1.39	0.70	0.69	3.9%
Minas Gerais	9.5%	1.60	1.27	1.35	1.13	0.87	1.01	0.93	0.65	0.81	0.86	0.78	1.11	0.77	1.06	3.8%
Pará	2.0%	1.20	4.33	1.48	0.65	1.12	1.21	0.92	0.38	0.83	0.49	0.44	1.09	0.70	0.77	3.4%
Pernambuco	2.3%	0.91	0.03	1.50	0.68	1.53	1.01	1.04	0.72	1.23	0.99	1.01	1.19	0.81	0.90	3.3%
Rio Grande do Sul	6.7%	1.78	0.06	0.66	1.20	0.86	0.91	1.19	0.85	0.73	0.85	1.24	0.95	0.75	1.02	3.0%
Amapá	0.2%	0.64	0.34	0.49	0.17	2.93	1.33	1.17	0.27	1.01	0.39	0.63	1.08	0.49	0.49	2.9%
Amazonas	1.5%	0.92	0.83	0.71	1.85	1.13	0.69	0.85	0.31	1.20	0.54	0.60	0.61	0.50	1.16	2.2%
Shares	100%	5.9%	3.2%	3.1%	16.6%	15.8%	8.2%	13.6%	6.8%	1.8%	7.2%	3.0%	1.2%	3.8%	5.0%	

Note: Regions are ranked from the top down, with the highest GDP *per capita* growth over the period 1995-2007.
Source: Based on data provided by IBGE.

Figure 1.37. **GDP per capita growth and specialisation in agriculture and mining, Brazilian TL2 regions**



Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: Based on data provided by IBGE.

Table 1.5. **Regional distribution of value added in manufacturing industry**

Selected macro-regions and states, 1970-2008

Macro-regions and states	1970	1980	1990	2000	2008
Northeast (excluding Bahia)	4.2	4.4	5.5	5.5	5.6
Bahia (Northeast)	1.5	3.1	3.4	3.4	3.2
Minas Gerais (Southeast)	6.4	7.8	8.1	9.0	10.7
Rio de Janeiro (Southeast)	15.7	10.2	7.7	6.6	6.7
São Paulo (Southeast)	58.1	54.4	48.3	45.1	43.7
Grande São Paulo	43.4	34.2	25.7	19.0	17.1
Interior	14.7	20.2	22.6	26.1	26.6
Paraná (South)	3.1	4.1	6.4	6.2	6.3
Santa Catarina (South)	2.6	3.9	4.4	5.7	5.8
Rio Grande do Sul (South)	6.3	7.9	9.5	9.4	8.0
Other states	2.1	4.2	6.7	9.0	10.1
Total	100.0	100.0	100.0	100.0	100.0

Source: Pacheco, C.A. (2010), “Sistemas Locais de Inovação no Brasil: Um Estudo Comparado dos SLI de Alagoas, Paraíba, Minas Gerais, Santa Catarina e São Paulo”, paper produced for the OECD.

Innovation-related activities

Innovation-intensive activities are key drivers of growth in the long term, especially for regions with higher levels of development, or in other words, those who have maximised their production possibilities. As with infrastructure, the positive effects of innovation-related activities in a given place go hand in hand with other important elements for growth, in particular adequate levels of human capital. In Brazil, as in many OECD countries, innovation-related activities tend to be concentrated in specific geographic areas. Brazil's innovation hubs are concentrated mainly in the TL2 regions of São Paulo, Minas Gerais and Santa Catarina. Indicators of access to the knowledge economy (e.g. access to the Internet and mobile phones) are significantly higher in these hubs: in São Paulo, 43.9% of people aged ten or over reported that they had used the Internet, while the share in Alagoas was only 17.8%. São Paulo and Santa Catarina are the states with the highest share of people using the Internet from home.

Table 1.6. **Internet and mobile phone use**

Share of people over ten years old (2008)

	Alagoas (Northeast)	Paraíba (Northeast)	Minas Gerais (Southeast)	Santa Catarina (South)	São Paulo (Southeast)
Internet					
Used Internet	17.8	26.4	33.1	40.2	43.9
Employed people who used the Internet	17.5	26.5	34.4	42.7	47.2
Used Internet at home	46.7	36.6	58.7	69.5	65.7
Used Internet at work	25.6	23.3	32.6	39.9	33.7
Used Internet at school	11.7	12.1	17.9	27.6	17.2
Used Internet in a public centre	44.4	56.0	34.6	23.8	30.8
Used Internet for education and learning	68.3	70.2	67.1	67.2	62.7
Used Internet for personal communication	79.4	84.8	82.1	85.2	84.4
Used Internet for leisure	58.9	64.2	67.9	72.1	70.4
Used Internet to read newspapers and journals	42.7	39.9	47.0	54.1	51.9
Did not have access to a PC with an Internet connection	48.3	17.0	35.2	35.0	25.4
Did not use the Internet	29.8	24.4	34.5	35.4	38.8
Mobile phones					
Own a mobile phone	36.6	45.3	55.2	60.6	59.2

Source: Pacheco, C.A. (2010), "Sistemas Locais de Inovação no Brasil: Um Estudo Comparado dos SLI de Alagoas, Paraíba, Minas Gerais, Santa Catarina e São Paulo", paper produced for the OECD.

At the firm level, the data also reveals higher innovation intensity in São Paulo, Minas Gerais and Santa Catarina (Table 1.7). In the country, around 4 200 firms report that they conduct R&D activities. Among them, about 40% are located in São Paulo, 10% in Santa Catarina, and 9% in Minas Gerais. The Northeast accounts for 6.5% of total innovating firms, while the Northeast without Ceará, Pernambuco and Bahia only accounts for 1.2% of total national innovative firms.

Table 1.7. **Innovation performance of firms by states (selected states, 2007)**

	Innovating firms (% of total firms)	Firms with innovation expenditures (number)	Innovation expenditure (% over sales)	Firms with R&D expenditures (number)	R&D expenditures (% over sales)
Brazil	38.1%	30 645	2.5%	4 268	0.6%
Minas Gerais (Southeast)	41.4%	4 238	3.9%	376	0.8%
São Paulo (Southeast)	36.4%	10 063	2.9%	1 800	0.8%
Santa Catarina (South)	37.9%	2 710	1.7%	407	0.3%
Northeast	33.8%	2 717	2.1%	277	0.3%
Northeast excluding Ceará, Pernambuco and Bahia	29.0%	758	1.5%	50	0.0%

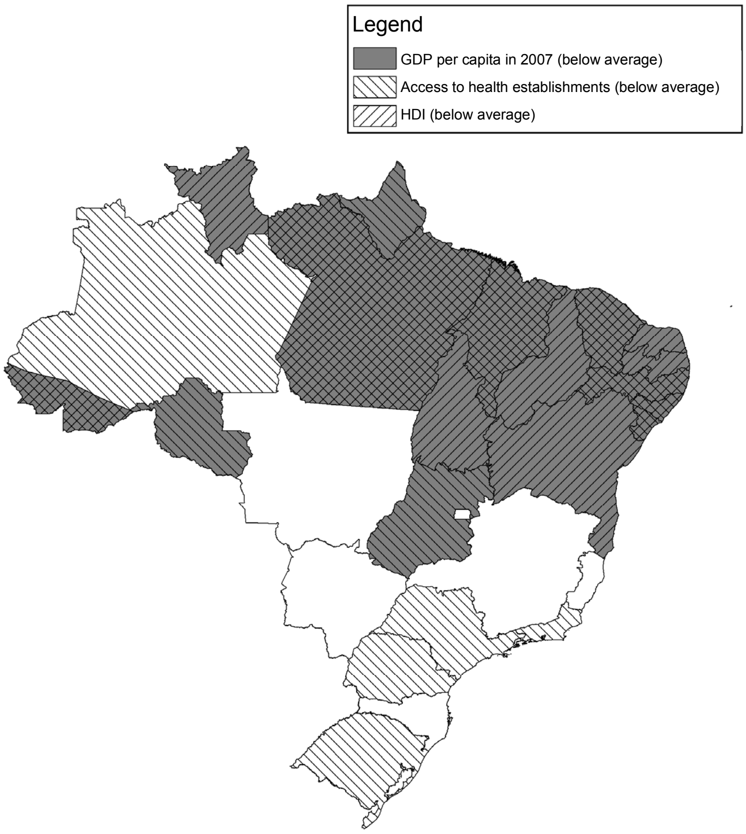
Regional development – a key pillar for improving overall socio-economic outcomes

Brazil has successfully balanced strong growth with social goals. Inequality among people and within and among regions has declined over the past years, especially since 1998. The decline in interregional inequality has been primarily driven by advances in resource-intensive regions with low initial levels of GDP *per capita* (Espírito Santo, Mato Grosso, Tocantins, Maranhão and Rondonia). Despite these favourable developments, other lagging regions mainly from the Northeast along with Pará, Acre, Amapa and Amazonas, are still lagging after three decades. As highlighted in the previous section, several regions, particularly from the Northeast, with low levels of GDP *per capita*, also display important gaps in key drivers for growth, especially in the areas of human capital and infrastructure. These regions' ability to generate dynamism and provide opportunities for their citizens is constrained by these bottlenecks. It is to no surprise that these lagging regions also display significantly lower socio-economic outcomes (Figure 1.38 and see Annex 1.A5).

Despite the successful implementation of a large number of social policies intended to benefit disadvantaged citizens, many of them located in disadvantaged areas, development and dynamism has not yet taken hold. Moreover, these policies are not cost-free. Dependency relationships between citizens and regions receiving the transfers can potentially develop, especially if they depend on external rather than endogenous resources for development and growth in the medium and long term.

Social policies in Brazil have brought many disadvantaged citizens out of poverty and provided basic public goods and services to those needing it most, but they could be enhanced by place-based polices and an attempt to address bottlenecks for development. As highlighted in this chapter, Brazilian lagging regions have significant gaps in human capital and infrastructure. Targeting these key areas for development through an integrated approach can help put them on the way to a sustainable growth path. As Chapters 2 and 3 will show, it is important to ensure that sectoral policies are targeted in space, so they interact and complement each other in positive ways and avoid unintended consequences.

Figure 1.38. **GDP per capita, access to health establishments and human development index, Brazilian TL2 regions**



Notes: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map. The Human Development Index (HDI) is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide.

Source: Based on data provided by IBGE, Ministry of Planning, Budget and Management, states and CEPAL/PNUD/OIT (2008), *Emprego, desenvolvimento humano e trabalho decente: a experiencia brasileira recente*.

Key policy and governance challenges

The analysis of regional trends and performance points to a series of regional policy challenges summarised in this section, which will be addressed in more detail in Chapter 2. In addition, this section highlighted some challenges in institutional and fiscal issues that will be further explored in Chapter 3.

Brazil's economy is more concentrated than that of any OECD country, almost double the average concentration level of OECD countries. Its settlement patterns are also very concentrated, surpassed only by Sweden and Iceland. Place-based policies can therefore be effective instruments in Brazil to help address the challenges and mobilise the potential in the geographical areas where the economy and people are most concentrated. High levels of concentration also pose challenges for the delivery of goods and services in remote and peripheral areas. A policy that does not take into account space and geography can miss its target.

According to the OECD taxonomy, half of Brazil's population lives in predominantly rural regions, approximately one-fourth in intermediate regions and one-fourth in predominantly rural regions. This implies that high levels of concentration are not necessarily driven by excessive urbanisation, despite the size of São Paolo and Rio de Janeiro, which are home to 21 million and 12 million inhabitants respectively.

The rate of urbanisation in Brazil has been relatively low when compared to other catching-up economies: urban population growth over the past decade in Brazil represents a small share of the national population (3%), as opposed to India (5%) and China (11%). Moreover, the majority of population growth in Brazil has primarily occurred in rural regions (38%), followed by intermediate (34%) and finally urban (26%) regions. Even if one allows for continued rural-urban migration on a large scale, these demographic trends imply that aggregate growth will depend largely on the extent to which upcoming generations are mobilised into productive activities in all regions, not merely on the performance of the large metropolitan areas.

Predominantly urban regions in Brazil appear to be underperforming by comparison with other OECD urban regions. Over the period 1995-2007, only two of its urban regions grew faster on average than OECD urban regions; moreover, more densely populated regions in Brazil are not its most dynamic performers. Improving the performance of urban regions and a number of underperforming intermediate regions would lift aggregate growth significantly: had five Brazilian urban regions and eight underperforming intermediate regions achieved the average rate of growth recorded by the corresponding categories of OECD regions, Brazil's average real GDP growth rate would have been about 0.33 percentage points higher over the period. Furthermore, if these regions achieved the rates attained by their Brazilian peer regions, aggregate growth would have been 1.15 percentage points higher on average. Policies capable of addressing bottlenecks that stall growth in urban systems and strengthening synergies and complementarities can bring significant aggregate gains.

The reduction of regional inequality has been mainly driven by advances in resource-intensive regions. Tocantins, Mato Grosso, Rondônia, Espírito Santo and Maranhão have made great gains, especially since 1998. Despite these favourable developments, lagging regions, located primarily in the Northeast and North (with the exception of five resource-intensive regions) still have *per capita* income levels of around half of the national average. This represents an important policy challenge for the future. The underperformance of lagging regions represents an aggregate loss in unrealised potential for growth. If these regions come to depend on external resources instead of endogenous assets, they can become a drag on national growth and represent a future cost in terms of delivery of goods and services. It will also be costly to re-integrate lagging regions and their citizens at a later date.

The contribution to Brazilian growth by regions highly specialised in resource-intensive activities (e.g. with a specialisation index above 2) was around 16% over the period 1995-2007, while the contribution to growth by regions specialised in agricultural or in mining activities (e.g. with a specialisation index above 1) was around 50%. Regions specialising in agricultural or mining have a more diversified production structure around primary activities. This suggests that policies targeted toward resource-intensive regions attempting to diversify primary activities around other sectors with higher value added can be important drivers of national growth.

Regions with the lowest socio-economic outcomes, mainly those located in the Northeast, have important gaps in key drivers for growth, particularly in human capital and infrastructure. Progress will not come to these areas and their citizens unless improvements are made in these critical areas for development.

Notes

1. Metropolitana de Salvador, Metropolitana de Fortaleza, Distrito Federal, Metropolitana de Belém, Metropolitana de Recife, Baixadas, Metropolitana do Rio de Janeiro, Metropolitana de São Paulo.

2. It is important to note that this refers to shares of the population living in regions with given characteristics – it is not the same as the share of the population living in rural/urban areas.

3. Specialisation is measured using the Balassa-Hoover index, which measures the ratio between the weight of an industry in a region and the weight of the same industry in the country according the formula: $BHi=(Yij/Yi)/(Yi/Y)$ where Yij is total employment of industry i in region j, Yj is total employment in region j of all industries, Yi is the national employment in industry i, and Y is the total national employment of all industries. A value of the index above 1 shows specialisation in an industry and a value below 1 shows de-specialisation.

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Annex 1.A1

OECD regional classification and regional typology

Regional grids

In any analytical study conducted at sub-national level, defining the territorial unit is of prime importance, as the word **region** can mean very different things both within and among countries. In order to have a measure that is comparable, the OECD has developed a regional typology for classifying regions within each member country.

The classification is based on two territorial levels. The higher level (Territorial Level 2 – TL2) consists of 335 large regions, while the lower level (Territorial Level 3 – TL3) is composed of 1 679 small regions. All the regions are defined within national borders and in most cases correspond to administrative regions. Each TL3 region is contained within a TL2 region.

This classification – which, for European countries, is largely consistent with the Eurostat classification – helps to compare regions at the same territorial level. Indeed, these two levels, which are officially established and relatively stable in all member countries, are used as a framework for implementing regional policies in most countries. In Brazil, TL2 regions correspond to 27 states (*estados*) and TL3 to 137 *mesorregiões*.

OECD regional typology

The OECD typology classifies TL3 regions as predominantly urban, predominantly rural and intermediate. This typology, based on the percentage of regional population living in rural or urban communities, allows for meaningful comparisons among regions of the same type and level. The OECD regional typology is based on three criteria. The first identifies rural communities according to population density. A community is defined as rural if its population density is below 150 inhabitants per square kilometre (500 inhabitants for Japan, to account for the fact that its national population exceeds 300 inhabitants per square kilometre). The second criterion classifies regions according to the percentage of the population living in rural communities. Thus, a TL3 region is classified as:

- predominantly rural (rural), if more than 50% of its population lives in rural communities;
- predominantly urban (urban), if less than 15% of the population lives in rural communities;
- intermediate, if the share of population living in rural communities is between 15% and 50%.

The third criterion is based on the size of the urban centres. Accordingly:

- A region that would be classified as rural on the basis of the general rule is classified as intermediate if it has an urban centre of more than 200 000 inhabitants (500 000 for Japan) representing no less than 25% of the regional population.
- A region that would be classified as intermediate on the basis of the general rule is classified as predominantly urban if it has a urban centre of more than 500 000 inhabitants (1 million for Japan), representing no less than 25% of the regional population.

Table 1.A1.1. **Classification of Brazilian TL3 regions according to the OECD classification**

#	TL3 name	Type	#	TL3 name	Type
1	Vale do Acre (Acre Valley)	PR	53	Centro Norte (Central North) de Mato Grosso do Sul	PR
2	Vale do Juruá (Juruá Valley)	PR	54	Leste (East) de Mato Grosso do Sul	PR
3	Agreste Alagoano (Agrestic Alagoas)	PR	55	Pantanais Sul Mato-grossense (Mato Grosso do Sul Wetlands)	PR
4	Leste Alagoano (East Alagoas)	PR	56	Sudoeste (Southwest) de Mato Grosso do Sul	PR
5	Sertão Alagoano (Alagoas Drylands)	PR	57	Centro-Sul (South-Central) Mato-grossense	PR
6	Centro Amazonense (Centre Amazon)	PR	58	Nordeste (Northeast) Mato-grossense	PR
7	Norte Amazonense (North Amazon)	PR	59	Norte (North) Mato-grossense	PR
8	Sudoeste Amazonense (Southwest Amazon)	PR	60	Sudeste (Southeast) Mato-grossense	PR
9	Sul Amazonense (South Amazon)	PR	61	Sudoeste (Southwest) Mato-grossense	PR
10	Norte do Amapá (North Amapá)	PR	62	Baixo Amazonas (Lower Amazonas)	PR
11	Sul do Amapá (South Amapá)	PR	63	Marajó	PR
12	Centro Norte Baiano (Central-North Bahia)	PR	64	Metropolitana de Belém (Metropolitan Belém)	PU
13	Centro Sul Baiano (South-Central Bahia)	PR	65	Nordeste Paraense (Northeast Pará)	PR
14	Extremo Oeste Baiano (Westernmost Bahia)	PR	66	Sudeste Paraense (Southeast Pará)	PR
15	Metropolitana de Salvador (Metropolitan Salvador)	PU	67	Sudoeste Paraense (Southwest Pará)	PR
16	Nordeste Baiano (Northeast Bahia)	PR	68	Agreste Paraibano (Agrestic Paraíba)	PR
17	Sul Baiano (South Bahia)	PR	69	Borborema	PR
18	Vale São-Franciscano da Bahia (Bahia São-Franciscano Valley)	PR	70	Mata Paraibana (Paraíba Forest)	I
19	Centro-Sul Cearense (South-Central Ceará)	PR	71	Sertão Paraibano (Paraíba Drylands)	PR
20	Jaguaribe	PR	72	Agreste Pernambucano (Agrestic Pernambuco)	PR
21	Metropolitana de Fortaleza (Metropolitan Fortaleza)	PU	73	Mata Pernambucana (Pernambuco Forest)	PR
22	Noroeste Cearense (Northwest Ceará)	PR	74	Metropolitana de Recife (Metropolitan Recife)	PU
23	Norte Cearense (North Ceará)	PR	75	São Francisco Pernambucano	PR
24	Sertões Cearenses (Ceará Drylands)	PR	76	Sertão Pernambucano (Pernambuco Drylands)	PR
25	Sul Cearense (South Ceará)	PR	77	Centro-Norte Piauiense (Central North Piauí)	I
26	Distrito Federal (Federal District)	PU	78	Norte Piauiense (North Piauí)	PR
27	Central Espírito-santense (Central Espírito Santo)	I	79	Sudeste Piauiense (Southeast Piauí)	PR
28	Litoral Norte Espírito-santense (Espírito Santo Nothern Coast)	PR	80	Sudoeste Piauiense (Southwest Piauí)	PR
29	Noroeste Espírito-santense (Northwest Espírito Santo)	PR	81	Centro Ocidental Paranaense (West Central Paraná)	PR
30	Sul Espírito-santense (South Espírito Santo)	PR	82	Centro Oriental Paranaense (East Central Paraná)	PR
31	Centro Goiano (Central Goiás)	I	83	Centro-Sul Paranaense (South Central Paraná)	PR
32	Leste Goiano (East Goiás)	PR	84	Metropolitana de Curitiba (Metropolitan Curitiba)	I
33	Noroeste Goiano (Northwest Goiás)	PR	85	Noroeste Paranaense (Northwest Paraná)	PR
34	Norte Goiano (North Goiás)	PR	86	Norte Central Paranaense (North Central Paraná)	I
35	Sul Goiano (South Goiás)	PR	87	Norte (North) Pioneiro Paranaense	PR
36	Centro Maranhense (Central Maranhão)	PR	88	Oeste Paranaense (West Paraná)	PR
37	Leste Maranhense (East Maranhão)	PR	89	Sudeste Paranaense (Southeast Paraná)	PR
38	Norte Maranhense (North Maranhão)	PR	90	Sudoeste Paranaense (Southwest Paraná)	PR
39	Oeste Maranhense (West Maranhão)	PR	91	Baixadas	I
40	Sul Maranhense (South Maranhão)	PR	92	Centro (Central) Fluminense	I
41	Campo das Vertentes	PR	93	Metropolitana (Metropolitan) do Rio de Janeiro	PU
42	Central Mineira (Central Mineira)	PR	94	Noroeste Fluminense (Northwest Fluminense)	PR
43	Jequitinhonha	PR	95	Norte Fluminense (North Fluminense)	PR
44	Metropolitana de Belo Horizonte	I	96	Sul Fluminense (South Fluminense)	I
45	Noroeste de Minas (Northwest Minas)	PR	97	Agreste Potiguar	PR
46	Norte de Minas (North Minas)	PR	98	Central Potiguar	PR
47	Oeste de Minas (West Minas)	PR	99	Leste Potiguar (East Potiguar)	I
48	Sul/Sudoeste de Minas (South/Southwest Minas)	PR	100	Oeste Potiguar (West Potiguar)	PR
49	Triângulo Mineiro/Alto Paranaíba	PR	101	Leste Rondoniense (East Rondoniense)	PR
50	Vale do Mucuri (Mucuri Valley)	PR	102	Madeira-Guaporé	PR
51	Vale do Rio Doce (Rio Doce Valley)	PR	103	Norte de Roraima (North Roraima)	PR
52	Zona da Mata	PR	104	Sul de Roraima (South Roraima)	PR

Table 1.A1.1. **Classification of Brazilian TL3 regions according to the OECD classification** (*cont.*)

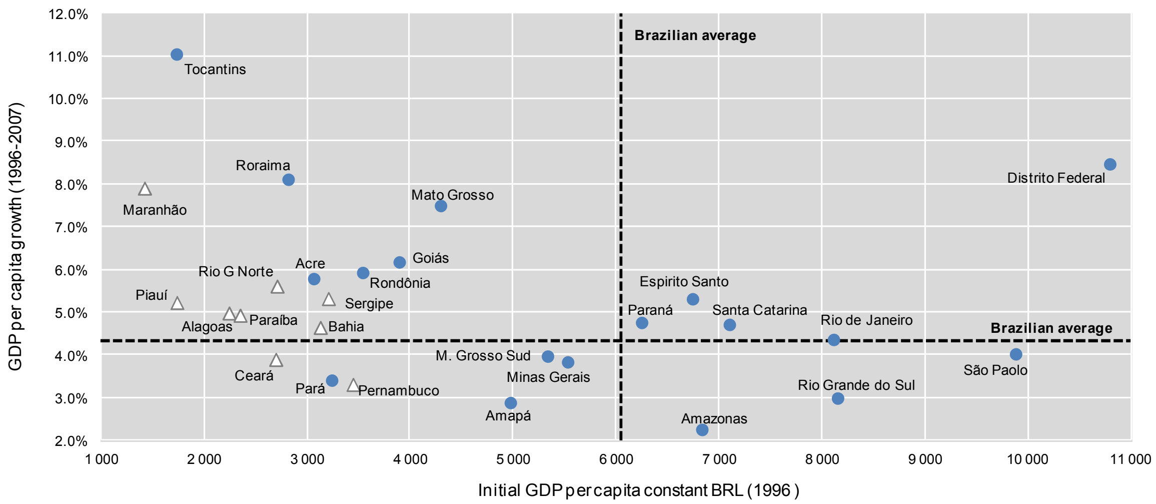
#	TL3 name	Type	#	TL3 name	Type
105	Centro Ocidental Rio-grandense (West-Central Rio Grande do Sul)	PR	122	Araraquara	I
106	Centro Oriental Rio-grandense (East-Central Rio Grande do Sul)	PR	123	Assis	PR
107	Metropolitana de Porto Alegre (Metropolitan Porto Alegre)	I	124	Bauru	PR
108	Nordeste Rio-grandense (Northeast Rio Grande do Sul)	PR	125	Campinas	I
109	Noroeste Rio-grandense (Northwest Rio Grande do Sul)	PR	126	Itapetininga	PR
110	Sudeste Rio-grandense (Southeast Rio Grande do Sul)	PR	127	Litoral Sul Paulista (São Paulo South Coast)	PR
111	Sudoeste Rio-grandense (Southwest Rio Grande do Sul)	PR	128	Macro Metropolitana Paulista (Macro Metropolitan São Paulo)	I
112	Grande Florianópolis (Greater Florianópolis)	I	129	Marília	PR
113	Norte Catarinense (North Santa Catarina)	I	130	Metropolitana de São Paulo (Metropolitan São Paulo)	PU
114	Oeste Catarinense (West Santa Catarina)	PR	131	Piracicaba	I
115	Serrana (Mountains)	PR	132	Presidente Prudente	PR
116	Sul Catarinense (South Santa Catarina)	I	133	Ribeirão Preto	PR
117	Vale do Itajaí (Itajaí Valley)	I	134	São José do Rio Preto	PR
118	Agreste Sergipano (Agrestic Sergipe)	PR	135	Vale do Paraíba Paulista (Paraíba Paulista Valley)	I
119	Leste Sergipano (East Sergipe)	I	136	Ocidental do Tocantins (West Tocantins)	PR
120	Sertão Sergipano (Sergipe Drylands)	PR	137	Oriental do Tocantins (East Tocantins)	PR
121	Araçatuba	PR			

Source: Based on IBGE data.

Annex 1.A2

Performance of Brazilian regions

Figure 1.A2.1. **Level and growth of GDP per capita in TL2 Brazilian regions (1995-2007)**



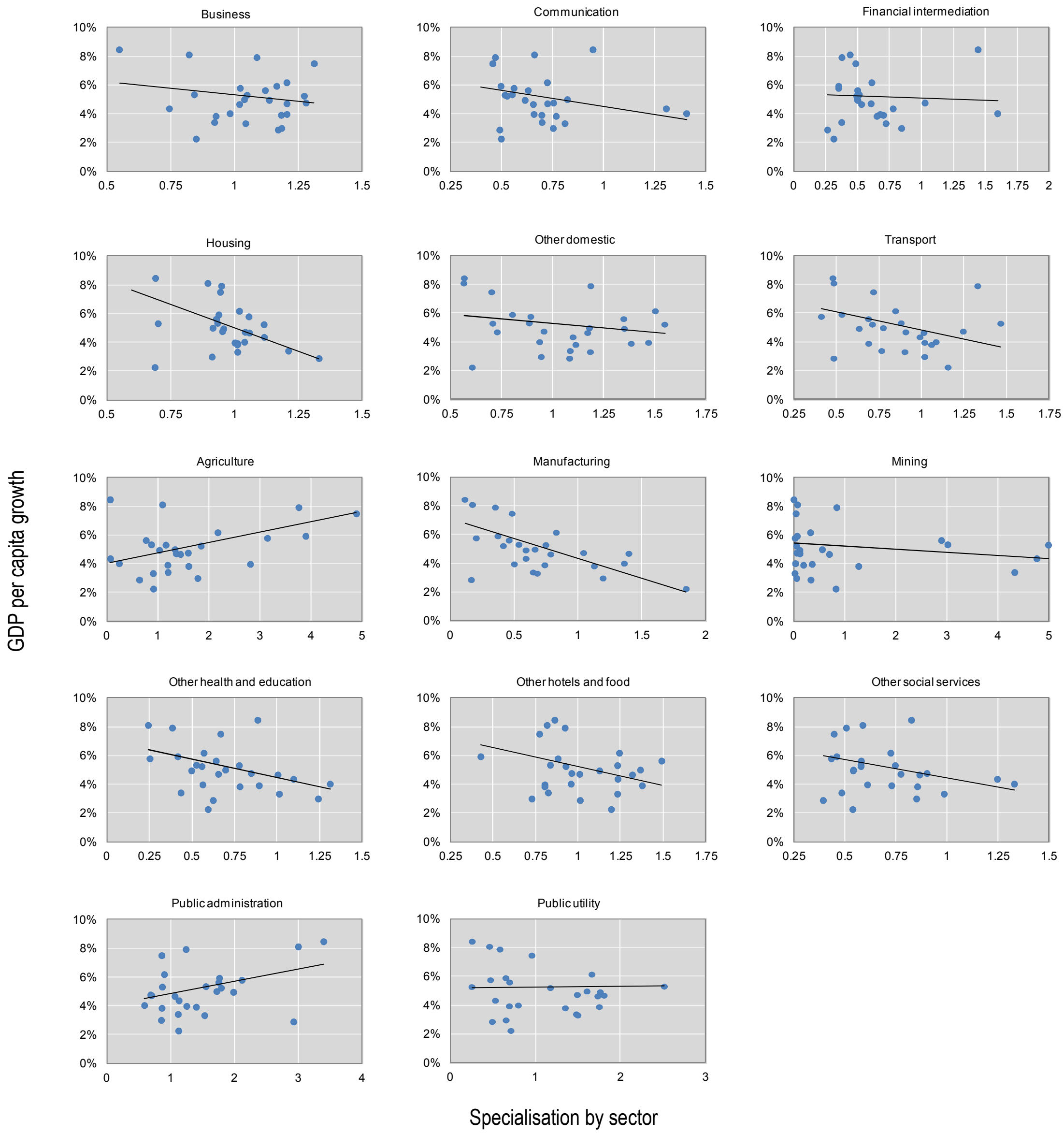
Note: Regions from the Northeast are indicated by a triangle.

Source: Based on data provided by IBGE.

Annex 1.A3

Regional specialisation and GDP *per capita* growth

Figure 1.A3.1. **GDP *per capita* growth and industry specialisation in Brazilian TL2 regions (1995-2007)**



Source: Based on IBGE data.

Annex 1.A4

Value added by industry

Table 1.A4.1. **Real value added by industry, index numbers (1996=100)**

	1997	1998	1999	2000	2001	2002	2003	2004
All industry	100	97	105	112	116	117	116	125
Extractive industries	102	115	141	139	152	166	163	193
Coal mining	126	121	113	141	108	111	101	135
Oil extraction	136	179	174	229	410	1 153	1 506	1 680
Mining metallic minerals	106	123	163	158	175	183	175	215
Mining non-metallic minerals	91	93	95	96	98	97	92	96
Transformation industries	100	96	104	111	115	116	115	123
Food and beverages	102	99	100	91	108	111	110	110
Tobacco products	94	83	99	81	92	91	75	83
Textiles	88	87	99	97	90	88	78	83
Clothing	91	91	89	85	85	76	69	70
Leather products	85	78	89	94	107	110	106	108
Wood products	102	96	132	120	131	149	172	190
Paper products	92	91	113	128	119	142	134	129
Printing and publishing	107	103	89	93	87	77	72	74
Coke, petroleum, nuclear fuel and ethanol	84	89	148	225	207	213	246	251
Chemical products	101	97	116	105	106	103	102	110
Rubber and plastic product manufacture	100	95	98	100	90	93	109	107
Non-metallic minerals	107	115	114	121	130	134	123	121
Basic metal manufacturing	108	100	117	132	132	152	158	215
Metal products excluding machinery and equipment	98	98	93	91	100	97	88	100
Machinery and equipment	102	91	89	87	101	105	97	107
Office equipment	110	109	162	251	315	172	144	120
Machines and electrical equipment	107	116	99	103	114	101	92	97
Electronic equipment	96	76	85	106	107	90	57	74
Precision equipment	97	99	103	114	107	110	93	106
Car, truck, bus manufacture including parts	106	95	78	94	92	101	108	118
Other transport equipment	125	134	184	205	281	287	238	287
Furniture and other manufacturing n.e.i.	99	102	98	106	100	97	86	87
Recycling	109	116	112	109	161	171	183	205

Source: OECD (2009), *Globalisation and Emerging Economies: Brazil, Russia, India, Indonesia, China and South Africa*, OECD Publishing, doi: *10.1787/9789264044814-en*, calculations computed from the Institute for Applied Economic Research's annual industrial research (IPEA-PIA).

Table 1.A4.2. **Employment by industry, index numbers (1996=100)**

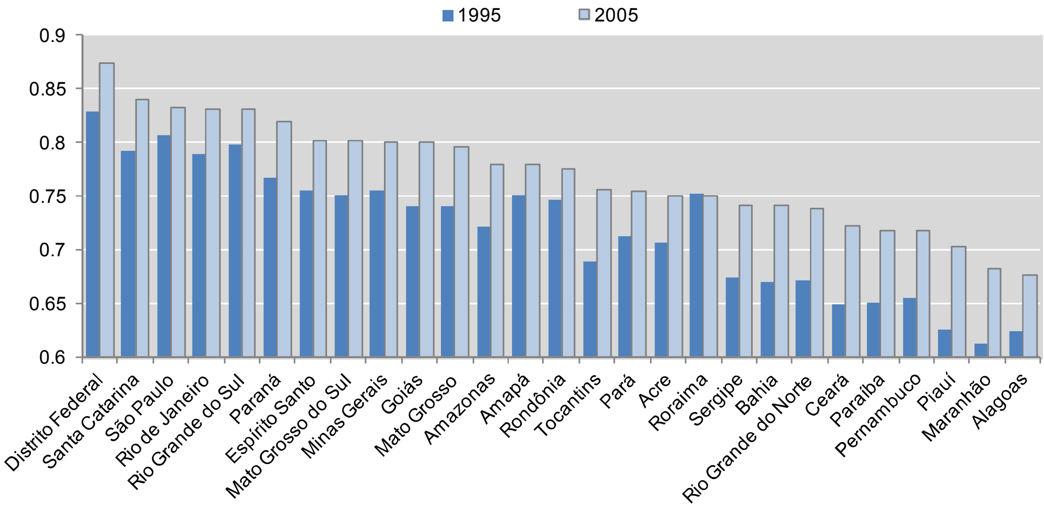
	1997	1998	1999	2000	2001	2002	2003	2004
All industry	97	95	97	103	106	108	116	124
Extractive industries	94	90	94	99	100	105	110	121
Coal mining	100	97	94	117	108	104	96	125
Oil extraction	129	133	124	237	323	515	630	846
Mining metallic minerals	81	74	72	76	76	79	84	94
Mining non-metallic minerals	100	98	107	108	108	108	112	116
Transformation industries	97	95	97	103	106	108	116	124
Food and beverages	98	99	99	104	110	112	123	135
Tobacco products	106	94	79	73	86	85	72	94
Textiles	87	87	88	95	97	96	99	107
Clothing	92	90	99	106	108	113	115	128
Leather products	90	88	102	118	128	132	149	161
Wood products	101	103	118	121	120	127	144	153
Paper products	94	90	92	91	96	104	105	106
Printing and publishing	101	101	101	101	103	97	101	103
Coke, petroleum, nuclear fuel and ethanol	85	58	54	48	48	50	60	66
Chemical products	100	96	101	106	106	104	113	117
Rubber and plastic product manufacture	102	99	103	114	111	110	130	130
Non-metallic minerals	104	106	110	117	114	115	115	121
Basic metal manufacturing	97	94	93	95	98	97	104	113
Metal products excluding machinery and equipment	101	100	99	107	111	115	114	126
Machinery and equipment	97	92	95	100	107	110	122	126
Office equipment	110	103	113	151	145	117	147	165
Machines and electrical equipment	97	98	93	103	107	106	107	114
Electronic equipment	91	79	83	96	88	85	76	91
Precision equipment	97	101	105	107	104	109	121	124
Car, truck, bus manufacture including parts	104	91	89	94	94	99	116	121
Other transport equipment	95	98	99	105	121	137	173	197
Furniture and other manufacturing n.e.i.	102	110	106	116	111	115	114	116
Recycling	114	112	136	173	231	278	394	472

Source: OECD (2009), *Globalisation and Emerging Economies: Brazil, Russia, India, Indonesia, China and South Africa*, OECD Publishing, doi: *10.1787/9789264044814-en*, calculations computed from IPEA-PIA.

Annex 1.A5

Socio-economic outcomes

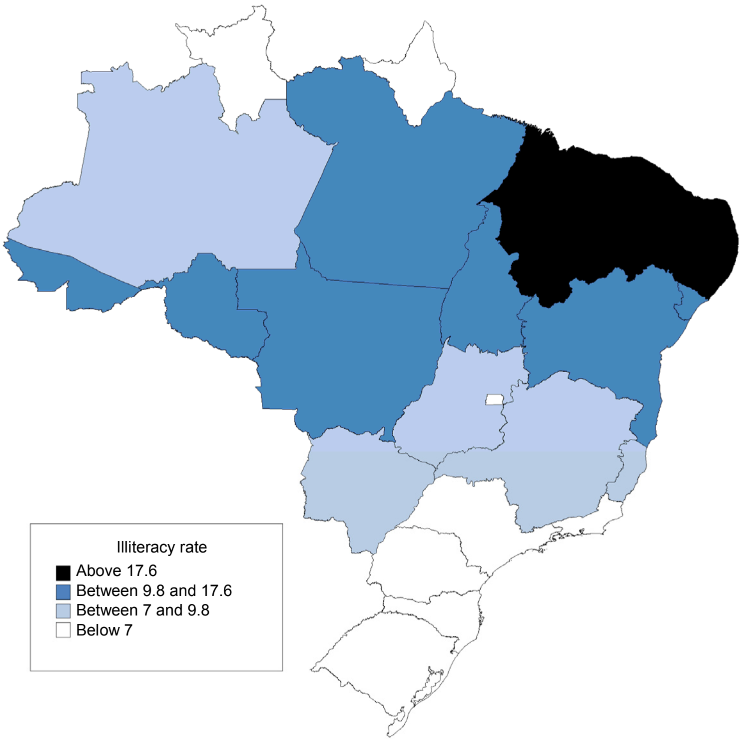
Figure 1.A5.1. **Human Development Index by state (2005)**



Note: The Human Development Index (HDI) is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide.

Source: CEPAL/ PNUD/OIT (2008), *Emprego, desenvolvimento humano e trabalho decente: a experiencia brasileira recente*.

Figure 1.A5.2. **Illiteracy rate by state (2009)**

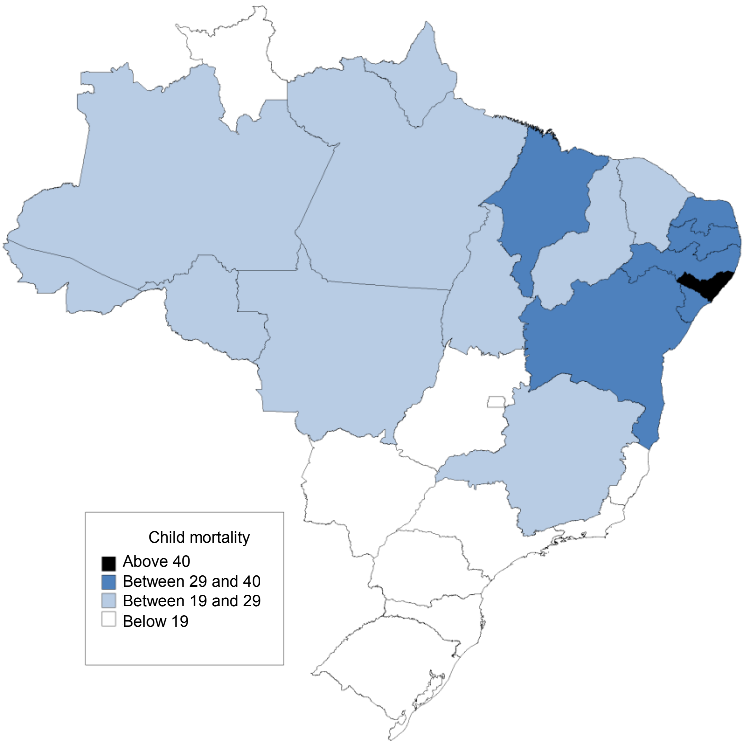


Notes: 1. Illiteracy rate of people 15 years old and more. 2. This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: Instituto Brasileiro de Geografia e Estatística (IBGE), *Síntese dos Indicadores Sociais 2010*.

Figure 1.A5.3. **Child mortality rate by state (2010)**

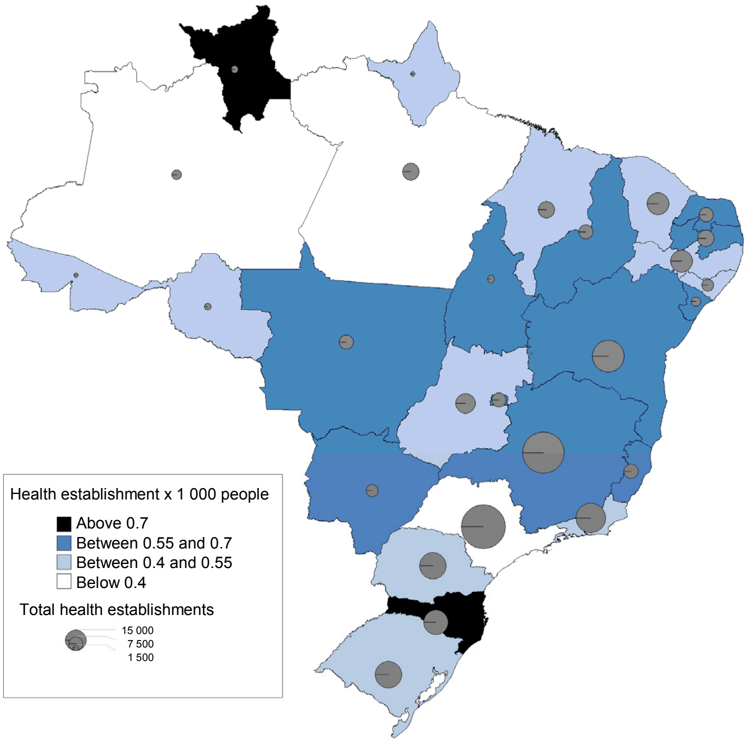
Child mortality rates per 1 000 births



Notes: 1. Child mortality rate refers to children younger than one year. 2. This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: Instituto Brasileiro de Geografia e Estatística (IBGE), *Síntese dos Indicadores Sociais 2010*.

Figure 1.A5.4. **Access to health establishments by state (2009)**

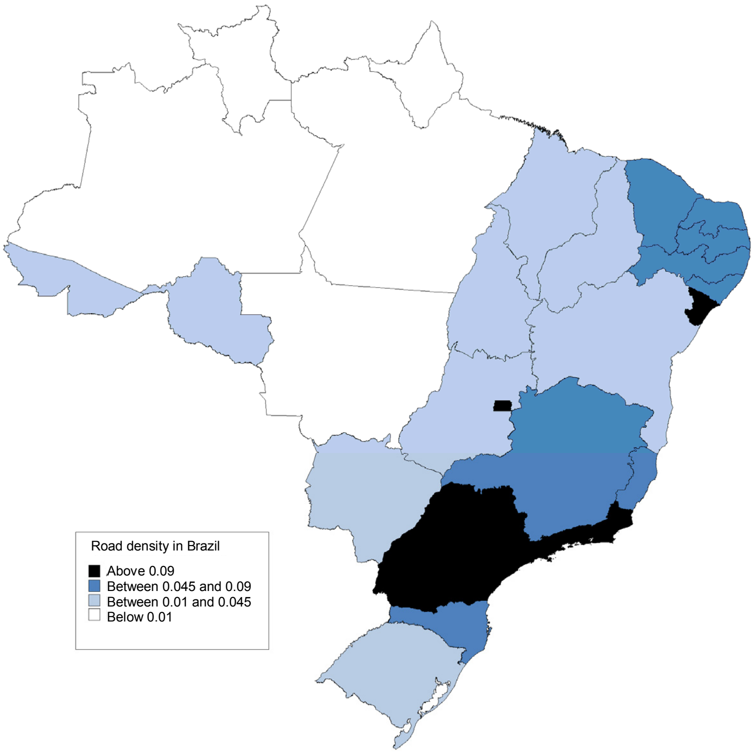


Notes: 1. Access to health establishments is computed as the share of total health establishments per 10 000 people. 2. This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: Ministry of Planning, Budget and Management, states.

Figure 1.A5.5. **Paved road density by state (2008)**

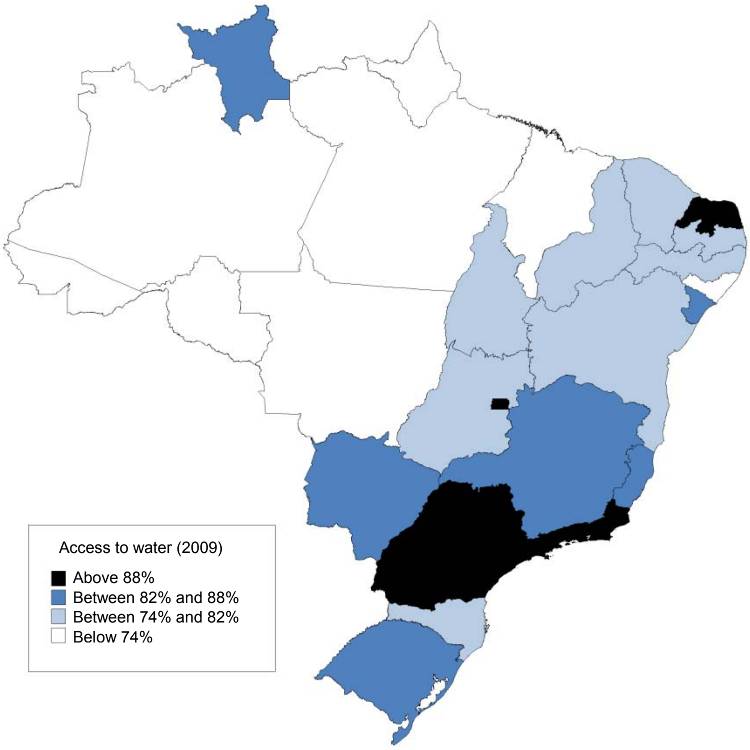
Kilometres of paved roads in proportion to the surface in square kilometres



Notes: 1. Paved roads refer to: *Rodovias Federais, Estaduais Transitórias (Estaduais Coincidentes), Estaduais e Municipais Pavimentadas*. 2. This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: DNIT (2009), National Department of Transport Infrastructure, *www.antt.gov.br/InformacoesTecnicas/aett/aett_2009/1.1.1.asp*.

Figure 1.A5.6. **Access to water per state (2009)**



Notes: 1. Percentage of households in each state, with secure access to the supply of water network. 2. This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: OECD, based on data from *Pesquisa Nacional por Amostra de Domicílios* (PNAD) (2009).

Chapter 2

Combining growth and social inclusion: The contribution of regional policies

This chapter describes the different policies in place in Brazil that have an implicit or explicit impact on the territories. The first section describes the analytical framework of this review. The second section describes two policies with direct territorial impact: the National Policy for Regional Development and the Territories of Citizenship. The third section describes the growth acceleration plans (PAC 1 and 2). The fourth section aims to identify potential synergies between regional development policy and sectoral policies, such as social policies and industrial and innovation policies. It analyses three examples: the Bolsa Família *Programme, the strategy for delivering health care services in lagging regions, and innovation and competitiveness policies.*

Introduction

Brazil's fast-growing economy is undergoing an unprecedented catching-up process. A window of opportunity now exists to make this process socially and territorially inclusive, and to reduce social and regional disparities. Despite sustained growth, the modernisation of industrial and agricultural production and major infrastructure investment programmes in the past few decades, Brazil is still an unequal country. Differences in income, education, employment opportunities, productive structure and the quality and coverage of public service delivery, housing and infrastructure have been reduced, but they persist.

The year 2003 marked a paradigm shift in federal policies in Brazil: the government instituted a major drive to make social inclusion and economic competitiveness the focus of national strategy. The goal was to support internal demand and mass consumption, in addition to boosting exports and Brazil's international competitiveness. Today's agenda aims to transform Brazil's production system and make the country an international leader in science and technology. At the same time, the government is pushing for universal access to public services such as education, health and housing, together with higher social inclusion and better employment opportunities. The policy paradigm shift, reaffirmed in 2011, revived the question of regional development and gave it new impetus. Reduction of disparities between individuals, territories and regions has been identified as a key component of the mixed-growth model, which is both export-led and driven by internal demand. If the reduction of these social and territorial disparities is to be sustainable, local sources of growth and employment must be generated to reduce dependency on redistributive transfers.

To achieve these objectives, the federal government is implementing a series of policies, with a strong emphasis on social and "people-centred" policies (i.e. targeting the poor). This chapter aims to show that each policy generates externalities, and that different policies may have mutually reinforcing impacts that could enhance their outcomes if they are combined and co-ordinated. Such policy complementarities should be recognised and supported to achieve the greatest impact. In particular, the different policies targeting poor people (direct income transfers, education, health, labour, microcredit, etc.) have important potential synergies, and should be co-ordinated to achieve the best results. This report also confirms that a concentration of poor people and the need for new infrastructure tend to be more acute in lagging regions. One way of co-ordinating these different sectoral policies is to recognise their link with the territory, and to approach them within the framework of a place-based, regional development approach. Regional development policy could be a useful tool for overcoming the challenges faced by policy makers in co-ordinating sectoral action, as well as for vertically co-ordinating action by different levels of government.

This chapter aims to describe the different policies in place in Brazil that have an implicit or explicit impact on the territories. The first section describes the analytical framework of this review. It is based on the understanding that in addition to policies with direct regional targets, some policies that do not explicitly target the territory may nevertheless have a large impact on regions. Different policies that have an impact on a given territory may have complementarities that, if identified and exploited, can enhance their effectiveness. The second section describes policies with direct territorial impact. It starts by describing the evolution of regional development policy in Brazil, from the 1960s to the current National Policy for Regional Development instituted by the Ministry of National Integration (MIN). It also analyses activities initiated by other ministries that can be considered regional development policies, such as the Territories of Citizenship, created as a strategy for rural development by the Ministry of Agrarian Development. The third section describes the growth acceleration plans (PAC 1 and 2). These are large public investment programmes that were not designed with a regional development objective or framework, but which will have a major impact on the regions. The fourth section aims to identify potential synergies between regional development policy and sectoral policies, such as social policies and industrial and innovation policies. It analyses three examples: the Bolsa Família programme, the strategy for delivering health care services in lagging regions, and innovation and competitiveness policies.

Chapter 3 analyses the challenges Brazil faces in co-ordinating these different policies to make the most of potential synergies, and describes instruments used in Brazil and in OECD countries to achieve this goal.

Mapping federal policies for regional development: Actions with explicit and implicit territorial targets

Policies can be conceived of as universal, intended to reach all the individuals and places of a country in a uniform fashion, or they may target only specific segments of the population or the territory. To reach the desired outcome, policies may be implemented in a uniform manner, or they may require differentiated interventions tailored specifically to the people or the territory. Some policies have an explicit territorial target: regional development policies, rural and urban development policies, etc. Others target all the citizens of a given country, but may have implicit or unintended territorial impacts. For example, if poor people are concentrated in specific regions, a policy targeting the poor will necessarily have a territorial impact on the regions where they are most concentrated. In the same way, a policy targeting territories with high concentrations of poor people (such as lagging regions) and aiming to bridge the various gaps that prevent these regions from growing (infrastructure gap, trained workforce, etc.) will influence the social outcome and potentially help to reduce poverty.

Brazil's current development strategy aims to achieve growth with social inclusion. The federal government has implemented active economic and industrial policies on the one hand, and on the other, active social policies such as the Bolsa Família programme. Recent work by the OECD has shown that better results could be achieved by not segregating the different policies, but finding and exploiting complementarities between them (OECD, 2009a). For example, a people-based policy such as Bolsa Família could have the greatest impact if it were combined with labour policy or microcredit programmes, to give employment opportunities to the newly educated generation. It would also be facilitated if living conditions were improved by the construction of sanitation and water infrastructure, or by increasing the share of paved roads and the number of households connected to electricity. Improvements in public infrastructure, for example in transport connectivity (roads, railways, ports, airports), electricity and water, could similarly help to attract private firms and create a critical mass for the region to move forward. All these policies are complementary, i.e. the impact of one is greater when the others are present. But the relevant policy mix and needs differ from one region to the other, depending on their specific problems and assets. Regional development policy could be a useful tool for co-ordinating these different sectoral policies in the territory, to make the most of potential synergies and achieve greater growth and social inclusion in all regions, as well as a reduction of disparities between different regions.

The challenge is to identify the possible complementarities between different policies, and to design specific instruments to promote the synergies between them (Box 2.1). Table 2.1 presents a taxonomy of federal policies, differentiating between policies with explicit territorial impact (such as the regional development policies carried out by the Ministry of National Integration, or the Territories of Citizenship created by the Ministry of Agrarian Development) from those that have implicit territorial impacts. Besides, policies are also classified according to their target. They can target: *i*) people's income (individuals and families); *ii*) production units (firms, entrepreneurs or institutions for competitiveness); or *iii*) public services and infrastructure gaps. Table 2.1 also shows the variety of institutions that carry out policies with an implicit or explicit impact on territories. Finally, it gives an indication (as far as data is available) of the amount of resources allocated by the federal government to each policy area.

Box 2.1. **Policy complementarity**

Policy measures often generate externalities, which can increase their effectiveness if they are properly used. The concept of policy complementarities refers to the mutually reinforcing impact of different actions on a given policy outcome. Policies can be complementary because they support the achievement of a given target from different angles (as in the case of production development policy, innovation policy and trade policy, all of which support the competitiveness of national industry). Alternatively, a policy in one domain can reinforce the impact of another policy. For example, cash transfers for the poor can help to identify the most deserving recipients and municipalities and make it easier to design microcredit programmes for that target group. On the other hand, microcredit programmes may help individuals escape poverty by helping them engage in a productive activity rather than relying on social assistance.

The dimension of time, or "sequencing", is also important in policy complementarity. Some policies are best put in place and strategically planned simultaneously. For example, innovation, industrial and trade policies must be synchronised to address the issue of industrial competitiveness from all angles. Other policies realise their synergies in a sequential way. For example, investments creating broadband infrastructure need to be followed up with specific policies targeting access and diffusion of those services to the population.

Complementarities between policies can be "latent", and can be fostered by specific governance arrangements, for example if mechanisms to co-ordinate state, municipal and federal action in education are in place. Alternatively, they can be induced, by combining different policies through conditionality schemes (as in the case of educational and health care conditionalities in the Bolsa Família Programme), or when the complementarities are the result of strategic planning. Employment generation opportunities, for example, can be attached to direct cash transfers to support the inclusion of poor people in production, so that they can avoid dependency on income transfers.

Policy complementarities can also be spontaneous when they appear as externalities of independent actions of ministries or bodies that design their interventions, or are attached to existing initiatives. The microcredit programme introduced by the *Banco do Nordeste* for the rural and urban poor uses the Single Registry of Bolsa Família to target and monitor recipients. In the case of Bolsa Família, for example, an evaluation conducted in 2007 shows that the programme has a positive impact on food security, increasing the quantity and variety of food consumed by its beneficiaries.

* The evaluation included a multiple-choice questionnaire sent to 5 000 Bolsa Família card holders in 229 municipalities in the Northeast, Centre-West, Southeast, North and South regions.

Source: iBase (2008), *Repercussões do Programa* Bolsa Família *na segurança alimentar e nutricional das familias beneficiadas*, IBase, Rio de Janeiro.

Table 2.1. **A taxonomy of federal policies by territorial target**

Territorial target	Policy target		Programmes (selected examples)	Ministry responsible/ institution	Policy area	Scope of the policy	Major institutional actors involved	Financial resources for major programmes (planned and executed)
Explicit	Specific regions/ territories	Priority macro-regions	Promeso Conviver Faixa de Frontera	Ministry of National Integration (MIN)	National Policy for Regional Development	Regional development and co-ordination of policies in the territory. Constitutional funds offer support to production and business development in selected macro-regions	MIN, states, municipalities, Ministry for Agriculture, *Banco do Nordeste do Brasil*, Bank of Amazonia (BASA), *Banco do Brasil*	Resources from the federal budget (OGU), FCO (Centre-West), FNE (Northeast) and FNO (North)
		Specific areas	Territórios da Cidadania	MDA	Rural development	Co-ordination of federal actions targeting poor rural areas	22 federal, state and municipal bodies	BRL 37.7 billion in 2008-09 BRL 27 billion in 2010
Implicit	Infrastructure gap	Country wide	Investment for Transnordestina, Suape and Rio São Francisco, for example	Executive Office of the President (*Casa Civil*)		Infrastructure development in the whole country	Municipalities, states, federal government, Petrobras	Resources from the federal budget (OGU) for PAC1 and PAC2
			National Broadband Initiative (*Programa Nacional de Banda Larga*)	Ministry of Communications	Tangible and intangible infrastructure development	Access to ICT	Ministry of Communications, Ministry of Science and Technology (MCT), Ministry of Industry and Trade (MIDIC), Ministry of Health, Ministry of Education, Ministry of Planning, Telebrás, National Telecommunications Agency (ANATEL), states and municipalities	BRL 316 million in 2010 and BRL 276 million in 2011 (announced budget for 2010-11: BRL 1 billion, effective budget, BRL 600 million)
		Specific areas	Luz para Todos	Ministry of Mining and Energy (MME)		Access to electricity in poor rural areas/communities	MME, states, National Electricity Regulatory Agency (ANEEL), Eletrobrás	Planned budget BRL 20 billion (2003-08) (71.5% federal government 28.5% states and electric companies)
			Projetos Multisetoriais Integrados Urbanos	National Bank for Economic and Social Development (BNDES)		Support for integrating programmes for urban qualification	States, municipalities	Supports programmes of more than BRL 10 million

Table 2.1. **A taxonomy of federal policies by territorial target** (*cont*)

Territorial target	Policy target		Programmes (selected examples)	Ministry responsible/ institution	Policy area	Scope of the policy	Major institutional actors involved	Financial resources for major programmes (planned and executed)
Implicit	People's needs	Country wide	Bolsa Família	Ministry of Social Development (MDS) and the Fight Against Hunger	Social development	Poverty reduction (direct income transfer with conditionalities on health and education)	Municipalities, Ministry of Education, Ministry of Health	BRL 12.34 billion in 2009 BRL 13.4 billion in 2010 (Note that discussions to double the budget and add BRL 14 billion to the programme are under way)
			Programa Brasil Alfabetizado	Ministry of Education (MEC)	Education	Literacy for children, adults and senior citizens	Municipalities, State Secretaries of Education	BRL 290 million in 2008 (BRL 604 million in 2006)
			Saúde da Família	Ministry of Health	Health	Delivery of health care services	Municipalities	
			Farmacia Popular			Access to drugs	Foundation Oswaldo Cruz (FIOCRUZ), network of private pharmacies	BRL 470 million for 2011
		Specific areas	*Minha Casa Minha Vida*	Ministry of Cities	Urban development	Access to proprietary housing for urban poor	*Caixa Económica*, states, municipalities, BNDES	Federal government. BRL 16 billion for 400 000 houses for families with 0-3 minimum wages. Federal government (2.5) and FGTS (7.5) for 400 000 houses for families with 3-6 minimum wages, plus investments in infrastructure BRL 5 billion.

Table 2.1. **A taxonomy of federal policies by territorial target** (*cont*)

Territorial target		Policy target	Programmes (selected examples)	Ministry responsible/ institution	Policy area	Scope of the policy	Major institutional actors involved	Financial resources for major programmes (planned and executed)
Implicit	Entrepreneurs, firms, institutions for competitiveness	Country wide and/or sectoral	Sectoral funds	Ministry of Science and Technology/ Research and Projects Financing (MCT/FINEP)	Production development, trade and science, technology and innovation	Support to R&D in key technology sectors	MCT/FINEP	BRL 1.433 billion in 2008 (executed BRL 1.390 billion)
			Complexo Indústrial Saúde	MIDIC/Ministry of Health		Integrated support for the health care sector	MIDIC, Ministry of Health, BNDES, MCT	BRL 17.530 billion for 2008-13
			SIBRATEC	MCT/FINEP		Support for science-industry linkages	MCT/FINEP, State Secretaries for S&T, State Councils for R&D, universities and research centres	BRL 20.8 million MCT + BRL 9.6 million from states (23% NE, 40% SO, 37% Sul)
			Institutos Nacionais de C&T	National Council for Scientific and Technological Development (CNPq)		Support co-ordination of research groups in frontier scientific areas throughout Brazil	CNPq, Capes/MEC, State Foundations for R&D Amazonas (Fapeam), Pará (Fapespa), São Paulo (Fapesp), Minas Gerais (Fapemig), Rio de Janeiro (Faperj), Santa Catarina (Fapesc), Health Ministry, BNDES	BRL 270 million for 2008-10 (in Minas Gerais, Rio de Janeiro and São Paulo, the programme will receive additional support from the State Foundations for R&D for the same amount of the federal contribution up to a maximum of BRL 30 million for Rio de Janeiro and Minas Gerais and BRL 75 million for São Paulo).
		Specific areas and/or sectoral	Cluster development (APLs)	Ministry of Industrial Development and Trade (MIDIC)	Production development, trade and science, technology and innovation	Competitiveness of SMEs	Federal government (MIDIC, MCT), BNDES, ABDI, Support Service for Micro and Small Enterprises (SEBRAE)	
			Programa ABC	Ministry of Agriculture	Agricultural development	Credit to agro-business and co-operatives for low-carbon agricultural production	Ministry of Agriculture, BNDES	BRL 2 billion for 2010/11 (new programme launched in 2010)
			PRONAF	Ministry of Agrarian Development (MDA)	Rural development	Credit to agricultural family workers	Ministry of Agrarian Development (MDA), Ministry of Agriculture, *Banco do Brasil*, BNB, Bank of Amazonia, BNDES	BRL 12 billion 2007/08 and BRL 13 billion 2008/09
			Crediamigo and Agroamigo	BNB	Production development	Microcredit for urban and rural areas in the Northeast	BNB	

The rebirth of explicit regional development policies in Brazil

From "problems" to "opportunities": The paradigm shift in regional development policy in Brazil

Early experiments in regional development policy in Brazil started in the 1960s

Regional development has been a concern in Brazil since the 1960s, when it was necessary to confront the development challenges in the Northeast region, and in particular, the problems caused by droughts and its semi-arid geography. In the early days, regional policy was synonymous with water and irrigation policy. During the industrialisation phase in the 1950s, the Northeast was ranked lowest in Brazil on different indicators of well-being (low educational attainment, pervasive poverty, high unsatisfied basic needs, huge infrastructure gaps, etc.). Moreover, its production system was oriented towards exports of raw materials and primary products with low productivity, low value added and few local linkages. The federal government realised that the Northeast required a targeted, specific approach and created a Working Group for the Development of the Northeast (*Grupo de Trabalho para o Desenvolvimento do Nordeste*, or GTDN).

In 1958, GTDN produced a policy analysis concluding that the problem of the Northeast extended beyond merely climatic issues, and needed to be tackled from a global perspective. The document, drafted by Celso Furtado, identified the main challenges for the development of the Northeast, and called for the creation of the first agency for regional development in Brazil, the Superintendency for the Development of the Northeast (*Superintendência de Desenvolvimento do Nordeste*, or SUDENE). The SUDENE was created in 1959 to make it possible to co-ordinate federal actions in the region by requiring multi-year planning of public investments. It also provided a forum, the Deliberative Council (*Conselho Deliberativo*) where the state governors could talk to the federal government. This first Superintendency was followed in 1966 by the creation of the Superintendency for the Development of the Amazon (SUDAM), and in 1967, by the Superintendency for the Development of the Centre-West (SUDECO) and the Free Zone of Manaus (SUFRAMA), which had similar mandates in their territory.

The existence of poor and less dynamic areas was seen as a visible consequence of the industrialisation strategy, which had promoted a concentration of efforts to achieve economies of scale and critical mass. A compensatory policy targeting specific regions was therefore needed, and the regional approach focused on a reduction of regional disparities through policies intended to attract capital and production. Fiscal incentives and subsidised credit were used as the main instruments for attracting production facilities to lagging areas. The main policy goal was to reverse the rising inequality and the growing concentration of economic activities resulting from industrialisation. The results of those policies fell far below expectations, and regional disparities remained acute.

After a pause during the crisis of the 1980s-1990s, regional development policy is revived in the new millennium

During most of the 1980s and 1990s, Brazil – and its Latin American neighbours – went through unstable economic times, with low economic growth, high inflation, debt defaults, highly restricted access to credit and capital markets, etc. Given the macroeconomic instability, public action focused on the short-term concern of reducing deficits and inflation, and regional development efforts were put on hold.

By the end of the 1990s, with the return of macroeconomic stability and the beginning of a sustained period of growth, Brazil gradually resumed an active public policy approach, and regional development came back onto the agenda. The federal government recognised that regional disparities were a barrier to sustained national growth, and carried out reforms to modernise the institutional setting. In 1999, the federal government created the Ministry for National Integration (MIN), to formulate a national policy for regional development, taking over the competences of the previous Special Secretariat for Regional Policies (*Secretaria Especial de Políticas Regionais*, or SPR). In 2001, the existing superintendencies for regional development were replaced by much less powerful regional development agencies, and placed under the authority of the MIN.

The change of government in 2003 ushered in a shift in Brazil's development strategy, towards a model of growth with social inclusion. This reinforced the rebirth of the regional development policy, and the reduction of regional disparities became a key theme of government intervention. A new policy paradigm emerged, in policies designed to identify and support endogenous development in the regions, focusing on untapped potential for local growth. In 2003, the MIN started formulating the first National Policy for Regional Development (*Política Nacional de Desenvolvimento Regional*, or PNDR), which was approved in 2007 (institutionalised by Decree No. 6047 of 22-02-2007). The policy defines a strategy for social and productive inclusion of marginal and poor areas. The objective is twofold: to reduce inequality and to exploit development potential of Brazil's regions, taking advantage of their diverse resources, cultural heritage and economic vocation. The National Policy for Regional Development aims for a participatory approach in public policy, and makes room for the relevant local stakeholders to be involved in setting strategy and following up on policy implementation. In 2007, the government recreated the superintendencies (SUDENE and SUDAM), but their role in the new framework is not yet clear.

Regional development policy as a tool for the Brazilian model of growth with social inclusion

In 2008, the MIN proposed moving to a second phase of the PNDR for the period 2011-15, aiming to give the PNDR the status of a "state" policy that would guarantee its continuity independent of the government in place. This new proposal was intended to improve the articulation, co-ordination and integration of government actions in the territory. It also aimed to rethink the use of funds for regional development and to make them more compatible with regional development plans and priorities. This new policy proposed creating a specific financial instrument, the National Fund for Regional Development (*Fundo Nacional de Desenvolvimento Regional*, or FNDR), which would have been partly managed directly by the states. This would further involve them in national policy for regional development, and increase co-ordination between government levels. In addition, the FNDR would also have financed economic and social development programmes throughout the country, and not just in the North, Northeast and Centre-West regions. This reform of national regional development policy was to be bundled with a tax reform. Indeed, in the absence of a financial instrument to promote regional development within their borders, states use the rate of the state tax on goods and services (*Impostos sobre Circulação de Mercadorias e Prestação de Serviços*, or ICMS), the equivalent of a state value-added tax, to attract capital and investment. This tax war has proven to be extremely damaging for states, because they all lose tax revenues, while the effect on attracting investment is probably rather weak (Nóbrega, 2001). The MINs proposal aimed to give the states a share of the FNDR, as an explicit regional development instrument, in exchange for their agreement to unify the rate on the state tax on goods and services and end the tax war. This proposal has not yet been voted on in Parliament.

Evolution of regional development policy: Brazilian and EU experience

The evolution of regional development policy in Brazil resembles the changes in policy in OECD countries, and especially in the European Union. Although policies evolve in response to patterns that are specific to each country and region, studying the experience of other countries can be helpful. Table 2.2 shows the evolution of regional development policy and in national development strategy in Brazil and the EU from the 1950s on.

From redistribution to endogenous development: The ongoing paradigm shift in regional development policy

In OECD countries and in particular, in the European Union, regional development policy is considered the "visible hand" in a market-led development strategy. Instead of considering "poor regions" as obstacles to development and as burdens that need compensation because of their exclusion from dynamic growth, each territory should be considered as an opportunity for growth and well-being. The European Cohesion Policy aims to complement the policy for competitiveness and innovation by providing public investment and production incentives, targeting actions where the market would have not provided them. The priority in the European Union shifted from financing infrastructure for supporting territorial cohesion to supporting innovation as a driver of regional and local endogenous growth.

The experience of the European Union and of OECD countries shows that the design and implementation of policies for regional development are a necessary ingredient in a strategy for national development and competitiveness. No automatic mechanisms can guarantee balanced growth: there is no evidence that adjustment mechanisms can ensure convergence in regional growth and development, if policies are not in place to support them. How can policies support virtuous growth development patterns? What should the priorities, the instruments and the governance arrangements be?

The EU and the OECD experience make it possible to identify common challenges, as well as certain mechanisms for overcoming them. Regional policy appeared on the policy agendas of most OECD countries during the 1950s and 1960s, a period of relatively strong economic growth, fiscal expansion and low unemployment. Regional development policy mainly responded to the goal of fostering greater equity and balanced growth in a period of rapid industrialisation. The assumption was that public policy could influence location decisions, essentially by changing production cost factors through production subsidies and incentives. The main instruments used were: *i*) financial incentives such as grants, loans, tax exemptions or transport subsidies for private firms located in priority regions; *ii*) infrastructure investment in targeted regions (mainly rural and sparsely populated areas); and *iii*) using state-owned enterprises to influence the location of investment and activity (Bachtler and Yuill, 2001).

Table 2.2. **Evolution of regional policy in a comparative perspective: Brazil and the European Union**

Brazil

	Brazil	1950s-1970s	1980-1990s	2000-10	2011 on PROPOSALS
National development strategy	Main priority	Industrialisation	Minimalist role of the state targeting inflation and macroeconomic stability	Growth with social inclusion	Consolidation of growth with social inclusion
	Main economic growth model	Import substitution by creation of endogenous scientific and industrial capabilities	Export-led growth and attraction of foreign direct investment	Mixed model: internal demand and export-led growth	Mixed model: internal demand and export-led growth
Regional development policy	Phase	Origins of the Regional Development Programme (RDP): creation of institutions and planning mechanisms	Minimalist role of RDP	Rebirth of the regional issue: first phase of the National Policy for Regional Development (PNDR)	Second phase of the PNDR: towards an integrated approach for regional development
	Main objective/ target	Reduction of disparities through compensatory policies (mainly fiscal incentives and credits for attracting production facilities to marginalised areas)	Dynamisation of endogenous growth potential	Targeted support to specific regions facing major challenges in production development and social inclusion	Towards differentiated policies for all Brazilian regions supporting production development and social inclusion
	Institutional arrangements	Creation of institutions for regional development Creation of the Superintendency for the Development of the Northeast (SUDENE) in 1958	1999: creation of the Ministry of National Integration (MIN); 2001: closure of regional development agencies	MIN 2003: recreation of regional development agencies; the Ministry of Planning, Budgeting and Management refocuses on the regional development issue	MIN proposes a high-level inter-ministerial body for co-ordination linked to the Presidency of the Republic
	Financial resources	Role of state-owned companies in strategic sectors	1988: creation of Constitutional Funds for Regional Development (FCO, FNE, FNO) Limited programmes to support entrepreneurial activities and environmental sustainability (Ministry of Environment, EMBRAPA, etc.)	Constitutional Funds (FCO, FNE, FNO) and federal budget (*Orçamento Geral da União or* OGU) for *Promeso*, *Conviver* and RIDEs programmes Major financing from infrastructure investments (PAC 1 and 2) and major horizontal programmes (Bolsa Família, *Minha Casa*, *Minha Vida*, etc.)	Proposal: creation of a National Fund for Regional Development; use of royalties from exploitation of deep-sea oil for regional development.

Table 2.2. **Evolution of regional policy in a comparative perspective: Brazil and the European Union** (*cont.*)

EU

	EU	1950-1970s	1980-1990s	2000-10	Towards EU 2020?
Development strategy	Main priority	Consolidation of post-war equilibrium (peace) by the creation of the "European space"	Creation of the European single market and social cohesion	Growth with social cohesion and EU enlargement process	EU 2020 strategy: towards a smart, sustainable and inclusive economy
	Main economic growth model	Economic integration of European countries (export-led growth)	Social market capitalism	Moving towards a market-oriented economy and export-led growth focus on innovation and job creation	In search of new sources of growth
Regional development policy	Phase	Origins of the RDP as a complement to economic integration	Birth of RDP. European Cohesion Policy as a complement to the policy for the single market and as an instrument of consolidation of democracy	Regional policy as a compensation instrument Minimalist role of policies	Debate on possible reforms of regional policy
	Main objective/ target	Reduction of disparities through compensatory policies (mainly resources transfers to marginalised areas)	Convergence	Make the EU the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion	Allow EU regions to emerge from the crisis, reduce disparities and contribute to the EU 2020 strategy
	Institutional arrangements	Creation of institutions at the European level	Strengthening the role of regions as relevant policy and economic "spaces". Consolidation of EU institutional arrangements and strengthening of regional capacities in EU member countries 1993: creation of the Committee of Regions	Emphasis on procedures: control and compliance	Introduction of conditionalities, strengthening of monitoring and evaluation for a results-based EU policy
	Financial resources	1958: creation of the European Social Fund (ESF) 1975: creation of the European Regional Development Fund (ERDF) (EUR 1.3 million for three years)	Creation of structural funds for priority regions 1989-1993: first period ECU 68 billion 1993: creation of the Cohesion Fund 1994-1999: second period (15 member countries) EUR 177 billion	Structural funds 2000-06: third period (25 member countries) EUR 213 billion Structural funds 2007-13: fourth period (27 member countries) EUR 347 billion	Structural funds 2014-20: EUR 376 billion

During the 1970s and 1980s, national regional development policy declined, due to the aftermaths of the oils shocks, and the general movement in Europe against state intervention. Regional and local governments therefore took over part of this responsibility, and became more involved in regional development. The 1990s saw a rebirth of regional development policy in European countries, with a different focus and a greater role for regional and local governments. The earlier focus on reducing disparities (in income, in infrastructure stock, etc.) was widened to include employment creation. Regional policy is shifting from top-down subsidy-based interventions designed to reduce regional disparities to much broader policies designed to improve "regional competitiveness". National governments are increasingly favouring regional growth over redistribution, in pursuit of national or regional competitiveness and balanced national development. Territorial development instruments are becoming broader in scope, even in the supported areas, and have aimed to adapt to the requirements of individual regions. This policy approach involves a growing trend of decentralisation to the regional levels. Regional strategic programmes and programming have become more prominent, reflecting a general shift towards support for endogenous development and the business environment, building on regional potential and capabilities and fostering innovation-oriented initiatives (OECD, 2010b and Bachtler and Yuill, 2001).

The paradigm shift in regional development policy thus involves moving towards new objectives, a new geographical scope, new governance and new policy instruments (Table 2.3). Multi-level governance approaches involving national, regional and local governments as well as third-party stakeholders (e.g. private actors and non-profit organisations, or NPOs) have increased in importance, where previously central government dominated. At the same time, better recognition of the interdependencies of sectoral policies and the impact on regions has facilitated co-operation of cross-sectoral policies (Yuill, 2008).

Table 2.3. **Old and new paradigms of regional policy**

	Old paradigm	New paradigm
Objectives	Compensating temporarily for location disadvantages of lagging regions	Tapping underutilised potential in all regions to enhance regional competitiveness
Unit of intervention	Administrative units	Functional economic areas
Strategies	Sectoral approach	Integrated development projects
Tools	Exclusive focus on subsidies and state aid/"Robin Hood" subsidies and aid (i.e. taking from the rich to give to the poor)	Mix of soft and hard capital (capital stock, labour market, business environment, social capital and networks)
Actors	Central government	Different levels of government

Source: OECD (2009), *Regions Matter: Economic Recovery, Innovation and Sustainable Growth*, OECD Publishing, Paris, doi: *10.1787/9789264076525-en.*

Regional policy is shifting from a compensatory logic approach to the concept of enhancing endogenous growth. Regions are now to be thought of as vital agents of change and as "opportunities" for national development. This requires bridging several gaps that undermine the capacity of articulating governmental action across vertical and horizontal levels. After sub-national governments were given a greater voice in public policy making and increased institutional, planning and financial capacities, improving co-ordination between different institutions and agencies became crucial. These are common challenges for Brazil too. Until the end of the 1990s, regional development policy in Brazil was the prerogative of the regional development superintendencies. These were created at the end of the 1950s as the deconcentrated "voice" of the federal government in the regions that had been left behind by the main wave of industrialisation, and which required targeted action for their development.

Brazil is now seeking a more comprehensive policy approach, in which regional development policy is not only a mechanism for correcting inequalities, but a pro-active tool for supporting growth and development in a territorially balanced way. The aim is to maximise national output by assisting and encouraging each region to reach its growth potential endogenously, departing from the previous prevailing view of regional polices as a zero-sum game. Recent reforms of regional policy in OECD countries and in the EU confirm this paradigm shift (Box 2.2).

The new paradigm in Brazil and in the European Union

In Brazil, the new paradigm is reflected in the MIN's efforts to move to a second phase of the PNDR by addressing all Brazilian regions, but in a differentiated way, according to the economic conditions and the different development trajectories of each territory (i.e. "addressing the unequal in an unequal way, but addressing everyone"). In addition to improving the management of existing resources for regional development in Brazil, the challenge is how to move beyond a policy for specific macro-regions, and how to design and implement a policy for all regions. Moving to a second phase of the PNDR (i.e. a regional policy for all regions) would require: *i*) identifying sources of finance for the "comprehensive" policy beyond the existing "macro-regional" funds; *ii*) defining conditionalities and targeted policy instruments for the different types of regions; and *iii*) increasing the co-ordination and alignment with major federal programmes for welfare, infrastructure development and competitiveness.

In the European Union, the Cohesion Policy for 2007-13 intends to offer a differentiated approach to all European regions on the basis of prioritisation and corresponding financial resources (Table 2.4). The policy has three main priorities: convergence, regional competitiveness and employment, and territorial co-operation. The convergence objective absorbs more than 80% of the total policy budget, and targets regions with gross domestic product (GDP) of below 75% of the EU average; the competitiveness and employment objective targets all the other regions and absorbs 15% of the total Cohesion Policy budget; and the territorial co-operation objective targets cross-border regions, with 2.5% of the policy budget. Priority fields of investments are innovation (24% of the total budget), transport (22%), human resources (22%), and environmental protection (19%). The policy is financed by three funds: *i*) the European Regional Development Fund (ERDF), which targets all regions and supports programmes for competitiveness, economic change and regional development; *ii*) the European Social Fund (ESF), which supports skills development and job inclusion in convergence but also in regions for competitiveness and employment; and *iii*) the Cohesion Fund, which targets convergence regions and supports transport and environmental infrastructure as well as environmental preservation.

Box 2.2. **Evolving priorities for EU countries regional development: The target of social cohesion**

The EU is a federation of states (27 members to date) that have gradually achieved economic and financial integration. Instruments to address regional economic and social imbalances have existed in the European Community since the beginning of the economic integration. The European Social Fund was created in 1958, while the European Fund for Regional Development (EFRD) was introduced in 1975. However, it was only in 1988 that the European Cohesion Policy was introduced as a structured policy at the EU level, to orient and plan programmes for development in partnership with states and regions of the EU.

The European Cohesion Policy has been marked by four major planning periods, financed by four rounds of structural funds: 1989-93; 1994-99; 2000-06 and 2007-13. The Cohesion Policy is seen as a necessary complement of the growth and competitiveness strategy. Implementation showed that measures targeted to more disadvantaged areas can make the difference to local, but also to national development goals. In more than 20 years of policy implementation, the priorities and mechanisms for regional policy evolved according to lessons learnt from experience and to changes in overall EU strategy and priorities.

The increasing importance of the regional development agenda for the EU is indicated by the rising amount of resources devoted to it. Today, more than one-third of the EU budget is allocated to the social cohesion agenda. This is a key pillar of the growth strategy, since it helps to target investments in areas where active state interventions are needed, because market forces alone would not provide sufficient incentives. It contributes to investments in infrastructure, human capital, modernisation and diversification of production structures to boost growth and quality job creation in a balanced way through the territories of member countries. The priorities of regional development policy have also evolved, from targeting infrastructure gaps to investments in innovation and environmental sustainability, which account for more than half of the total EU social cohesion budget today.

The EU growth agenda for 2007-13 is made up of two pillars: the innovation agenda, *Competitiveness for Growth and Employment* actions, and the regional development agenda, named *Cohesion for Growth and Employment*. Those two lines of action are complementary and respond to the challenge of increasing the EU's competitiveness by boosting the European economy and creating better jobs. The cohesion agenda has three main objectives: convergence, competitiveness and employment, and territorial co-operation. It targets all European regions but in a differentiated way, and it is financed by two structural funds, the European Regional Development Fund (ERDF) and the European Social Fund (ESF) and also by the Cohesion Fund. Table 2.4 shows the priorities, budget allocation and financial mechanisms for the three main objectives.

The accumulated experience in regional policy management also favoured the introduction of improved tools for policy management. The 2007-13 strategy includes simplifications in procedures for access and transfer of resources, and a higher level of decentralisation. The Community Strategic Guidelines (CSG) are a new tool that clarifies the strategic goals of the European Commission and is supposed to orient the National Strategic Reference Framework (NSRF), in which each member country is called to define its priorities. These, in their turn, orient the Action Programmes, which are formulated by member countries and regions to clarify the specific priorities of the regional development strategy. Clearly, the use and impact of those planning tools vary by country and by region.

Table 2.4. **EU Cohesion Policy for 2007-13: Resources, targets and priorities**

<table>
<tr><th>Objective</th><th>Budget allocation (total budget EUR 347.4 billion)</th><th>Targeted regions</th><th>Priority fields of investment (share of total budget)</th><th colspan="3">Financial mechanisms</th></tr>
<tr><td>Convergence</td><td>EUR 283.7 billion (81.7%)</td><td>Regions with GDP below 75% of the EU average (82 regions in 17 member countries, accounting for about 35% of the EU population</td><td rowspan="3">Innovation 24%
Transport 22%
Environmental protection and risk prevention 19%
Human resources 22%</td><td rowspan="3">European Regional Development Fund (ERDF)
Support for programmes for competitiveness, economic change and regional development</td><td rowspan="3">European Social Fund (ESF)
Support for skill development and job inclusion</td><td rowspan="3">Cohesion Fund (Support for transport and environmental infrastructure and environmental preservation)</td></tr>
<tr><td>Regional competitiveness and employment</td><td>EUR 55 billion (15.8%)</td><td>168 regions in 19 member countries (all other regions that are not classified as "Convergence", 314 million inhabitants)</td></tr>
<tr><td>European territorial co-operation</td><td>EUR 8.7 billion (2.5%)</td><td>Cross-border regions or those belonging to transnational co-operation areas (accounting for 37.5% of the EU population)</td></tr>
</table>

Source: Based on European Union (2008), *Working for the Regions: EU Regional Policy 2007-13*, European Union, Brussels.

The Brazilian scheme for regional development has not yet achieved the maturity of the EU system. Until now, the PNDR has financed only convergence regions, as defined by the macro-regional approach developed in the 1950s and reaffirmed by the 1988 Constitution. These correspond to regions classified as dynamic, stagnant and fragile by the PNDR typology. These resources mainly target business development and only a small share is allocated to finance infrastructure investment. The proposal under discussion for the PNDR 2011-15 is schematised in Table 2.5. The MIN is willing to extend the objective of the PNDR by targeting convergence, regional competitiveness and "transition territories". Following the classification of the Brazilian regions elaborated for the first PNDR (Table 2.6), the convergence policy would target dynamic, stagnant and low-income regions, and the regional competitiveness policy would target competitive regions to increase their competitiveness, consolidate their industrial base, widen access to credit and improve public services infrastructure. The residual budget would address the "transition territories", the places (meso-regions, Integrated Development Regions, or RIDEs, etc.) that have benefited from the first phase of the policy and that need to switch to the new approach.

If the EU Cohesion Policy seems more mature than in Brazil, it is still evolving and adapting, in a constant effort to improve its results in a challenging economic environment. The "Fifth EU Report on Economic, Social and Territorial Cohesion" (EU, 2011) highlights how the EU Cohesion Policy can contribute to the Europe 2020 strategy, which requires innovation, employment and social inclusion, as well as a concerted response to environmental challenges. To contribute to these objectives, Cohesion Policy reforms are discussed. These aim to put greater emphasis on achieving and monitoring results, while cutting red tape and simplifying the daily management of the policy. Three main lines of reform emerge: *i*) concentrating financial resources on a limited number of priorities; *ii*) strengthening performance through conditionality and incentives, and *iii*) improving evaluation, performance and results.

Table 2.5. **The second phase of the PNDR 2011-15: A proposal for a regional policy for all Brazilian regions**

<table>
<tr><th>Objective</th><th>Budget allocation</th><th>Targeted regions</th><th>Priority fields of investment (share of total budget)</th><th colspan="3">Financial mechanisms</th></tr>
<tr><td>Convergence</td><td>From 60% to 70% of total PNDR resources</td><td>Dynamic, stagnant and fragile regions</td><td rowspan="3">Until now the main resources came from the constitutional funds, which target private sector initiatives that the creation of FNDR intends to support infrastructure building and delivery of public services</td><td rowspan="3">Proposal under discussion in Congress
National Fund for Regional Development (FNDR)
(to include the constitutional funds)
Resources from the Social Fund from the royalties from deep-sea oil</td><td rowspan="3">Resources coming from the OGU (Orçamento Geral a União)</td><td rowspan="3">Constitutional Funds
FNO
FNE
FCO</td></tr>
<tr><td>Regional competitiveness and employment</td><td>Minimum of 20% (maximum 30%) of total PNDR resources and regional matching funds</td><td>Competitive regions</td></tr>
<tr><td>Transition territories</td><td>EUR 8.7 billion (2.5%)</td><td>Territories prioritised in the first phase of the PNDR
13 differentiated meso-regions
9 sub-regions
Semi-Arid
RIDEs and Faixa de Fronteira</td></tr>
</table>

Source: Based on Ministerio da Integração Nacional (2010), *A PNDR em dois tempos: a experiencia apreendida e olhar pós 2010*, Ministerio da Integração Nacional, Secretaria de Políticas de Desenvolvimento Regional, Brasília, DF, Brazil.

The National Policy for Regional Development (PNDR): Addressing priority territories through specific programmes

Reducing regional inequalities is one of the fundamental objectives of the 1988 Constitution of the Federal Republic of Brazil, and the new government has listed it as its second priority. The PNDR is one of the fundamental tools for reaching this objective. Its goal is to unlock the development potential of the Brazilian regions, and use the great diversity of the country to better distribute production activities throughout the territory. It also aims to promote the participation of different stakeholders in the design and implementation of this strategy, by involving federal entities, social bodies, productive sectors, financial actors and so on.

In order to prioritise public action, the PNDR created a typology to classify municipalities according to socio-economic indicators, combining information on the living conditions of the population in the micro-regions (proxied by the local level of income per household), with information on the economic and productive perspective (proxied by GDP growth). The combination of these criteria resulted in four types of micro-regions (Ministry for National Integration, 2007) (Table 2.6 and Figure 2.1):

- **High-income micro-regions** correspond to municipalities with both high average household income and a high growth rate. These are found predominantly in the South and Southeast regions, and also in the Centre-West. There are very few high-income micro-regions in the North and Northeast, and these are mainly located in the state capitals. High-income micro-regions account for around 76% of national GDP and 53% of total population.
- **Stagnant micro-regions** are characterised by a medium-average household income, but a low productive/economic growth. They are dispersed throughout the territory and account for 18% of GDP and 29% of total population.
- **Dynamic micro-regions** correspond to municipalities with middle to low household income levels, but with an economic dynamism resulting mainly from the expansion of agribusiness. They are more frequent in the Centre-West and Northeast, where they tend to cover large territories. These micro-regions account for 4% of national GDP and 9% of total population.
- **Low-income micro-regions** are those with both a low household income level and low economic and productive growth. They are predominant in the North and Northeast regions. They are the greatest challenge for the PNDR. They account for 1.7% of GDP and host 8.4% of the total population.

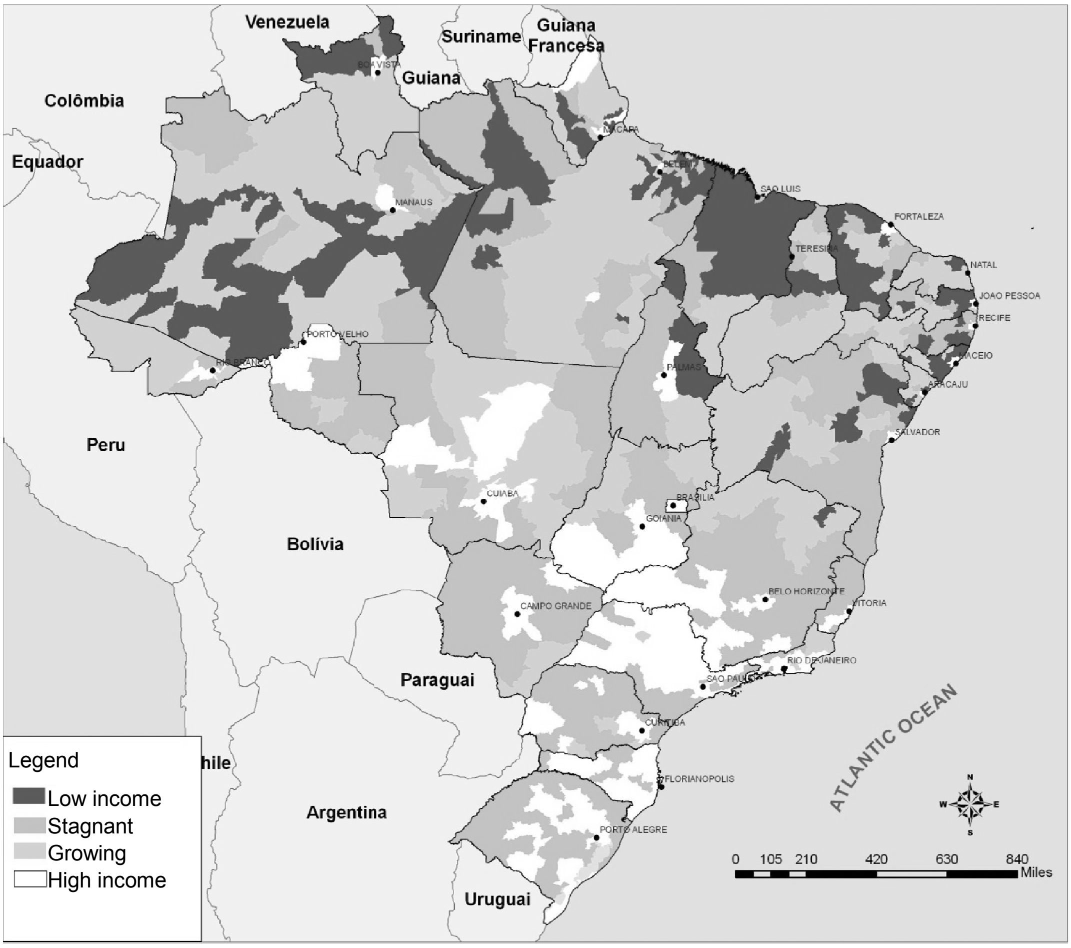
Table 2.6. **PNDR typology of micro-regions**

<table>
<tr><th colspan="2"></th><th colspan="3">Average income per capita</th></tr>
<tr><th colspan="2"></th><th>High</th><th>Medium</th><th>Low</th></tr>
<tr><td rowspan="3">GDP per capita growth</td><td>High</td><td rowspan="3">High income</td><td colspan="2">Dynamic</td></tr>
<tr><td>Medium</td><td rowspan="2">Stagnant</td><td rowspan="2">Low income</td></tr>
<tr><td>Low</td></tr>
</table>

Source: Ministry of National Integration (2007), “National Policy for Regional Development: Building a Country for All Regions”, *ExpoRegions Catalog*, Brasilia.

In 1999, the MIN created 13 differentiated meso-regions (*mesorregiões diferenciadas*), which are different from the geographic meso-regions defined by the Brazilian Geographical and Statistical Institute (*Instituto Brasileiro de Geografia e Estatística*, or IBGE) (Figure 2.2). Indeed, the meso-regions were created based on purely geographic criteria, in order to create a statistical aggregation level between the state and the municipality, and municipalities in the geographic meso-regions must all belong to the same state. By contrast, the MIN’s differentiated meso-regions: *i*) do not cover all the territory; *ii*) intend to include municipalities from at least two different states or with an international frontier; and *iii*) were created based on socio-economic indicators, to try to create culturally and economically homogeneous territories.[1] Differentiated meso-regions are governed by a forum that includes representatives from the federal government, the states, the municipalities, but also civil society (NGOs), the private sector, etc. Each forum must define its own Regional Development Programme. This structure aims to promote co-operation between municipalities and states, pool and increase capacity at the municipal level, and increase civil society and private sector participation, to develop a bottom-up approach to the design of regional strategy.

Figure 2.1. **Map of Brazil according to the typology of the PNDR**



Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

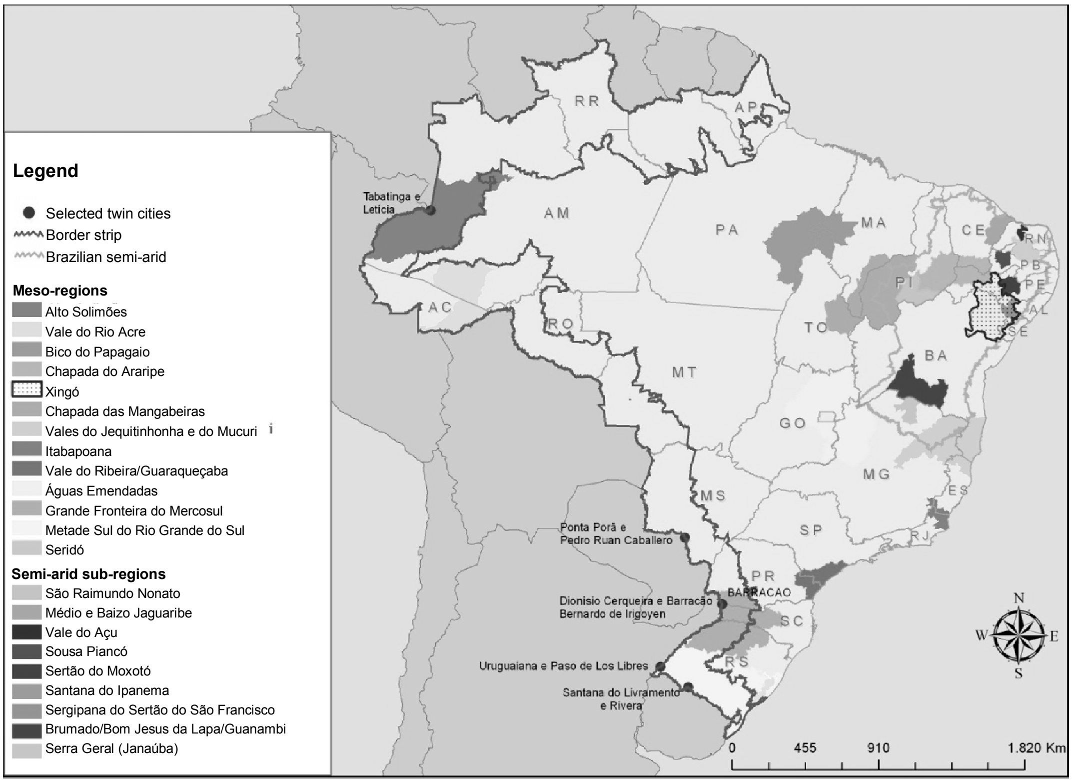
Source: European Union (2008), "Regional Integration and Development. The EU-Brazil Dialogue on Regional Policy", Raphaël Goulet (ed.), European Commission, Directorate-General for Regional Policy, Brussels.

In addition to the differentiated meso-regions, the PNDR defines specific areas classified as priority territories, based on climatic, environmental and geographic criteria (Figure 2.2). The action of the MIN within these different territories consists of managing four governmental programmes:

- **Promotion of the Sustainability of Subregional Areas (PROMESO)**, which aims to set up a new management model for the development of differentiated meso-regions;

- **Semi-Arid Sustainable and Integrated Development (CONVIVER)**, which aims to promote economic growth and social integration in regions with adverse climates (drought) and persistent socio-economic problems;
- **Social Development of the Border Strip (PDFF)**, which aims to increase economic development and social integration of the communities along the border with other South American countries, given that the cross-border issue is becoming increasingly important (Box 2.3). The Social Development of the Border Strip programme promotes structural investments in infrastructure, social and production development in frontier zones to support cross-border collaboration and interaction for territorial development. This area includes 11 states (including the Federal District) and 588 municipalities, and represents approximately 10 million inhabitants;
- **Development of the Integrated Development Regions (RIDEs)** of the Federal District and surrounding areas, Juazeiro-Bahia and Petrolina-Pernambuco, and Grande Teresina-Piauí: setting up of an integrated government action management model.

Figure 2.2. **Differentiated meso-regions, semi-arid and border strip regions**



Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: European Union (2008), "Regional Integration and Development. The EU-Brazil Dialogue on Regional Policy", Raphaël Goulet (ed.), European Commission, Directorate-General for Regional Policy, Brussels.

Box 2.3. **International co-operation for regional development: The case of the Oyapock Basin (Guyana-Amapá)**

In Brasília on 29 November 2007, the MIN and the European Commission signed a memorandum of understanding aiming to increase the exchange of information about regional development policy. This would include actions to reduce regional disparities and reinforce territorial cohesion, the design of regional development strategic plans, evaluation methodologies and questions linked to governance and partnerships. Within this framework, a pilot project is being developed on the Oyapock Basin. This co-operation zone covers 62 000 square kilometres on both sides of the Oyapock River, and encompasses regions belonging to Brazil (the state of Amapá), Guyana (France) and Suriname.

The total population of the Oyapock Basin is 35 500 inhabitants (5 300 in Guyana and 30 000 in Amapá). Average population density is extremely low (0.6 inhabitants per square kilometre), but most inhabitants are concentrated in the frontier towns of Saint-Georges-de-l'Oyapock in Guyana and Oiapoque in Brazil. In recent years, these towns have seen a rapid increase in population: in Saint-Georges, population has doubled from 2 000 inhabitants in 1999 to 4 000 today, and the population of Oiapoque has risen from 15 000 inhabitants in 2000 to more than 20 000. The dramatic changes in the socio-economic structure of the towns have led to an increase in crime on both sides of the frontier.

The region faces both a human and an ecological challenge. A large indigenous population of the Wayana, Kalina, Plikur and Wayampi tribes is settled around the frontier, and the Oyapock Basin is covered by a large, humid equatorial forest, with several rivers and an exceptional biosphere. Despite the low population density, its biodiversity is under strain as a result of the exploitation of forest resources and mining activities, particularly of gold.

The region is poorly served in basic infrastructure and the provision of public services (transport, garbage treatment, etc.). Most of the population is rural and lives on agriculture and crafts, as well as from trade activities, especially linked to the trade of gold. However, the region is an important nexus of migration, receiving many Brazilians seeking work in Guyana (especially gold seekers, *garimperos*) and many Guyanese visiting Brazil as tourists and to buy consumer goods that are far cheaper in Brazil than in Guyana.

The frontier towns of Saint-Georges and Oiapoque face each other across the river and are linked to their capitals by roads (200 kilometres to Cayenne on the Guyana side, and 600 kilometres to Macapá in Amapá). However, canoes are the only way of crossing the river: no road links Brazil and Guyana. The French and Brazilian authorities consequently agreed to build a bridge over the Oyapock that was expected to be inaugurated in the fall of 2011. This new road link between Brazil and Guyana was expected to create opportunities for regional development on both sides of the Oyapock River, and to increase traffic in both merchandise and people. However, there is concern that it may facilitate a rise in organised crime on both sides of the river.

A well-thought out strategic development plan for the trans-frontier region could make the most of this opportunity and minimise risk. This would require a structured dialogue between politicians in Guyana and Amapá, and a strategic plan using the financial resources available on both sides, in particular, resources from the FEDER on the European side, and from the Social Development of the Border Strip (PDFF) programme on the Brazilian side. This plan could be based on specific pillars, and translated into concrete projects.

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Box 2.3. **International co-operation for regional development: The case of the Oyapock Basin (Guyana-Amapá)** (*cont.*)

- co-operation on preserving and protecting natural resources;
- joint provision of public services (civil protection, professional training, etc.);
- tourism development;
- measures to promote economic development;
- administrative co-operation, in particular between police and customs authorities.

The first phase of this strategy should include a memorandum of understanding between Guyana and Amapá. The European Commission's Directorate General for Regional Policy could be invited as a intermediary to facilitate co-ordination between the two partners.

To implement these strategies, the MIN elaborates macro-regional development plans (Sustainable Amazon, Northeast/Semi-Arid, and Centre-West), and meso-regional development plans. It is funded by different financial sources, which are described in the next section. Since financial resources are scarce for tackling a challenge as large as the regional development of Brazil, the MIN is also very active in the National Congress, informing congressmen and trying to secure additional resources to implement its action plan. Besides, the MIN also aims to act as a co-ordinating body between different institutions operating in the regions. This role will be further analysed in Chapter 3.

Territórios da Cidadania: Supporting development in poor rural communities

In addition to the explicit regional development programmes carried out by the MIN, other ministries are developing policies that could qualify as regional development. For example, in 2003, to implement its campaign to combat poverty and increase citizen participation, particularly in rural areas (social pact and agrarian reform), the administration of President Luiz Lula da Silva created a Secretariat of Territorial Development (*Secretária de Desenvolvimento Territorial*, SDT) under the Ministry of Agrarian Development (*Ministério do Desenvolvimento Agrário*). The mission of this secretariat is to stimulate the development of rural areas, taking their disparities and varying needs into account in developing policy.

In 2008, the Secretariat for Territorial Development launched a new programme, Territories of Citizenship (*Territórios da Cidadania*). This is similar in scope to the differentiated meso-regions of the MIN but targets only poor rural communities. It has some similarities with other Latin American initiatives to promote development in rural areas, such as Mexico's micro-region strategy (Box 2.4). The initiative responds to the government's priority of increasing the capacity of public policies to act in the most marginalised rural areas and of raising the participation of civil society in public policy planning. As in the case of the differentiated meso-regions, the programme is based on the concept of "territorial identity" as a mechanism for making civil society an active and responsible voice in the development strategy of a given territory. Each territory is composed of 20 to 25 municipalities and includes territories in poor rural areas with less than 50 000 inhabitants. The definition of the territory follows a functional approach based on "identity": the territories were demarcated according to criteria of cultural homogeneity and territorial identity (municipal stakeholders were not consulted). Other criteria used included the municipal Human Development Index, the concentration of family farms, the concentration of indigenous population, index of basic education achievement, etc.

Box 2.4. Mexico's micro-regions strategy

Mexico's micro-regions strategy aims to provide basic infrastructure in the most marginalised rural regions. It involves many ministries and is led by the Ministry of Social Development (SEDESOL). Its objective is to co-ordinate public policy for the least developed rural areas (263 areas of application spread across 1 334 municipalities in 31 different states) and to promote bottom-up participation in targeted communities. Rather than a programme, it is a multi-sectoral strategy that relies on a multi-tier co-ordination mechanism.

The National Strategy for the Micro-Regions, initiated in February 2001, was an attempt to counter the prevailing tendency towards "sectorialisation" in ministries. The aim was to enhance co-ordination and synergies among different ministries concerning investment in lagging rural regions. The strategy's micro-regions were chosen on the basis of the Marginalisation Index developed by the National Council of Population (CONAPO). The selected 263 micro-regions include more than 99 000 localities and a population of close to 20 million.

The strategy seeks to encourage development through the provision of all basic infrastructure services in "micro-poles of development", called strategic community centres (CECs). Their function is to concentrate the necessary basic infrastructure for the local population and the surrounding settlements. Authorities expect these "centres" to help overcome the difficulties linked to the provision of basic services and foster a concentration of population around them to create larger rural hubs and contain migration towards urban areas. Objective criteria have been developed for validating progress in each CEC, based on flag indicators. For each of the CECs, the stated objective is to reach 11 "white flags" or *banderas blancas*. A *bandera blanca* certifies that a target area has reached a certain level of infrastructure or service.

Source: OECD (2007), "OECD Monitoring Review of Mexico", GOV/TDPC(2007)5.

Territories of Citizenship are administered by a "territorial body" (*colegiado territorial*) that includes representatives from the municipalities, the states, the federal government and representatives from organised civil society (NGOs, unions, citizens associations, environmental associations, women's associations, etc.). Each Territory of Citizenship must develop its "sustainable rural development territorial strategy" (*Plano Territorial de Desenvolvimento Rural Sustentável*, or PTDRS). Twenty-two federal ministries and bodies are involved in the Territories of Citizenship Programme. The federal government proposes a "menu" of possible actions, the territorial body selects the actions it wants to carry out, these are approved by the federal government, and are then implemented either by the federal government, or by the territorial bodies when possible. The territorial body monitors the implementation of these actions.

Territories of Citizenship operate in territories that are politically fragile and that have little political capital, fragile institutions and unstable conditions. The objective is not only to increase the effectiveness of public action in the territory but to strengthen social capital in poor and marginalised areas. Reports on its first two years of operation indicate that the initiative has the potential to multiply the effect of federal actions in marginal rural areas (Box 2.5). Still, implementation of the new measures has not always been easy, especially in municipalities with reduced administrative capacities. Chapter 3 will analyse such challenges, in particular with capacity building and institutional development.

Box 2.5. Territories of Citizenship in numbers

- There are 120 Territories of Citizenship funded by the programme, of which 56 are located in the Northeast.
- Territories of Citizenship include 1 830 municipalities (32.89% of all municipalities) and 39.1 million inhabitants (23.05% of the population).
- The Territories of Citizenship Programme involves 22 federal ministries and agencies.
- In 2008, 60 Territories of Citizenship received BRL 12.9 billion, and in 2009, 120 Territories of Citizenship were included in the programme and received BRL 25 billion. The amount budgeted for 2010 was BRL 27 billion. This is not necessarily new money, because some funds that were previously distributed to municipalities are now managed through Territories of Citizenship (e.g. Bolsa Família funds).
- In 2010, the different ministries participating in the Territories of Citizenship carried out 102 actions, of which 40 account for 70% of the total budget.
- Thanks to the co-ordination of the Territories of Citizenship programme:
  - 4.4 million families benefited from the Bolsa Família Programme between 2008 and 2009;
  - 666 people’s pharmacies were set up in the territories;
  - 538 000 people benefited from the literacy programme (*Brasil Alfabetizado*);
  - 448 200 people signed contracts with the National Programme to Strengthen Family Farms (*Programa Nacional de Fortalecimento da Agricultura Famíliar*, or PRONAF), etc.

Priorities, targets and resources for regional development policy in Brazil: Towards a policy for all regions?

Thanks to a series of reforms carried out in early 2000 and to rapid economic growth, funds for regional development are soaring, since they are directly linked to tax collections. Their allocation has been diversified, default rates have been reduced and a higher share of the funds reaches the target population. Still, the regional development funds target mainly private firms, leaving few resources for public investment.

Federal regional development funds chiefly target private firms, with hardly any resources for public investment

Today, there are three major federal sources of finance for regional development in Brazil:

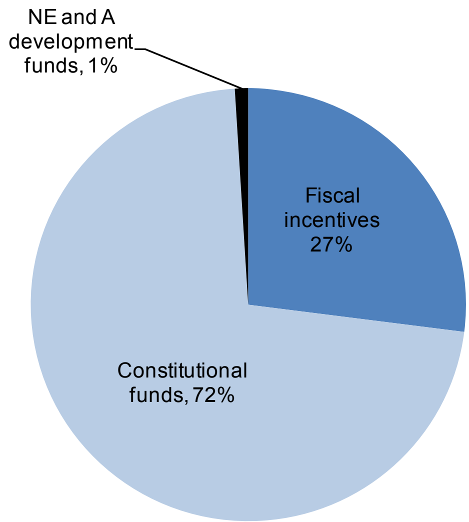
- **The constitutional funds** (including the *Fundo Constitucional de Financiamento do Centro-Oeste*, or FCO, for the Centre-West, the *Fondo Constitucional de Financiamento do Nord-Este* or FNE, for the Northeast, and the *Fundo Constitucional de Financiamento do Norte, or FNO*, for the North), introduced by the federal Constitution of 1988. These are the largest funds and the main instruments of the PNDR. The Constitution earmarks 3% of the receipts of the income tax (*Arrecadação do Imposto da Renda*, or IR) and the tax on industrial products (*Imposto sobre Produtos Industrializados*, or IPI) to the constitutional funds to finance production development in the Centre-West, Northeast and North regions.[2] The funds have been administered by the MIN since 1999, and operated by regional development banks: the Bank of Amazonia (BASA), the Bank for the Northeast (BNB), and the *Banco do Brasil* (for the Centre-West, which does not have its own regional development bank).

- **Fiscal incentives** are also used to attract private investment to these three priority macro-regions. The incentives are of two types. The first consists of tax exemptions: firms operating in sectors classified as a priority for regional development are subjected to a lower income tax rate. The second mechanism consists of "deposits for investment". A share of up to 30% of the firm's income tax can be deposited in the regional development bank of their region, and released to finance investment projects approved by the regional development agency. These must be projects to modernise or complement the firms equipment.
- **Regional development funds** include the Northeast Development Fund (*Fundo de Desenvolvimento do Nordeste*, or FDNE) and the Amazon Development Fund (*Fundo de Desenvolvimento da Amazônia*, or FDA). The federal government created these in 2001 to finance infrastructure development to attract private investment in the Northeast and North regions. They consist mainly of resources allocated in the annual budget and transferred by the National Treasury.

Constitutional funds represent 72% of federal regional development funds (Figure 2.3). They are distributed as subsidised loans to sectors such as rural producers or individual firms and co-operatives operating in the agricultural, mining, agribusiness, tourism, infrastructure, trade and services sectors. Fiscal incentives, which represent 27% of regional development funds, also target private firms. Only the two funds created in 2001 (the Northeast Development Fund and the Amazon Development Fund), aim at financing public investment, with the objective of providing adequate infrastructure to attract private investment in the Northeast and the North regions. These only represent about 1% of the regional development resources.

Providing direct subsidies to firms in priority areas used to be a common practice in OECD countries, as exemplified by the Italian case (Box 2.6). Nowadays, regional development policy tends to be oriented towards a wider range of policy sectors: physical and economic infrastructure, business development, human resources, tourism, environment, etc. (Bachtler and Yuill, 2001). In Canada for example, the primary concern of Canada's regional development agencies (or RDAs) is the long-term development of specific regions of Canada, not the development of specific sectors of the economy. Rather, Canada's RDAs focus on desired outcomes that cut across sectors. These include technology commercialisation, trade and investment, and business productivity and competitiveness. Since the mandate of Canada's RDAs is to diversify the economies of each region, most investments are made in new or emerging sectors/clusters (e.g. information and communications technologies, life sciences, environmental technologies, aerospace and defence). Canada's RDAs invest funding either through partnerships, by third party delivery, and for some RDAs, directly in firms. Recipients can include private firms, not-for-profit organisations, post-secondary institutions, communities and other regional stakeholders such as associations and other non-governmental organisations.

Figure 2.3. **Types of regional development resources in Brazil (2008)**



Source: Based on: *Sistema de Informações Gerenciais dos Fundos Constitucionais de Financiamento* (2000-09); IRPJ e IOF-*Coordenação-Geral de Estudos Econômicos-Tributários* – COGET/*Receita Federal; Relatório de Execução Territórios da Cidadania Matriz 2008* and *Relatório de Execução Plano de Execução 2009,* Territories of Citizenship.

Box 2.6. **The Italian experience of the "extraordinary intervention for the South", 1950-1993**

In the 1950s, Italy started implementing a regional policy aiming at addressing the problem of the Mezzogiorno, the South of the country which was lagging in terms of GDP *per capita*, growth, fixed investment and unemployment. This policy was called the "extraordinary intervention for the South", and was managed by the *Cassa per il Mezzogiorno* (or Cassa), created in 1950.

The rationale for such a geographically concentrated intervention was the claim that the lagging South offered a limited market for the outputs of the more industrialised North, and that its industrial backwardness reduced the overall productivity of the Italian industry.

During the first years of existence, the Cassa was more concerned with infrastructure and agriculture than with industrial development. The priority was to increase the stock of capital of the South (roads and railways, water main, sewers) to attract private investment in the region. By the mid-1950s, it became clear that focusing on agriculture alone would not be sufficient to trigger the development of the South, and the Cassa expanded its activities to the industrial sector.

This industrial policy began in 1957, and took the form of financial subsidies: soft loans, grants and fiscal subsidies. Initially, priority was given to small and medium-sized companies, supposed to generate more employment. These therefore benefited from lower, more subsidised, interest rates. But soon, size limits were lifted to attract investment from larger, more productive firms. In addition, state-owned enterprises were obliged to carry out 60% of their investments in the South.

Box 2.6. **The Italian experience of the "extraordinary intervention for the South", 1950-1993** (*cont.*)

Subsidised loans would cover a maximum of 70% of the planned investment, and were repayable in 15 years. Loans were managed by three medium-term credit institutions operating in the South (Isveimer, Iffis and Cis). The Cassa covered the differential between subsidised and market interest rates.

In addition, the Ministry of Industry also offered subsidised credit in all the country, with preferential terms for Southern firms. For subsidised credit, Italy was divided into four areas: South, underdeveloped areas in the Centre, underdeveloped areas in the North, the rest of the Centre and the North. Interest rates, conditions and amounts depended on the area.

Initially, the Cassa was supposed to last only until 1980. It was then extended several times until it was finally closed in 1993, and the "extraordinary intervention" replaced by a "national programme of assistance for depressed areas".

Evaluations of the results of the extraordinary intervention carried out by the Cassa are contrasted. In 1975, the Southern GDP per head amounted to 65% of the corresponding figure for the Centre and North, which represents a reduction of 10.5 percentage points as compared to 1951. Still, the differential has been widening since that date.

Source: Spadavecchia, A. (2007), "Regional and National Industrial Policies in Italy, 1950s-1993: Where did the subsidies flow?", *Working Paper No. 48*, University of Reading.

The creation of the MIN helped to improve the functioning of the constitutional funds

Before the creation of the MIN in 1999, no specific ministry was responsible for the management of the constitutional funds. These were managed by the Superintendency for the Development of the Northeast (SUDENE) and the Bank of the Northeast of Brazil (*Banco do Nordeste do Brasil*, BNB) for the FNE (Box 2.7), by the SUDAM and the *Banco da Amazônia* for the FNO, and by the *Secretaria Especial de Desenvolvimento Regional* (SEPRE), an agency related to the Ministry of Planning, Budget and Management, for the FCO. The FNE and the FNO faced very low execution rates and very high default rates (*inadimplência*) and there was no coherence between the objectives and management of the three funds. Since 1999, the MIN has assumed the responsibility for the management of the regional development funds: it first determines the selection and priority criteria, and projects are then analysed and selected by the Deliberative Councils of the SUDAM and the SUDENE and the FCO respectively, which also set the matching criteria of states and municipalities for the Northeast Development Fund (FDNE) and the FDA.

In the period 2000-01, several laws were passed that reformed the management of constitutional funds, which increased the amount of funds loaded out (Figure 2.4). They consisted first of giving greater prerogatives to the MIN, such as establishing the criteria and priorities for the application of the funds. Development banks are now obliged by law to provide the MIN with the necessary information for the supervision, monitoring and control of the application of the funds.

Box 2.7. **The Bank of the Northeast (BNB): 60 years of integrated action in support of regional development**

The Bank of the Northeast (*Banco do Nordeste do Brasil*, or BNB) was created in 1952, under the administration of President Getúlio Vargas, to support regional development. The chief concerns at the time were the climate challenges in the area and the lack of permanent sources of financing for production development programmes in the region. In 1956, the BNB supervised the creation of the Working Group for the Development of the Northeast (*Grupo de Trabalho para o Desenvolvimento do Nordeste*, or GTDN). This was transformed into the Northeast Development Council (*Conselho de Desenvolvimento do Nordeste*, or CODENO) and had a decisive role in the creation of the SUDENE in 1959.

In the 1960s, the bank started its first operations, with the support of the Inter-American Development Bank (IDB). From its inception, the bank provided integrated services for regional development, acting mainly in partnership with non-financial institutions involved in institutional development and capacity building. For example, the BNB supported the creation of the Center for Training in Regional Economic Development (*Centro de Treinamento em Desenvolvimento Econômico Regional*, or CETREDE) in collaboration with the University of Ceará, to give the regional labour force the skills to support industrialisation. The BNB has progressively expanded the scope of its operations, offering financial support for the provision of basic services such as water and sanitation in major city capitals in the region. Starting in the second half of the 1960s, the BNB began to support urban infrastructure such as electricity, telecommunication networks and transport. In addition, in collaboration with state governments and the SUDENE, it managed the technical assistance programme for industrial SMEs in the region.

In the early 1970s, the BNB created the first regional Fund for Scientific and Technological Development (*Fundo de Desenvolvimento Científico e Tecnológico*, or FUNDECI), which aims to support applied research for agricultural development and to address the scientific and technological challenges of the semi-arid region. At the same time, the BNB created the Fund for Urban Development of the Northeast (*Fundo de Desenvolvimento Urbano do Nordeste*, or FUNDURBANO), and the Northeast Investment Fund (*Fundo de Investimento do Nordeste*, or FINOR), which channels federal resources to regional development.

In the 1990s, the BNB prioritised capacity-building programmes, in partnership with international organisations such as the United Nations Development Programme (UNDP) and with states and municipalities. For example, the programme to support income and employment generation, financed by the Constitutional Fund for the Northeast (FNE) and the Fund for Workers (*Fundo de Amparo ao Trabalhador*, or FAT) aimed at developing the capacities of small producers in rural areas and areas on the urban periphery, to integrate them into the production process.

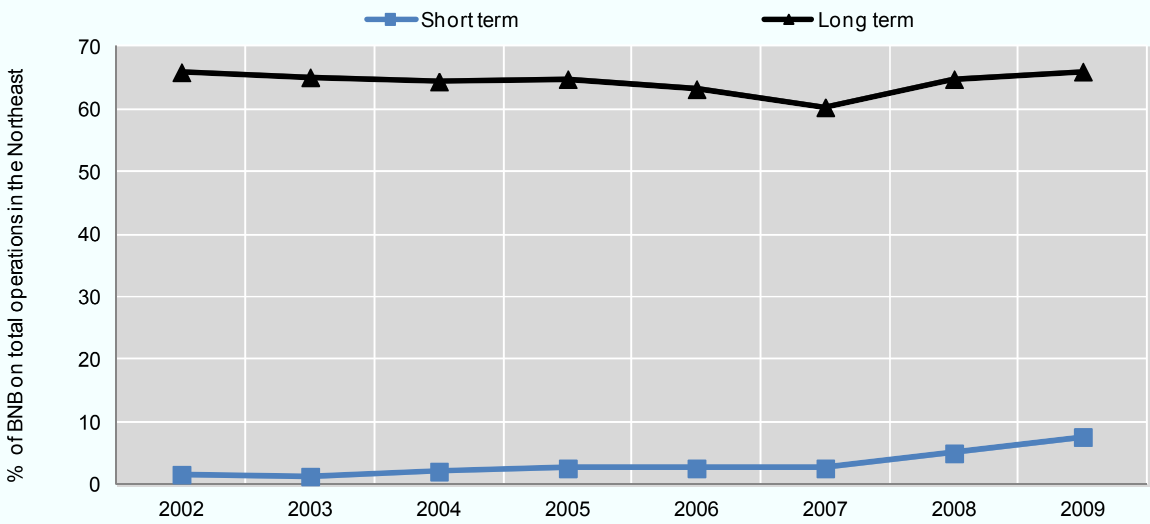
The 1990s saw organisational changes and a modernisation of the BNBs management practices. The bank introduced reforms to simplify procedures, changed its management style in favour of a more participatory approach to decision making, and introduced technological modernisation to improve its operational strategy. It also developed methodologies to target the states priorities in its plan of action, through protocol agreements and *convenios* with the states. As a result of these reforms, the BNB increased its capacity to communicate with states and municipalities.

In 1996, the BNB introduced "development agents" to extend the banks presence in all municipalities in the Northeast. These professional figures mobilise and orient local production agents, support associations between producers, and encourage the implementation of collaborative production projects. At the end of the decade, the BNB intensified its approach in support of job creation, and instituted the microcredit programme *CrediAmigo* and the *FNE-Verde* to support green investment projects in the region. Since the end of the 1990s, the BNB has markedly increased its role as an agent for investment promotion in the region. During the 1999 financial crisis, the BNB acted as a countercyclical agent, offering investment support to protect employment and securitising major long-term investment programmes in the region.

Box 2.7. **The Bank of the Northeast (BNB): 60 years of integrated action in support of regional development** (*cont.*)

In the 2000s, the BNB prioritised its campaign to increase its capacity to relate with states and municipalities. It introduced the Development Lighthouse Programme (*Farol do Desenvolvimento*) in all the municipalities in its area of operation. The programme is an open space for strategy-setting in which local actors interact to develop a coherent development strategy. The bank adopted e-learning programmes to increase its capacity for training entrepreneurs in the territory, and in 2005, it introduced the programme for social responsibility (*Projeto de Responsabilidade Social Empresarial do Banco do Nordeste*, or RSE), to strengthen its commitment to achieve its major development function.

Share of BNB credit on total regional credit supply (2002-09)



Source: Central Bank Information System (SISBACEN).

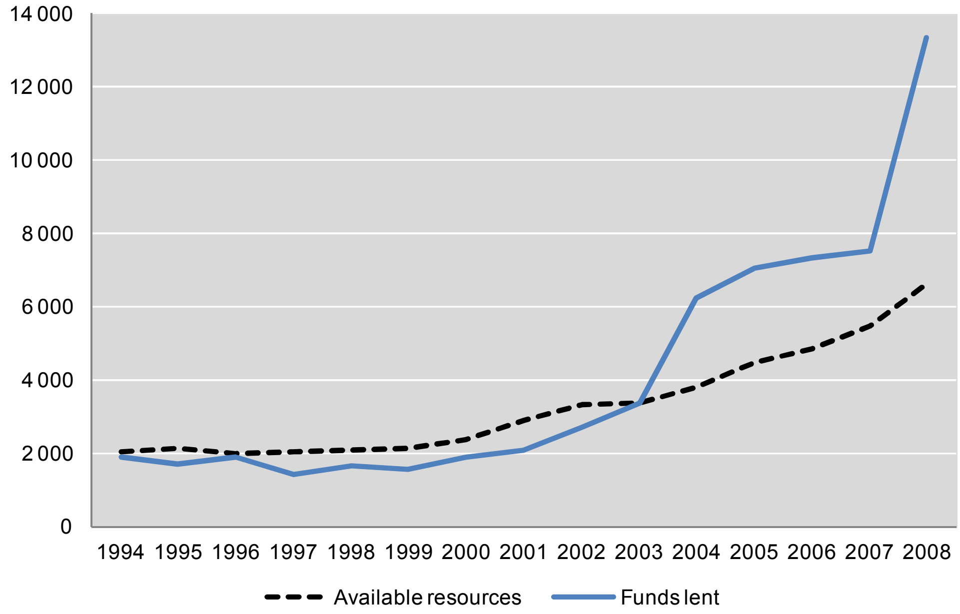
Today, the BNB employs around 6 000 professionals, operating through a network of 182 agencies throughout the region (in addition to four regional offices in Brasília, São Paulo, Rio de Janeiro and Belo Horizonte). It has clients in about 2 000 municipalities and is responsible for the majority of long-term credit in the region (the BNB provides 66% of total long-term credit in the Northeast and 7.6% of short-term credit, which represents 36.5% of the total credit in the region, see Figure 2.4).

Source: BNB.

Second, the MIN supported changes in the operationalisation of funds. The interest rates charged on the loans were reduced and passed from floating to fixed rates, and preferential treatment (lower rates and higher funding) was granted to small entrepreneurs (family farmers, mini and small rural producers, micro and small firms), as these tend to generate more employment than larger firms. Finally, a "bonus for compliance" was granted to borrowers who delivered their payments on time (25% in the Northeast semi-arid region, 15% elsewhere).

Figure 2.4. **Available resources versus funds loaned out**

BRL million actualised to December 2008 values

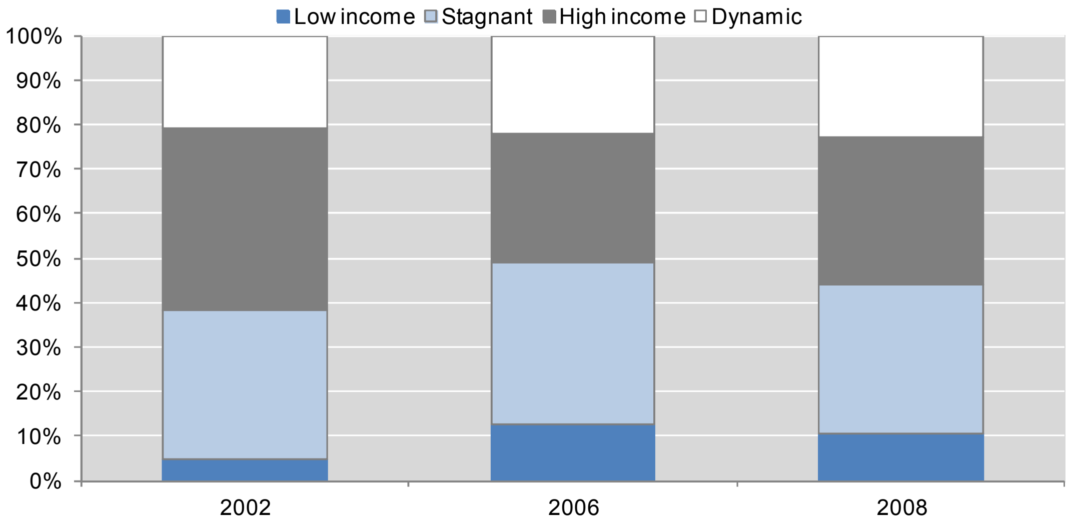


Source: Ministry of National Integration (2010), *20 anos de Fundos Constitucionais de Financiamento* (FCO-FNE–FNO), *Despempenho Operacional*, Secretaria de Políticas de Desenvolvimento Regional.

Third, the MIN also reformed the allocation process, by including new stakeholders in the discussions: the state governments, the Industrial Association, the Agriculture Association, and other stakeholders with potential interests in the resources. The recreation of the regional development superintendencies (SUDENE and SUDAM) helped to include the development perspective in the allocation process. The Deliberative Councils of the superintendencies approve the allocation of funds. This guarantees that the stakeholders interested in the actual spending of these funds, such as the state governors, representatives of the productive sector (Association of Industry, Association of Agriculture, etc.), representatives of the municipalities, and representatives of the workers participate in the resource allocation process, since they are all members of the Deliberative Councils of the Regional Superintendencies for Development.

Finally, in 2006, new priority criteria have been established for the constitutional funds, according to the typology developed for the PNDR (low, stagnant, dynamic and high-income regions). These new criteria aim to encourage projects in low-income regions. They determine the percentage of the cost of activity that entrepreneurs can receive, depending on the size of the firm and the type of region where it is located. The percentage ranges from 70% for large firms located in high-income regions to 100% for small firms, whatever the region. Figure 2.5 shows that there has been a slight decrease in the share of funds channelled to high-income and dynamic regions from 2002 to 2006, and very little evolution from 2006 to 2008. Reaching micro and small entrepreneurs is also a challenge, often due to their lack of information about the benefits they are entitled to. The Centre-West region has developed an original strategy to reach its targeted share of micro and small entrepreneurs benefiting from the FCO (Box 2.8). Given the success of this strategy, the MIN would like to extend it in the Northeast and Amazon regions. Microcredit, both for urban and rural entrepreneurs (*Crediamigo* and *Agroamigo*) is also an important source of finance for micro-entrepreneurs in poor regions, especially in the Northeast (Box 2.9).

Figure 2.5. **Allocation of constitutional funds according to type of region as defined by the PNDR**



Source: Based on Ministry of National Integration (2010), "*20 anos de Fundos Constitucionais de Financiamento (FCO-FNE-FNO), Despempenho Operacional*", Secretaria de Políticas de Desenvolvimento Regional.

Box 2.8. **Reaching micro and small entrepreneurs: The Centre-West Fund success story**

Law No. 7 827 of 1989, which created the constitutional funds, establishes that preferential treatment should be given to the productive activities of mini and small rural producers, micro and small enterprises and their respective associations and co-operatives.

In 2003, applications to the Centre-West Fund (FCO) were concentrated among medium and large producers, with only 21.1% of the funds going to the targeted population. In response, the Deliberative Council of the FCO (CONDEL/FCO) passed a resolution that states that the *Banco do Brasil* must allocate at least 51% of FCO resources to finance the projects of mini and small rural producers, micro and small enterprises and their respective associations and co-operatives.

To reach this target and to generate the necessary demand among mini and small entrepreneurs, several actions were carried out in association with the MIN's Secretariat for the Development of the Centre-West region, the governments of the states, the Federal District and the *Banco do Brasil*. They include the FCO Programme for Dissemination and Publication (radio, media, press, etc.), and since 2006, another public relations campaign the FCO Caravan (*FCO Itinerante*). The result of these collaborative efforts was an increase in lending to the target population. In 2008, the resources allocated to mini and small rural producers, to micro and small enterprises and their respective associations and co-operatives (including the National Programme for Strengthening Family Farms, or PRONAF) represented 46.1% of total applications to the FCO (i.e. 704.5% more than in 2003).

After this success, the MIN is trying to convince the SUDENE, SUDAM, *Banco do Nordeste*, *Banco da Amazônia* and the governments of the states to introduce similar mechanisms in the North and the Northeast.

Source: Ministry of National Integration (2010), "*20 anos de Fundos Constitucionais de Financiamento (FCO-FNE-FNO), Despempenho Operacional*", Secretaria de Políticas de Desenvolvimento Regional, Brasília, Brazil.

Box 2.9. Microcredit for local development: Crediamigo and Agroamigo in the Northeast

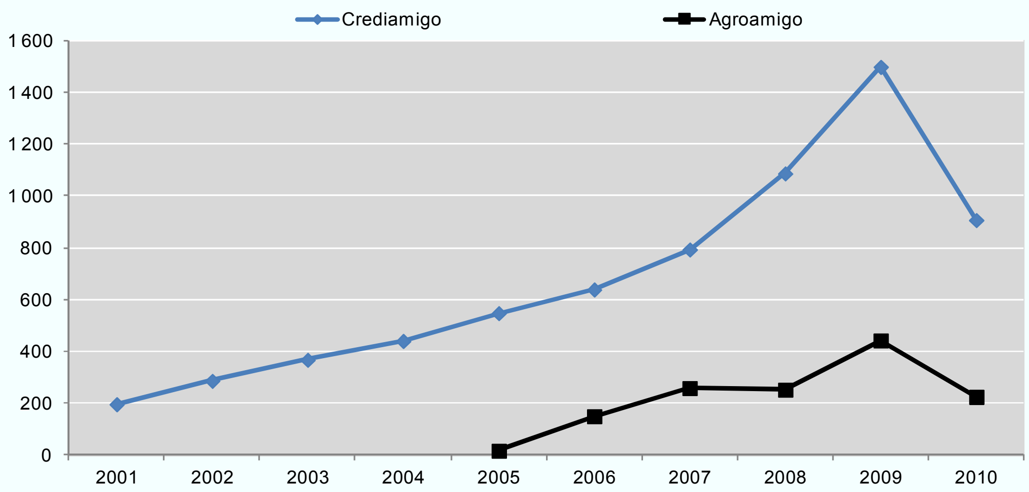
Crediamigo is the major microcredit programme in Brazil. It is managed by the Development Bank for the Northeast (BNB), and channels resources to the poorest urban areas in the region. The programme follows the solidarity guarantee scheme of traditional microcredit operations, in which a group of entrepreneurs collectively assumes the responsibility for each individual grant. The BNB operates the programme where the clients activity is located. Initial amounts lent vary from BRL 100 to BRL 4 000, depending on the type and extent of the activity. The client may apply for further credit up to a total of BRL 15 000. The programme targets self-employed and informal workers in poor urban areas. It was created in 1997, operates in 1 558 municipalities in the Northeast and Minas Gerais, Espírito Santo, Brasília, Belo Horizonte and Rio de Janeiro. In 2009, it offered credit to almost 500 000 entrepreneurs. The programme is operated through a network of 171 agencies, 77 client service points and about 2 000 professionals.

On the basis of the *Crediamigo*, the BNB introduced the *Agroamigo*, a microcredit programme for rural areas carried out in collaboration with the Ministry for Agrarian Development (MDA).

Under *Agroamigo,* a microcredit advisor in the territory helps the client to define the development project and manage resources. The programme targets the beneficiaries of the PRONAF Programme belonging to the B group. These are people working the land, whether or not they are owners, who have an annual income of less than BRL 6 000, excluding additional social benefits and contributions deriving from rural activities. *Agroamigo* started in 2004 with a pilot project in Piauí. In 2010, it was operated by 158 units of the BNB, reached 1 856 municipalities and had a cumulative portfolio of BRL 1.349 million, divided into 945 312 operations (figure below).

Annual amount of BNB microcredit operations by type of programme (2001-10)

BRL millions

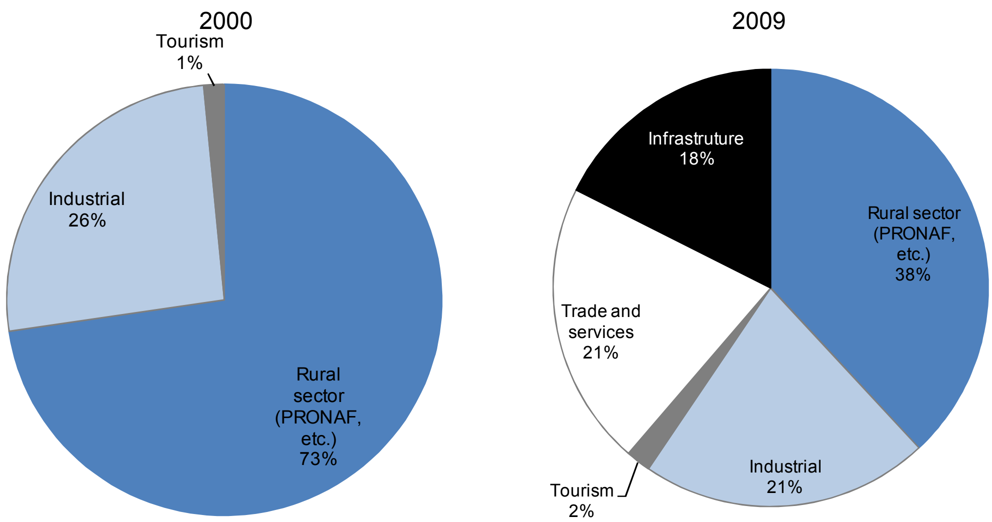


Source: BNB, values actualised at June 2010.

The reforms led to progress in the execution rate of constitutional funds and in reaching target populations

As a result of these reforms, the execution rate of the constitutional funds has increased (by 282% in 2003, compared to 2002) (Figure 2.4), the rate of default has decreased, and the allocation of funds has been diversified. This allows the financing of other productive activities essential to development, such as trade and services, or tourism (Figure 2.6). The share of privately financed infrastructure has also considerably increased. This is reinforced by sustained economic growth. Because the amounts transferred by the National Treasury to the constitutional funds are linked to tax collections, they increase with economic activity. As a consequence, the constitutional funds were multiplied by a factor of more than nine in nominal terms from 2000 to 2009, from BRL 1.6 billion to BRL 14.7 billion. Tax exemptions (fiscal incentives) are also linked to economic activity and have therefore increased sharply (Figure 2.7). The presence of these stakeholders increases the demand, and thus helps to increase the volume of financing. The reduction of the interest rates charged also helped to increase the demand for funds, as they became more attractive than regular financial markets. The bonus for compliance incentivises efforts to repay the loans on time, thus increasing available funds. The MIN supervises the banks' work and controls the volumes and allocation of their portfolios, giving them recommendations for improving the execution of the constitutional funds. Finally, the interest rate that the banks have to pay on funds that are not distributed has been increased, providing a further incentive to reduce them. Since the new legislation in 2001, constitutional funds can also be used to finance trade and services activities.

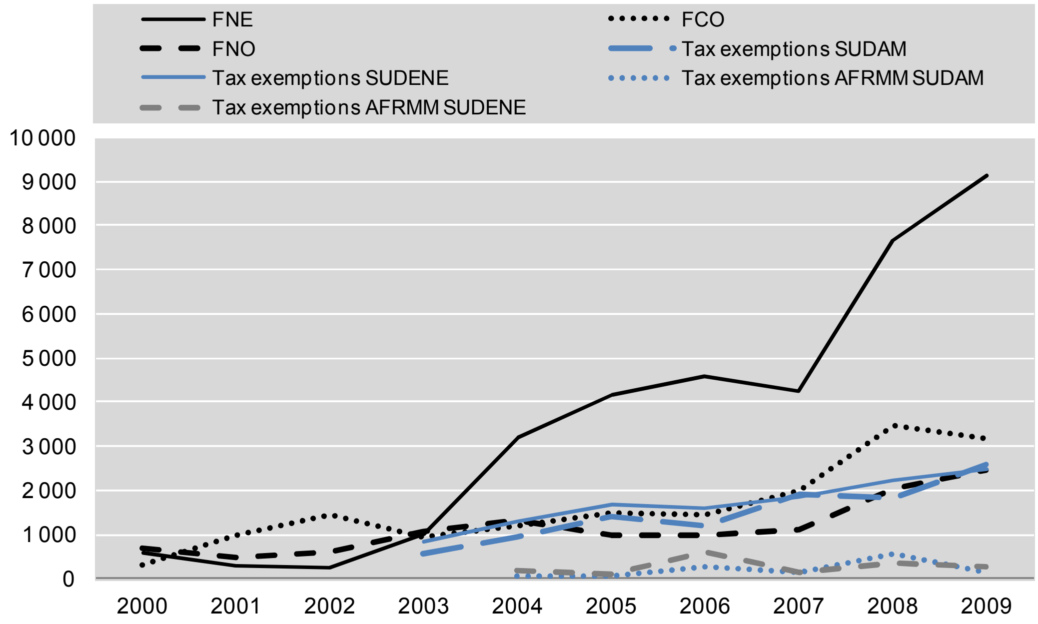
Figure 2.6. **Allocation of constitutional funds for regional development by sector (2000 and 2009)**



Source: Based on *Sistema de Informações Geranciais dos Fundos Constitucionais de Financiamento*: 2000-09.

Figure 2.7. **Resources for regional development**

BRL million



Source: Sistema de Informações Gerenciais dos Fundos Constitucionais de Financiamento (2000-09); IRPJ e IOF-*Coordenação-Geral de Estudos Econômicos-Tributários* – COGET/*Receita Federal*; *Relatório de Execução Territórios da Cidadania Matriz* 2008 and *Relatório de Execução Plano de Execução* 2009 Territories of Citizenship.

Royalties on deep-sea oil: The chance to create a fund to finance public investment in lagging regions?

The discovery of deep-sea oil (*pré-sal*) could represent a new source of financing for regional development. This discovery opened debate on the redefinition of the spatial allocation of royalties from the exploitation of natural resources. Since the approval of the Petroleum Law in 1997, companies have been required to pay royalties to the federal government for the exploitation of natural resources. In 2010, the legislative power approved the creation of a Social Fund (*Fundo Social*, or FS), that will collect and save about two-thirds of the oil revenues. Details regarding the specifics of the fund are still under discussion. Current plans suggest that the real returns on it will be spent on non-earmarked, but mostly education measures, although some may be allocated to a broader range of social and environmental areas. The MIN has proposed using these resources to create a National Fund for Regional Development. The redistribution of oil revenues also aims to be equitable across regions. In draft legislation, the authorities plan to share the proceeds of oil production from the *pré-sal* areas that are not saved among all states and municipalities, including those with no involvement in the oil industry. The Social Fund would support programmes for alleviating poverty, climate change initiatives and activities in education, culture, health and science and technology for social development. The *Banco do Brasil* and the *Caixa Econômica Federal* will be responsible for the execution of the resources of the Social Fund. The proposal establishes the creation of a Deliberative Council of the Social Fund (*Conselho Deliberativo do Fundo Social*) responsible for establishing the priorities of the Social Fund, such as poverty reduction, climate change and science, technology, health and education for development.

The Deliberative Council will be composed of members of civil society and public administration.

However, how this new source of financing will be used for regional development is still a matter of debate. Other countries use resources from compensations and royalties from natural resource exploitation to finance regional development, as Canada does with its gas fund (Box 2.10). In Latin America, Chile introduced a royalty on mining exploitation and linked it to a Fund for Competitive Innovation (Box 2.11), in order to increase the competitiveness of Chilean regions beyond the capital. Colombia and Peru are currently discussing how to use royalties on natural resource extraction for financing regional development. The impact of those transfers on regional development in Brazil is, however, still unclear.[3]

Box 2.10. **Gas Fund in Canada**

The federal government collects a range of excise taxes on gasoline, diesel and aviation fuel, which go to the general coffers and help to fund a range of programmes. Since 2005, a share of these revenues was earmarked in the so called Gas Tax Fund (or GTF), and redistributed to municipalities to support investment in environmentally sustainable municipal infrastructure such as: public transit; drinking water; wastewater infrastructure; community energy systems; solid waste management; local roads and bridges.

The municipal allocation of the GTF is determined at the provincial/territorial level based on a *per capita* formula. For the period 2005-14, the GTF represents CAD 13 billion. In response to ongoing requests for stable, long-term funding, Budget 2008 announced that the GTF will be extended at CAD billion per year beyond 2014 and become a permanent measure.

The GTF is a key component of the *Building Canada* infrastructure plan and helps building Canada's communities by providing predictable and long-term funding in support of municipal infrastructure that contributes to cleaner air, cleaner water and reduced greenhouse gas emissions.

In addition, it benefits communities by providing funding to increase the capacity of communities to undertake long-term planning.

Municipalities can pool, bank and borrow against this funding, providing significant additional financial flexibility. To ensure accountability to Canadians, communities report on their use of the funds on an annual basis.

Source: Infrastructure Canada, *www.infc.gc.ca*.

Public infrastructure investment: The challenge of closing the gap in lagging regions

The PAC: More than just an investment programme

For almost three decades, public investment in infrastructure stagnated in Brazil. Indeed, in the 1980s and early 1990s, hyperinflation and fiscal instability ruined any possibility of medium- and long-term planning. Then, after 1994, fiscal consolidation and stabilisation efforts led to using public investment as an adjustment variable to reach fiscal targets, resulting in an underinvestment in infrastructure. With the return of growth in the early 2000s, the results of two decades of insufficient public investment were obvious: major bottlenecks in the transport sector (both for passenger and cargo), basic sanitation infrastructure, ports, airports, energy production and transmission, etc. This generated a crucial need to boost public investment, exacerbated by the fact that Brazil is due to host two major international sporting events requiring substantial investment in sports infrastructure, transport infrastructure and housing: the World Cup in 2014 and the Olympic Games in 2016.

Box 2.11. **Using royalties on copper mining to finance innovation: The case of Chile**

In 2005, Chile introduced a royalty on copper mining in order to create a National Competitiveness Innovation Fund (*Fondo Nacional de Innovación para Competitividad*, or FIC) to finance innovation and thus diversify regional economies and reduce Chile's vulnerability to trade shocks. It also created a National Council for Competitiveness in Innovation (*Consejo Nacional de Innovación para la Competitividad*, or CNIC), a public-private body acting as an advisory board to the President on public policies for innovation and competitiveness. This includes science and technology development, human resources and innovating entrepreneurship. The National Council of Innovation for Competitiveness defines the national innovation strategy and the priorities that will be financed with the new National Fund for Competitiveness.

The Competitiveness Innovation Fund finances the implementation of national and regional innovation policies focused on boosting the national innovation system. Starting in 2008, 25% of the funds resources are regionally assigned, with 60% going to mining regions and 40% to non-mining regions. The regional government is tasked with defining the use of these resources, taking into consideration the national innovation strategy, the corresponding regional development strategy, the strategic innovation agenda and the plans for improving competitiveness of regional development agencies.

The creation of the Competitiveness Innovation Fund significantly increased the budget for innovation in Chile (OECD, 2010). Still, the execution of the budget has been relatively low (a common feature in the initial phase of new projects). One of the challenges is to create consensus between regional administrations. Traditionally, royalties on natural resources were allocated to the regions where these were extracted, as compensation for the externalities generated.

Source: OECD (2009), *OECD Territorial Reviews: Chile 2009*, OECD Publishing, Paris, doi: *10.1787/9789264060791-en*; and OECD (2010), *Latin American Economic Outlook 2010*, OECD Publishing, Paris, doi: *10.1787/leo-2010-en*.

Strong growth in a stable macroeconomic environment, coupled with a political decision to invest in infrastructure to uncap growth potential resulted in a gigantic investment programme, the Growth Acceleration Plan (*Programa de Aceleração do Crescimento*, or PAC). The PAC was launched by President Luiz Lula da Silva in January 2007 to promote three key priorities of his government: *i*) increase economic growth; *ii*) increase employment, and *iii*) improve the living conditions of the Brazilian people. The best-known feature of this programme is the major public investment programme, amounting to over BRL 500 billion (USD 306 billion) for the first phase (2007-10) and BRL 959 billion (USD 582 billion) for the second phase (2011-14). Still, the programme aims to be more than just a public investment programme: it is chiefly concerned with promoting private investment, by providing the necessary public infrastructure to attract private capital. It also established institutional measures to reduce barriers to growth, including bureaucratic, administrative, regulatory, juridical and judicial burdens.

The measures of the PAC are organised in five blocs:

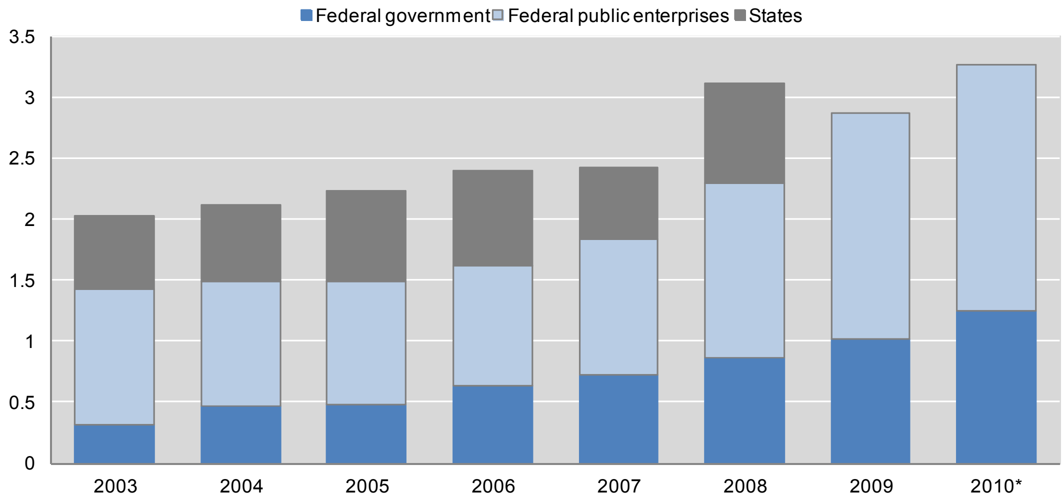
1. **Public investment in infrastructure**. The goal here is to eliminate the main bottlenecks that can reduce growth, to reduce costs and increase productivity, stimulate private investment and reduce regional disparities.
2. **Stimulate credit and financing**. The objective is to deepen Brazilian capital markets and make possible the funding of more productive projects. This includes measures such as increasing the capital of funds that finance housing and sanitation and reducing interest rates charged by the National Bank for Economic and Social Development (*Banco Nacional do Desenvolvimento*, or BNDES).
3. **Improve the business environment** through institutional and regulatory reforms. These include measures to facilitate investment in infrastructure (such as easing environmental constraints), improving the regulatory framework, especially in order to guarantee competition (such as creating a regulatory framework for natural gas, insurance and reinsurance markets, creation of regulatory agencies, etc.). This bloc also aimed to stimulate regional development by recreating the SUDENE and SUDAM superintendencies.
4. **Improve the tax system**. This includes granting preferential tax rates for specific sectors (such as automobile, capital goods, inputs for civil construction), small and medium enterprises and consumer goods; reduction of or revoking taxes on the sale of agro-industrial products, and special tax incentives for products such as corn, rice and wheat flour.
5. **Long-term budget measures** to ensure sustainability. These include control of expenditure, especially personal expenditure (with a ceiling on public wage increases), a long-term policy for re-evaluating the minimum wage, and measures to improve social welfare (by fighting fraud and creating a National Forum for Social Welfare).

Successful implementation of the PAC has increased levels of public investment

Since the PAC was instituted, federal public investment has more than doubled as a share of GDP, rising from about 0.30% on average during 2003-06 to 1.25% (Figure 2.8). Adding public investment by the states, public investment increased from 0.92% of GDP in 2003 to 1.69% in.[4] State-owned enterprises are also a major player in public investment in Brazil and represent about half of public investment. Of course, including them in the total public investment may overestimate the volume of public investment directed to the provision of public goods, as a significant part of their investment may be aiming at private objectives (such as exploiting oil fields, etc.). Still, judging by the size of the resources spent, their investment decisions have a great impact on the development potential of the regions where they are located.

Figures 2.9 and 2.10 report public investment as a share of GDP by levels of government in OECD countries in 2003 and 2008, and also show the information on public investment by federal public enterprises in Brazil. (This information is not available in an internationally comparable format for OECD countries). These figures show that public investment in Brazil was indeed very low by OECD standards in 2003, and has become closer to the OECD average since the PAC was instituted in 2008.

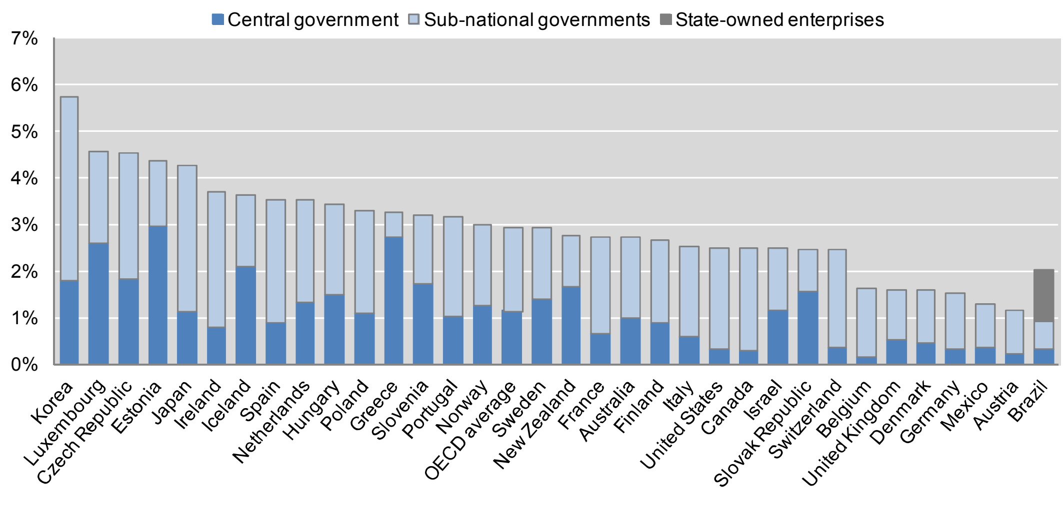
Figure 2.8. **Public investment by level of government as a share of GDP (2003-08)***



Note: * Information about public investment by the states in 2009 and 2010 was not available when this report was written. Federal government funds accumulated in the 12 months before October 2010; state funds accumulated in the 12 months before August 2010.

Source: PAC Relatórios de Gestão (various years), *Quadro dos Datos Contábeis Consolidados dos Estados.*

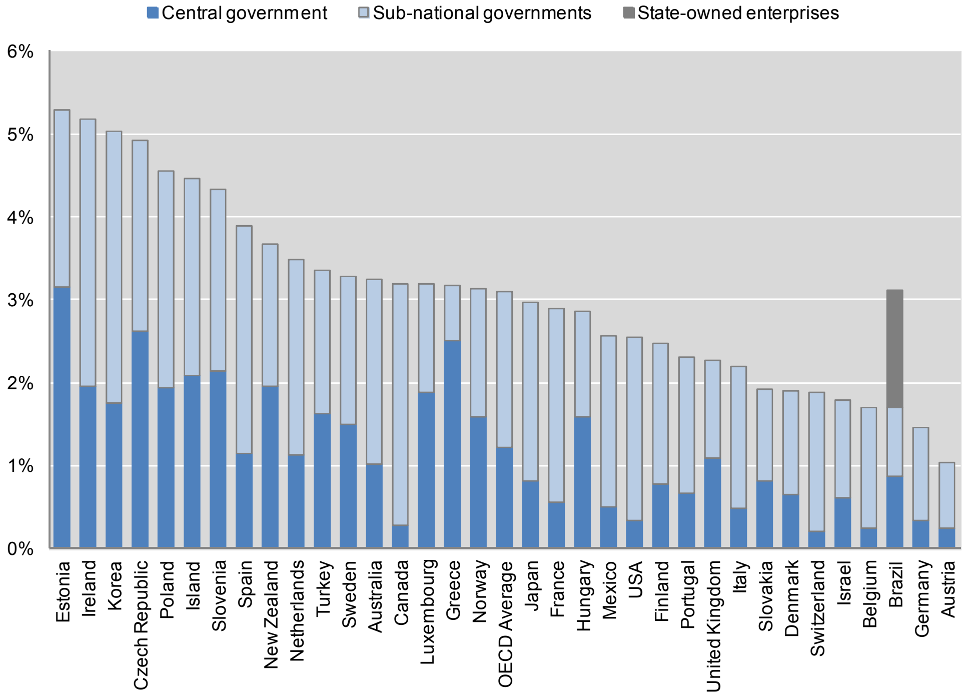
Figure 2.9. **Public investment as a share of GDP by level of government in Brazil and OECD countries (2003)**



Notes: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD National Accounts and *Quadro dos Datos Contábeis Consolidados dos Estados*.

Figure 2.10. **Public investment as a share of GDP by level of government in Brazil and OECD countries (2008)**



Notes: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

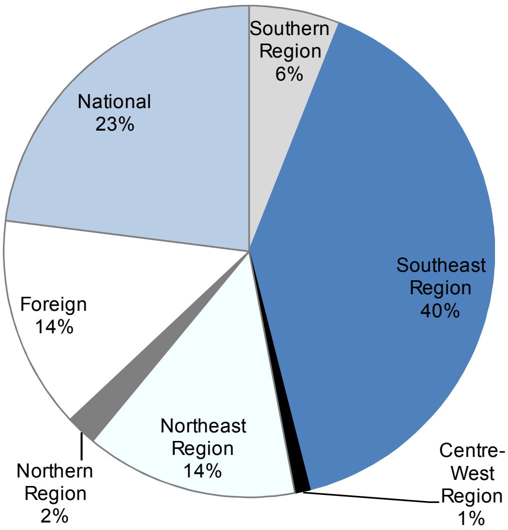
Source: OECD National Accounts and *Quadro dos Datos Contábeis Consolidados dos Estados*.

Directing public investment and financial resources to lagging regions: A pending challenge

In most OECD countries, public investment, and in particular, public investment in physical capital, is a key element in regional development policy (Box 2.12). This is not the case in Brazil: as shown in the previous section, only a small share of regional development resources is targeted to public investment, and its geographical allocation does not favour lagging regions. Public investment has surged since 2007, but it is still mainly channelled to the most developed areas. The data on territorial allocation of public investment is not complete, but information does exist on the allocation of public investment by federal public enterprises. About 20% of the spending, however, cannot be attributed to a specific region (Figure 2.11). In spite of this margin of error, it can be said that the two most developed southern regions (the South and Southeast) receive about two-thirds of the investments by federal public enterprises, while the remaining three regions share only about one-third.

This trend does not seem to be reversed by the ambitious recent investment plan, the PAC. The PAC is a sectoral plan that did not take regional development into account in prioritising and selecting investments. This is reflected, for example, in the way the PAC's objectives and results are presented, as there is no compilation of spending per state (the information for this report therefore had to be compiled from the 27 *Relatórios Estaduais*). The results show that more than two-thirds of the funds were allocated to investment projects in the Southeast and South regions (i.e. the most developed and fastest-growing macro-regions), while only about 19% are allocated to projects in the Northeast, 7% to the North and 5% to the Central-West macro-regions (Figure 2.12), where most infrastructure gaps are located (see Chapter 3 and Annex 3.A1).

Figure 2.11. **Regional allocation of investment by federal public enterprises (2010)**



Note: 1. Budget items that are spent in several regions or whose physical or technical characteristics do not allow them to be allocated to a given region are classified under "National".

Source: Ministry of Planning, Budget and Management, *Secretária executiva, Departamento de Coordenação e Controle das Empresas Estaduais*.

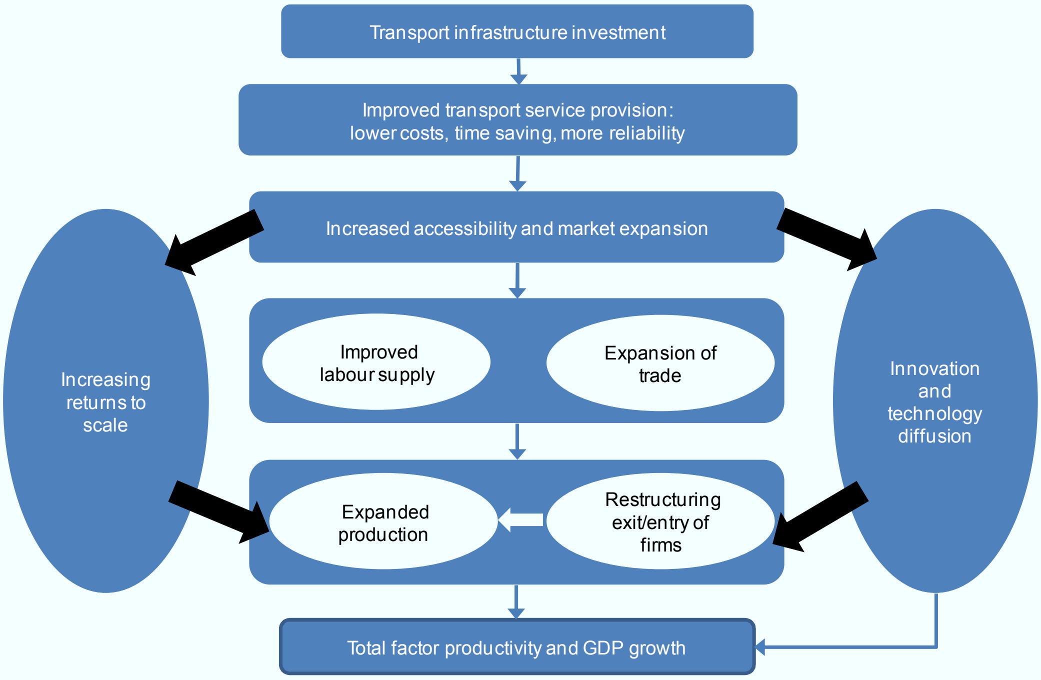
Box 2.12. **Investment in physical capital has played a key role in regional policy in OECD countries**

Many national government policies have tried to reduce disparities by reducing travelling times from the target region to other regions and by eliminating gaps in telecommunications networks. Recent examples of this approach include Mexico's *Plan-Puebla-Panama* or the EU Trans-European Transport Networks (EU-TEN) transport corridor programme. The expectation that improvements in physical infrastructure will generate productivity gains for local businesses and increase the attractiveness of an area for investment has been a recurring theme in OECD reviews. High-quality infrastructure and services are accepted as being vital to a strong economy locally, regionally and nationally (see figure below). In the case of transport, upgrading infrastructure improves access (by cutting travel times), which in turn affects property prices and economic rents and influences decisions of households (residential location, patterns of consumption) and firms (production location, access to markets and investment decisions). These, in turn, should have a positive net impact on the economy, increase tax revenues, create employment and generate resources for further investment. For business, the benefits could include: *i*) access to a wider labour market pool, with more diverse skills; *ii*) faster access to suppliers and customers, reducing transaction costs; *iii*) expanded market reach, both to suppliers and customers; and *iv*) reduction of land use constraints.

The Czech Republic (OECD, 2004) demonstrates the importance of adequate domestic and international road and rail connections for improving competitiveness. Ostrava, the third city in the country, is still not connected to the Czech highway network. This has held back the development of an industrial area that is undergoing deep restructuring and high unemployment. Its limited accessibility prevents Ostrava, and more generally the region of Moravia-Silesia, from attracting a larger share of foreign direct investment (FDI). This comes at the expense of Ostrava's assets, which include human capital, an excellent university and research centres, and strong financial and other incentives for investors.

Box 2.12. **Investment in physical capital has played a key role in regional policy in OECD countries** (*cont.*)

Transport infrastructure investment and economic growth effects

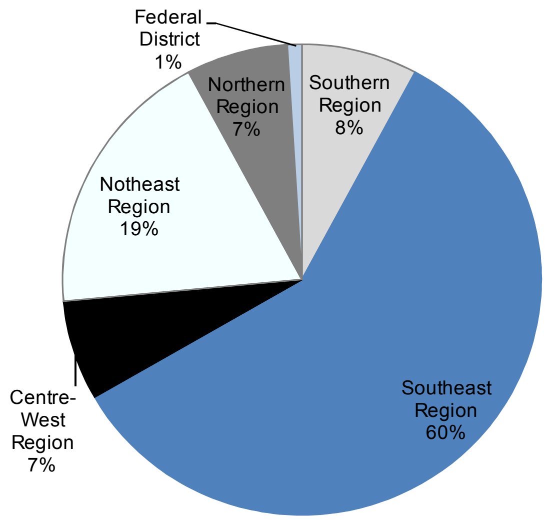


Source: Adapted from Lakshmanan and Anderson (2002), "Transportation Infrastructure, Freight Services Sector and Economic Growth", Center for Transportation Studies, Boston University, a White Paper prepared for the Federal Highway Administration, U. S. Department of Transportation.

Similarly, in Poland, a main focus of regional policy since 2004 has been road development (expressways, motorways and national roads). Major EU transport infrastructure investments have concentrated on Poland because it is crossed by four of the ten pan-European transport corridors. One of Poland's critical priorities is to improve road-bearing capacity and quality and to create an effective network of motorways connecting the country's major urban centres and the Trans-European Transport Networks. The focus on roads has continued in the 2007-13 regional development strategy: 51.7% of total funds for the infrastructure programme (including co-financing) is allocated to road development (EUR 11.2 billion from EU funds and EUR 1.98 billion from national funds), while 21% is dedicated to rail transport and 13% to urban transport. In the regional programmes, 26% of the funding goes to transport, or EUR 4.4 billion out of a total of EUR 16.6 billion (OECD, 2009a). However, the review also notes the efforts of the Polish national and regional authorities to adopt a balanced policy mix for regional development. This focuses on transport, but also on human capital and innovation, and on maximising the economic multiplier from the huge infrastructure investment by integrating it with other policies.

Source: OECD (2009), *How Regions Grow: Trends and Analysis*, OECD Publishing, Paris, doi: *10.1787/9789264039469-en*.

Figure 2.12. **Regional allocation of PAC investments**



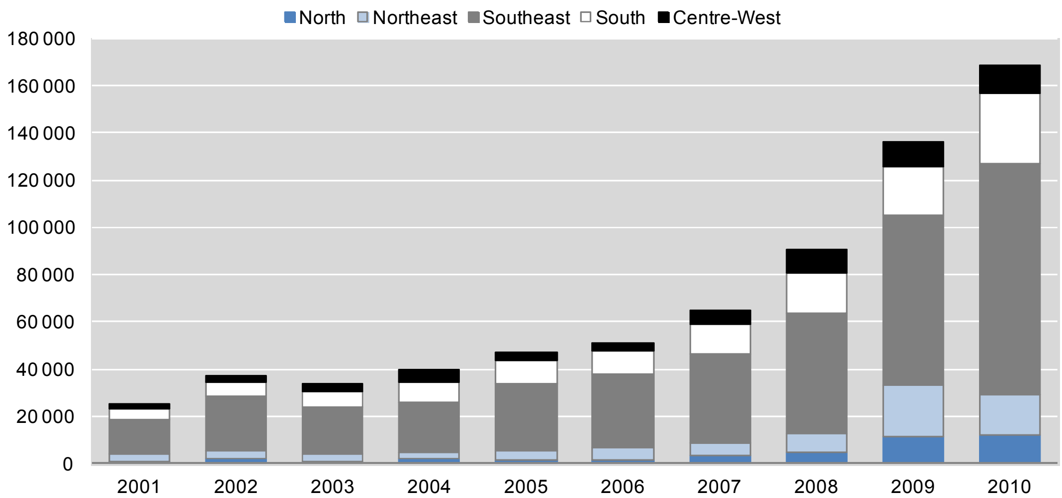
Note: Totals for four years, 2007-10.

Source: Relatórios Estaduais.

The same is true for the disbursements of the state-owned National Development Bank (*Banco Nacional do Desenvolvimento*, or BNDES) (Box 2.13), which have grown in tandem with the growth in public investment (Figure 2.13), but also mainly target developed regions such as the South and Southeast, which account for almost 80% of the funds on average (Figure 2.14).

Figure 2.13. **Yearly lending under the National Development Bank (BNDES) system**

BRL million



Source: BNDES website, *www.bndes.gov.br*.

Box 2.13. **The National Development Bank (BNDES)**

The Brazilian Development Bank (*Banco Nacional do Desenvolvimento*, or BNDES) is the main financing agent for development in Brazil. It was created by the federal government in 1952 to resolve a market failure, after private lenders proved unable to provide long-term financing. It is financed through compulsory saving via the workers tax fund (*Fundo de Amparo ao Trabalhador*, or FAT) and public transfers. It supplies credit for long-term investment projects at below-market rates, oriented toward social inclusion, regional development and environmental sustainability. Since its foundation, the BNDES has played a fundamental role in stimulating the expansion of industry and infrastructure in the country. Over the course of the bank's history, its operations have evolved in accordance with the Brazilian socio-economic challenges, and now they include support for exports, technological innovation, sustainable socio-environmental development and the modernisation of public administration.

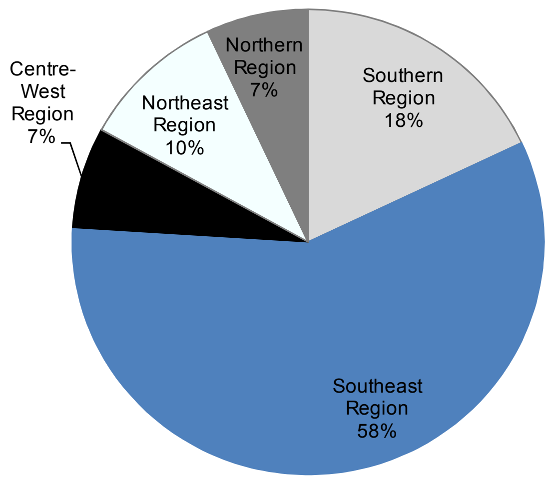
The bank offers several financial support mechanisms to Brazilian companies of all sizes as well as public administration entities, enabling investments in all economic sectors. In any supported undertaking, from the analysis phase up to the monitoring, the BNDES emphasises three factors it considers strategic: innovation, local development and socio-environmental development.

The BNDES supports investment in such sectors as agriculture, industry, infrastructure, trade and services, providing special terms for small and medium enterprises. It also underwrites social investment, in education and health, family agriculture, basic sanitation and urban transport.

Regional and local development priorities are addressed in its Regional Dynamisation Policy (*Política de Dinamização Regional*, or PDR), which aims to reduce regional and social income inequality. It consists of several budget lines that support investments in priority municipalities or in the North and Northeast regions.

Source: BNDES website, *www.bndes.gov.br*.

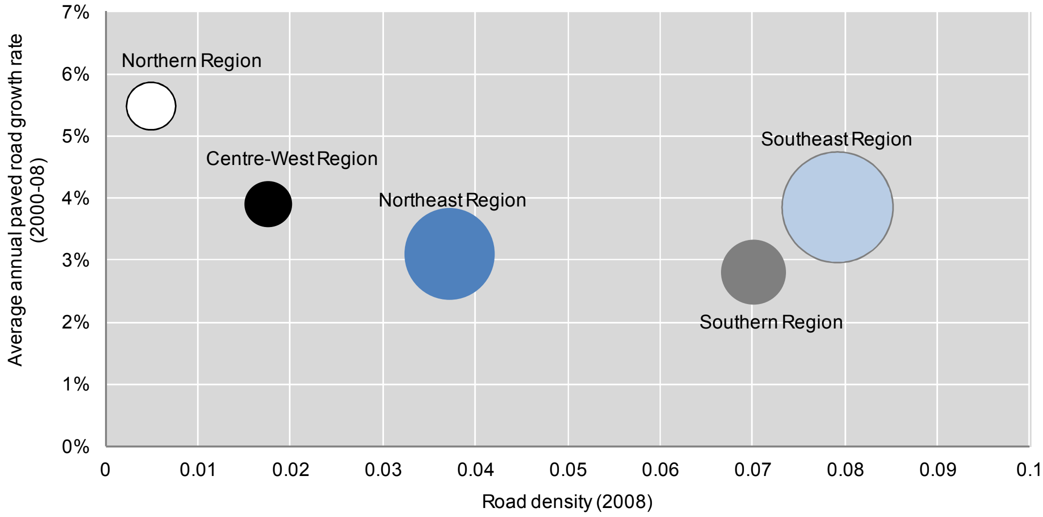
Figure 2.14. **Regional allocation of lending by BNDES system in 2010**



Source: BNDES website, *www.bndes.gov.br*.

If they are to close their infrastructure gap, regions with less developed infrastructure should grow at a faster rate. This is not really the case at present: Figure 2.15 shows that for transport infrastructure, for example (proxied by road density, i.e. the number of kilometres of paved road per square kilometre), Brazil's growth rate in function of initial density presents a U-shape: the Northern region is clearly catching up, as its initial road density was very low, and average annual growth rates are above the national average. On the other hand, the Northeast and Southern regions have comparable growth rates, even though the Northeast had a much lower initial density, and the Southeast region, which had the greatest initial density, is also one of the fastest growing.

Figure 2.15. **Regional paved road density and paved road growth**



Notes: 1. Paved roads refers to federal roadways, *Rodovias Federais*, *Estaduais Transitórias* (*Estaduais Coincidentes*), *Estaduais e Municipais Pavimentadas, por Região e UF*. 2. Bubble size depicts population size in 2009.

Source: DNIT (2009), *www.antt.gov.br/InformacoesTecnicas/aett/aett_2009/1.1.1.asp*.

Insufficient capacity at state and municipal level in lagging regions explains some of this challenge

The regions that are farthest behind and the individuals who are worst off are often less than proportionally represented in Brazilian programmes that aim to finance public investment, improve living conditions and provide subsidised credit. Often, these institutions and individuals are not even aware of the existence of these programmes and the fact that they are eligible for them. In addition, they do not have the capacity to design and develop projects they could propose. Chapter 3 will show how some programmes, by conducting an evaluation of the situation, can create valuable information about where needs lie, so that other ministries can address them. For example, the Ministry of Education gives grants to schools so they can hook up to energy, water and sanitation networks. Typically, however, the schools that do not have these facilities do not know about the programme and do not have the capacity to apply for it. They, therefore, do not appear in the mapping of sectoral ministries. The School Census, which surveyed schools and obtained details about their facilities, collected data about where the needs lie, and therefore made it possible to address them (see Chapter 3).

Social programmes, innovation and competitiveness as drivers of regional development

The framework described in the first section is based on the recognition that if properly identified and exploited, complementarities can make it possible to increase the effectiveness of the policies that are implemented in given territories. This section will take a look at three main policies undertaken by the Brazilian government and highlight the conditions under which they can act as drivers for regional development. Two social development policies will be analysed, the Bolsa Família anti-poverty programme and the National Health Care Strategy. Both target individuals and demand considerable participation from states and municipalities. The third example is Brazil's National Policy for Innovation and Competitiveness, which targets firms and institutions. Its governance structure involves several ministries at the federal level that must share responsibilities with institutions at the state level. This section aims to identify possible complementarities and synergies between sectoral policies and regional development policy. The next chapter will present the challenges policy makers face in exploiting these complementarities and describe some tools used, in Brazil and in OECD countries, that could be helpful in this regard.

Bolsa Família: More than simply a direct income-transfer programme

In addition to regional development and public investment programmes, major programmes targeted to the poor also channel resources to lagging regions (Box 2.14). Investment in support of social development has been a major priority for Brazil since 2002. The budget of the Ministry for Social Development rose from BRL 11.4 billion in 2003 to BRL 33 billion in 2009. The social agenda aims to close several gaps: actions to close income and nutrition gaps (such as Bolsa Família or the minimum wage policy, see Box 2.14) are matched with support for increasing the provision of public services to poor people, and democratisation of opportunities for production development. Those gaps have a clear regional dimension, as most of them affect people concentrated in certain regions, especially in the Northeast and in poor rural and urban areas across the country (see Figures 1.20, 1.37, 1.38 and Table 3.1).

Box 2.14. **The Brazilian social development agenda: The time for equity**

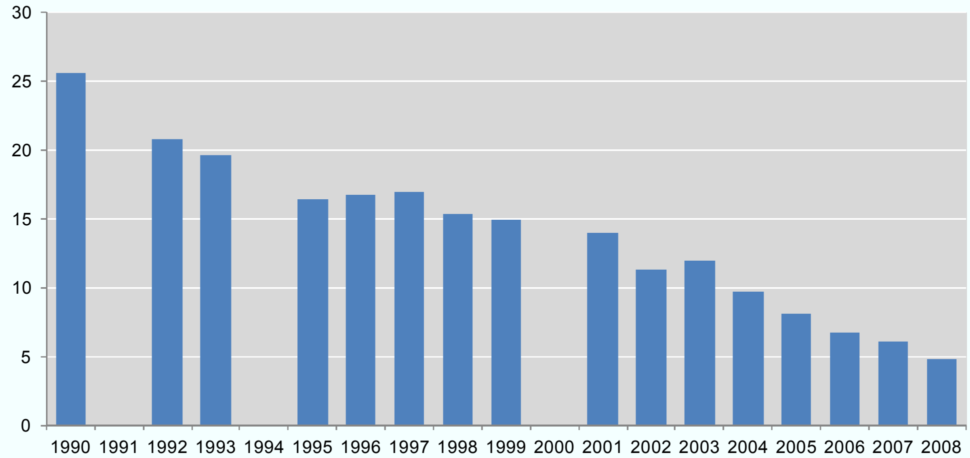
Since 2003, Brazil has prioritised a comprehensive social development agenda involving several policy fields. Income-transfer programmes and the United Nations Millennium Development Goals (MDGs) are the principal lines of attack.

The MDGs established a goal of cutting in half the share of population living in extreme poverty in all developing countries. Brazil set its own, more ambitious target of reducing extreme poverty by 75%. In 2008, this objective was achieved (see figure below); however, the share of national income owned by the bottom 20% of the population only rose from 2.2% to 3.1% between 1990 and 2008. This suggests that most of the reduction in poverty can be explained by a rise in real income rather than by a structural transformation in income distribution across social groups (Presidency of the Republic, 2010).

Box 2.14. **The Brazilian social development agenda: the time for equity** (*cont.*)

Population living in extreme poverty (1990-2008)

Less than USD 1.25 PPP per day



Note: Estimation. Income: IBGE PNADE, *Patroes* PPC NNUU. Average annual inflation rate: IFM.

Source: Presidency of the Republic, (2010), *Relatório Nacional de Acompanhamento: Objetivos de desenvolvimento do Milênio, coordenação* IPEA-SPI/MP, Brasília.

The table below shows the main areas of action and programmes of social policy in Brazil, indicating the number of expected beneficiaries. The major objectives of social development policy are the delivery of high-quality education and health care and a guarantee that all citizens have access to them without discrimination, as well as targeted policies to reduce income gaps.

Main areas of action of social development policy

Areas of action	Examples of actions	Expected beneficiaries
Health	Community Agents for Health	61% of total population (115.4 million people)
	Family health	51% of total population (96.1 billion people)
	Dental health	48% of total population (91.3 million people)
	Medical consultations	2.5 consultations *per capita* per year
Education	Infant education	4.2 million students
	Basic education	37.6 million students
	Graduate	1.2 million students
	Delivery of textbooks	117.5 million books delivered
Social assistance	Bolsa Família Programme	12.4 million families
	Beneficios de Prestação Continuada	1.6 million handicapped people 1.5 million seniors
Social pension schemes	Pensions	24 million beneficiaries
Employment and workers protection	Unemployment insurance	6.6 million beneficiaries
Agrarian development	PRONAF	1.7 million financing contracts

Source: Presidency of the Republic, (2010), *Relatório Nacional de Acompanhamento: Objetivos de desenvolvimento do Milênio, coordenação* IPEA-SPI/MP, Brasília.

Box 2.15. **Minimum wage: A tool for social policy**

A major tool of social policy in Brazil is the management of the minimum wage, which has undergone constant re-evaluation in recent years. Since 2007, the government has committed to readjusting the minimum wage to take account of accumulated inflation since the last readjustment, plus the real GDP growth. This procedure should guarantee a rise in the purchasing power of minimum wage earners, in line with the national strategy of supporting more balanced growth. From 2006 to 2010, the minimum wage rose from BRL 350 to BRL 510. This last increase will cost the government around BRL 4.6 billion. The re-evaluation of minimum wage tends to have a skewed impact across Brazilian macro-regions and states, considering the differences in the cost of living across the country.

The Bolsa Família Programme has been the flagship of the social development agenda of Brazil since 2003. The programme, the biggest conditional cash transfer programme in the world, targets around 11 million families at a cost of approximately 0.4% of Brazil's GDP. It has been recently complemented by a new programme, Brazil Without Poverty (*Brasil sem Miséria*), launched in June 2011. It aims to promote social and productive inclusion of the extreme poor, i.e. for the beneficiaries of Bolsa Família. The Bolsa Família Programme is a direct income transfer with health and education requirements that aims to break the cycle of poverty (Box 2.16). The beneficiaries receive a direct cash transfer through a bank card offered to them through a simplified procedure by the *Caixa Econômica Federal*. The benefits offered by the programme range between BRL 22 and BRL 200, depending on the monthly income of the family, the number of children under 15 years of age, and the number of children of 16 and 17 enrolled in school. The beneficiaries must comply with health and education requirements to keep receiving programme benefits. At the same time, the conditionalities create a responsibility on the government's part to supply the promised public services.

Box 2.16. **Bolsa Família in practice: Benefits, conditionalities and governance**

The Bolsa Família Programme is a federal programme created by decree in 2003 and stipulated in Law No. 10.836/04, which consolidated four pre-existing conditional and unconditional cash-transfer programmes: *Bolsa Escola*, a minimum income grant attached to primary education, *Fome Zero* and *Bolsa Alimentação*, two income grants related to food security, and *Vale Gás*, a subsidy to poor households for buying cooking gas.

Bolsa Família annual targets and allocated budget (2004-09)

Year	Number of targeted families (millions)	Allocated budget (BRL billions)
2004	6.5	5.7
2005	8.7	6.5
2006	11.1	8.2
2007	11.1	9.2
2008	11.1	11.8
2009	11.1	11.9 (estimated value)

Note: The number of families targeted has not been updated since 2006, due to a lack of new estimates of the number of poor families in Brazil.

Source: Based on data from *Sistema de Administração Financeira* (SIAFI).

Box 2.16. **Bolsa Família in practice: Benefits, conditionalities and governance** (*cont.*)

The Bolsa Família Programme targets poor families with a monthly income per person between BRL 70 and BRL 140 and extremely poor families with a monthly income per person below BRL 70.

The programme offers three types of benefits:

- basic: BRL 68 to all families classified as extremely poor;
- variable: BRL 22 to families with income of up to BRL 140, with children 15 years of age. Each family can receive a maximum of three variable benefits (BRL 66).
- variable for teenagers: BRL 33 to all families with children aged 16 and 17 enrolled in school. Each family can receive a maximum of two benefits (BRL 66).

Beneficiaries must meet a series of conditions in the area of health, education and social assistance.

- Beneficiaries must carry out the required vaccinations and health procedures for children under the age of seven, as prescribed by the national vaccination card. In addition, all women between 14 and 44 years old must undergo check-up procedures as required by the public health system, and in case of pregnancy, must enrol in prenatal and postnatal care.
- As for education, all children between 6 and 15 years old are required to enrol in schooling, with a monthly attendance rate of not less than 85%. For students between 16 and 17, the minimum attendance rate is set at 75%.
- In the area of social assistance, children and teenagers of up to 15 years old who are at risk for being involved in child labour as defined by the national programme Fight Against Child Labour (*Programa de Erradicação do Trabalho Infantil*, PETI) must participate in the social activities prescribed by PETI, with a minimum attendance rate of 85% in monthly activities.

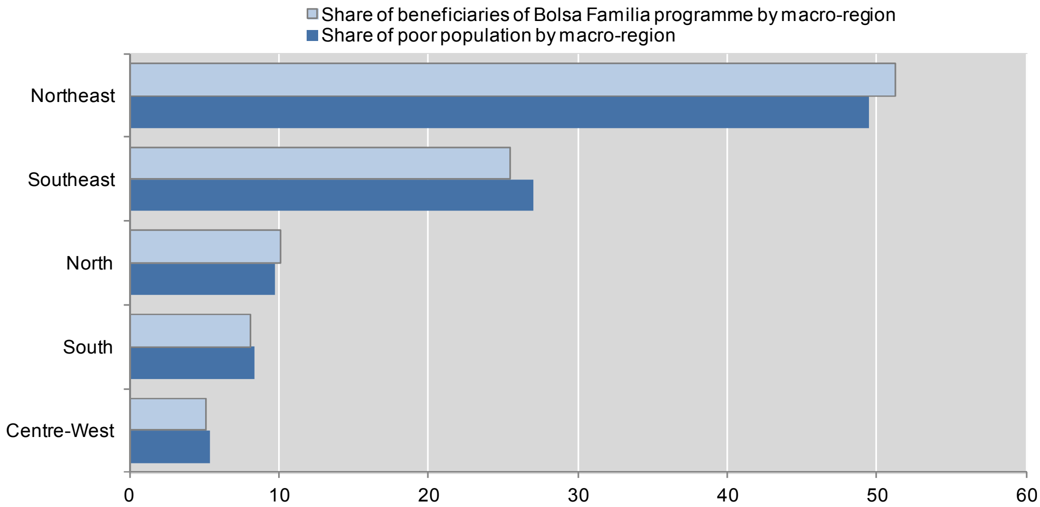
The Ministry of Social Development monitors compliance with these requirements in collaboration with the Ministry of Health and Education, and in partnership with the states and municipalities. Families who fail to comply with the requirements are subject to temporary suspension of their benefits and potentially expulsion from the programme. Follow-up service is provided to families to help them reintegrate into the programme.

The programme requires that beneficiaries register in the Single Registry for Social Programmes (*Cadastro Unico para Programas Sociais*). The Single Registry (under decree No. 6135/07) is supervised by the Ministry of Social Development. The federal government consolidates information from the different municipal registries, so that social policies targeting the poor can be designed. The Single Registry included more than 19 million families in 2010, and represents the standard of reference for social development policies. The Registry is also useful for municipalities and states to map social development in their territories and to target specific actions.

The programme is executed in partnership with states and municipalities, and its governance is shared between levels of government. The Ministry for Social Development is responsible for the management and organisation of the programme at the federal level. States are responsible for offering technical and capacity-building support to municipalities and to promote the inclusion of traditional communities in the Single Registry, to monitor compliance, and to help integrate measures to support poor families. Municipalities are responsible for the identification of beneficiaries, for the management of the Single Registry and for making sure the requirements are met.

Source: Based on interviews with officials from the Ministry of Social Development.

Figure 2.16. **Regional distribution of the poor and of beneficiaries of the Bolsa Família**



Note: The share of poor population by macro-regions is an estimate on the basis of data from the census (*Pesquisa Nacional por Amostra de Domicilios* or *PNAD*) 2006. The share of beneficiaries by macro-regions refers to the data reported by the Sibec for March 2009.

Source: Federal Audit Authority (2009) on the basis of data from *Sistema de Benefícios ao Cidadão* (SIBEC)-*Sistema de Gestão dos Beneficios*.

The income poor are highly concentrated in the Northeast, which receives more than 50% of the total income transfer under the Bolsa Família Programme (see Figure 2.16). The programme has had an important impact in the region, mobilising resources and creating incentives for poor municipalities to increase their capacities to deliver services to their citizens. The Bolsa Família Programme can act as a driver for regional development if synergies with other policies are properly exploited. Annex 2.A1 shows possible policy complementarities with other policy fields. Some of these are described in more detail below.

- **The programme reveals potential gaps in institutional capacities at the municipal level** for the provision and monitoring of education and health care services. The health and education requirements ensure that income transfers are matched with measures intended to break the inter-generational cycle of poverty, by facilitating poor people's access to education and health care. The programme's requirements create demand for the provision of those services in areas where poor people are concentrated, acting as a driver for regional development. The programme is required to be matched with actions to strengthen local institutions. Bolsa Família is designed to target beneficiaries directly and requires strong state and municipal institutions for its effective implementation and follow-up. In practice, there are bottlenecks in the delivery of public services and in the capacity of municipalities to implement and manage the policy. The municipalities that most need the resources usually have less institutional and financial resources. An evaluation carried out by the Federal Audit Authority (*Tribunal de Contas da União* or TCU, 2009) showed that the capacity of municipalities to manage the Bolsa Família Programme was higher in the municipalities where the Community Health Agent's Programme (*Programa de Agentes Comunitários da Saúde,* PACS) and Family Health Programme (*Programa Saúde da Família*, PSF) were already active. These programmes are operated at the municipal level and require municipal teams for project management. The local teams responsible for the programmes have been trained to manage the Bolsa Família Programme and have taken on the responsibility of monitoring compliance with health requirements. The management of education requirements was more difficult, given a lack of continuity with pre-existing programmes, such as *Bolsa Escola*. This made it necessary to re-establish a mechanism and teams for policy implementation and monitoring. Synergies also arise through the delivery of complementary services to poor people, such as the programme offering subsidised drugs in poor areas (*Farmácia Popular*), or the delivery of school textbooks to schools in poor municipalities.

- **The Bolsa Família Programme acts as an "entry door" for public policies for marginalised citizens**. The Single Registry makes it possible to identify and target citizens previously "invisible" to public policy. Families that qualify for and are registered with the Bolsa Família Programme can apply to other social policy programmes (such as microcredit programmes, education and sanitation policies, housing policies, etc.). Each policy has its own register, which can be matched with the Single Registry, providing a precious source of data for policy monitoring and assessment). This "visibility" effect for citizens beyond the radar of public policy is a major positive externality of the Bolsa Família Programme. In addition, a series of additional policies have been designed and targeted to the beneficiaries of the Bolsa Família Programme. Beyond the impact of income transfers, it has been used as a platform for accessing rights such as health and education, and for services like the banking system and professional training.
- **The Single Registry has been a fruitful source of information externalities**. Several programmes have been attached to the Bolsa Família Programme. For example, the Ministry of Employment implemented a series of policies targeting beneficiaries of Bolsa Família to create employment opportunities in certain production poles. The programme also develops synergies with policies for competitiveness, such as for example a *Banco do Nordeste* microcredit initiative targeting the rural and urban poor (see Chapter 3), which uses the Single Registry as a reference. The Ministry of Employment introduced the Employment and Income Generation Programmes (*Programas Geração de Emprego e Renda*, or PROGER) targeting micro-entrepreneurs and offering subsidised credit for the implementation of production development programmes to beneficiaries of Bolsa Família. The Bolsa Família Programme also promotes access to the financial system, introducing poor families to banking. Its beneficiaries are given an incentive to open a simplified bank account in the *Caixa Economica Federal* (in 2008, 2.5 million beneficiaries of Bolsa Família owned a bank account).

However, complementarities between the Bolsa Família Programme and the regional development policy have not been totally exploited. There is room to improve the impact of the Bolsa Família Programme and to help beneficiaries exit from the programme in the long term through the delivery of services in poor rural and urban regions. Except for some isolated experiences like the Territories of Citizenship and the *Minha Casa Minha Vida* Programme, the connection between the social agenda and national regional development policy has been weak, due to the lack of co-ordination mechanisms. Some cases of co-ordination occurred on an *ad hoc* basis when pro-active states mobilised to complement the Bolsa Família Programme with state and municipal measures. In Pará, for example, the state introduced a programme to create employment opportunities for Bolsa Família beneficiaries, aiming to reduce dependency on income transfers in the long term. The recently introduced Brazil without Poverty programme appears to make use of them by increasing access to public services (water and electricity in particular) and providing job opportunities in rural and urban areas.

Delivering health care to people and places: Using fiscal incentives to achieve targets

The Brazilian Constitution of 1988 states: "Health is a citizen right and a duty of the state". To implement this constitutional principle, the Ministry of Health developed a Family Health Strategy to improve primary health care. This strategy is conducted by the Department of Primary Health Care (*Departamento de Atenção Básica*) within the Ministry of Health, but must be implemented in partnership with the states and municipalities. The Department of Primary Health Care formulates the policy and specific actions, and is responsible for the control and evaluation mechanisms, as well as for providing technical assistance to states and municipalities.

Family Health is a strategy based on the organisation of "health teams" composed of at least one family doctor, a nurse and assistant nurse, and 4 to 12 "community health agents" (whose role is to facilitate and improve communication between professionals and the community). Each health team is responsible for supervising a number of families (3 000 to 4 000 people) in a specific geographical area. The objective of the Department of Primary Health Care is to cover all the territory.

The Family Health strategy began to be implemented in Brazil in the early 1990s, after some years of experimentation in pilot municipalities. In 1994, the first teams started working in 12 cities, but although its results were promising, the programme was slow to take off. This was related to problems over the financing of the programmes, which had to be renegotiated each year by each municipality, and left doubts as to whether funds would be available in the future. The Department of Primary Health Care therefore introduced a series of changes in the mechanism for transferring primary health care resources to the municipalities, to increase their incentives for creating health care teams. In 1998, the department introduced a first reform of the financing scheme, which aimed to provide long-term security about the availability of funding for municipalities by creating a Fixed Basic Care Fund (involving the transfer of an equal *per capita* amount to all municipalities independent of the actions performed), and a Variable Basic Care Fund (which granted an extra amount per action implemented). This first change in the financial incentives accelerated the expansion of Family Health Teams all over the country.

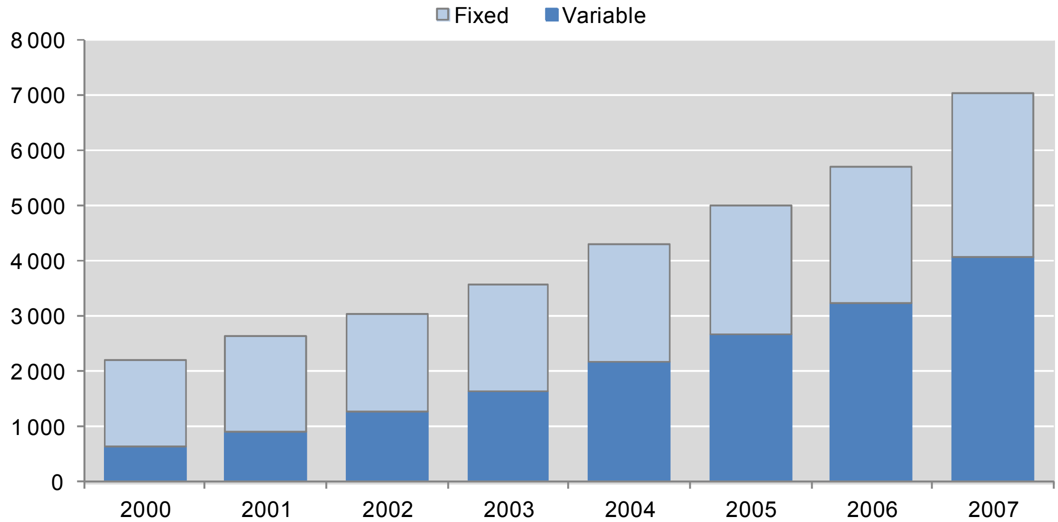
Despite this change, some regions (mainly poor rural areas) still lagged behind, in particular in the Amazon region. To improve their situation, the Brazilian government changed the distribution criteria again in 2004, providing a 50% bonus per Family Health Team to municipalities with less than 50 000 inhabitants in the Amazon, or less than 30 000 inhabitants and with a Human Development Index of below 0.7 in other regions of the country. This helped to improve the situation, but some regions were still under-covered. In 2006, a new financial incentive was given to support the teams working in *quilombolas* areas (rural communities formed by descendants from black slaves) and Territories of Citizenship. The new funding policy increased the number of teams working in these areas from 36 in 2006 to more than 1 500 in 2008.

There are now 30 000 Family Health Teams working all over the country, which represents about 230 000 community health workers, and a total of more than 350 000 workers. National coverage is above 50%.

This increase in coverage implied a sustained increase in the financial resources granted by the federal government, which grew at a pace of more than 300% in the last ten years (federal grants to finance primary health care in municipalities were about USD 5 billion in 2009 and represent above 20% of the budget of the Ministry of Health) (Figure 2.17). Still, federal grants only cover about 35% of the cost of the Family Health Teams. The remaining costs are covered 50% by municipalities, and 15% by the states. The rapid pace of demand for Community Health Agents has also presented a challenge in terms of capacity building. The Family Health Programme has achieved good results in increasing the numbers of the population with access to health care, in reducing infant mortality and other health-related outcomes. It has also had a positive impact on social inclusion, since the large number of community health agents it employs are often women who previously had no occupation or salary. This policy also has complementarities with the Bolsa Família programme, because complying with the health requirements is easier for families in municipalities where health teams operate than in municipalities where they do not.

Figure 2.17. **Evolution of primary health care federal resources**

BRL million



	2000	2001	2002	2003	2004	2005	2006	2007
Variable	651.9	898.9	1 270	1 662	2 191	2 679	3 248	4 064
Fixed	1 562	1 744	1 766	1 902	2 134	2 335	2 470	2 976

Source: National Health Fund.

Mobilising innovation and competitiveness for regional development

Competitiveness and innovation as drivers for regional development

Brazil's development strategy combines a strong social development agenda with a clear set of goals for production development and innovation. In recent years, policies for industrial and technological development have been revived as drivers of economic growth and well-being (Box 2.17). Meanwhile, the territory has re-emerged as a relevant element for public policy planning and implementation. Territorial dynamics both shape and are influenced by industrialisation, particularly in economies involved in a major catching-up process. Production development and innovation policies increasingly take into account the territorial impact of sectoral strategies.

In Brazil, both production development policy and innovation policy have trended in this direction, and regionalisation and regional development are now a strategic focus.

Improvements have been made in the legal framework and in policy governance, and policies for production development and for innovation have been synchronised. However, more resources could be directed to lagging regions. In addition, policy complementarities of sectoral measures could receive more attention, and institutional capacity at the state and municipal level could be increased to boost the effect of federal actions.

Box 2.17. Regions and innovation policy: Views from OECD countries

There are no set recipes for knowledge and innovation diffusion. Differences in knowledge absorption, creation and diffusion capacities across regional innovation systems tend to persist over time, both between and within countries. Experience shows that there is room for virtuous catching up, or leap-frogging, but that those processes are usually shaped by a series of complementary factors and need to be supported by smart policies. The costs of not favouring the transition to a socially and environmentally sustainable growth paradigm are too high. The new innovation agenda must be inclusive, and regions are key players in this endeavour, which demands effective co-operation between the different levels of government.

Regions have increasingly become relevant actors. Two policy trends contribute to their increasing importance. First, the paradigm shift in regional development policies favours strategies based on the mobilisation of regional assets for growth, making innovation the core of regional development agendas. Second, national innovation strategies are beginning to recognise how vital the regional dimension is, and to make the best use of local assets. The increased relevance of networks and connectivity for innovation also reinforces the importance of regional innovation systems. But regions are not countries and cannot simply replicate national policies at a regional scale.

The following guidelines can help policy makers design better regional innovation policies:

1. **Acknowledge the diversity of regional economic and innovation profiles.** Regions and their innovation systems follow different paths of development. Many kinds of regional innovation systems can coexist within the same country, including knowledge hubs, industrial production zones and regions that are not driven by science and technology.
2. **Open the "black box" of regional innovation policies.** To identify the scale and scope for innovation policy in regions, three different dimensions need to be considered simultaneously:
   - the **institutional context**, which concerns regional institutions' room to manoeuvre within the national governance framework and the degree of the devolution of powers and responsibilities;
   - the **regional innovation system**, which defines the region's strengths and weaknesses for innovation and the nature of local and international relationships and networks; and
   - the **strategic choices** regions make to support the transition towards an innovation-driven model of growth.
3. **Enable regions to become agents of change.** Regional governments can play a determining role in identifying opportunities for transformation.
4. **Develop a vision and a strategic road map to encourage innovation.** What is needed is a shift toward outcome-driven policies based on a clear regional strategy for innovation.
5. **Design a smart policy mix** (asset-based and multi-sectoral), integrating several policy fields, vertically and horizontally, using a range of complementary instruments to target knowledge creation, diffusion and exploitation.
6. **Establish multi-level, open and networked governance structures**. The combination of decentralisation, bottom-up regional initiatives and increasing attention to place-based dimensions in national policy has resulted in greater areas of interdependence in innovation policy.

Box 2.17. **Regions and innovation policy: Views from OECD countries** (*cont.*)

7. **Foster policy learning through better metrics, evaluation and experimentation.** Regions can play a key role in improving the quality of data relevant to policy making, and in developing monitoring and analytical capacities to support policies that are based on evidence.

Regions can be laboratories for policy: the diversity of regional situations and the unpredictability of the innovation process call for a certain degree of policy experimentation. Pragmatic experimentation, which can inform national policy, needs to be backed by outcome-oriented policy evaluation.

Source: OECD (2011), *Regions and Innovation Policy*, OECD Publishing, Paris, doi: *10.1787/9789264097803-en.*

The legal framework and policy governance support a more inclusive production development

First, there have been advances in the legal framework for supporting innovation in all Brazilian states. In response to the need to increasing the economic density of the country, the Ministry of Science and Technology (MCT) supported the creation of state laws for innovation in each Brazilian state. Almost all Brazilian states now have a state law for innovation that regulates the activities and functions of state institutions for innovation support, like state foundations for research and development and state secretariats for innovation.

Brazil's National Science, Technology and Innovation Strategy uses a selective approach linked to support for production development. At the same time, it is committed to increasing the quality and critical mass of skilled workers and to a focus on the regional dimension. The Ministry of Science and Technology (MCT) supports the establishment of innovation laws in Brazilian states to create the legal basis for state-level action. In addition, several initiatives have been carried out to increase decentralisation in providing support to innovation, and incentives have been designed to support matching federal, state and private resources for innovation. For example, the Ministry of Science and Technology supported the creation of the Brazilian System for Technology (*Sistema Brasileira do Tecnologia*, or SIBRATEC). This supports local networks and partnerships between firms, institutions and research centres in different states, to foster technology transfer from research to production. The Ministry of Science and Technology has also intensified investment in setting up local technology centres to support research and innovation that can address local challenges, for example in the Territories of Citizenship.

Supporting production development and innovation: The benefits of a synchronised approach

Innovation and the capacity to develop and introduce new products, processes and business models are key determinants of sustained productivity and output growth (Box 2.18). Several governmental institutions influence production development and innovation, for example the ministries of economy, industry, trade and innovation at the central level, and regional development agencies and state secretariats at the regional level. Whether Brazil can maintain its competitiveness and modernise its production depends on the synergy between the policies of these different institutions.

Box 2.18. **Regional innovation strategies in OECD countries: Supporting economic transformation**

The **Basque Country** in Spain is regarded as a regional success story, in which a traditional industrial manufacturing area was repackaged as an attractive and dynamic destination. The "Guggenheim effect", building on the construction of the new art museum, redefined the image of Bilbao, boosting regional commerce and services. This was only a first step, since the region's industrial activity remains a major source of employment and of generating wealth. It also provides a reserve of expertise in industrial production and in organising economic activity. Meanwhile, the Basque Country has identified an apparent "missing link": its research base. It recently began prioritising a series of governmental actions to strengthen its regional research base and human capital. Regional industrial production is being retooled to keep pace with changing paradigms, so that it can take advantage of the opportunities offered by the global knowledge economy and to improve the region's standard of living. The Basque Country had certain assets that have helped shape the search for the new frontier. Its history of manufacturing and production suggests the development of research capacities and investment in the generation of new knowledge. The inward-looking orientation of the regional innovation system calls for selectively improving international collaboration and linkages for innovation, as well as investing in the training, attraction and retention of skilled workers.

The **Shinshu** Smart Device Cluster in Japan contributed to the transformation of the Nagano Prefecture from a traditional industrial area to a high-tech-intensive industrial pole. The objective is to support industrial development, with a view toward creating new jobs. The development plan followed a two-step procedure. A first phase centred on the Knowledge Cluster Initiative Programme, which was started in 2002. This promoted research and development in key technological fields, such as high-precision processing technology, precision-moulding technology and engineering design, all building on the engineering expertise of Shinshu University. The second stage, started in 2007, involved the creation of the Shinshu Smart Device Cluster, which fosters the creation of high-tech firms and the commercialisation and diffusion of research. The programme is the result of a combination of strong political will at the provincial level, well-organised support from the national government, and strong commitment from the business and research sector. By 2007, the cluster included 319 firms, 106 research members and 121 supporting organisations.

Nuevo León in Mexico is another example of a traditional manufacturing area turning towards a more knowledge-based economy. Compared to other regions in Mexico, it has a strong background in technological research, a skilled labour force and a comparative logistical advantage. The region is prioritising four main sectors: ICT, biomedical devices, food technologies and aerospace, as well as supporting existing clusters, for example the automotive industry. The state provides a series of incentives for knowledge-based firms, including some innovative selection criteria, increasing support for firms that pay higher salaries to their workers.

Regional governments can play a decisive role in new economic and technological frontiers. One approach is to experiment with solutions for emerging challenges, by mobilising different actors and addressing problems from the initial concept to application and dissemination. In **Canada, the Toronto Hydrogen Village** involves more than 35 companies, and includes developers and end users. The programme is administered by the Canadian Hydrogen and Fuel Cell Association, and receives financial support from the Ontario Ministry for Research and Innovation and the National Research Council's Canada Transportation and Fuel Cell Alliance Programme. The project aims to create the conditions for early development in supply and use of green energy in the Greater Toronto Area.

Box 2.18. **Regional innovation strategies in OECD countries: Supporting economic transformation** (*cont.*)

The programme's comprehensive approach involves direct support for technology development. Among its goals are the creation of a sustainable and effective infrastructure for energy delivery, and raising public awareness in the community through educational institutions and the media. It supports corporate responsibility, as well as codes, standards and regulations for sustainable development. The programme involves public institutions at different governmental levels, such as the City of Mississauga, Toronto, the government of Ontario, and federal energy and innovation institutions and associations. It has financed activities in the development of the supply chain, in fuel infrastructure (for production, storage and delivery of fuel) and in end-use technologies. The programme is an incubator and testing ground for exploring new green energy sources. Using an integrated approach, its activities range from support for technological research and development; encouraging new products, services and applications; and promoting a conceptual shift towards sustainable consumption and production. The provincial and metropolitan dimension, matched with federal funding, allows for such experimentation to occur. Close interaction with end users in the Greater Toronto Area promises to deliver results and applications in the mid-term. Among the challenges the programme faces are continuity of government support, identifying mechanisms for linking federal and governmental actions, and making it possible to translate the demonstration activities onto a larger scale.

Source: OECD (2011), *Regions and Innovation Policy*, OECD Publishing, Paris, doi: *10.1787/9789264097803-en.*

Consensus has grown on the need to use innovation policies to support long-term growth in Brazil, as in other Latin American countries. However, while considerable attention has been paid to innovation, fewer resources have been devoted to production development. To be effective, an innovation policy must be synchronised with policies intended to stimulate production development and create the demand for innovation (Cimoli et al, 2009).

Starting in 2003, Brazil supported a complementary approach to production development by establishing an integrated national strategy for trade, production development and innovation (*Política Industrial Tecnológica e de Comércio Exterior*, or PITCE). In a second phase, this policy evolved towards the complex governance structure of the National Production Development Policy (*Política de Desenvolvimento Produtivo*, or PDP). This was introduced in 2008, and sets out priorities and lines of attack on the basis of co-ordination between industrial, innovation and trade policy. The complementarities between governmental actions are recognised *ex ante* and shape strategy formulation and implementation. Governance and co-ordination between different actions is ensured by the Management Council, which is chaired by the Ministry of Industry and composed of representatives from the Executive Office of the President (*Casa Civil*), the Ministry of Science and Technology, the Ministry of Finance and the Ministry of Planning. The participation of the BNDES, the Brazilian Industrial Development Agency (ABDI) and the Ministry of Finance in the Executive Secretariat helps to ensure that financing is aligned with priorities.

Brazil has made progress in the governance structure of industrial and innovation policy by prioritising co-ordination of different ministerial agendas. The Production Development Policy launched in 2008 draws on the experience of the PITCE of 2003, and introduced improvements in two major areas: it included targets for policy monitoring, and it instituted a governance model that encourages dialogue with the private sector and across levels of government. The PDP has been divided into five major programmes, each with a specific governance arrangement. The major lines of action include: systemic actions focused on promoting systemic conditions for production development; strategic issues, including regional development and three major structural programmes: strengthening competitiveness, strengthening leadership and mobilising innovation in strategic areas.

The articulation between regional development policy and production development policy follows different channels. On the one hand, "regionalisation" is one of the five strategic focuses of the PDP. The inclusion of this dimension stems from the recognition of the need to increase the density of the production structure across the country, and consequently, to reduce the spatial concentration of production that characterises the Brazilian economy. The programme is managed by the Brazilian Industrial Development Agency (ABDI) and by the Ministry of National Integration (MIN).

On the other hand, the development agency, created in 2003, is responsible for co-ordination, and the ministry provides its executive secretary. The PDP explicitly recognises the need to support production development in each region, and to promote industrial development and value chains around major industrial development investments and infrastructure investments in marginalised areas. The goals of the regionalisation pillar include increasing the targeting of funding of National Bank for Economic and Social Development (BNDES) to the Northeast and the North. It also intends to strengthen institutional capacities at the regional level. Industrial policy can be managed by creating regional networks of policy managers in states and municipalities (the ABDI manages the National Network of Industrial Policy Agents, *Rede Nacional de Política Indústrial*, or RENAPI). Local strategic economic planning can be boosted by developing state plans for APLs (local production systems) (Box 2.19). Investment in planning is helping to support the convergence between federal policy and policies at the state and municipal level. It is also promoting local forms of collaborations for production development on the territory. The ABDI is responsible for monitoring the implementation of the activities of the "regionalisation" pillar. Evaluation of the results shows that 74% of actions were intended to deliver technical assistance to regional governments for policy management, 22% of actions included direct financing of operations and 3.7% of actions related to regulatory improvements. In terms of areas of activity, 62% supported the investment plan, 19% targeted SMEs and 19% supported exports of regional production systems.

Lagging regions have difficulty accessing financial resources for innovation and competitiveness

Most instruments of financial support are "demand" oriented, which results in a bias towards the more advanced regions in terms of resource allocation. These locations host the majority of firms that are eligible for financial support and are well equipped to access those resources (in terms of awareness of the programmes, knowing how to apply, etc.). Making production development policy instruments work for lagging regions would require an integrated approach; resource transfers are not enough. An attempt to build capacity among local policy makers and entrepreneurs, and to provide business services, could be helpful. Finance is a necessary but not a sufficient condition for entrepreneurial development, especially in areas that have little experience of entrepreneurial culture, on the demand and on the supply side.

Box 2.19. **Supporting local development by promoting entrepreneurship: Local Production Systems (APLs)**

Local Production Systems (*Arranjos Productivos Locais*, or APLs) are defined as a concentration of production activities in a given territorial area, in which several participating organisations, most of them small and medium-sized firms, work together. The Ministry of Industry and Trade (*Ministério do Desinvolvimento, Indústria e Comércio Exterior*, or MIDIC) supported the creation of a Permanent Working Group (GTP-APL) to help co-ordinate several governmental and non-governmental actors supporting APLs. The GTP-APL was created in 2004 and is composed of 33 institutions. The group mapped the APLs in the country, identified 955 of them, and selected 267 to receive priority public support. Major support comes from the Production Development Strategy and the PNDR, and requires collaboration between the MIDIC, the BNDES and the MIN. States played a crucial role in defining priority APLs and in elaborating integrated and participatory plans for local production development. To access federal resources, APLs develop a plan that takes into account the demands of different local actors. The governance structure requires co-operation between governmental agencies that design policy and local stakeholders involved in local production development.

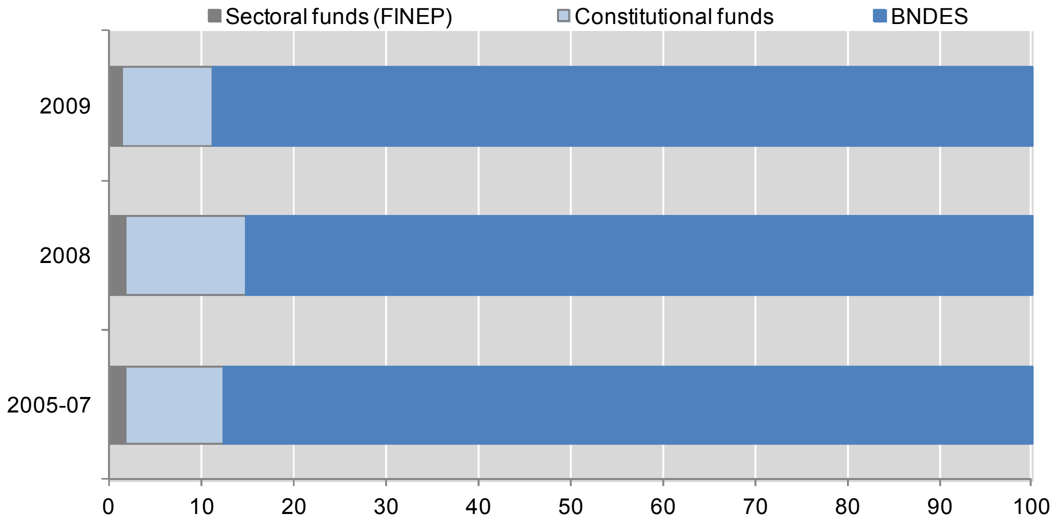
The BNDES recently appointed a Secretary for Innovative Production Arrangements and Local Development and a Committee for APLs and Regional Development. These institutional changes are intended to mobilise industrial policy to increase Brazil's economic density and reduce regional disparities.

Support for APLs combines support for production development and for improving living conditions. Successful cases develop high-quality production by making the most of local competences and skills and cultural and territorial specificities. Coffee production in the region of Maciço de Baturité in Ceará is one such example that respects local biodiversity and environmental sustainability. It involves four municipalities and receives support from *Banco do Nordeste*, the state government, the Secretary for Local and Regional Development (SDLR) and SEBRAE, Brazil's Support Service for Micro and Small Enterprises (*Agência de Apoio ao Empreendedor e Pequeno Empresário*, or SEBRAE). The APL project groups small producers into co-operatives to increase productivity and quality, as well as increasing their bargaining power at market. The support for the APLs helps them to reach export markets directly and to increase the generation of local value added. States can facilitate the co-ordination of different actions in support of APLs in their territories. For example, in Sergipe, the State Group for APLs (*Nucleo Estadual de APLs do Sergipe*) monitors the development of the APLs in the territory and facilitates co-ordination between the different agencies from which it receives financial support.

Information on APLs is plentiful at the micro-level (i.e. in terms of description of development and evolution of APLs in each locality). However, it is difficult to access information about effective public support to APLs from the different institutions and sources.

The BNDES is the main contributor to resources for production development (Figure 2.18). As for public investment, the majority of these resources fund agents in richer regions like the Southeast. A core objective of the new BNDES strategy is to increase its disbursements in the North and Northeast regions. This requires increased co-ordination with regional policy so that strategic planning capacities can be developed in states and municipalities, and a mobilisation of effort to increase competences and human capital in lagging regions.

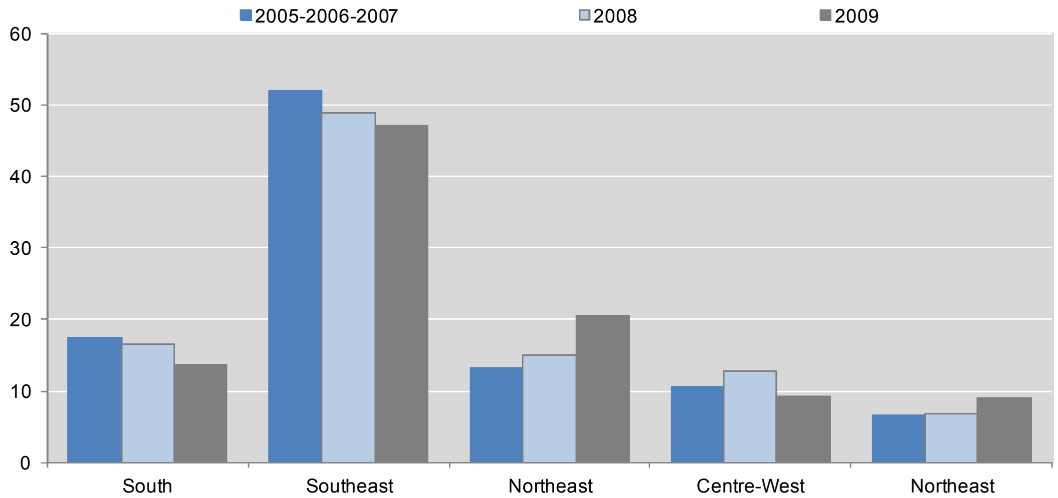
Figure 2.18. **Federal resources for production development: BNDES as the major player**



Source: Based on ABDI data.

Brazil's new focus on the regional dimension has meant that federal financing of production development policy has undergone a decentralising trend in recent years (Figure 2.19). In 2005, the Southeast region received more than 50% of total federal expenditure for production development; in 2009, this share decreased to 47%. The Northeast and North now have a larger percentage of total financing, although their share is still low. The Northeast accounted for 20.5% of total financing for production development in 2009, as compared with only 13% in 2005. The North's share grew from 6% to 9% during the same period. This decentralising trend is mainly explained by the increase in BNDES expenditures in the two regions.

Figure 2.19. **Regional distribution of public support for production development**



Note: Financial resources for Production Development Policy include BNDES, constitutional funds and sectoral technology funds.

Source: Based on ABDI data.

Supporting research for agricultural production: The case of EMBRAPA

The Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária*, or EMBRAPA) attached to the Ministry of Agriculture, is a key institution in the innovation landscape and a well-known success story in Brazil (Box 2.20). The agency performs as a National Research Institute for Agriculture, and it has a major impact in production development in the agribusiness sector. It was created in 1973, at a time when the provision of services was split between two agencies. EMBRAPA was in charge of focusing on applied research in support of competitiveness and sustainability of domestic agricultural and livestock production, while national rural extension services were responsible for the dissemination of the results to producers. The dismantling of national rural extension services in the 1980s weakened the model, and obliged EMBRAPA to look for alternative methods for technology transfer. For example, the EMBRAPA *Agroindústria Tropical* introduced a "mobile unit" that operates in the Northeast as an alternative for traditional extension services. The mobile units reach producers in remote areas and deliver technical assistance for applying the latest research to production. Some states, like Ceará, run their own rural extension services. In these instances, EMBRAPA's influence on domestic and local production is much greater.

Box 2.20. **EMBRAPA: Investing in knowledge for agricultural and livestock production**

The institution

EMBRAPA was created in 1973 as an institution attached to the Ministry of Agriculture. Its mission is to develop solutions for increasing the value added and the sustainability of agricultural and livestock production.

EMBRAPA operates through a network of 45 units in almost all the Brazilian states, focusing on thematic issues, specific products and major challenges. EMBRAPA employs 8 944 people, of which 2 024 are researchers (21% with master's degrees, 71% with Ph.D.s and 7% with post-doctoral training). The budget for EMBRAPA for 2010 was BRL 1.863 billion. EMBRAPA receives resources from the federal government, but also from the BNDES, the BNB and international donors.

EMBRAPA focuses on three major issues:

- providing new knowledge and technological solutions for national challenges and for addressing specific problems of given types of production;
- technology transfer; and
- diffusion of good agricultural practices to family agriculture.

In the Northeast, EMBRAPA Semi-Arido is working on solutions for agricultural irrigation in the semi-arid region, with 340 employees. EMBRAPA Agroindústria Tropical, created in 1987, is working on solutions for Brazil's tropical agro-industry, and has 170 employees.

EMBRAPA created a "Mobile Unit for Technology Transfer" to give technical assistance to local producers and to compensate for the lack of a national rural extension service. The initiative complements a joint initiative by the Ministry of Education, the Ministry of Social Development and the Social Services for Industry (*Serviço Social da Indústria*, or SESI), teaching residents about inexpensive food with high nutritional content.

Box 2.20. **EMBRAPA: Investing in knowledge for agricultural and livestock production** (*cont.*)

The strategy

EMBRAPA conducts advanced applied research on specific topics to provide solutions for agricultural and livestock production. It develops social technologies to facilitate technology transfer that are made available to producers free of intellectual property fees. The organisation requires rural extension services to deliver technical solutions to rural producers. It also works on commission for large firms. In 2008, EMBRAPA introduced a PAC EMBRAPA (*Programa de Fortalecimento e Crescimento da EMBRAPA*), which allocated BRL 49.2 million for infrastructure and BRL 145 million for the reorganisation of state institutes for applied research in 2008/09.

EMBRAPA has launched several international partnerships to increase its research excellence. Its major partners are the US Agricultural Research Service; the Agropolis in Montpellier, France; Wageningen University in the Netherlands; the Rothamsted Research Institute in the United Kingdom, and a laboratory in South Korea. EMBRAPA is also promoting south-south co-operation with the opening of new branches in Ghana, Venezuela and Panama.

Annex 2.A2 shows that the lack of provision of rural extension services undermines the impact of EMBRAPA's action on local development. A high degree of synergy exists between policies targeting the needs of the poor. In particular, EMBRAPA's activities have an impact on social development through induced complementarities with social development programmes, such as those that disseminate information on nutritional content and healthy and economical cooking (*Cozinha Brasil*). EMBRAPA benefits from improvements in the quality of the educational system, and carries out training for scientific personnel, supporting education policy in training skilled labour. It has an indirect impact on health care policy by increasing the quality of the food consumed, and by potential spill-overs from applied research. EMBRAPA directly influences environmental issues, since its mission is to develop environmentally sustainable solutions for increasing agricultural productivity and the raising of livestock. In addition, environmental policy is a source of demand for targeted research addressing environmental challenges.

Conclusion

Since the return of economic stability at the end of the 1990s, Brazil has embarked on several policies intended to reduce social inequality and regional disparities. Meanwhile, it has continued to pursue economic policies such as competition and innovation policies to promote growth. This chapter has shown that many of these policies have a regional impact, either because they specifically target these regions, or because the recipients of these policies are more concentrated in certain geographical areas than in others. Exploiting complementarities between different policy areas can enhance the results of each policy taken separately. For example, a policy targeting poor people, like the Bolsa Família Programme, is likely to be more efficient where specific health and education policies pre-exist or can be developed, and its success can also be increased if other basic public services (such as water, sanitation, electricity, housing, etc.) are available. If the regions with large concentrations of poor people are offered more microcredit and more employment possibilities, the programme's outcome is likely to be more sustainable. In other words, fostering endogenous growth in these regions is likely to pay off.

Making the most of policy complementarities requires the co-ordination of public action in the territories. Horizontal co-ordination between sectoral ministries at the federal level (i.e. breaking out of policy silos) is needed, as is co-ordination between levels of government, whether federal, state or municipal. This can make implementation more coherent, because it is typically a responsibility shared between different levels of government. Finally, it also requires co-ordination between local actors, and municipalities. This helps to avoid duplication of effort and to calibrate the scale of the provision of public services. Other key factors include increasing the professionalisation of managers at all levels of government and strengthening institutions.

The next chapter will analyse the specific challenges Brazil faces in co-ordinating policies that have an impact on the ground, in order to make the most of their potential synergies. It will describe some instruments used in Brazil to support regional development, as well as instruments used in OECD countries. The next chapter will show how regional development policy aims to co-ordinate the activity of different sectoral ministries in the territory, in order to exploit these synergies, and how multi-level governance tools can be used to improve the territorialisation of sectoral policies.

Notes

1. Differentiated meso-regions are defined as "continuous sub-national spaces that comprise the territory of one or more states of the country, smaller than the macro-regions, with defined identities and specific objectives aimed at identifying socio-economic, cultural, political, institutional and environmental potentials and vulnerabilities that lead to more effective public policies. They are also political and institutional subspaces created in search of a more effective and co-ordinated territorial action in order to help reduce regional inequalities, promoting new development dynamics".

2. Of these tax revenues, 1.8% are allocated to the FNE, and the FCO and FNO each receive 0.6% (this distribution roughly reflects the distribution of population in the three regions).

3. See Postali (2009) for an analysis of the impact of royalties on the growth of recipient funds in Brazil, which shows that recipient municipalities grew less than non-recipient ones.

4. There is no centralised information about public investment by states and municipalities in Brazil. Still, this information can be extracted from the consolidated accounts of the states (*aplicações diretas*).

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Annex 2.A1
Bolsa Família, a mix of policy complementarities

Table 2.A1.1. **Bolsa Família, a matrix of policy complementarities**

Type of programme and complementarities with other policies/programmes		Policies targeting specific regions/territories		Regional development policy (RDP)	Policies targeting infrastructure gaps	Policies targeting people's needs		Policies targeting individuals, firms and institutions for competitiveness	Institutional development
		Rural development policy	Urban development policy			Education policy	Health policy		
Policies targeting people's needs Bolsa Família (PBF) Conditional cash-transfer programme with conditionalities on health and education for interrupting the inter-generational cycle of poverty.	Complimen-tary	Poverty extends beyond lack of income. The policy could help channel resources and services to the rural poor.	Income poverty is also associated with a lack of appropriate housing conditions and access to water and urban services.	RDP could support the integration of state and municipal action to increase the impact of Bolsa Família by activating local development opportunities.	The programme is a direct indicator of municipal demand for infrastructure for health care and education.	Access to school is a requirement in the design of the programme. The programme creates demand for educational services.	Basic health care is made a conditionality in the design of the programme. The programme creates demand for health care services.	The programme needs to be matched with opportunities for production inclusion for beneficiaries and with policies for supporting production of goods and services for local consumption.	The programme requires strengthening institutional capacities at the municipal level and the creation of mechanisms for monitoring compliance with requirements.
	Example of existing mechanisms to support synergy of action.	The *Territórios da Cidadania* Programme aims to create synergies in rural territories between Bolsa Família and other federal, state and municipal activities.	The *Minha Casa Minha Vida* Programme offers subsidised credit to poor urban families (up to ten minimum salaries). Families with less than three minimum salaries get a total subsidy.	Co-ordination between the social agenda and the RDP agenda is currently weak.		Co-ordination of responsible secretaries in the different ministries at the federal and municipal level. Offer of educational services to the poor. The *Programa Brasil Alfabetizado* offers adult literacy training. Several programmes distribute books to municipalities in need.	Co-ordination of responsible secretaries in the different ministries at the federal and municipal level. Offer of health services targeting the poor. *Programa Saúde da Família* *Programa Farmacia Popular* Health care assistance services for poor families and offer of subsidised drugs.	*Banco do Nordeste do Brasil* microcredit programme (microcredit to urban and rural poor matching the Bolsa Família Single Registry) PROGER (programme of the Ministry of Employment offering small and micro-entrepreneurs access to credit). *Programa Bolsa Trabalho – Estado do Pará* (programme instituted by the state of Pará to offer subsidised microcredit to help create employment opportunities for the beneficiaries of PBF)	Distance-learning tools for training municipalities implemented by the MDS (in place, but still not matching the demand for training). Establishment of performance-based indicators for municipal management of the Bolsa Família.

Annex 2.A2

EMBRAPA, a mix of policy complementarities

Table 2.A2.1. **EMBRAPA, a matrix of policy complementarities**

Type of programme and complementarities with other policies/ programmes		Policies targeting specific regions/ territories	Regional development policy	Policies targeting infrastructure gaps	Policies targeting people's needs				Policies targeting individuals, firms and institutions for competitiveness				Institutional development
		Rural development policy			Social development policy	Education policy	Health policy	Environmental policy	Science, technology and innovation policy	Production development policy	Agricultural development	Trade policy	
Targeting individuals, firms and institutions for competitive-ness The case of EMBRAPA State-owned institute for applied agricultural research	Complementarity	Macro-regional and state-level strategic planning for rural development production Rural extension services for the application of research to production	The territorial units of EMBRAPA are key players in the regional system. RDP could facilitate the provision of complemen-tary services to increase the impact of EMBRAPA, raising awareness of production communities.	The action of EMBRAPA requires infrastructure for research, irrigation, transport and access to ICT.	Impact on well-being of poor local communities by increased learning or making the most of local natural resources	The EMBRAPA strategy requires high-quality education and training and creates a demand for skilled labour and technical training	Rising nutritional standards and quality of food and beverages Bio-technology for health applications	Environmental impact of application of R&D outcomes to production. Demand for targeted research facing specific environmental challenges.	Synergy with policies supporting creation of human resources for R&D; support for R&D to firms and research centres; incentives for infrastructure for research Intellectual property management	Generation of demand for application of R&D outcomes of EMBRAPA. Synergies with policies for local production development and business development and with nanotechnology and biotechnology production development	Major mission of EMBRAPA : delivery of solutions for sustainable agricultural and livestock production	Synergy with foreign direct investment and strategies of multi-national firms in agri-business	Effective performance of EMBRAPA also depends on the quality and effectiveness of functioning of state research entities

Table 2.A2.1. **EMBRAPA, a matrix of policy complementarities** (*cont.*)

Type of programme and complementarities with other policies/ programmes		Policies targeting specific regions/ territories	Regional development policy	Policies targeting infrastructure gaps	Policies targeting people's needs				Policies targeting individuals, firms and institutions for competitiveness				Institutional development
		Rural development policy			Social development policy	Education policy	Health policy	Environmental policy	Science, technology and innovation policy	Production development policy	Agricultural development	Trade policy	
Targeting individuals, firms and institutions for competitive-ness The case of EMBRAPA State-owned institute for applied agricultural research	Existing mechanisms supporting synergy of action	Need to reactivate rural extension services that have been dismantled. This undermines EMBRAPA's impact on local production. There are potential synergies with *Territórios da Cidadania.*	Current co-ordination with RDP is low. It could be activated by including EMBRAPA in strategic regional and local planning exercises. Co-ordination of rural extension services. When states offer rural extension services, the impact of EMBRAPA is greater.	Participation of EMBRAPA in regional and local strategic planning councils	*Cozinha Brasil*, a programme in partnership with EMBRAPA *Agroindústria Tropical*, SESI (Social Industrial Service), MDS, MEC, to disseminate information on nutrition	Support for higher education in scientific fields Agency for the Support and Evaluation of Graduate Education or (CAPES) grants EMBRAPA trains scientific personnel	Implicit comple-mentarity of rising supply of quality food.	Development and application of technological and non-technological solutions for sustainable agricultural and livestock production	EMBRAPA co-ordinates the SNPA (National System of Agricultural and Livestock Research), sectoral funds Ministry of Science and Technology (MCT), CNPq, *Banco do Nordeste*-ETENE Fund, open dissemination of patented research outcomes for local use in production development	Support for agribusiness industry, support for APLs, incubators for rural technology firms	Development of solutions for agricultural development technology transfer, support to family agriculture, support to increase in value added of agricultural produce		PAC-EMBRAPA Investment in strengthening state research institutes for applied agricultural research

Annex 2.A3
Matrix of policy complementarities

Table 2.A3.1. **Production Development Policy (PDP) and its complementarities**

Type of programme and complementarities with other policies/programmes		Policies targeting specific regions/territories		Regional development policies	Policies targeting infrastructure gaps	Policies targeting people's needs			Policies targeting individuals, firms and institutions for competitiveness				Institutional development
		Rural development policy	Urban development			Education policy	Health policy	Environmental policy	Innovation policy	Trade policy	Fiscal and monetary policy	Labour market	
Targeting individuals, firms and institutions for competitive-ness PDP Production Development Policy	Complementarities	Value chains and linkages with local economy Rising demand for rural produce	Integration of production facilities in urban landscape; urban mobility; provision of services in line with the requirements of the Production Development Policy	Identification of potential for diversification, according to territorial, social and cultural characteristics	Tangible and intangible infrastructure for connectivity, for international competitive-ness and for domestic modernisation	Technical training, engineering and high-level educational supply	National Health policy can allow for public procurement for domestic health care production Production of specific drugs for addressing national health strategy (neglected diseases, etc.)	Environmental sustainability of production could be introduced as a condition of public support for production development Preferential support for clean and sustainable production	Demand for innovation efforts; incentives for R&D; infrastructure for research, etc.	Trade promotion and tariff management	Exchange rate manage-ment; fiscal incentives and tax policy	Labour market regul-ations, manag-ement of informal economy	Creation of articulated governance structure for negotiations between different stakeholders (state and federal, as well as across ministries); demand for implementation capacities at the state and municipal level; capacity to involve the academy and business sector in strategy planning

Table 2.A3.1. **Production Development Policy (PDP) and its complementarities** (*cont.*)

Type of programme and complementarities with other policies/programmes	Policies targeting specific regions/territories		Regional development policies	Policies targeting infrastructure gaps	Policies targeting people's needs			Policies targeting individuals, firms and institutions for competitiveness				Institutional development
	Rural development policy	Urban development			Education policy	Health policy	Environmental policy	Innovation policy	Trade policy	Fiscal and monetary policy	Labour market	
Examples of existing mechanisms for supporting synergy of action	National Service for Rural Learning (SENAR) Co-ordination with states for creation of opportunities for rural development opportunities and qualification of labour force	PAC2 Mobility in big cities (Ministry of Cities)	Local Production Systems (APLs) (cluster policy)	Growth Acceleration Plan (PAC) Densification of transport infrastructure for exports (e.g. Trans-nordestina, expansion of Suape)	Investment in rising quality and coverage of technical and high-level training ENEM (*Examen Nacional do Ensino Médio*) Assessment of quality of the educational system *Brasil Profissionali-zado* Professional training	FIOCRUZ and applied health care research Hemobrás Public company related to the Ministry of Health and major actor in national industrial health care complex	Activities of the Ministry of Environment	Management Council (*Conselho Gestor*) chaired by the Ministry of Industry with representatives from *Casa Civil*, MCT, MF, MPOG and an executive secretary composed by BNDES, MF and ABDI National Service for Industrial Learning (SENAI) Qualification of labour force Sectoral Technology Funds (MCT) Support to R&D investments CNPq-CAPES Support for research	Trade promotion of domestic production and specific arrangements for imports of externally produced goods. (MDIC) *Regime Especial de Tributação para a Plataforma de Exportação de Serviços de Tecnologia da Informação* (REPES) *Regime Especial de Aquisição de Bens de Capital para Empresas Exportadoras* (RECAP).	*State VAT; Law of* Goods (*Lei do Bem*)	Minimum-wage policy Training of professional workers	Regulatory framework (measures settled by PAC) National Network of Industrial Policy Agents (RENAPI), co-ordinated by ABDI

Chapter 3

Multi-level governance for more effective regional development policies

Brazil currently faces a window of opportunity to implement its agenda of economic growth with social inclusion. Such a strategy requires, among others things, identifying potential complementarities between policies and creating the multi-level governance tools to co-ordinate policies in territories. Brazil's institutional structure and multi-level governance framework are highly complex. Given its size, heterogeneity and constitutional framework, Brazil faces important multi-level governance challenges. This chapter explains how regional development policy could help to reach the national goal of growth with social inclusion. Then it will analyse these specific challenges for policy co-ordination, and highlight tools used in Brazil or in OECD countries that could be useful for overcoming these challenges.

Introduction

One of the priorities of the Brazilian government is to achieve economic growth with social inclusion and a reduction of individual and regional disparities. Brazil is currently receiving large amounts of foreign capital, and implementing on the one hand, large investment programmes such as the Growth Acceleration Programme (*Programa de Aceleração de Crescimento*, or PAC) and on the other hand, social and pro-poor programmes. A window of opportunity has opened that makes it possible to tackle these issues. As demonstrated in the previous chapter, different policies have an important impact on the territories, and they have complementarities that could enhance their effectiveness. This is particularly true in that most of the gaps in social needs and infrastructure are concentrated in certain geographical areas, and some geographical areas tend to concentrate all the gaps. A place-based policy, such as a regional development policy, which took into account the specific needs of each territory and co-ordinated the action of sectoral ministries, would make it possible to increase the effectiveness of social policies. Meanwhile, tapping unused resources would increase aggregate growth.

Such a strategy requires several steps. First, it is important for federal sectoral policies to have a territorial dimension. Second, potential complementarities between policies should be identified. Third, the challenges for multi-dimensional co-ordination (i.e. horizontal, between sectoral ministries at the federal level; vertical, between levels of government; and horizontal co-ordination among sub-national governments) should be defined. Lastly, tools for overcoming these challenges should be formulated. There are four key conditions for promoting integrated territorial approaches to sectoral policy at the federal level:

- high visibility and priority on the federal government's political agenda (i.e. strong leadership), and long-term commitment;
- efficient mechanisms for inter-ministerial and vertical co-ordination;
- promotion of place-based rather than one-size-fits-all policies at the federal level;
- involvement of local actors (states and municipalities) in the design and co-implementation of federal strategy.

Brazil's institutional structure and multi-level governance framework are highly complex, which is hardly surprising, and probably even desirable, given the continental scope of the country. Given its size, heterogeneity and constitutional framework, Brazil faces three main multi-level governance challenges. The first concerns fiscal federalism issues, and the challenge of dealing with sub-national governments' financial and political autonomy. The second concerns the multi-dimensional fragmentation of policies (both sectoral and geographical fragmentation). Finally, the third challenge consists in overcoming information asymmetries, strengthening institutional and administrative capacity at sub-national level (in particular in lagging municipalities), monitoring policy implementation and evaluating results, and increasing the participation of civil society. This chapter explains how regional development policy could help to reach the national goal of growth with social inclusion. Then it will analyse these specific challenges for policy co-ordination, and highlight tools used in Brazil or in OECD countries that could be useful for overcoming these challenges.

How regional development policy could help Brazil harness its national strategy of growth with reduction of social and regional disparities

Needs are concentrated in specific territories, and some territories concentrate all the needs

Since the early 2000s, the main priority of governments in Brazil has been to achieve growth with social inclusion. This has implied carrying out policies that directly target the poor (such as the income-transfer programme for poor people, Bolsa Família, or the PRONAF, a fund that provides subsidised credit to poor farmers), policies aiming at providing basic infrastructure in all the areas of the country (such as *Luz para Todos* for electricity, *Minha Casa Minha Vida* for housing, *Programa de Banda Larga* for Internet access, programmes for water and sanitation, etc.), as well as basic public services (*Saúde da Família* for family health, *Programa Brasil Alfabetizado* for fighting illiteracy, etc.). Table 3.1 (and the corresponding maps in Annexes 1.A1-1.A5) shows that there is a high correlation between the different needs in given states: in most cases, states that perform poorly in social indicators (such as Human Development Index, illiteracy rate or child mortality) tend to have major gaps in infrastructure (such as kilometres of paved road per square kilometre, or percentage of the population with secured access to water networks). These indicators are also correlated with average income *per capita*, as the states that have the lowest average income *per capita* also perform poorly in social and infrastructure indicators. The opposite is true of top performers: states with high scores in social indicators also tend to have the best scores in infrastructure indicators, and have the highest average income *per capita*. As for macro-regions, states that perform poorly are more concentrated in the Northeast and North regions, while top performers are located in the South and Southeast, and the Federal District.

This shows that most needs, and therefore most of the potential beneficiaries of social and pro-poor programmes, are located in the same geographical areas (lagging municipalities and states). The previous chapter showed that all these policies have complementarities and synergies, and thus that the effect of one is greater if the others are present. The sectoral policies targeting poor people and their specific needs therefore need to be co-ordinated. Because the needs are geographically concentrated, this calls for place-based policies. A wide scope exists for synergies between social policies and place-based policies such as regional development policies, to make the most of policy complementarities and avoid unintended outcomes (Box 3.1).

Regional development policy could help co-ordinate the different policies on the ground

What characterises placed-based policies, such as regional development policies, is that they are differentiated and aim to provide responses tailor-made for a territory's specific needs and opportunities. If such a regional development policy is to be efficient, it must not only target the correct content, but rely on effective tools in order to be implemented and fully enforced. As in all decentralised contexts, where various actors and levels of government interact and are mutually dependent, regional development policies face a number of challenges or gaps. These gaps have been identified and analysed by the OECD (Box 3.2). The following sections explore these different challenges.

Table 3.1. **Summary of social, infrastructure and economic indicators**

Legend:	Top ranking	Medium ranking	Low ranking	Very low ranking

Macro-region	State	HDI	Illiteracy	Child mortality	Access to health	Paved road density	Access to water	Gini coefficient	Average income per capita
Northeast	Alagoas	Very low	Very low	Very low	Very low	Medium	Very low	Low	Very low
	Bahia	Very low	Low	Low	Low	Low	Low	Low	Very low
	Ceará	Very low	Very low	Medium	Low	Medium	Low	Very low	Very low
	Maranhão	Very low	Very low	Low	Very low	Low	Very low	Low	Very low
	Paraíba	Very low	Very low	Low	Low	Medium	Low	Low	Very low
	Pernambuco	Very low	Very low	Low	Low	Medium	Low	Low	Very low
	Piauí	Very low	Very low	Medium	Low	Low	Low	Very low	Very low
	Rio Grande do Norte	Very low	Very low	Low	Top	Medium	Top	Low	Low
	Sergipe	Very low	Low	Low	Medium	Top	Medium	Very low	Very low
North	Acre	Low	Low	Medium	Very low	Low	Very low	Very low	Low
	Amazonas	Low	Medium	Medium	Very low	Very low	Very low	Top	Low
	Amapá	Low	Top	Medium	Very low	Very low	Very low	Top	Low
	Pará	Low	Low	Medium	Very low	Very low	Very low	Top	Low
	Rondônia	Low	Low	Medium	Very low	Low	Very low	Top	Low
	Roraima	Low	Top	Top	Medium	Very low	Medium	Medium	Low
	Tocantins	Low	Low	Medium	Low	Low	Low	Low	Low
Central-west	Goiás	Medium	Medium	Top	Low	Low	Low	Medium	Medium
	Mato Grosso do Sul	Medium	Medium	Top	Medium	Low	Medium	Medium	Medium
	Mato Grosso	Low	Low	Medium	Very low	Very low	Very low	Top	Medium
Southeast	Espírito Santo	Medium	Medium	Top	Medium	Medium	Medium	Medium	Medium
	Minas Gerais	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Low
	Rio de Janeiro	Medium	Top	Top	Top	Top	Top	Medium	Medium
	São Paulo	Medium	Top	Top	Top	Top	Top	Top	Top
South	Paraná	Medium	Top	Top	Top	Top	Top	Medium	Medium
	Rio Grande do Sul	Medium	Top	Top	Medium	Low	Medium	Top	Medium
	Santa Catarina	Top	Top	Top	Low	Medium	Low	Top	Medium
Federal District	Distrito Federal	Top	Top	Top	Top	Top	Top	Very low	Top

Note: Data for HDI is 2005; illiteracy: 2009; child mortality: 2010; access to health: 2009; paved road density, 2008; access to water: 2009; Gini coefficient: 2008; average income *per capita*: 2008.

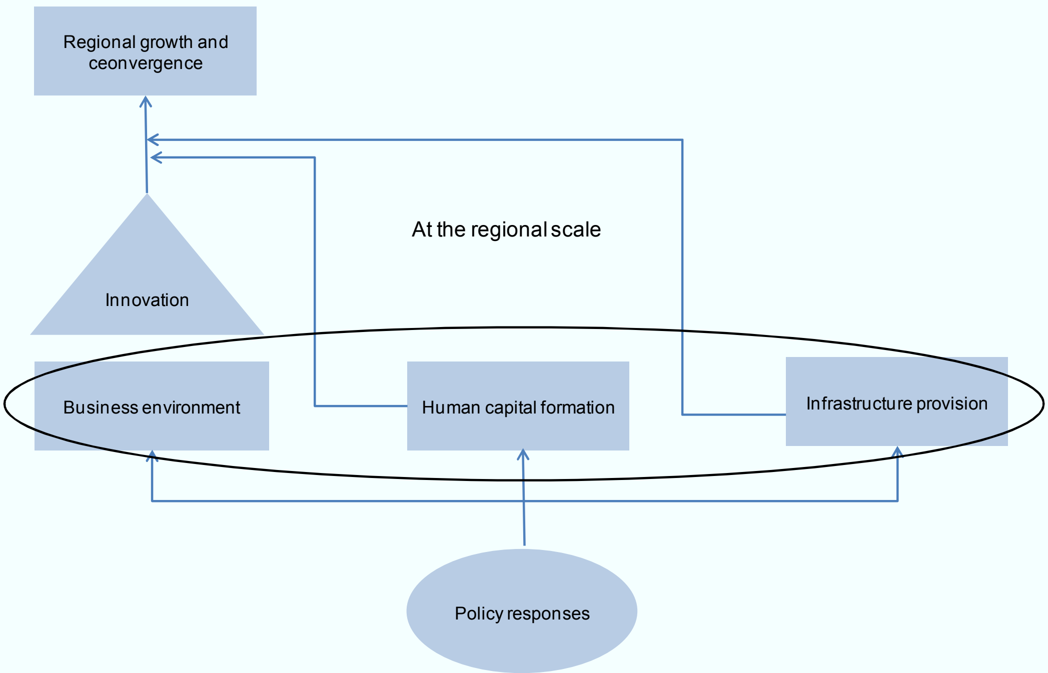
Source: Based on data from the Brazilian Agency for Industrial Development (ABDI).

Box 3.1. **The policy headache: Isolated sectoral action may have unintended outcomes**

OECD studies suggest that constructing or upgrading of transport infrastructure can have a positive influence on a region's economic development, but that economic growth is not automatic. Growth effects are likely to appear only when positive externalities exist in the region. Faster transport connections can exploit potential positive externalities that exist in various markets – typically non-exhausted economies of scale, scope, agglomeration, density or network – and consequently improve (labour) productivity, enhance output, reduce production costs and promote more efficient use of resources. If such latent economies do not exist, however, improvements in accessibility could lead to changes in existing transport flows and spatial patterns without having long-term effects on growth.

If regional policy concentrates only on providing capital in the form of infrastructure, a lagging region may end up losing economic resources (the "leaking by linking" phenomenon). By reducing inter-regional transport costs, firms continue to find it cheaper to concentrate in the core regions, to reap the benefits of agglomeration economies and thick markets and to ship the goods to the periphery. For example, improved motorways in eastern Poland will enable goods to reach foreign markets faster and at lower cost, but competition from other parts of Europe will also increase for local firms (OECD, 2008a).

Regional development policy therefore requires a multi-dimensional approach.



Source: OECD (2010), *Regions Matter: Economic Recovery, Innovation and Sustainable Growth*, OECD Publishing, Paris, doi: *10.1787/9789264076525-en*.

Box 3.2. **The OECD approach to multi-level governance challenges**

The relationship among levels of government resulting from decentralisation is characterised by mutual dependence, since it is impossible to have a complete separation of policy responsibilities and outcomes among levels of government. It is a complex relationship, simultaneously vertical, across different levels of government, horizontal, among the same level of government, and networked. Governments must therefore bridge a series of challenges or "gaps" between levels, both vertically and horizontally.

These gaps include notably the **fiscal capacity** of governments to meet obligations, **information asymmetries** between levels of government, gaps in **administrative responsibility**, with administrative borders not corresponding to functional economic and social areas at the sub-national level, gaps in **policy design**, when line ministries take purely vertical approaches to cross-sectoral regulation that can require co-design of implementation at the local level and often a **lack of human, or infrastructure resources** to deliver services and design strategies. Countries may experience these gaps to a greater or lesser degree, but given the mutual dependence that arises from decentralisation, and the network-like dynamics of multi-level governance, countries are likely to face them simultaneously.

Mutual dependence across levels of government:
Multi-level governance challenges/gaps in OECD member countries

Types of challenges/ gaps	Co-ordination challenges/gaps
Funding	Unstable or insufficient revenues undermining effective implementation of responsibilities at the sub-national level or for shared competences **=> Need for shared financing mechanisms.**
Administrative	Occurs when the administrative scale for investment does not correspond with functional relevance, as in the case of municipal fragmentation **=> Need for instruments for reaching "effective size" (co-ordination tools among sub-national units; mergers).**
Policy	Results when line ministries take purely vertical approaches to cross-sectoral policies, to be territorially implemented **=> Need for mechanisms to create multi-dimensional/systemic approaches and to exercise political leadership and commitment.**
Information	Asymmetries of information (quantity, quality, type) between different stakeholders, either voluntary or not **=> Need for instruments for revealing and sharing information.**
Capacity	Arises when there is a lack of human, knowledge or infrastructural resources available to carry out tasks and to design relevant strategies for local development **=> Need for instruments to build local capacity**.
Objective	Exists when different rationales among national and sub-national policy makers create obstacles for adopting convergent targets. Can lead to policy coherence problems and contradictory objectives across investment strategies **=> Need for instruments to align objectives.**
Accountability	Reflects difficulties in ensuring the transparency of practices across different constituencies and levels of government. Also concerns possible integrity challenges for policy makers involved in the management of investment **=> Need for institutional quality instruments => Need for instruments to strengthen the integrity framework at the local level (focus on public procurement) => Need for instruments to enhance citizens' involvement.**

OECD member and non-member countries are increasingly developing and using a wide variety of mechanisms to help bridge these gaps and improve the coherence of multi-level policy making. These mechanisms may be "binding", such as legal mechanisms, or "soft", such as platforms for discussion, and they must be sufficiently flexible to allow for territorially specific policies. Involvement of sub-national governments in policy making takes time, but medium- to long-term benefits should outweigh the costs of co-ordination.

Source: Charbit, Claire and Varinia Michalun (eds.) (2009), "Mind the gaps: Managing Mutual Dependence in Relations among Levels of Government", *OECD Working Papers on Public Governance*, No. 14, OECD Publishing, Paris, doi: *10.1787/221253707200*; and Charbit, C. (2011), "Governance of Public Policies in Decentralised Contexts: The Multi-level Approach", *OECD Regional Development Working Papers*, No. 2011/04, OECD Publishing, Paris, doi: *10.1787/5kg883pkxkhc-en*.

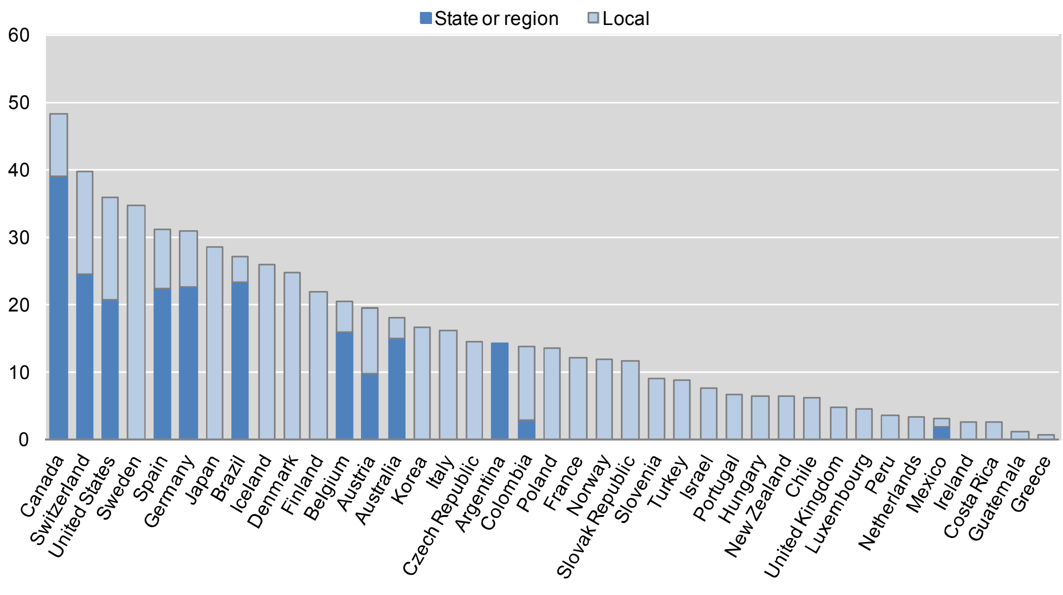
Dealing with sub-national governments' financial and political autonomy

States and municipalities enjoy wide revenue and spending autonomy

Brazil's fiscal federalism framework is highly unusual

The 1988 Constitution radically changed Brazil's model of fiscal federalism. A strong political drive towards decentralisation created a highly original situation: Brazil's municipalities were granted the status of federal entities, just like the states. (In most OECD federal countries, for example Canada and Germany, municipalities tend to be the "agents" of the states.) This special constitutional status means that states cannot compel or prohibit actions by the municipalities, and that the federal government has direct leverage over them, because direct transfers from the federal government to the municipalities are very large (they represent about half the transfers the municipalities receive) (Annex 3.A2). This institutional autonomy was reinforced by fiscal power: municipalities were given a large share of tax revenues, thus reducing tax revenues allocated to the federal government.[1] In 2008, the federal government received about 48% of tax revenues, while the states and municipalities received about 27% (*Tesouro Nacional*), a figure higher than the OECD and Latin American average (Figure 3.1 and Annex 3.A3).

Figure 3.1. **Attribution of tax revenue to sub-national levels of government as a share of total tax revenue (2008)**



Notes: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: *OECD Revenue Statistics 2010*.

On the spending side, there was no clear division of responsibilities in a number of crucial areas, such as health care, education, social security, welfare, agriculture and food distribution, sanitation and housing, etc. (Annex 3.A4). Spending responsibilities were not specifically assigned to sub-national governments in concert with their increased revenues. To restore its financial capacity, the federal government raised the taxes that were not shared with sub-national governments and created new "contributions" (corresponding to the taxes not shared with sub-national governments), thus increasing the tax burden and reducing the efficiency of the tax system. In 2008, these contributions accounted for more than 50% of the federal government's revenues, while taxes brought in only about 35% (Annex 3.A5). In a second stage, the federal government increased the use of non-constitutional (discretionary) transfers, which are negotiated on a case-by-case basis between the federal and sub-national governments, and which are conditional on the signing of an agreement (*convenio, pacto*, etc.). This sets the precise applications of the funds (mainly health and education), which are subject to strict control procedures. After several defaults by state governments, the federal government enacted a Fiscal Responsibility Law in 2000, to prevent the states from running excessive budget deficits that could threaten macroeconomic stability (Box 3.3).

Box 3.3. **Improving the sustainability of sub-national governments: The Fiscal Responsibility Law**

In the 1990s, the federal government had to bailout states and municipalities twice: in 1989, it assumed their external debts and refinanced them as local currency internal debts with the federal government, and in 1993, the federal government agreed to reschedule the debt contracted with federal institutions. In the second half of the 1990s, state and municipality bonded debts on the private financial market soared, from 2.3% of GDP in 1990 to 5.8% in 1996. More than 90% of this debt was concentrated in the four biggest states (Minas Gerais, Rio de Janeiro, São Paulo and Rio Grande do Sul) (Castanhar, 2003). Interestingly, most of this increase was not due to new issues of bonds (which were almost completely restricted by regulations or credit risk assessment), but to the capitalisation of growing interest rates in the period. These high rates were a result of the tight monetary policy the federal government adopted to tamp down inflation and to attract foreign capital. In 1997, the federal government carried out a conditional bailout, the Fiscal and Financial Restructuring Programme (*Programa de Apoio à Reestruturação Fiscal e Financeira*). Under this programme, most of the state debts were refinanced, conditional on the implementation of a rigorous long-term fiscal adjustment, the privatisation of state and municipal-owned companies (energy, gas, transport, water supply, etc.), and the privatisation of the state official bank. To make sure the commitment would be enforced, this programme was collateralised by the proceeds of the State and Municipality Participation Funds, and if necessary, the federal government could retain the proceeds of the states and municipalities' shared taxes.

Following the agreement with the IMF in 1999, Brazil enacted the Fiscal Responsibility Law in 2000, which further reduces sub-national governments' autonomy by increasing the monitoring of states' and municipalities' fiscal and financial accounts. The law stipulates that any permanent expenditure (of more than two fiscal years) must be attached to a new permanent source of financing (a new tax or an increase in a tax rate). It limits expenditure on personnel to 50% of net current revenues for the federal government and 60% for the states and municipalities, and it establishes limits on expenditure for judiciary and legislative personnel. It also sets stringent requirements for new credit operations, which reduce borrowing capacity. Finally, credit operations between federation entities are ruled out, which eliminates any possibility of future bailouts. These criteria are the same for all states, regardless of their population, level of income, size or initial situation. Besides, these are only administrative limits, which include performance indicators, output and outcome measurements, and therefore cannot distinguish between efficient and inefficient administrative units (Castanhar, 2003).

States and municipalities enjoy a very large tax autonomy

To secure the desired decentralisation, the 1988 Constitution allocated a substantial amount of taxes and constitutionally compulsory transfers to state and municipal governments (Figure 3.1). For this reason, access to constitutionally guaranteed revenue (own taxes plus tax sharing) is larger than in most Latin American countries (Box 3.4). Notably, a value-added tax on goods and services (*Impostos sobre Comercialização de Mercadorias e Serviços*, or ICMS) accounts for 85% of states' own tax revenues and for one-quarter of total tax revenue in the country (Annex 3.A6). Municipal governments also manage a tax on urban property and a tax on services that is mainly relevant in state capitals. Additional sub-national government revenue is provided by tax-sharing arrangements on the personal and corporate income tax and the national value added tax, but these are considered to be transfers in the criteria established by the System of National Accounts. On average, state own revenues (own taxes, contributions and other own revenues) represent almost 70% of states' total revenues and 23% of municipalities' revenues (Annex 3.A7). But these averages mask important regional disparities, due to the concentration of economic activity in the South and Southeast regions: at the macro-region level, own revenues represent only about 50% of states revenues in the North region but almost 60% in the Northeast, while they represent about 77% in the South and Centre-West, yet up to 85% in the Southeast region (Annex 3.A7).

Sub-national governments have considerable autonomy over their own taxes. States are free – within limits – to set tax rates and the tax base of the ICMS. This autonomy has, however, led to intense tax competition, which distorts trade flows between states and influences where firms choose to locate. Sub-national governments (states and municipalities) are also free to set rates and bases for other taxes, which gives Brazilian sub-national governments greater tax autonomy than in most other OECD countries.

Box 3.4. **Taxes by level of government in Latin America**

Since the mid-1980s, decentralisation reforms have been adopted all over Latin America, transferring government functions from the central government to sub-national entities. Initially, this mainly focused on strengthening the democratic representation of local authorities, but a gradual trend towards increasing expenditure at sub-national level emerged.

By contrast, the scope of sub-national tax policy in the region has been relatively modest, focusing on a limited number of taxes. Most Latin American countries have prioritised the strengthening of central government revenues to the detriment of sub-national entities. Between 1990 and 2008, the tax share of central or federal administrations rose by around five percentage points, whereas the shares of sub-national governments decreased or remained relatively stable.

This trend in sub-national tax receipts is related to the low level and weak structure of sub-national taxation in Latin American economies. As compared with OECD countries, the attribution of tax revenues to sub-sectors of government in Latin America is skewed towards central or federal entities. In Latin America as a whole, receipts from central governments account for more than 80% of the total revenue collected, whereas the corresponding figure for sub-national entities is less than 5%.

This situation varies considerably among countries in the region. Argentina, Brazil and Colombia have relatively high own-source generation at the sub-national level. However, in unitary countries, the average share of municipal receipts reached only 1.9% in 2008.

Box 3.4. **Taxes by level of government in Latin America** (*cont.*)

Nevertheless, two important statistical issues can produce material differences in the figures at the sub-national level. First, in this report, the attribution of revenues to the different sub-sectors of government was made according to the revised guidelines of the 2008 version of the System of National Accounts. The revised approach may alter these shares, when one level of government collects tax revenues and transfers them in whole or in part to other levels of government. Under the new scheme, the revenues are attributed to the collecting government. Regional examples of such mechanisms are the Co-participation Law in Argentina, federal participations in Mexico (as stipulated in the Fiscal Co-ordination Law) and Participation Funds in Brazil (defined in Article 159 of the Constitution). Second, regional averages in some countries are affected by the paucity of tax revenue statistics at sub-national level. This effect is more pronounced at the beginning of the series, since the availability of data at this level has tended to improve in recent years.

In Latin America, receipts from territorial entities account for an average of approximately 0.9% of GDP, or one-fifth of the receipts collected by developed countries. As a result, sub-national activities rely instead on a system of transfers from upper to lower levels of administration.

The difficulties that sub-national governments encounter in collecting their own taxes are indicated by the narrow range of taxes under their jurisdiction. The taxes most frequently assigned to sub-national entities are property taxes, motor vehicle licenses, taxes on specific services and municipal fees. These instruments' potential for revenue generation is limited compared with other taxes under central jurisdiction, such as VAT and income taxes.

The tax structure of territorial entities in Latin America contrasts with the more diversified sources of revenue in developed countries. For countries where this information is available, property taxes and taxes on goods and services account on average for around 40% of the total revenue collected at this level of government. In OECD countries, however, the bulk of what sub-national governments collect is generated through income taxes (again representing around 40% of the total amount collected).

However, the situation varies among Latin American countries. One of the most notorious situations is Brazil, in which large part of the VAT (*Impostos sobre Circulação de Mercadorias e Prestação de Serviços*, or ICMS) is collected at the sub-national state level. Another example of a similar tendency is the provincial sales tax (*Impuesto a los ingresos brutos*) in Argentina.

Source: OECD/Economic Commission for Latin America and the Caribbean/Inter-American Center of Tax Administrations (2011), *Revenue Statistics in Latin America*, OECD Publishing, Paris, doi: *10.1787/9789264110540-en-fr*.

Most inter-governmental transfers are general purpose

Despite the increase in the use of discretionary transfers, most inter-governmental transfers in Brazil are still defined by the Constitution (and therefore not discretionary) and general purpose: 71% of federal transfers to states, 64% of federal transfers to municipalities and 100% of state transfers to municipalities are general purpose.[2] There are three types of inter-governmental transfers in Brazil:

- **Constitutional transfers** (State Participation Fund, or FPE, and Municipality Participation Fund, or FPM), which are in fact tax-sharing arrangements where the amounts distributed to the states are calculated automatically based on formulas defined in the Constitution. Whenever the federal government increases the collection of one of the shared taxes, a portion automatically flows to sub-national governments, as a general-purpose grant. These represented 47% of federal transfers to states and 45% of federal transfers to municipalities in 2006.

- **Non-constitutional (or discretionary) transfers**, which are usually earmarked and subject to federal monitoring. These are mainly expended by "national programmes", that is, areas where the federal government is responsible for designing national legislation that sets standards of quality and accessibility of public services for the whole country. These services are financed and to a large extent managed and controlled by the federal government. However, implementing the programmes is left to sub-national governments. This is mainly the case for health and education policies (the national Unified Health System, *Sistema Único de Saúde*, or SUS, and two education funds for primary and lower-secondary education, the *Fundo para Manutenção e Desenvolvimento do Ensino Fundamental,* or FUNDEF, and the *Fundo de Manutenção e Desenvolvimento da Educação Básica*, or FUNDEB) (Box 3.5). National programmes represent about a quarter of federal grants to states (SUS accounts for 14% and education transfers for 12%), and 44% of federal transfers to municipalities (SUS accounts for 26% and education transfers 18%) (Annex 3.A2).
- ***"Return transfers"*** are transfers from the states to the municipalities, which correspond to the taxes collected by the states on behalf of the municipalities. As the states act only as collecting agents, these transfers are general purpose.

States and municipalities have large spending assignments in crucial areas

On the spending side, Brazil is also comparable to the most decentralised countries of the OECD (Figure 3.2). The sum of state and municipal expenditure is around 60% of general government spending, more than in Switzerland and Spain, and less only than Canada and Denmark. Spending allocation reflects a gradual and uneven process of decentralisation. The Brazilian Constitution determines which activities are to be performed or regulated exclusively by the federal level, and which are the responsibility of the municipalities. As for states, they may carry out all those functions that are not explicitly foreclosed to them under the Constitution. This opens the way for possible overlaps of spending and policies by the three levels of government, and several activities are executed concurrently by the three levels of government. Apart from debt service and transfers to municipalities (which represent about 20% of states' expenditure), the main spending responsibilities of states are education (16% of states' expenditure), health (13%) and social protection (9%) (Figure 3.3). Sub-national governments in Brazil therefore play a major role in the financing and implementation of crucial public policies, which have the greatest impact on the underprivileged portion of the population. As it turned out, wide discretion and lack of conditionality in the use of resources did not ensure equality in the levels and quality of public services across states, except in health care and education. In these cases, decentralisation was more carefully planned and multi-level governance mechanisms are in place. In addition, health care and education are mainly financed by earmarked grants from federal government, which has increased the level of control and co-ordination between the different federal entities.

Box 3.5. **The Fund for Maintenance and Development of Basic Education (FUNDEF)**

The Fund for Maintenance and Development of Basic Education, or FUNDEF, was created in 1996 and put into effect in 1997-98 to finance sub-national spending on primary and lower-secondary education. While primary spending is assigned to the municipalities by the Constitution, the states were the main providers of services until the late 1990s. FUNDEF changed the mechanism for financing sub-national spending on education in two main ways. First, a national spending floor was introduced per student enrolled in primary and lower-secondary education (from first to eighth grades), coupled with a framework for the allocation of funds between the state and municipal public school networks. Second, FUNDEF requires the federal government to top up spending in those states that cannot afford the national spending floor. Since 2000, different floors have been set for primary education (first to fourth grades) and for lower-secondary education (fifth to eighth grades), at 5% above the value for primary education.[1]

FUNDEF is financed by earmarking 15% of: *i*) the state and municipal allocations in the revenue-sharing funds with the federal government; *ii*) revenue from the state value-added tax (ICMS); *iii*) revenue from the federal value-added tax levied on exports (IPIexp); and *iv*) federal transfers to the states associated with ICMS revenue insurance (i.e. a mechanism for compensating the states for the revenue losses associated with the exemption of value-added tax on the exports of primary and semi-manufactured goods).

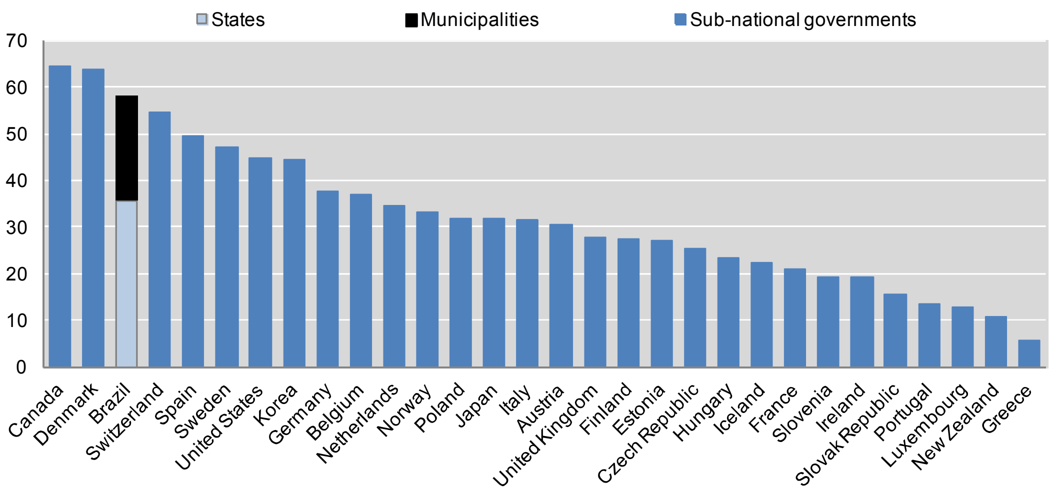
FUNDEF resources are allocated within each state according to the number of students enrolled in the state and municipal public school networks. At least 60% of FUNDEF allocations must be spent on personnel, with the remaining share being spent on operations and maintenance. Within FUNDEF, the municipalities are required to spend at least 25% of their revenue on education (and at least 15% on primary education).

FUNDEF has been associated with a rapid increase in enrolment rates in primary and lower-secondary education. Although this increase cannot be attributed solely to FUNDEF, there appears to be a strong association between changes in enrolment rates and in the composition of enrolment between the state and municipal school networks, which has been changing over time in favour of the municipal school network. Based on evidence for a data set including 26 state capitals in the period 1991, 1994, and 1998-2001, enrolment rates were estimated to have risen rose by more than 2% per year faster after the introduction of FUNDEF than in the period 1991-98.[2]

Notes: 1. See de Mello (2001a, 2001b), Afonso and de Mello (2002) for more information. 2. See de Mello and Hoppe (2005) and OECD (2005), for empirical evidence.

Source: De Mello (2006), *Fiscal Responsibility, Legislation and Fiscal Adjustment: The Case of Brazilian Local Governments*, OECD Publishing, Paris.

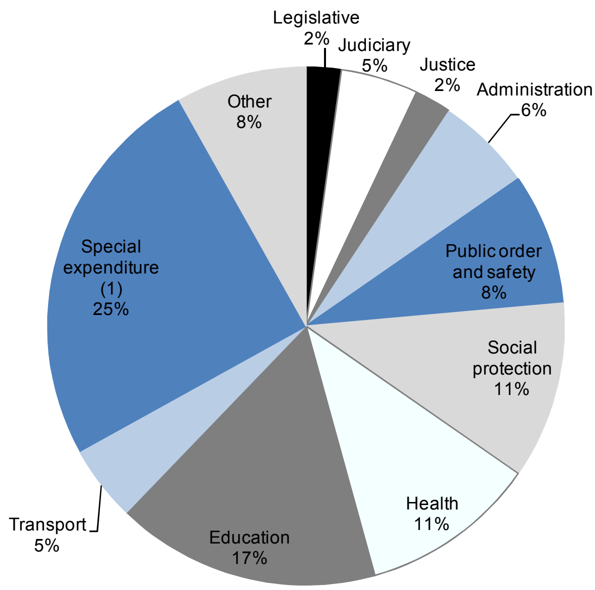
Figure 3.2. **Share of sub-national governments in general government spending (2008)**



Note: Data for Brazil are not consolidated.

Source: *OECD National Accounts*, calculation for Brazil based on data from the National Treasury of Brazil.

Figure 3.3. **State expenditure by function (2008)**



Note: 1. Special expenditure includes debt service and transfers to lower levels of government.

Source: Based on National Treasury of Brazil.

Brazil's institutional framework calls for enhanced multi-level governance instruments

States and municipalities have important responsibilities in areas that are key priorities for the federal government, such as education and health. In addition, they have wide autonomy to make decisions, given both their constitutional guarantee of autonomy and their access to autonomous, non-earmarked, financial resources. It is thus very difficult for the federal government to impose a policy or regulate standards nationwide, and it must rely on other types of incentives to ensure coherence between policies in different sub-national governments. One way of guaranteeing the homogenous provision of public services across Brazil was to increase non-shared taxes and redistribute them to sub-national governments as earmarked grants, for which the federal government sets the objectives and monitors results.[3] Other multi-level mechanisms can be exploited to ensure co-ordination of policies across levels of government. These will be discussed in the coming sections.

Contracts and pacts are frequently used to co-ordinate policies across levels of government

Convenios (agreements) and contracts are the main instrument used for co-operation between public institutions. For example, in the case of the Bolsa Família Programme, the main difficulty the Ministry of Social Development faced was dealing with municipal autonomy, as it lacked adequate tools for co-operation. It therefore developed a method based on a standard contract that municipalities are free to sign, which recognises the co-ordination, regulation and financing role of central government, while describing the municipalities' obligations to: *i*) register all the low-income families in their territory; *ii*) keep this information updated; *iii*) verify that the health and education conditions are fulfilled by the families. This contractual approach made it possible to clarify the responsibilities of each level of government. Contracts are also widely used for vertical co-ordination in OECD countries (Box 3.6), and as instruments for complementing the constitutional allocation of responsibilities.

Box 3.6. **Examples of inter-governmental contracts: France and Italy**

France

The *Contrat de Plan Etat Région* (now *Contrat de Projet État-Régions* or CPER) has become a key tool of French regional policy. Nearly 20 ministries participated in the previous generation of CPER (2000-06), and all contributed to varying degrees. The ministries that contributed the most to regional programmes under these contracts were the Ministry of Infrastructure, Transport and Housing, followed by the Ministry of Education and the Ministry of Agriculture.

Co-ordination of the various ministries' actions in regions is the responsibility of both the inter-ministerial role of the DIACT (*Délégation Interministerielle à l'amenagement et la competitivité du territoire*, under the authority of the Prime Minister's Office) and the "prefect" role of negotiator of the contract (the other party is the president of the regional council) who refers to the variety of ministries who are stakeholders of the contract (with the participation of their deconcentrated services in regions).

Italy

Italy's regional development policy has a marked contractual nature. The emphasis on participatory forms of territorial development planning and on recourse to contractual forms of multi-level governance can be considered the outcome of at least three factors: *i*) the influence of foreign experience; *ii*) a country-specific need for procedural and decision-making simplification; *iii*) the strong influence of EU territorial development policies. Indeed, the shift towards instruments of a predominantly contractual nature is part of a process that dates back to the mid-1980s and is partially modelled on foreign experience (in particular, the British "culture of public-private partnership" and the French "State-regions planning contract" of the early 1980s). This influence, along with the country-specific need for simplification that was at the basis of the first experiences with the "contractualisation" of public programmes notably the institution of the *accordi di programma* (programme agreements) and the *conferenza dei servizi* (service conference), which primarily aimed at overcoming bureaucratic inertia and veto power and thus speeding up the decision process. The choice of contractual instruments as a strategy for co-ordinating development policies involving multiple public and private actors, complex decision making and the unified management of financial resources dates back to the mid-1990s and goes under the name of "negotiated programming" (Law n. 662/1996).

Source: OECD (2007), *Linking Regions and Central Governments: Contracts for Regional Development*, OECD Publishing, Paris, doi: *10.1787/9789264008755-en*; OECD (2010), *OECD Territorial Reviews: Sweden 2010*, OECD Publishing: Paris, doi: *10.1787/9789264081888-en*.

"Federal pacts" (*pactos federativos*) are another common contractual instrument used in Brazil for vertical co-ordination, generally associated with plans and funds. Such pacts are usually established by sectoral ministries, with leadership from the President's Office (*Casa Civil*) and are the result of a negotiation process with the states and municipalities. They consist of a set of objectives for a determined policy, and define the roles, responsibilities and financing of each level of government. For example, the Pact for Life (*Pacto pela Vida*) launched in 2008 by the Ministry of Health, defines 11 priorities, such as health care for the elderly, reduction of infant and maternal mortality, strengthening basic health care, etc. Each objective is associated with specific actions, and with a budget.

Once a federal pact is negotiated, each state and each municipality must adhere to the pact, i.e. accept the goals and allocation of responsibilities. It is common at this stage for the minister to go on a "road trip" (for example, a *caravana de educação*, *caravana de saúde*, etc.), to present the objectives to all the state governors, persuade them to adhere to the pact and convince them to promote it amongst their municipalities (Box 3.7 presents the specific case of the pact to reduce infant mortality). Financial incentives to encourage municipalities to adhere to the pact may be available, but this is not always the case. Federal transfers to municipalities can be of two kinds: compulsory (determined by law or even by the constitution), or discretionary. When a sector is entitled to discretionary transfers, the federal ministry can make those transfers conditional on adhesion to the pact. For example, in health care, there are three pacts: the Pact for Life (*Pacto pela Vida*), the Pact for Administration (*Pacto pela Gestão*) and the Pact to Defend the SUS (*Pacto en Defensa do SUS*). All the states and most municipalities have accepted the first, but acceptance of the second is much more limited, as the Pact for Administration clarifies the roles and responsibilities of each level of government, and many municipalities are not anxious to make their responsibilities explicit. As the Ministry of Health offers no financial incentive to encourage them to sign on to it, adhesion is low. In the case of education, the ministry could use a financial incentive to persuade municipalities to sign up for the plan for education development (*Plano de Desenvolvimento da Educação*, or PDE) by making the transfer of voluntary resources conditional on the municipality signing on to the plan.

Using fiscal federalism as a tool for regional development

Equalisation and the reduction of spending capacities

In most countries, redistributive (equalisation) transfers are used to reduce horizontal disparities in the spending capacity of sub-national governments. In Brazil, the State Participation Fund (FPE) and the Municipality Participation Fund (FPM) are the main fiscal equalisation transfers. These represented 2.2% of GDP in 2006, which is close to the OECD average (Box 3.8). These transfers were created by the 1965 tax reform, and are intended to channel additional revenues to the regions with lower revenue-raising capacity. In 1989, the formula for distributing the participation funds was changed and lost its dynamic qualities, which used to ensure that the regions with the lowest tax-raising capacities were getting proportionally higher transfers. The system thus became close to a simple tax-sharing formula, where the allocation co-efficient takes into account historical levels of tax-raising capacity. As a result, even if *per capita* shares of the State Participation Fund are greater for states in the North and Northeast (Figure 3.4), disparities in spending capacity between states are not fully eliminated. This means that states with very similar economic situations and initial spending capacity may end up with very different final revenues (Prado, 2009).

Box 3.7. **Pact to reduce infant mortality**

Reducing maternal and infant mortality was a personal priority for President Luiz Lula da Silva, and he set a national objective of reducing the mortality rate by 5% a year.

There are great disparities in infant mortality rates across Brazil (see Figure 1.A5.3), with some states close to OECD standards and to the goal of less than 10 per thousand (for example, Rio Grande do Sul is at 10.2 per thousand), while others are as high as 27.1 per thousand (Northeast). The national average is 19.3 per thousand. High infant mortality rates are geographically concentrated: 256 municipalities represent about 50% of the deaths (155 in the Northeast and 101 in Amazonia).

In January 2009, President Lula met with the governors of the North and Northeast regions, and the Ministers of Education, Human Rights and Agrarian Development. The Minister of Health presented his suggestions to implement the president's objective of reducing the infant mortality rate by 5% a year. Priority was given to the 256 municipalities mentioned above.

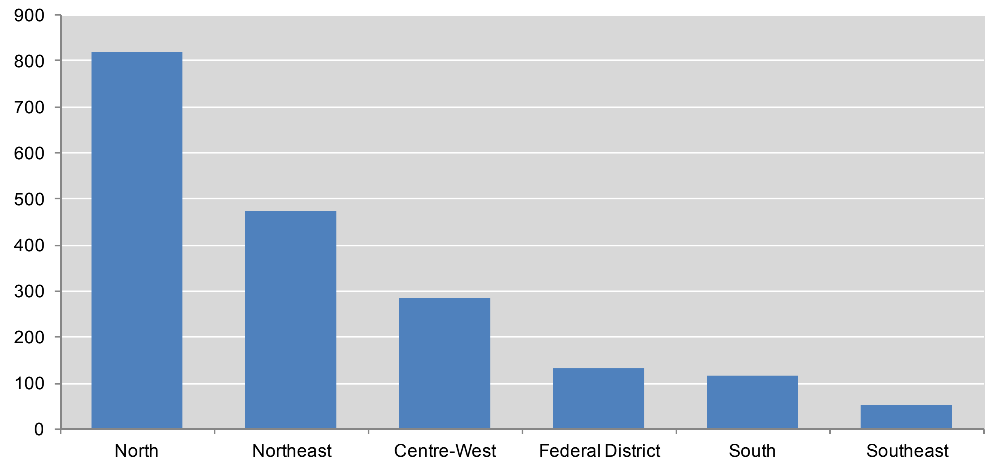
In February-March 2009, 17 offices were created in the states of Northeast and Amazonia Legal to draft their action plan. These offices were composed of representatives from the Ministry of Health, the state Secretaries of Health, the municipal Secretaries of Health of the priority municipalities, various technicians and representatives from the National Council of State Secretaries of Health (*Conselho Nacional de Secretários de Saúde*, or CONASS), National Council of Municipal Secretaries of Health (*Congresso Nacional de Secretárias Municipais de Saúde*, or CONASEMS) and Council of Municipal Secretaries of Health (*Conselho de Secretários Municipais de Saúde*, or COSEMS).

From March to May 2009, the federal Minister of Health visited all the states and communicated on the importance of this pact. He signed the pact with the 17 governors of the states concerned, and each governor then undertook to sign the pact with the priority municipalities of their respective state.

To work together on the implementation of this pact, the secretaries of state of agrarian development, education, health and human rights meet every three weeks in *Casa Civil*, together with the Secretariat of Institutional Relations (*Secretaria de Relações Institucionaes*, or SRI). It is still too early to assess whether this pact produced the desired effects on reducing infant mortality.

Source: Ministry of Health of Brazil (n.d.), "Family Health Strategy. A Brazilian Contribution for Health Development" ("Estratégia de saúde familiar: A contribuição Brasileira para o desenvolvimento da saúde"), Brasília.

Figure 3.4. **Allocations of Brazil's State Participation Fund (FPE) *per capita* per macro-region (2008)**



Source: Based on National Treasury of Brazil and IPEA.

Box 3.8. Fiscal equalisation in OECD countries

One of the most important roles of inter-governmental grants is to reduce differences in tax-raising capacity and public service needs across sub-national governments. Most countries have introduced explicit or implicit equalisation systems using either vertical transfers to financially weak sub-national governments, or horizontal transfers from financially strong to financially weak sub-national governments (Blöchliger and Charbit, 2008). Fiscal equalisation is defined as "a transfer of fiscal resources across sub-national governments with the aim of offsetting differences in revenue-raising capacity or public service cost. Its principal objective is to allow sub-central governments to provide their citizens with similar sets of public services at a similar tax burden" (Blöchliger et al., 2007).

A snapshot of fiscal equalisation: Equalising grants and their effect on reducing fiscal disparity

	Size of the equalisation system (in %)			Effect on fiscal disparities (variation coefficient)		
	% of GDP	% of government expenditure	% of inter-governamental grants	Disparities before equalisation	Disparities after equalisation	Difference
Federal/regional countries						
Australia	0.5	1.4	19	16.8	0.0	16.8
Austria	3.8	7.6	69	–	4.2	–
Canada	1.0	2.5	24	29.8	20.1	9.7
Germany	2.0	4.2	45	13.0	2.7	10.3
Italy	3.0	6.3	48	39.0	6.0	33.0
Mexico	3.7	–	78	–	–	–
Spain	3.0	7.6	67	26.5	10.1	16.4
Switzerland	3.0	8.2	80	31.8	23.2	8.7
Unitary countries						
Denmark	2.8	5.1	23	16.0	6.0	10.0
Finland	3.8	7.4	71	17.7	4.2	13.4
Greece	1.2	2.4	75	–	–	–
Japan	4.0	11.0	–	36.0	–	–
Norway	0.5	1.2	11	23.0	8.0	15.0
Portugal	1.8	4.0	81	90.0	28.0	62.0
Sweden	2.6	4.6	50	10.0	0.0	10.0
Turkey	1.1	–	82	39.0	14.0	25.0
Unweighted average	2.3	4.8	55	29.9	9.7	19.2

Source: Blöchliger, H. et al. (2007), "Fiscal Equalisation in OECD Countries", *OECD Working Papers on Fiscal Federalism*, No. 4, OECD Publishing, Paris, doi: *10.1787/5k97b11n2gxx-en*.

On average, equalisation represents 2.3% of GDP in OECD countries (see table above), but ranges from 0.5% in Australia and Norway to 4% in Japan. It represents on average 4.8% of total government expenditures, and about 55% of inter-governmental grants. All grants do not have an equalisation objective. Equalisation grants are fiscal arrangements that provide greater transfers per resident to sub-national governments with below-average tax revenue-raising capacity, or greater transfers per resident to sub-national governments with above-average public service cost (this last distinction has proved difficult for some countries). The coefficient of variation gives a picture of regional disparities. It measures the variability of GDP *per capita* per region in a given country. The table above shows that fiscal equalisation considerably reduces disparities, from an average of 30% to less than 10%. In some countries, such as Australia and Sweden, disparities are actually reduced to zero. After equalisation, fiscal disparities are clearly below economic disparities as measured by regional GDP, meaning that the potential to provide public services is more evenly distributed than economic wealth.

Source: Vammalle, C. and C. Charbit (2010), "Fiscal Federalism: Recent Developments and Future Trends", in *Local Public Sector in Transition: A Nordic Perspective*, Antti Moisio (ed.), Government Institute for Economic Research, VATT, Helsinki, Finland.

In any case, equalisation cannot be a substitute for regional development policies. Indeed, at the most, a good equalisation system may offset disparities in tax-raising capacity and allow all the regions to provide similar levels of public services with similar tax efforts, but equalisation systems do not generate endogenous growth that could allow lagging regions to catch up with the more advanced ones. To some extent, fiscal equalisation can be considered an "old paradigm" type of policy, which should be accompanied by more active regional development policies.

Using fiscal incentives as a substitute for regional development funds: The state value-added tax (ICMS) and the fiscal war

In most countries, the value-added tax is among the main revenue sources for central governments. In Brazil, the tax on goods and services (ICMS) – which is equivalent to a value-added tax – is allocated to the states, which are free to set its rate within certain limits. States have always used this tax as a tool to attract private investment to their jurisdiction, by granting enterprises fiscal incentives called "tax expenditure" (i.e. provisions of tax law, regulation or practices that reduce or postpone revenue for a comparatively narrow population of taxpayers, relative to a benchmark tax). During the 1990s, states intensified the use of such fiscal incentives, leading to what is qualified as a "tax war". One of the reasons this tax war is particularly intense in Brazil is the insufficient national industrial and regional policies. Because they did not have regional development funds to finance public investment, states that wanted to attract private investment had no option but to grant firms fiscal incentives. This was reinforced by the closing of the regional development agencies in 2001, which led to increased levels of tax competition among the states (Nóbrega, 2001). The opening of the Brazilian economy in the 1990s and the subsequent increase in foreign direct investment further reinforced this phenomenon, because all the states were interested in attracting investment.

Granting fiscal incentives to attract private investment is a typical example of a policy that may be rational on an individual basis, but that can backfire. If only one state granted such benefits and is able to attract private firms, this can generate positive externalities in the state (higher levels of employment, an increase in other tax collections due to higher general levels of activity, etc.), even if the ICMS revenues are not increased. But if each state pursues the same strategy, all the states lose, as their fiscal incentives no longer influence where firms choose to locate, and in addition, they forgo the revenues of the ICMS. From an aggregate point of view, the country as a whole loses, because aggregate tax collections are weaker, without the expected benefit of firms locating in poorer regions.

A second undesired consequence of the tax war is that rather than decreasing industrial concentration, by attracting resources to lagging regions, it actually increases regional disparities. Indeed, if all the states grant similar fiscal incentives, these play only a small role in determining where investment is located, and the main drivers of such decisions are traditional considerations regarding the conditions of the state (access to market, quality of infrastructure, availability of raw material, etc.), which tend to be more attractive in richer, more developed states. A study carried out in 1997 by the Economic Commission for Latin America and the Caribbean (*Comisión Económica para América y el Caribe*, or CEPAL) shows that fiscal incentives are just as important as distance to market as drivers for deciding the location of investment by private firms (Nóbrega, 2001). To overcome their disadvantages in terms of general conditions, poorer states would have to offer greater fiscal incentives than richer ones. But precisely because they are poorer and have more financial problems, they are unable to do so.

Finally, in many cases, firms negotiate with several states to get the largest possible fiscal exemptions, and states sometimes grant fiscal incentives without properly evaluating their expected returns. The costs incurred in lost taxes may thus be higher than the benefits obtained from attracting a firm (in employment generated and positive externalities on the overall level of activity and collection of other taxes). In such a case, not only the country as a whole, but also the state individually is a net loser in the tax war. The main winners are private firms, who do not really base their decision on where to locate on the tax incentives, but who nevertheless benefit from the reduced taxation.

The Brazilian tax system is recognised as generating large revenues (its tax revenues as a share of GDP are close to the OECD average, well above Latin American levels, Box 3.4). However, it relies heavily on inefficient and regressive taxes (such as contributions that are raised because they are not shared with the states, or state ICMS, which leads to inefficient tax wars). There have been several attempts to reform the system since the promulgation of the 1988 Constitution, which created it (1995, 2002, 2003 and 2007). In 2007, a comprehensive tax reform was proposed, which aimed to create a uniform state VAT legislation throughout the country (Box 3.9). The Ministry of National Integration (*Ministério da Integração Nacional*, or MIN) was involved in this proposal, which aimed to compensate for the losses incurred by the states by the abolition of fiscal incentives by creating a state fund for regional development financed by the revenues of the *pré-sal* oil fund. Such a fund would not only have helped compensate losers. By allocating resources to the states to carry out an explicit regional development policy, it would have reduced the need to grant tax incentives and incur a tax war. The proposal was not adopted by Parliament before the end of President Lula's mandate, and it is not known if it will be resubmitted in its present format.

Box 3.9. **Fiscal reform on the move: Success in Mexico and an unfinished agenda in Brazil**

The governments of the two largest economies of Latin America, Mexico and Brazil, have placed fiscal reform at the centre of their efforts to foster economic growth and strengthen social cohesion. In September 2007, the Mexican Congress (with some minor amendments) approved President Felipe Calderón's fiscal reform proposal, aimed at increasing non-oil fiscal revenue by 2.1% of GDP over the next four years. In Brazil, the government of President Luiz Lula da Silva sent a proposed constitutional amendment to Congress in February 2008, targeting fiscal complexities and distortions, and in particular the damaging "tax wars" among different Brazilian states.

These reforms differ in their details, but they share the common goal of maximising the potential of fiscal policy to promote economic growth and to reduce poverty and inequality.

In Mexico, where fiscal revenue in 2005 accounted for only 19.9% of GDP[1] against that year's OECD average of 35.9%, the main objective of the reform was to increase the tax take by expanding the fiscal base, reducing exemptions and combating tax evasion. The most important reform was the introduction of a minimum flat tax of 16.5% of firms' business income (sales less input costs, with deductions for capital expenditure). This will be gradually increased to 17.5% in 2010. Other measures included a new 5.5% tax on fuel, a 2% tax on cash deposits exceeding a cumulative monthly amount of MXN 25 000, special taxes on betting and lottery operators, and tax cuts of as much as USD 5.4 billion over the next four years for Pemex, the national oil company. The government estimated that these measures would raise additional revenue of around USD 11 billion in 2008, the bulk of which was to be spent on social programmes and infrastructure. Also on the expenditure side, the new reform will reinforce the oversight functions of the lower house of Congress, the implementation of austerity programmes and the establishment of uniform accounting principles for the three branches of government.

Box 3.9. **Fiscal reform on the move: Success in Mexico and an unfinished agenda in Brazil** (*cont.*)

The Mexican reform was perhaps not as ambitious as originally hoped, but it was a positive step in securing an increase in national non-oil revenues. The approval of the reform shows how, through dialogue and a willingness to negotiate, the executive and legislative branches can reach the required consensus. The compromises arrived at during the lengthy negotiations with various stakeholders are the political price of reform. The other side of the coin can be seen in Brazil, where the government suffered a material setback in December 2007, with the rejection by just four votes in the Senate of the renewal of the temporary contribution on financial movements (*Contribuição Provisoria sobre Movimentação Financeira*). The loss of this tax on financial and capital transactions deprived the federal government of about USD 14 billion in annual revenue.

In contrast to Mexico, however, Brazil starts with relatively high tax revenues. At 33.1% of GDP in 2006, it is much closer to OECD levels and well above the Latin American average of 20.2%.[2] As a result, the main objective of the fiscal reform programme sent to Congress in February 2008 is not so much to increase revenue as it is to make collection fairer, simpler and more efficient, with an eye towards reducing complexities and correcting distortions as a way of attracting private investment and boosting sustained economic growth.

The bill submitted by the Lula government had provisions that ranged from unifying and simplifying existing taxes to reducing the fiscal pressure on investments and exports. It aimed to lower employers' social security contributions to encourage employment in the formal economy, and supported a gradual reduction in the number of indirect taxes on basic products through the introduction of a new federal VAT (IVA-F). A new state-level VAT (IVA-E) would also have helped to end the tax wars resulting from the current decentralised authority over VAT rates, which has been exploited by the states as an industrial policy tool to attract economic activity. The new IVA-E would have replaced the 27 existing merchandise circulation taxes (ICMS), the value-added tax each state levies on every transfer of goods. Specific complementary provisions in the reform package fostering regional development policies and mechanisms would also have encouraged better inter-state relations and fiscal solidarity.

By simplifying the tax regimes and making them more progressive, Brazil also aimed to improve public attitudes toward its tax system. As noted in the 2008 Outlook, in 2005 only 12% of Brazilians believed that their taxes were being well spent, a score higher only than Peru's (10%) in a region where the average was 21%. Improving fiscal efficiency and fairness would represent a start in reshaping these perceptions.

With inflationary pressures on the horizon, there are limits on the ability of monetary policy to respond, given Brazil's strong currency, soaring foreign investment inflows and interest rates that are already among the world's highest. Reforming the tax system was important for Brazil's short-term economic future, particularly if the government was to achieve its objective of successive primary fiscal surpluses and achieve a zero deficit by 2010. As the case of Mexico illustrates, flexibility may be needed on both sides. A shared understanding of the need to reform, adequate transition mechanisms and consultation with all stakeholders are the best way to achieve fairer and more inclusive fiscal regimes – and the economic benefits they can bring.

Note: 1 Fees levied by the Mexican state on hydrocarbon production are considered tax revenues in the *OECD Revenue Statistics*, but are not counted as taxes in Mexico's own statistics. As these fees constitute more than 40% of public revenues in Mexico, tax-to-GDP ratios reported in other sources may be substantially lower than the figure given here if they do not reflect OECD accounting guidelines. 2. The Latin American average covers Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Mexico, Peru and Venezuela. The sources of all fiscal revenue figures in this box are from the OECD (2007a) for OECD countries, and the *Latin American Revenue Statistics database* for Latin America.

Source: OECD (2009), *Latin American Economic Outlook,* OECD Publishing, Paris, doi: *10.1787/leo-2009-en.*

Are fiscal incentives a good tool for regional development?

From a strictly fiscal point of view, granting fiscal incentives to a firm or sector should be strictly equivalent to giving subsidies to them, or making any other direct transfer of resources. What drives the use of fiscal incentives rather than direct subsidies?

First, states do not have state-managed regional development funds that they could use to grant firms direct subsidies, or implement infrastructure investment that would render the region attractive without having to offer special incentives. The main resources for regional development in Brazil are the constitutional funds, which can only be used to provide subsidised credit to firms, and which are managed by the regional development superintendencies, the Superintendency for the Development of the Northeast (*Superintendência de Desenvolvimento do Nordeste*, or SUDENE) and the Superintendency for the Development of Amazonia (*Superintendência de Desenvolvimento da Amazônia*, or SUDAM), and operated by the regional development banks (*Banco da Amazônia*, *Banco del Nordeste*).

Second, fiscal incentives do not appear as expenditures in the annual budget and therefore do not need to be renegotiated every year to be included in the new budget. This is convenient for reducing negotiation transaction costs and to offer firms some predictability, but it also reduces the transparency of the subsidies given, and therefore undermines accountability. This is particularly relevant because fiscal incentives are more difficult to audit than direct expenditure programmes. The Fiscal Responsibility Law mandates that these should be considered as expenditure and should face the same requirements, but this is not at all easy to enforce. First, there is no consensus about what counts as a tax expenditure as opposed to a simple tax reduction, and second, calculating the revenue forgone (i.e. the amount of the expenditure) is also challenging and controversial. Finally, a policy based on fiscal incentives appears less interventionist, as the allocation decisions are carried out by the private firms while an explicit subsidy policy would make it incumbent upon the state to choose which firm to help. Of course, in practice, the two policies are equivalent as far as state intervention is concerned, but fiscal incentives are less visible (Nóbrega, 2001).

Overcoming a multi-dimensional fragmentation of policies

Policy fragmentation

Brazil has a multiplicity of actors at federal and sub-national levels

The Brazilian government structure is highly complex. As seen before, from a vertical perspective, it is composed of three levels of government, which enjoy wide financial and political autonomy. From a horizontal point of view, Brazil's institutional culture is one of "silo"-type ministries, where each sectoral ministry has its own territorial vision and does not necessarily co-ordinate with other ministries. Each of these ministries controls or is related to agencies and publicly owned enterprises, creating a highly complex arena with a great number of stakeholders. This complexity is aggravated by the fact that Brazil is traditionally governed by coalition governments, making co-ordination between ministries more difficult. The same observation is also true at state level. State governments are also constituted of sectoral ministries, state agencies and state-owned enterprises. This creates potential policy and objective gaps, where each ministry, state, agency or publicly owned enterprise pursues its own strategy and policy objectives on the territory. Different initiatives therefore run the risk of not being sufficiently co-ordinated and not exploiting all the potential complementarities and synergies. In such a context, effective instruments for co-ordination, both horizontal at the federal level, and vertical between levels of government, are crucial.

Co-ordination is more effective when it is under the responsibility of an institution with political power

Co-ordinating different actors with different strategic objectives (i.e. bridging the "objective gap"), (Box 3.2) is a challenging task. Experience shows that the higher the political level of the institution responsible for co-ordination, the more effective it is. In addition, if the representatives of the different stakeholders in the co-ordination body have greater political authority, it helps co-ordination, as they have more power to make decisions and they can truly speak for their constituencies, and commit for them. In recent years, Australia has developed several multi-level governance institutions that appear to be quite effective in implementing the reform agenda and dealing with delicate issues such as the 2008-09 financial crisis. Their members are drawn from high levels of government. The Council of Australian Governments (COAG), for example, the main institution for co-ordination across levels of government, is made up of the Australian Prime Minister and the state premiers (Box 3.10). It has played a crucial role in recent fiscal federalism reforms and in co-ordinating the implementation of the stimulus programmes (OECD, 2011b). In addition to the COAG, Australian states have created the Council for the Australian Federation (CAF), to facilitate horizontal co-ordination among them.

This is also the case in Brazil: it seems that when co-ordination is carried out directly by *Casa Civil* (i.e. the President's Cabinet), it is more effective, and several cross-sectoral programmes that need the joint participation of several ministries were launched and initially piloted from *Casa Civil* during Lula's Presidency. For example, *Casa Civil* took the initiative on the Bolsa Família Programme, a joint programme between the Ministry of Social Development, the Ministry of Education and the Ministry of Health. Once the programme was well established, it transferred the leadership to the Ministry of Social Development. Territories of Citizenship constitute another example of a cross-ministerial programme launched thanks to the strong leadership of *Casa Civil*, and the direct support of the president, before being fully transferred to the Ministry of Agrarian Development.

The Presidency has a Secretariat of Institutional Relations (*Secretaria de Relações Institucionais*, or SRI), which is responsible for: *i*) the general co-ordination of government policy; *ii*) the relations between the government and the Parliament and political parties; and *iii*) the relations across levels of government. Together with *Casa Civil*, it is one of the main institutions for horizontal and vertical co-ordination.

Many institutions exist for horizontal co-ordination at federal and state levels

It is a common practice in the Brazilian administration to create permanent working groups, committees or councils, similar to what in other countries are defined as "interministerial committees" (Box 3.11), in which ministers, or in certain cases their main advisors, regularly meet to help co-ordinate action. The effectiveness of these permanent working groups varies across fields of policy and according to the co-ordinating institution, and the institutional capacities of the participating bodies to co-ordinate and generate synergies with other line ministries. There are several co-ordination bodies to note, but it is hard to assess their effectiveness. Examples of those bodies are the Committee for the Management of PAC (*Comitê de Gestão do Plano de Aceleração do Crescimento*, or CGPAC), co-ordinated by the Ministry of Planning and

Budget and composed of the Ministry of Treasury, Planning and other relevant sectoral ministries.

Box 3.10. Multi-level governance institutions in Australia and COAG co-ordination

The Council of Australian Governments (COAG) is the main forum for the development and implementation of inter-jurisdictional policy. It is chaired by the Australian Prime Minister and includes state premiers, territory chief ministers and the president of the Australian Local Government Association.

Prior to the introduction of the COAG in 1992, Financial Premiers' Conferences served as the peak inter-governmental forum through which the Commonwealth, the states and territories discussed issues of national concern, but these were mainly driven by the Commonwealth, with limited opportunity for input by the states. In contrast, COAG meetings have displayed a high degree of collaborative efforts by state, territory and Commonwealth political leadership as well as agency officials, who participate in COAG decision making through heads of government meetings, ministerial councils and working groups.

The COAG was established in May 1992, but since 2007, the implementation of the COAG reform agenda has been boosted by new Commonwealth leadership and new working arrangements at COAG, including the use of working groups of senior state officials chaired by a Commonwealth minister, to identify areas for reform and develop implementation plans. Under the auspices of the COAG, ministerial councils facilitate consultation and co-operation between the Australian government and states and territories governments in specific policy areas, and take joint action in the resolution of issues that arise between governments. In particular, ministerial councils develop policy reforms for consideration by COAG, and oversee the implementation of policy reforms agreed by COAG.

In 2006, the states established a Council for the Australian Federation (CAF), comprising all the state premiers and territory chief ministers. The CAF aims to facilitate COAG-based agreements with the Commonwealth by working towards a common position among the states, as well as common learning and sharing of experiences across states.

The COAG Reform Council (CRC) is an independent body established by a COAG decision in 2006. It is meant to assist the COAG to drive its national reform agenda by strengthening accountability for the achievement of results through independent and evidence-based monitoring, assessment and reporting of the performance of governments. The CRC is independent of individual governments and reports directly to the COAG.

Source: OECD (2010), *OECD Reviews of Regulatory Reform: Australia 2010, Towards a Seamless National Economy*, OECD Publishing, Paris, doi: *10.1787/9789264067189-en*.

In the field of policies for competitiveness, and with a view to supporting regional development, the Permanent Working Group for Local Production Systems (*Grupo de Trabalho Permanente–Arranjos Produtivos Locais*, or GTPAPL) was instituted in 2003. Its aim is to increase the co-ordination between different policies supporting APLs in Brazil. The GTPAPL is composed of 33 governmental and non-governmental institutions dealing with APLs, including the Ministry for Trade and Industry (*Ministério do Desinvolvimento, Indústria e Comércio Exterior*, or MIDIC), the National Bank for Economic and Social Development (*Banco Nacional do Desenvolvimento Económica e Social*, or BNDES), the MIN and the Ministry for Science and Technology. In addition, in 2004, the National Council for Industrial Development (*Conselho Nacional do Desenvolvimento Indústrial*, or CNDI) was established. This is a consultative body associated with the Presidency, which is responsible for promoting industrial policies in accordance with trade and science and technology policies. The council is composed of representatives of 13 ministries and the president of the BNDES. It includes 14 members from civil society, the business sector and labour representatives. It is chaired by the Ministry for Industry and the executive secretary is the responsibility of the Brazilian Agency for Industrial Development (*Agencia Brasileira de Desenvolvimento Indústrial*, or ABDI).

Box 3.11. Mechanisms for national cross-sectoral co-ordination for regional development policy in OECD countries

- **Co-ordinating structures such as interministerial committees and commissions.** This is one of the simplest systems for horizontal governance, since it is based on the existing government structure. Examples include the Ministerial Committee for Regional Policy in Denmark, the Presidential Committee on Regional Development in Korea, and the Cabinet Subcommittee on Rural and Regional Policy in Norway.

- **Fully fledged ministries with broad responsibilities and powers that encompass traditionally separate sectors.** Some positive implications of the concentration of different responsibilities within the same authority include a more open and coherent perspective, a concentration of expertise and the possibility of a more integrated approach. Specific ministries for regional development were created in Chile, the Czech Republic, Poland, the Slovak Republic and Slovenia.

- **Strategic planning and programming, including agreements, frameworks and instruments.** The formulation and implementation of national regional policy programmes and/or spatial planning can provide the framework for greater central co-ordination and is widely used across OECD countries. Planning and programming have been recognised as policy tools for regional competitiveness policies. In many countries, spatial planning is gradually moving from land-use regulation frameworks towards long-term strategic documents, focusing on the co-ordination of diverse issues and interests across sectors as well as between levels of government. It often incorporates monitoring, feedback and revision mechanisms. Examples include the National Strategic Reference Framework in EU countries, the National Spatial Strategy in Japan, and the Comprehensive National Territorial Plan in Korea.

- **Special units or agencies that provide planning and advisory support to facilitate policy coherence across sectors at the central level.** High-level "special units" have been created in several countries to ensure consistency among sectors. The closer such units or co-ordinators are to a chief executive, the greater the incentives are for co-operation across sectoral ministries. Examples include the French Interministerial Delegation for Spatial Planning and Regional Action (*Délégation à l'aménagement du territoire et à l'action régionale*, or DATAR), which is linked to the Office of the Prime Minister and the Austrian Conference on Spatial Planning under the auspices of the Federal Chancellery. Special units under sectoral ministries include, for example, the National and Regional Planning Bureau of the Ministry of Land, Infrastructure, Transport and Tourism in Japan and the Spatial Economic Policy Directorate of the Ministry of Economic Affairs in the Netherlands.

- **Regional ministers.** Ministers must take into consideration the territorial aspects of the programmes and policies of their portfolios. For example, Canada appoints "regional ministers" who have regional responsibilities and represent the interests of their respective regions. Ministers combine their regular (sectoral) portfolio duties with their regional political roles. France and the Netherlands have appointed a minister who represents the interest of the leading region in the country, i.e. the State Secretary for the Development of the Ile de France and the Minister for Randstad.

Box 3.11. Mechanisms for national cross-sectoral co-ordination for regional development policy in OECD countries (*cont.*)

- **Territorial proofing mechanisms.** Territorial proofing is a mechanism that monitors government policies to prevent them from having a negative impact on certain types of territories. Ideally, proofing should be implemented in the early stages of designing policy. In addition to the rural proofing system of the United Kingdom and Canada, Korea and Sweden recently introduced a rural proofing mechanism. In Sweden, the rural development strategy was developed in 2009, and every ministry was tasked with looking at its own policy area and putting a rural perspective on it. In Finland, the Ministry of Employment and Economy has required sectoral policy makers to clarify their regional strategies and has assessed regional impacts (regional proofing) since 2004. Ten key sector ministries must define regional development plans in their field of responsibility, which fit into the Regional Development Act guidelines defined by law and the nine regional development targets adopted by the government in 2004.
- **Combining financing and/or creating a consistent and comprehensive budget.** The budgeting system is also a powerful tool for integrated policy making. Integrating financial tools and programmes can improve transparency and synergy across sectors and facilitate accountability and performance monitoring. Mexico grouped together ministerial budgets for rural policies into an official rural budget under the Special Concerted Rural Development Programme. Korea transformed many specific-purpose national grants into general grants, and established the Regional Development Special Account. A block grant was then adopted to give local municipalities the authority to autonomously design projects.

Source: OECD (2010), *Regional Development Policies in OECD Countries*, OECD Publishing, Paris, doi: *10.1787/9789264087255-en*; and: OECD (2010), *Regions Matter: Economic Recovery, Innovation and Sustainable Growth*, OECD Publishing, Paris, doi: *10.1787/9789264076525-en.*

As for regional development policy, one positive attempt to support policy co-ordination was the creation of the National Integration and Regional Development Policies Board (*Câmara de Políticas de Integração Nacional e Desenvolvimento Regional*) in 2004, chaired by the chief of staff of *Casa Civil*. The board's aim was to design policies and strategies for national integration and regional development, as well as to co-ordinate sectoral policies with regional impacts, in order to reduce inequalities between and within regions. It aimed to support policy co-ordination to overcome bottlenecks in areas such as: production development, economic infrastructure (transport, energy and telecommunications), social infrastructure (digital inclusion, education, urban and rural infrastructure, sanitation) and social and institutional organisation (citizenship, local development, etc.). The board was co-ordinated by *Casa Civil* and included 23 ministries and special secretariats.[4] It also involved relevant national entities such as the Service Support to Micro and Small Enterprises (SEBRAE), the National Service for Rural Learning (SENAR), the National Confederation of Industries (*Confederação Nacional da Indústria*, or CNI), as well as banks and financing agencies. Unfortunately, the organisation of meetings was not formalised, and after a few years when *Casa Civil* organised meetings regularly, the National Integration and Regional Development Board has not met since 2007.

States also have fragmented sectoral ministries, and have often created their own co-ordination systems. This is the case, for example, in innovation policy (Box 3.12).

Box 3.12. **Horizontal co-ordination within states: Building local governance for innovation systems in Brazil**

In Brazil, the multiplicity of institutions for production development, science, technology and innovation at the federal level is replicated at the state level. States generally have a secretariat in charge of education, a foundation for supporting research and development, a secretariat for production or economic development, a regional development bank offering support to business development, federal and research institutes and units of EMBRAPA, in addition to several branches of the institutes related to the "S System", the extension services for training for local development and SMEs. Horizontal co-ordination across the institutions of the state innovation systems is not always in place. More advanced states co-ordinate actions better, partly because the demand and the pressure for effective delivery of services is higher. In the state of São Paulo, the pressure from industry and the academy to obtain effective support for policies is extremely high. Weaker states with less developed industrial fabric also face less demand, and fewer incentives for co-ordination, which creates a vicious cycle.

Some emerging states have employed innovative mechanisms to support horizontal co-ordination in innovation and production development policies. For example, in 2007, Minas Gerais created the Innovation System of Minas Gerais (*Sistema Mineiro de Inovação*, or SIMI). This state-led initiative encourages collaboration between different parties that support innovation in the state. The SIMI is a platform that operates through: *i*) an observatory for policy monitoring and evaluation, a forum for innovation headed by the governor of the state and made up of representatives from the public sector, science and technology institutions, the private sector; and *ii*) a committee of entrepreneurs.

The state has an innovation law and State Fund for Innovation, as well as a Secretariat for Science, Technology and Higher Education, the Foundation for R&D support (FAPEMIG), 11 federal universities and several institutes for teaching, research and technical services. The SIMI helps co-ordinate the activities of several organisations, including SEBRAE, (*Serviço Nacional de Aprendizagem Indústria*, or SENAI), the state Innovation Network (*Rede Mineira de Inovação*, or RMI), the state Intellectual Property Network (*Rede Mineira de Propiedad Intelectual*, or RMPI), network for basic industrial technology. The SIMI orientates actions in three main areas: regional and sectorial development, technical training and support for innovation (see table below).

Areas of action of the Minas Gerais Innovation System

Regional and sectoral development	Technical training network	Technological innovation
APIs biotech, software, electronics and biofuels	Creation of 84 technological vocational centres	Supporting innovation environment: technological parks (Belo Horizonte-TEC; Viçosa PTV, focused on agribusiness; Itajubá ParCTec engineering), park close to the airport for high-tech research Incubators *Inove em Minas* (support for firms to access human and financial resources) Inovatec yearly innovation show
Excellence poles in strategic sectors, coffee, milk, forest, mining, water and genetics applied to kettle	Implementation of 487 *telecentros* for distance-learning	Innovation in firms: Programme for Incentives to Firms (*Programa de Incentivo à Inovação*, or PII) to link university research to industrial application 22 Nuclei for Technological Innovation (*Núcleos de Inovação Tecnológica*, or NIT) for training professionals in innovation management and commercialisation Basic Industrial Technology (*Tecnologia Industrial Básica*, or TIB) Minas Center for Design Research Support in Enterprises Programme (*Programa de Apoio à Pesquisa em Empresas*, or PAPPE) programme for incentives for innovations with social and economic impact Grants to include master's and Ph.D. students in firms
Innovation poles encouraging innovation in less advanced areas through institutional co-ordination		Creating a culture for innovation: training programmes to stimulate entrepreneurship and awareness of innovation potential

Source: OECD, based on Pacheco, C.A. (2010), "Sistemas Locais de Inovação no Brasil: Um Estudo Comparado dos SLI de Alagoas, Paraíba, Minas Gerais, Santa Catarina e São Paulo", paper produced for the OECD.

Instruments for federal-municipal co-ordination are necessary

The institution in charge of vertical relations across levels of government at the federal level is the Sub-secretariat of Federal Issues (*Subchefia de Assuntos Federativos*, or SAF), situated under the Secretariat for Institutional Relations (*Secretaria de Relações Institucionais*, or SRI), directly supervised by *Casa Civil*. As indicated above, the Constitution of 1988 granted municipalities a particularly wide degree of autonomy, together with important responsibilities for implementing policies with national impact. The federal government therefore felt the need for a specific instrument for federal-municipal co-ordination, and in 2003, it created the Federal Co-ordination Committee (*Comitê de Articulação Federativa*, or CAF), to facilitate dialogue between the federal government and municipalities. This committee was institutionalised in 2007 as a body of the SRI in *Casa Civil*. The committee is chaired by the Minister of Institutional Relations, and is composed of 18 ministries whose policies most influence municipal issues, as well as 18 members of the national institutions that represent municipalities: the Brazilian Association of Municipalities (*Associação Brasileira de Municipios*, or ABM), the National Confederation of Municipalities (*Confederação Nacional de Municipios*, or CNM), and the National Association of Prefects (*Frente Nacional dos Prefeitos*, or FNP). It is difficult to assess the effectiveness of this committee.

In the period 2003-08, other federal initiatives were taken to further the dialogue between the federal government and municipalities, such as: *i*) the creation of a Ministry of Cities (*Ministério das Cidades*) in 2003; *ii*) the creation by the National Bank (*Caixa Econômica Federal*) of offices for local civil servants (*Sala das Prefeituras*) in each capital city (Box 3.13); *iii*) the creation in 2006 of a System of Federal Advising (*Sistema de Assessoramento Federativo*, or SASF) which appoints a federal advisor responsible for states and municipalities to each federal administrative body (the system is co-ordinated by the Sub-secretariat of Federal Issues and meets once a month); and finally, *iv*) the institutional strengthening of the Federal Co-ordination Committee in 2007. Again, it is difficult to assess the impact of these mechanisms.

Box 3.13. **Caixa's offices for local civil servants**

The Caixa National Bank (*Caixa Econômica Federal*), in partnership with the federal government, created an Office for Prefects to help municipalities carry out their responsibilities.

These spaces provide prefects, the elected representatives of municipalities, with meeting rooms, phones, faxes, computers with broadband access, etc. where the Caixa offers prefects individualised attention and technical assistance from a specially trained team. At present, the Caixa has 73 such offices.

Some sectoral ministries have developed their own multi-level governance system

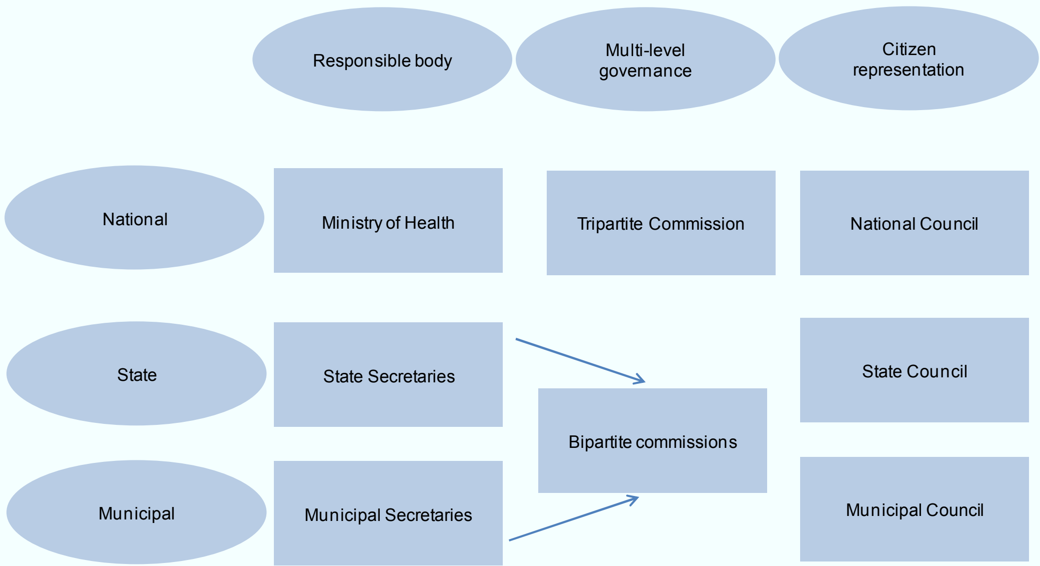
At the sectoral level, several ministries must rely on municipalities to implement crucial aspects of their policies. Many have developed their own ways of relating with municipalities, but the Ministry of Health is often cited as an example of best practice in terms of vertical co-ordination. For policy design, it relies on a tripartite commission including health representatives from the three levels of government that meets once a month. Bipartite commissions (one per state, representing the state and all its municipalities) are used for the adaptation of the general policy to the specific conditions and needs of the state, and for deciding on implementation (Box 3.14).

Box 3.14. **Multi-level governance in health care policy in Brazil**

The Constitution grants considerable autonomy to both states and municipalities in terms of policy making and implementation of health care policy, and municipalities necessarily play a big role in providing this public service. Health care provision is an overlapping responsibility of the three levels of government. In the 1990s, the Ministry of Health developed mechanisms to co-ordinate and integrate policies across levels of government, based on a sequential decision-making process that involves all levels of government.

The first stage takes place in the Tripartite Multi-level Commission (*Comissão Intergestores Tripartite*, or CIT). This tripartite commission is composed of 18 representatives representing each level of government,[1] and meets once a month. It also uses input from nine thematic technical groups, also made up of technicians from the three levels of government, who conduct studies on indicators, policies, etc. This tripartite commission takes all the decisions concerning the Unified Health System (*Sistema Único de Saúde*, or SUS) by consensus. In particular, it agrees on 11 national priorities for each two-year period, as well as a set of indicators to measure their implementation. These priorities are then discussed in each state and adapted to the needs and priorities of each state in the state's Bipartite Multi-level Commission (*Comissões Intergestores Bipartite*, or CIB). These bipartite commissions gather representatives designated by the State Secretary of Health, and representatives designated by the State Association of Municipalities (COSEMS) on equal basis. Finally, there are citizen representations (the national, state and municipal councils), which are institutions for social control and are composed of representatives of the systems' users (for example, associations of patients with specific diseases), workers (and unions) and service providers (for example, hospitals).

Institutional and decision-making structure of the SUS



Box 3.14. **Multi-level governance in health care policy in Brazil** (*cont.*)

Seventy percent of Brazilian municipalities have fewer than 20 000 inhabitants and are considered by the Ministry of Health to be too small to effectively provide public health services. In 2006, the Ministry of Health initiated a process of "regionalisation", which implies constituting "health regions" (*Regiões de saúde*). These are territorial divisions in which health care is administered. The health regions must be geographically continuous and determined by the municipal and state governing bodies (*gestores*) as having the same cultural, social and economical identities, as well as sufficient transport infrastructure and communications network. These health regions can be either intra-municipal (a large municipality could be divided into several health regions), intra-state (composed of municipalities within the same state), inter-state (composed of municipalities from different states) or even frontier (composed of municipalities that could belong to neighbouring countries).

Health regions are managed by a regional management body (*Colegiado de Gestão Regional*) that includes all the municipal health managers (*gestores municipais de saúde*) and representatives of the state health managers (*gestores estaduais de saúde*). The regional management bodies meet regularly, and their decisions must be taken by consensus, engaging all participants. Their functions include regional planning, design and implementation of a regulatory framework, prioritising investments, etc. The Ministry of Health offers a financial incentive for the creation of health regions, transferring to the states BRL 20 000 per health region. There are 411 health regions in Brazil, including 5 270 municipalities in 23 states. In some states (mainly in the South), creating health regions caused no major problems, as they were used to working with the regional level. In other states, the task was a challenge, because municipalities refused to work together, and the number of health regions in those states is thus more limited. Three states have not yet managed to create health regions.

Note: 1. Six representatives are chosen by the Ministry of Health, six by the National Association of State Health Secretaries (CONASS) and six by the National Association of Municipal Health Secretaries (CONASEMS). In each case, there is one representative per macro-region, plus the president of the association.

Promoting vertical and horizontal co-ordination is not an obvious task

Horizontally and vertically, a large number of co-ordinating bodies exist, but their capacity to support effective co-ordination across different line ministries and bodies is variable. It is related to the position of those bodies in the country's institutional hierarchy, the level of the representatives who attend the meetings regularly, the frequency of the meetings, their autonomy or lack of it (as for example, when their scheduling depends on another institution, as was the case for the National Integration and Regional Development Policy Board), etc. If *Casa Civil* is involved, co-ordination is usually more effective. In many cases, however, these institutions are useful for exchanging information but lack a binding instrument to ensure that their decisions are enforced.

The case of the SUDENE: An additional more than a structured intermediation role

Agencies are often used as the key intermediary bodies between the central government and the regions. This is the case notably in Canada (Box 3.15). In Brazil, the SUDENE is the Superintendency for the Development of the Northeast, a deconcentrated federal institution. It was first created in 1957, then abolished in 2001 and finally re-established in 2007. On paper, the SUDENE would seem to be the perfect "new generation" institution for multi-dimensional co-ordination (Box 3.16): vertical between the federal government, the states, the private sector and civil society (through the Deliberative Council in particular); horizontal at federal level to co-ordinate sectoral policies on a regional level; and finally, horizontal at sub-national level, by fostering dialogue and partnerships between states (role of the Regional Committee for the Co-ordination of Federal Bodies and Entities). In practice, the SUDENE is still having difficulties in defining its role. For example, before the SUDENE was closed down in 2001, the Deliberative Council used to be a crucial institution, giving state governors a chance to gain the ear of the federal government. When the SUDENE was closed, the states created a new institution, the Forum of the Governors of the Northeast (*Fórum dos Governadores do Nord-Este*) to replace the previous council. This forum became quite powerful, and began to set the agenda. It was not closed when the SUDENE was re-created, meaning that two institutions with similar mandates now exist, operating in parallel. This may undercut the influence and usefulness of the Deliberative Council. In the same vein, the federal government has re-created the SUDENE with the goal of setting up an institution to "regionalise" and co-ordinate sectoral policies of federal ministries. But meanwhile, the federal government and sectoral ministries have also created sectoral institutions for vertical co-ordination, such as the Council of Planning Secretaries (*Conselho dos Secretarios do Planejamento*) for example.

Geographical fragmentation

Brazil is divided into a multiplicity of geographical and administrative subdivisions

The Brazilian federation has four types of political-administrative organisations formally recognised by the Constitution of 1988: the Federation (*União*), the states (26), the municipalities (5 565) and the Federal District, where the federal capital is located. States have their own constitution, which can attribute to them any function that is not formally prescribed in the Constitution. Municipalities are governed by an organic law, which must comply with the federal and state constitutions. Both states and municipalities have executive and legislative powers, but only the states enjoy judiciary power. The federal government may carry out its responsibilities with the co-operation of sub-national entities by specific laws (decentralisation), or by creating local units representing federal interests (deconcentration), such as National Police stations or social security attention centres.

States are grouped into five macro-regions (*macrorregões*): North (*Norte*), Northeast (*Nordeste*), Centre-West (*Centro-Oeste*), Southeast (*Sudeste*) and South (*Sul*). These macro-regions are sole geographic subdivisions, with no autonomy, administration or own budget. Three superintendencies were created to represent the federation in less developed regions of the country, which broadly correspond to the macro-regions: the SUDENE (for the Northeast, Minas Gerais and Espírito Santo), the SUDAM for the Amazon and the SUDECO for the Centre-West.

Macro-regions are very large and composed of several states with very different strengths and weaknesses. The states themselves are large and heterogeneous, and do not often constitute the right scale for implementing regional development policy or other sectoral policies. But at the other end of the spectrum, municipalities are often too small (70% of them have less than 20 000 inhabitants) (Table 3.2), and of insufficient size to provide certain public services, implement large investments or plan sectoral policies. Line ministries and government agencies, both at federal and state levels, have thus created an intermediary subdivision of the territory, a "regional" level not underwritten in the Constitution. This has been carried out without co-ordination, leading to a proliferation of different territorial subdivisions.

Box 3.15. **National presence at a regional level: Canadian regional development agencies (RDAs)**

In creating the regional development agencies (RDAs), the government of Canada intended to build strong, effective organisations run by senior officials, including the Deputy Minister, who were as engaged and attuned as possible with regional realities and the priorities of economic development. This guiding principle meant creating linkages and accessibility between the national government and regional actors. While several national or sectoral departments enjoy a regional presence with satellite or regional offices, such as Fisheries and Oceans Canada, Transport Canada and Canadian Heritage, these departments' higher level, decision-making officials remain in the National Capital Region of Ottawa. While the regional presence of these departments provides working-level capacity across the country, a geographic barrier separates policy and programming decision makers in Ottawa and regional entities.

There are six federal departments and agencies mandated to promote economic development in their respective regions of Canada. The first three RDAs, Western Economic Diversification Canada (WD), Atlantic Canada Opportunities Agency (ACOA) and Canada Economic Development Agency for the Regions of Quebec (CEDQ) were created in 1987, 1987 and 1991 respectively. In 2009, two additional RDAs were established: the Federal Economic Development Agency for Southern Ontario (FedDev Ontario) and the Canadian Northern Economic Development Agency (CanNor) for Canada's North. The Federal Economic Development Initiative for Northern Ontario (FedNor) is a branch of Industry Canada that promotes economic diversification in Northern Ontario.

The role of economic development agencies includes co-ordination and delivery of federal economic development activities at the regional level, as well as policy, research and advocacy. The RDAs have a strong presence in their regions and consult widely with their partners and stakeholders, including provincial governments, not-for-profit organisations, business organisations, and other interested groups.

All five RDAs are responsible for economic development and diversification in their respective regions. All have a core programme – in WD's case, the Western Diversification Programme (WDP) – through which they make strategic investments in initiatives that enhance and strengthen the economy of the region. RDAs have been seen by the federal government as an effective and capable service delivery agent for national programmes; as a result, Canada's RDAs sometimes play an economic adjustment role by implementing, in co-operation with other departments, national programmes aimed at supporting struggling industries. For example, the Canadian Apparel and Textile Industries Programme (CATIP) was developed by Industry Canada and implemented in Quebec with the collaboration of CEDQ. This programme was aimed at helping Canadian clothing and textile manufacturers become more competitive and better adjust to major changes in the industry and the marketplace.

From time to time, the RDAs have been asked to implement special intervention measures, such as community economic adjustment initiatives or the Community Adjustment Fund (CAF) and Recreational Infrastructure Canada (RInC) programmes under the federal Economic Action Plan (i.e. the stimulus plan during the 2008-09 crisis). Lastly, the RDAs have also delivered modern infrastructure programming in support of national initiatives such as the Municipal Rural Infrastructure Fund.

Source: ACOA and WD.

Box 3.16. **The Superintendency for the Development of the Northeast (SUDENE)**

The Superintendency for the Development of the Northeast (SUDENE) was recreated in January 2007 and became operational in 2008 (it had been closed in 2001 and replaced by a much less powerful agency).

The objectives of the SUDENE include:

- defining strategic plans and guidelines for the development of the Northeast, following the directives of the National Regional Development Policy, and in co-ordination with national, state and local plans;
- defining a regionalisation of industrial policy, ensuring that it respects local specificities and potential;
- articulating and co-ordinating actions and programmes of sectoral ministries, defining priorities;
- co-ordinating actions from public institutions to increase citizen representation and participation;
- supporting public and private investment in social and economic infrastructure, human resource capacity building, innovation and diffusion of technology, social and cultural initiatives for regional development;
- stimulating private activity through the management of fiscal incentives and benefits;
- contributing to the definition of priorities and criteria of application of the constitutional funds and administration of development funds.

Its actions are based on three main pillars:

1. stimulating reflection among ministers, state governments and civil society on the conditions of growth of the Northeast, and integrating the fruits of these reflections into plans for regional development;
2. co-ordinating actions and programmes with regional impacts, or those that require the participation of several state governments, or those that could benefit from economies of scale if implemented on a regional scale. The demand for such co-ordination must come from the federal government or from a group of state governments from the Northeast;
3. managing, with the Bank of the Northeast (BNB), the constitutional funds and incentives for development in the Northeast.

To carry out these tasks, the SUDENE relies on three particularly interesting institutions:

- The Deliberative Council (*Conselho Deliberativo da SUDENE*, or CONDEL)*:* this is the most important body in the SUDENE. It meets at least four times a year and issues resolutions. It is composed of: *i*) the 11 state governors of its area of responsibility (the Northeast, and some municipalities of Minas Gerais and Espírito Santo); *ii*) the Ministers of State of National Integration, of Finance, and of Planning, Budgeting and Public Administration; *iii*) the Superintendent of the SUDENE; *iv*) the president of the Bank of the Northeast; *v*) the prefects of three municipalities, on a rotating basis; *vi*) three representatives of the private business sector (from the agriculture, trade and industry sectors); *vii*) three representatives of the workers (in agriculture, trade and industry).

Box 3.16. **The Superintendency for the Development of the Northeast SUDENE** (*cont.*)

- The Regional Committee of Federal Financial Institutions (*Comitê Regional das Instituções Financeiras Federais*)*:* this is a technical committee created by the Deliberative Council to co-ordinate financial support to infrastructure and public services projects, to increase their efficiency and ensure their sustainability. It also aims at facilitating the exchange of information and the organisation of technical assistance. It is composed of the Superintendent of the SUDENE and high-level representatives from the *Banco do Brasil, Banco do Nordeste do Brasil*, BNDES and *Caixa Econômica Federal*.
- The Regional Committee for the Co-ordination of Federal Bodies and Entities (*Comitê Regional de Articulação dos Orgãos e Entidades Federais*): this is another technical committee created by the Deliberative Council to co-ordinate actions and policies of the different federal entities acting in the area of responsibility of the SUDENE. It seeks to encourage partnerships and common actions in projects of strategic interest. It is composed of the Superintendent of the SUDENE and the secretaries of state of the relevant areas of work of the SUDENE.

Source: SUDENE.

Table 3.2. **Municipal fragmentation (2007)**

Population size	Share of municipalities	Share of population
Total	100	100
< 5 000	24	2.4
5 001 to 10 000	22.7	4.9
10 001 to 20 000	25.2	10.9
20 001 to 50 000	17.9	16.3
50 001 to 100 000	5.6	11.9
100 001 to 500 000	3.9	24.4
> 500 000	0.6	29.2

Source: IBGE, situation on 1 April 2007.

For example, for statistical purposes, the Brazilian Geographical and Statistical Institute (IBGE) has grouped states into meso-regions (*mesorregiões*), and micro-regions (*microrregiões*), according to criteria based on territorial characteristics such as biomass (*bioma*), natural landscapes, historical process of occupation or dominant economic activity. The Ministry of Planning ordered a large study on the territorial dimension for planning, which classified municipalities into sub-regions (*sub-regiões*), macro-regions (*macroregiões*) and strategic vision regions (*visião estratégica*). For regional development purposes, based on a bottom-up methodology that takes into account municipal identities (but for which municipalities have not been consulted), the Ministry or National Integration has gathered municipalities into differentiated meso-regions (*meso-regiões diferenciadas*) in 1999. Differentiated meso-regions intend to favour municipal co-operation and civil society participation for regional development of lagging areas. Differentiated meso-regions also aim to promote co-operation between states, and favour putting municipalities of at least two different states in a given differentiated meso-region. This subdivision does not cover the entire territory. In 2008, the Ministry of Agrarian Development created the Territories of Citizenship (*Territorios da Cidadanía*). Like the differentiated meso-regions, the Territories of Citizenship aim to promote municipal co-operation and increase civil society participation, but exclusively target poor rural areas. The Ministry of Health has also grouped municipalities into health regions, in what seems to be the only instance where states were involved in the design of the specific groupings.

Some of these regional subdivisions are purely a formal grouping with no related institution. But others have created governing boards, such as the territorial colleges (*Colegiados territoriais*) for the Territories of Citizenship, the forums (*fóruns*) for the meso-regions, or the regional management bodies (*colegiados de gestão regional*) for health regions.

At state level, the different state ministries have also faced the same problem of efficient size for implementing strategic planning and sectoral policies, and have created their own regional subdivisions (which may vary from one ministry to the other, within the same state). For example, for regional development policy, Rio Grande do Sul created 22 Regional Development Councils (*Conselhos Regionais de Desenvolvimento*, or COREDES) in 1994, and Santa Catarina created 30 Secretariats for Regional Development in 2003. These institutions aim to increase citizen participation and representation in policy decisions, and have responsibilities such as promoting regional development, integrating the resources and the actions of the government within the region, increasing equity in the distribution of income, prioritising public investment decisions in regions, etc. Other states such as Ceará (NE), Minas Gerais or Espírito Santo have similar regional bodies. Some states also created metropolitan regions to co-ordinate policies in urban areas.

The above list is not exhaustive, but it aims to show that a single municipality may belong simultaneously to a state, a macro-region, a meso-region, a differentiated meso-region, a Territory of Citizenship, a health region, a regional development council, etc., and thus has to provide representatives for territorial colleges, forums, councils, etc. This multiplicity of institutions operating in the same municipality complicates communication and co-ordination, increases operating costs, reduces transparency and puts a further strain on human resources, given that many lagging municipalities lack qualified staff.

Territories of Citizenship: An interesting tool for bridging multiple co-ordination gaps

Among the institutions cited above, the Territories of Citizenship are particularly interesting, as they address several co-ordination challenges, both horizontal and vertical (see Chapter 2 for a detailed description):

- Efficient size: by combining several municipalities, Territories of Citizenship create larger areas, where public service delivery is more efficient (for example, it may not be worthwhile for a single municipality to invest in a cold house. But when several municipalities are bundled, the right scale may be reached to justify building a cold house).
- Lack of capacity at municipal level: Territories of Citizenship help capacity building at the local level, both through the interaction of local officials with federal and state officials, who usually have a higher capacity level, and also because the Territories of Citizenship Programme includes providing training

courses and other capacity-building activities to citizens and to officials in these areas.

- Citizen participation and accountability: Territories of Citizenship also address the citizen gap, by including civil society in their governing body and helping to create a more transparent environment. Federal teams provide assistance to Territories of Citizenship to help organise civil society, and sometimes use NGOs for this purpose. One of the purposes of this project is to bring about cultural change by providing information and capacity building locally to increase citizen participation.
- Horizontal co-ordination at the federal level: the Territories of Citizenship programme involves 22 federal ministries and bodies, helping to co-ordinate sectoral policies.

In practice, the lack of capacity of some municipal officials still undermines the effectiveness of the Territories of Citizenship, because they do not always understand which service they are supposed to deliver (Territories of Citizenship do not directly finance projects, for example), and how to get the most out of this instrument. This is probably due to the fact that municipal officials need to familiarise themselves with this new instrument. Territories of Citizenship have only been introduced in 2008, and a first evaluation of their results is under way, but the conclusions are not yet available.

Targeting functional areas and efficient scale: Inter-municipal consortia

As in many OECD countries, evidence from Brazilian municipalities suggests that smaller municipalities face diseconomies of scale in the delivery of a number of public services such as transport, health care and sanitation, housing and urbanisation, local administration and planning, and education and culture. To overcome these diseconomies of scale, Brazilian municipalities have a fairly long tradition of joint provision and financing through inter-municipal consortia, and they often engage in joint ventures with higher levels of government such as states or even the federal government, as well as with private sector providers (de Mello and Lago-Peñas, 2012). As in most European countries, Brazilian inter-municipal consortia are often single-purpose entities that focus on the delivery of a vast array of services, including urban development, health care, education and culture. Consortia are seldom established with the primary objective of performing policy co-ordination and planning tasks. Moreover, as in most European countries, consortia are usually set up on a voluntary basis, often as non-profit organisations, and the legal/institutional framework of their establishment is provided for by municipal legislation. In Brazil, the legal nature of the consortia allows them greater flexibility in personnel management than in non-participating municipalities, which are bound by stricter regulations governing public sector employment.

Experience with inter-municipal consortia is most developed in the sector of health care. Several consortia were put in place in the 1980s, ahead of and in preparation for the devolution of responsibility for the provision of health care to the municipalities, which was phased in gradually in the early to mid-1990s. The decentralisation of health care provision placed a burden on the smaller municipalities, which lacked the scale, administrative and technical capacity, as well as the financial means, to deliver the range of services to be devolved to them, especially in specialised, in-patient care. Inter-municipal health care consortia are widespread. About 41% of municipalities participated in a health care consortium in 2009, as compared with 15% in the case of urban planning and development, 11% in the case of education, and less than 4% in the case of transport (IBGE, 2009). Health care consortia provide a range of services to the population, whose costs are reimbursed by the National Health System (SUS). Participation of state governments in health care consortia is infrequent. Creating consortia between municipalities belonging to different states can be complicated, as different states may have different legal provisions. For example, in the case of health care, each state has its own Integrated and Agreed Plans (*Programação Pactuada e Integrada*, or PPI), which define how the service should be delivered across the state. Municipalities of different states are therefore included in different integrated and agreed plans, which may prevent them from creating consortia (this is the case, for example, between Petrolina and Juazeiro, or between São Paulo and Paraná).

A recent study by OECD (de Mello and Lago-Peñas, 2012) finds that smaller municipalities, which are likely to operate at sub-optimal scale, are also more likely to participate in inter-municipal consortia, except for transport and education/culture, controlling for other drivers of associational activities at the municipal level. Moreover, for all services studied, involvement in consortia with the federal government inhibits participation in inter-municipal consortia, which is in turn encouraged by participation in arrangements with the state governments and private sector providers.

Hosting the Olympic Games and World Cup: A case for multi-level governance

Rio's Olympic project for 2016 will depend on the ability of government agencies to co-ordinate with one another, avoid cost overruns, and ensure infrastructure maintenance after the Games. Institutions and multi-level governance tools require serious attention to ensure successful delivery and long-term maintenance of legacy infrastructure. One of the most important challenges will be to ensure transparency and accountability. Rio's experience in hosting the Pan-American Games provides a cautionary tale in this respect, because it revealed gaps in regulatory and contractual frameworks.

The projected cost of Rio de Janeiro's hosting of the Olympic Games, at USD 14.4 billion, is one of the world's largest infrastructure projects. It includes the construction of an Olympic training centre, an Olympic village and media centre, additional hotels, 2 satellite terminals in the international airport, 7 new metro stations, facilities to accommodate 3 new rapid transit bus systems, and 170 kilometres of new roads. The federal government of Brazil has also pledged to modernise airports and seaports in Rio de Janeiro as part of its Growth Acceleration Programme (*Programa de Aceleração do Crescimento*, or PAC).

Though the Brazilian government has pro-actively established an *ad hoc* governance structure, the Olympic Development Authority (*Autoridade Pública Olímpica*) to co-ordinate the delivery of capital investment and government services required for the 2016 Games, it is not clear how well this authority will function. The Olympic Development Authority was set up along the lines of the organisations for the Sydney Olympics in 2000 and the forthcoming 2012 Olympics in London. The Rio 2016 Olympics Organising Committee is a non-governmental, non-profit organisation incorporating private sector and community stakeholders. The Olympic Development Authority and Olympics Organising Committee will work together in a Joint Olympic Steering Committee, subject to the supervision of the Olympic Board, the Federal Minister for Sport, the state governor, the mayor of Rio de Janeiro and the presidents of the Brazilian Olympic Committee and the Paralympic Committee.

Previous management of the Games suggests the scope of interministerial involvement in the staging of the Olympics and the importance of facilitating service delivery and infrastructure planning. In Sydney, the Olympic Co-ordination Authority (OCA) managed the participation of a wide network of institutions, including the Office of Olympic Co-ordination, in the premier's department; the Olympic Construction Authority, housed in the Public Works Department; the Homebush Bay Development Corporation, which was responsible for providing most Olympic venues; part of the Department of Sport and Recreation, which had responsibility for delivering certain new Olympic facilities; and part of the Department of Planning, which was responsible for securing venues for equestrian and mountain bike events (Sydney Organising Committee for the Olympic Games, 2001).[5] Likewise, the Seoul Olympics illustrates the degree to which government ministries can play a supportive role in hosting the Olympics (Box3.17).

Box 3.17. **Interministerial involvement in the support of the Olympic Games: Seoul 1988**

For the Seoul 1988 Games, each of the government ministries organised special committees to take exclusive charge of projects relating to the Olympic Games. It was incumbent upon all government ministries to create a festive mood, encourage public relations for the Games and offer support in manpower and materials. Each ministry also assumed the function of a supervising agency in developing conditions conducive to the staging of the Olympic Games, and carried out relevant tasks, including:

- **Economic Planning Board:** the Economic Planning Board took charge of the economic publicity and projections, studying and analysing the effect of the Olympic Games on the national economy; the data were used for a public relations campaign.
- **Ministry of Finance:** in 1988, the ministry began to operate an Olympic situation room and instructed the Office of National Tax Administration, the Customs Office and the Office of Monopoly to do so too. It also advised banking institutions to establish similar situation rooms.
- **Ministry of Justice:** the ministry activated its own Olympic Support Unit in 1987 under the leadership of the director of the Immigration Bureau; the unit operated departments concerned with immigration, accommodations, logistics and crime control. The unit's major functions were comprehensive immigration measures for the entry into the country and exit of Olympic participants; control of obstructions of the Olympics and immigration law violations; and anti-terrorism countermeasures.
- **Ministry of Sports:** the ministry established a master plan for the Games, and carried out the role of a command centre co-ordinating various Olympic projects. It also organised indirect projects at the government level to support the Games and took on such tasks as the improvement of sports capabilities for training athletes, international standardisation of sports equipment, organising conferences on sports technology, and sports diplomacy.
- **Ministry of Agriculture and Fisheries:** the ministry established an Olympic Operation Team in 1988; the team's major functions were the inspection, evaluation and co-ordination of the Olympic projects relating to the agriculture and fishery sectors, including animal and plant quarantine for racing horses and feed brought into the nation.
- **Ministry of Construction:** an Olympic Project Support Team was organised in 1988 under the control of the planning budget officer. Division chief-level officials were responsible for the refurbishing of national parks, environmental landscaping of highway service areas, and refurbishing of the road race and torch relay courses.

Box 3.17. **Interministerial involvement in the support of the Olympic Games: Seoul 1988** (*cont.*)

- **Ministry of Culture and Information:** the ministry set up the Overseas Information Unit in 1987, headed by the director of the Korean Overseas Information Service. In addition to Olympic public relations planning overseas, the unit's functions included the development and expansion of cultural facilities such as the construction of the Seoul Arts Center, the National Classical Music Institute and the Chongju Museum, refurbishing of artistic cultural assets and the Seoul Olympic Arts Festival.
- **Ministry of Science and Technology:** the ministry established its Olympic Support Office in 1986 to deal with weather reporting, testing of athletes for banned substances, and inspection and co-ordination during implementation of the project.

Source: Seoul Olympic Organising Committee (1989), Official Report.

The creation of the Governance Council (*Conselho de Governança*) positions Rio de Janeiro to align objectives between different levels of government. Established by Law No. 12.396 (of 21 March 2001), this council will be headed by the president of the Olympic Development Authority and include representation from federal, state and municipal levels.[6] The council is mandated to provide advice and recommendations concerning management, strategic planning, budgeting and financing for the Olympic Development Authority.

As Olympic planning gathers steam, the Governance Council could call for a clearer understanding of the working relationships between different levels of government. The 2010 Vancouver Winter Olympic and Paralympic Games offer a model applicable to the Brazilian context of involvement of various agencies of federal, state and municipal government. The "Multi-party Agreement for the 2010 Winter Olympic and Paralympic Games" addresses a range of issues, including financial contributions, legal responsibilities and the sports legacies of the 2010 Winter Olympic Games.[7] To ensure effective support, the government of Canada specified its contribution according to its legislative obligations and prerogatives (Box 3.18).

Creating information and building capacity at sub-national level, increasing citizen participation

Accurate metrics for monitoring social and economic development trends and governmental action in the territories is a prerequisite for carrying out policies where they are most needed. They are also imperative for monitoring the delivery of policies and assessing their impact. In an era of information and communications technology and transparency, consolidating democracies requires accountability and generates demand for monitoring and assessment of policies. This is a common challenge for OECD countries, as well as for emerging ones. In Brazil's case, it is a pressing need, considering the rising amount of public resources that have been committed to boost competitiveness, and also for delivering high-quality social services and bridging income disparities.

Box 3.18. **Clarifying central government support: Vancouver's Multi-party Agreement for the 2010 Olympics**

In the "Multi-party Agreement for the 2010 Olympic Games", the government of Canada outlined both its financial commitment and its technical support for the city of Vancouver. Support included:

- **Freedom to perform Olympic function:** facilitating the entry to Canada of all accredited Olympic and Paralympic Family members, as well as persons legitimately required to work on the organisation or operations of the Games, in possession of the required travel documentation.
- **Import, use and export of goods:** co-operating with the Organising Committees for the Olympic Games (OCOGs), the city, the Canadian Olympic Committee (COC) and the Canadian Paralympic Committee (CPC), the International Olympic Committee (IOC) and International Paralympic Committee (IPC) and other Games parties concerning the importation of goods required by the IOC, the IPC, delegations of participating National Olympic Committees and National Paralympic Committees and international federations, as well as accredited media, sponsors and suppliers. Consistent with this practice, relief would be provided from customs duties, excise taxes and goods and services tax (GST) on goods imported into Canada, such as personal effects, gifts, awards, display goods and equipment.
- **Financial guarantees:** contributing amounts equal to the amount allocated by the province of British Columbia; CAD 255 million toward the non-OCOG budget for the capital costs of sport and event venues (which would include partial funding toward the Athletes' Villages and International Broadcast Centre) for the Games, and CAD 55 million toward a separate legacy endowment fund to support the ongoing operation of key sport venues.
- **No other meetings:** committing not to host any other important national or international meetings in Vancouver, Whistler or the lower mainland of British Columbia during the period of the Games, or for one week immediately before or after.
- **Peaceful holding of the Games:** assigning the Royal Canadian Mounted Police to provide: *i)* the lead in forming an integrated police planning group; *ii)* appropriate federal security measures considered necessary by Canada; and *iii)* a pledge to co-operate with the OCOG, the city, the COC and CPC, the IOC and other Games.
- **Income-tax exemption:** the IOC would qualify for an exemption from federal income tax, in which case the GST paid by the IOC in its commercial activities would be fully recoverable through input tax credits.
- **Allocation and fees for radio frequencies:** offering support to Olympic organisers through the licensing of additional radio spectrum to meet any requirements where the services of a commercial operator were not readily available, and be ready to investigate and resolve any cases of radio interference on a timely basis. No radio licence or radio interference service fees were charged to the Organising Committee for the Olympic Games during the period of the Games.

Source: Government of Canada et al. (2002), "Annex E. Covenant of the Government of Canada. Vancouver's Candidacy for the 2010 Olympic and Paralympic Winter Games" in "Multi-party Agreement for the 2010 Olympic and Paralympic Games", 14 November, *www.canada2010.gc.ca/role/gc/020102MPA-eng.cfm*.

Information gaps, administrative capacity and citizen participation are three related issues. Information gaps between levels of government can be of various types:

- a lack of information at the central government level concerning where federal sectoral budgets are spent (localisation of spending);
- a lack of information at the central level about where the needs lie (localisation of needs);
- a lack of capacity on the part of some sub-national governments to evaluate which programmes could benefit municipalities; what the prerequisites for them are; whether they are eligible for them; how to apply to the particular programme; and how to present a project with a structured budget;
- a lack of public awareness of programmes implemented by the federal and sub-national governments in their region and of the benefits citizens can claim (thus calling for citizen participation);
- a lack of evaluation of the outcomes of policies carried out, which prevents building and sharing knowledge and experiences;

This section will address these five issues, and describe some tools that are being used in Brazil or in OECD countries to address these challenges.

Information gaps about regional issues at the federal level

Sectoral ministries have tacit incentives not to declare in which region they spend their budgets

The information gap in Brazil is multi-dimensional. Apart from the classical asymmetries of information (where local governments tend to have more information than the federal government about local needs and preferences, but little information about the federal government's preferences and intentions), Brazil faces several other information challenges. In particular, there is incomplete information about where the money is spent. The traditional budget procedure and reporting by sectoral ministries do not oblige ministries to declare in which state or municipality the money is spent. This makes it difficult to evaluate the efficiency of policies in the regions. The Ministry of Planning is developing an instrument to map regional spending and investment by line ministries, using regional indicators of spending (*Localizadores de Gastos Territoriais*, or LGT), but it is facing difficulties.

In principle, expenditure by line ministries on specific actions must be localised in the budget procedure, but ministries can choose between national, macro-region, state or municipality as a level of localisation. Most ministries prefer to use the "national" option, as the budget is a law, and they would lose flexibility to move resources from one action in a given state to another action in a different state if they specified *ex ante* in which state the money has to be spent. To overcome this problem and try to gather the information, the Ministry of Planning has created a norm that obliges ministries to declare *ex post facto* how much they have spent in each state. But the ministries have incentives not to comply, as this would open them up to criticism if they do not keep their promise to prioritise given states. As the Ministry of Planning does not have any tools to create incentives or to force ministries make such declarations (i.e. no sanction if they do not comply, and no rewards if they do), the information collected is not complete.

New tools are increasing the availability of information about where the needs are

A key requirement for public redistributive policy in the regions is to have accurate, up-to-date information of where the needs are. Several recently implemented federal programmes have made it possible to gather and share this information, sometimes as an unintended positive externality. This has allowed other line ministries to improve the targeting of their policies either geographically or socially. This issue is very much related to municipal capacity gaps, as some municipalities are so far behind that they do not have the tools to make themselves known to the state or federal governments in order to get the needed attention and funds. Some large-scale programmes covering the whole country, such as Bolsa Família or the Basic Education Programme, have helped bridge this information gap, both by identifying the population in need, and by identifying the municipalities that have the greatest difficulty carrying out their responsibilities.

Bolsa Família is a good example, because it has created a database of information on poor families by building a Single Registry (see Chapter 2), which maps all the low-income families across Brazil. This database references 20 million low-income families and makes it possible to collect statistics of poverty by municipality. It was created in 2001, became operational in 2004, and is now used by several other programmes targeting poor people, such as housing programmes, social assistance and training programmes run by the Ministry of Labour. By creating a common set of criteria, it guarantees that all the efforts will focus on the same people/places, therefore creating potentially unanticipated synergies.

In addition to offering their citizens Bolsa Família grants, municipalities have financial incentives to adhere to the programme. Municipalities are autonomous, and the programme cannot be imposed on them. Each must sign a standard contract with the federal government agreeing to participate in the programme. Participating municipalities not only receive the funds that are transferred to the families (depending on the number of families and the amount each is entitled to receive), but it also receives funds for holding and updating the Single Registry. These transfers come with incentives to improve the administration of the register: each municipality receives BRL 2.5 per month per beneficiary family in its district, but this amount is weighted by a factor ranging from 0 to 1, depending on the performance indicator of the municipality (the Decentralised Management Index – *Indice de Gestão Decentralizada*, IGD). This performance indicator takes into account two dimensions: the percentage of families registered, and the accuracy of the information (regular updating). Building and updating the Registry can burden a municipality with considerable expense: in some areas of the country, a Census team must be sent by boat or airplane to remote communities.

The role of municipalities is crucial for implementing the Bolsa Família Programme (identifying the families, providing the education and health services, monitoring the compliance of families with the requirements and reporting the information to the federal government). In many cases, it was necessary to provide support to municipalities, train their staff, etc. for the programme to be correctly implemented. The Ministry of Social Development uses the result of the management performance indicator mentioned above to identify the municipalities that have the most difficulties in carrying out their administrative tasks. It can then support these municipalities, sending them a team for a week to train their local staff. Municipalities that receive these services must develop a plan of action on how they are thinking of solving their problems. These plans are then published (without attribution) on the Internet to be used as models by other municipalities. In Norway, such "benchlearning" or sharing of information between municipalities and the central government is particularly advanced. Norway's information system, called KOSTRA, was launched in 2002 and is often cited as a best practice in terms of data reporting and sharing (Box 3.19).

Box 3.19. **KOSTRA: Data reporting and information system in Norway**

KOSTRA is Norway's information system for conveying data from the municipalities to the central government, between municipalities, and to the public. Launched for all municipalities in 2002, the system transformed the collection, processing, and dissemination of statistical information from local governments. Emphasis is placed on electronic transmission of data by municipalities to the central government. The latter adds value by combining municipal data and producing key indicators on financial figures, productivity, coverage rates and priorities. At the municipal level there are about 40 key indicators and an additional 1 000 indicators covering 16 service areas.

The introduction of KOSTRA benefited both the central and sub-national governments. At the central level, the system rationalised data collection and processing contributed to uniform standards thereby enhancing the comparability of municipalities and service sectors, helped the central government to determine if municipalities are complying with national standards and regulations, and facilitated a common assessment of the local economic situation which is used as the basis of a parliamentary discussion on the transfer of resources to municipalities. For the municipalities, KOSTRA lessened the administrative burden of reporting. It also provided a tool for internal planning, budgeting and communication at the local level. In addition, it facilitated the sharing of knowledge between municipalities, which are able to use indicators for the purpose of benchmarking performance.

While KOSTRA has brought benefits, there are limitations in the current system. First, the large amount of data collected makes ensuring quality challenging. Second, there is a tendency for the central government to request more and more data, causing both the administrative burden and the costs of data collection to rise in municipalities. Municipalities also receive much more data than in the past.

Overall, KOSTRA has been perceived as a very successful information system with potential for further refinement. Looking forward, focus is being placed on collecting data regarding quality of public services and developing indicators of quality. "Soft data" collected outside KOSTRA (test scores, reading proficiency and user satisfaction for various service, etc.) are gradually being used in combination with data from the KOSTRA system. This will permit policy makers and citizens to assess outcomes as well as outputs.

Source: OECD (2006), *OECD Territorial Reviews: France 2006*, OECD Publishing, Paris, doi: *10.1787/9789264022669-en*; Statistics Norway (2002), "KOSTRA" online at *www.ssb.no/english/subjects/00/00/20/kostra_en.*

Using national census and indexes to locate needs: The case of education

The National Institute of Research on Education (*Instituto Nacional de Estudos e Pesquisas Educacionais*, INEP) conducts an annual School Census (*Censo Escolar*), which gathers information about the number of pupils in each grade, as well as information on the number of teachers, results and condition of school buildings (such as access to drinking water, electricity, Internet and so on). This information is available at state, municipal and even school level, and is used as a reference for the design of other sectoral policies and the execution of education programmes, including transfers of resources such as meals, school transport, distribution of books and uniforms, creation of libraries, connection to electricity, etc. In 2007, the Ministry of Education created a Basic

Education Development Index (*Índice de Desenvolvimento da Educação Básica*, or IDEB), incorporating information from the School Census. The Basic Education Development Index helps to set and monitor policy targets and to prioritise resources. It has been used to target, not the municipalities with the highest number of students, but the municipalities with highest unsatisfied needs, and to monitor their evolution in time. Municipalities with lower Basic Education Development Index scores have priority to benefit from federal assistance and voluntary transfers (used for example for the acquisition of school buses, for building schools, improving equipment, etc.). These transfers usually go to the municipalities, but sometimes directly to schools (about 30 000 schools receive direct support from the federal government).

This indicator has been useful in pointing out municipalities that were lagging, but did not previously expect or receive help. Such municipalities are often very poor and have few schools. Under the previous system, the school or municipality was expected to present a request to the federal ministry, with a project and structured budget – precisely the type of task that they were not equipped to fulfil. In the past, they did not present projects, did not make themselves known to the federal government and did not receive federal help.

Brazil is fairly advanced in measuring socio-economic territorial indicators

Brazil has made a major effort to create databases and information sets for policy evaluation and follow-up. A considerable amount of information is available both on the input side, for example evidence of socio-economic trends and information on public expenditure, and on the outcome side, in terms of impact of policies (Box 3.20). Unfortunately, this information is usually sparse in given sectoral ministries or confined to specific levels of government (federal, state or municipal), making it difficult to access comprehensive policy assessment.

Box 3.20. **Using territorial indicators to target policies and investments**

The Ministry of Planning Matrix

As part of recent efforts to integrate territorial considerations in budgeting and planning, the Ministry of Planning (*Ministério do Planejamento, Orçamento e Gestão*, or MP) developed a matrix of socio-economic indicators by state (*Matriz de Sustentabilidade*).

The matrix identifies four key areas for sustainable development and maps indicators available at the state level in Brazil. The poverty line is established on the basis of a state basket of consumption goods calibrated by state, using a methodology elaborated by IPEA. The matrix elaborates a composite indicator of sustainable development by state based on the most recent available information.

It is a relevant starting point; however, the criteria for establishing weights in the different components of the indicators should be clarified. The indicator would also benefit from a separation between effort variables and outcome variables. It would be interesting to contrast gross domestic product (GDP) *per capita* with growth rates, and not only relative participation to national GDP. It would be useful to include ICT-related indicators such as broadband penetration, number of subscribers to mobile services, Internet users, etc.

An interesting element of the matrix is the elaboration of tentative "institutional indicators", such as considering the existence of councils as a proxy for social participation in public policies.

Note: The matrix is based on an IBGE study on *Indicadores de Desenvolvimento Sustentavel* (2008). The matrix uses the PRADIN software (*Programa para apoio à tomada de decisão baseada em indicadores*).

In addition, Brazil has a unique cultural asset for developing good practices for monitoring and follow-up of policies: a concentration of think-tanks and centres for strategic studies in proximity to the governmental sphere. The Institute for Applied Economic Analysis (*Instituto de Pesquisa Econômica Aplicado*, or IPEA), associated with the Secretary for Strategic Affairs (*Secretaria de Assuntos Estratégicos*, or SAE), the Oswaldo Cruz Foundation, which is associated with the Ministry of Health, the Teixeira Institute of the Ministry of Education, the Centre for Management of Strategic Studies (*Centro de Gestão e Estudos Estratégicos*, or CGEE) linked to the Ministry of Science, Technology and Innovation, and at the regional level, the Technical Office of Economic Studies of the Northeast (*Escritório Técnico de Estudos Econômicos do Nordeste*, or ETENE), linked to the SUDENE, are only a few of the examples of strategic centres for policy-oriented research. Universities tend also to be located in the vicinity and to participate in policy debates, creating an atmosphere open to feedback from technical studies about impact evaluation; the Centre for Regional Development and Planning (*Centro de Desenvolvimento e Planejamento Regional*, or CEDEPLAR) of the University of Minas Gerais is an example of a university research centre that has always been actively involved in the policy debate.

Indicators of process associated with financial incentives have recently been introduced

Municipalities play a crucial role in the implementation of the Bolsa Família Programme, but states also have a very important role, in monitoring the actions of municipalities, helping municipalities that face capacity problems in implementing the programme, ensuring the co-ordination of sectoral actions involved in the programme (social assistance, education, health and planning), and so on. The Ministry of Social Development transfers resources to the states to carry out these functions, and has created a performance-related system to give financial incentives to the states to carry out these tasks effectively.

In 2008, the Ministry for Social Development created a State Decentralised Management Index, based on the results of the municipalities in managing the Bolsa Família Programme (i.e. on the Decentralised Management Indexes of municipalities). To receive the transfers of support to the state management of the Bolsa Família Programme and the Single Registry, states must have a minimum State Decentralised Management Index of 0.6. The maximum amount of resources that each state is entitled to is defined by law (based on the number of beneficiary families, etc.), but the amount of resources that is in fact transferred corresponds to this ceiling multiplied by the value of the State Decentralised Management Index. A higher score therefore implies higher revenues for the state.

In addition, the Ministry for Social Development also created incentives for states to monitor municipalities accurately, by giving them bonuses that depend on the performance of municipalities under their jurisdictions: states get a 5% bonus when no municipality in the state has a Decentralised Management Index (*Indice de Gestão Decentralizada*, or IGD) of less than 0.4, and this bonus becomes 10% if this index is above 0.6 for all municipalities. States can receive a further 10% bonus when all municipalities in the state have adopted Version 6.05 of the Single Registry; plus a 10% bonus when the state provides information on more than 90% of students in the programme. Finally, states can obtain an additional 10% bonus if they increase the number of poor people identified in civil registries, if they provide regular information to the National Secretariat of Citizen Revenues (*Secretaria Nacional de Renda de Cidadania*, or SENARC), and if they add that information to the Single Registry.

Output or result indicators are not yet very developed in Brazil

Brazil is fairly advanced in indicators revealing needs and resources, as well as in the use of process indicators, which indicates whether the agreed procedures are being implemented. By contrast, outcome indicators, which quantify the results a given policy is expected to achieve, are not yet very developed. Such indicators were used, for example, by the European Commission, which introduced for the period 2000-06 a system of financial rewards/sanctions associated with performance, called the "performance reserve". This mechanism consisted of retaining a proportion (4%) of the total budgetary resources at the disposition of a programme, and using it to reward the most successful programmes, assessed on the basis of performance indicators reflecting a set of three criteria: effectiveness, management quality, and financial implementation. The specific indicators were to be defined by the member countries in close consultation with the Commission. These were to be quantifiable to the extent possible, to make them rigorous and justifiable, and to "avoid subjective judgment linked to qualitative assessment". Some countries reproduced domestically this European scheme. Italy, for example, extended and reinforced the EU approach during the 2000-06 period by adopting a national performance reserve aimed at promoting the modernisation of public administration. This reserve, which set aside 6% of the programme's budget, was developed collaboratively between the central government and regional actors. With the end of the 2000-06 programming period, the performance reserve mechanism (both the national and the EU approaches) came to an end. Whereas the Commission suspended the performance reserve mechanism, Italy decided to continue with such a scheme, but adopted a reformed mechanism, which drew from the previous experience (Box 3.21).

Box 3.21. **Italy's new performance reserve system (2007-13)**

Following the end of the 2000-06 EU performance reserve experience, the Italian authorities adopted a new performance reserve system for 2007-13 with distinctively new contours. The new approach draws on lessons from the previous experience, such as focusing on a more limited number of objectives to obtain greater visibility and adopting final objectives that are easily understandable by the public to avoid formal compliance and strengthen the accountability of local administrations. The major difference between the former and the current systems lies in the transition from a performance assessment of process and output indicators to one based on outcome and equity indicators.

The mechanism is enclosed within the National Strategic Framework, the document that provides the basis for implementing Italian regional policies (both national and European Structural Funds) for the period 2007-13. The system of indicators focuses on a set of objectives considered to be strategic for regional development. Four "essential" collective services have been identified, which are decisive in determining a citizens' quality of life and business' propensity to invest. These services, with their associated strategic goal are listed in the table below.

Box 3.21. **Italy's new performance reserve system (2007-13)** (*cont.*)

Objectives, indicators, and targets in the new performance reserve for 2007-13

Objective	Indicator	Baseline (%)	Target in 2013
Education: improve students' competence, reduce drop-outs and broaden population's learning opportunities.	% of early school leavers	26	10
	% of students with poor competencies in reading	35	20
	% of students with poor competencies in math	48	21
Child and elderly care: increase the availability of child and elderly care to favour women's participation in the labour market.	% of municipalities with child care services	21	35
	% of children (age 0-3) in child care	4	12
	% of elderly people beneficiary of home assistance	1.66	33.5
Urban waste management: protect and improve the quality of the environment, in relation to urban waste management.	Amount of urban waste disposed in refuse tip	395 kg *per capita*	230 kg *per capita*
	% of recycled urban waste	9	40
	% of composted waste	3	20
Water service: protect and improve the quality of the environment, in relation to integrated water service.	% of water distributed	63	75
	% of population served by waste water treatment plants	56	64

Source: Italian Ministry of Economic Development, Department for Development Policies (2007), "Measurable Objectives for Essential Services", accessed October 2008, *www.dps.tesoro.it/obiettivi_servizio/eng/ml.asp.*

Eleven quantifiable indicators are associated with the four strategic goals. They are all outcome or equity indicators except one that is an output indicator (concerning child care). Targets have been set for the eight regions of the Mezzogiorno and the Ministry of Public Education. The minimum achievement levels are the same for the eight regions as they are considered to be the minimum acceptable service standards. The total amount of the reserve is around EUR 3 billion. Two deadlines exist, one in 2009 to compare progress with the baseline, and the other in 2013 to assess if the minimal thresholds have been reached. As in the past, the objectives, indicators and targets have been selected on the basis of in-depth consultations between the central government and the regions and the involvement of a technical group.

The main difference between the past and present mechanism is that objectives are no longer intermediate ones (e.g. to monitor the institutional set up) but rather correspond to final outcomes (delivery of final services). The explicit consideration of final objectives is considered to be an improvement with respect to the previous performance reserve. This is expected to focus attention on results in public services provision and quality essential for development. In addition, the achievement of these objectives is subject to good interactions taking place between several institutional actors. The attempt is therefore being made to explicitly and more thoroughly involve the different stakeholders concerned and assess collective performance. Regions are left free to choose how best to reach the targets. They must adopt an action plan detailing their adopted strategy.

Source: OECD (2009), *Governing Regional Development Policy: The Use of Performance Indicators Systems*, OECD Publishing, Paris, doi: *10.1787/9789264056299-en.*

The Federal Audit Authority (TCU) plays an important role in assessing policies

The Federal Audit Authority (*Tribunal de Contas da União*, TCU) carries out assessments of sectoral projects, issues recommendations and carries out regular monitoring exercises to follow up on its recommendations. For example, it carried out an assessment of the implementation of the Bolsa Família Programme in 2004, followed by two monitoring exercises in 2005 and 2009. According to the second monitoring study, 10 out of the 11 recommendations issued in 2004 had been implemented in 2009, while one was only partially implemented.

The 2004 assessment identified weaknesses and bottlenecks in the implementation of the Bolsa Família Programme, such as poorly defined responsibilities, insufficient means of ensuring compliance with conditionalities and a lack of sanctions in case of non-compliance (Box 3.22). The mechanisms for civil society participation were rated inadequate and ill defined, and it was noted that the *Caixa Económica Federal*'s capacity to support the pool of beneficiaries should be expanded. Mechanisms to address those weaknesses were identified, and the second study, in 2009, demonstrated improvement in the implementation of the suggested reforms. The study addressed seven major areas for policy management: *i*) mechanisms to follow up on compliance with requirements; *ii*) mechanisms to increase awareness about the programme at the state and municipal level; *iii*) activities to strengthen the capacities of the executors of the programme; *iv*) support for cross-learning and exchanging experiences between state and municipalities; *v*) incentives and mechanisms to increase social control and civil society participation; *vi*) design and use of performance indicators; and *vii*) concrete mechanisms for distributing the bank cards and for managing the Single Registry (TCU, 2009).

Land administration in Brazil: The importance of creating information

Today, various departments and agencies in Brazil own more than 30% of its land area.[8] Much public land is often underutilised and managed in a fashion that Brazil's Ministry of Cities characterises as "bureaucratic, inefficient, erratic, and often arbitrary" (Ministry of Cities, 2004). The federal agency currently in charge of these areas, Brazil's Federal Assets Office (*Secretaria do Patrimônio da União*, or SPU), does not possess an adequate, computerised registry of federal lands. Records recently released by Brazil's National Institute for Colonisation and Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária*, or INCRA) reveal that approximately 9% of the land mass of the country is missing from registries. In a country of 850 million hectares, at least 73 million[9] are unaccounted for in registries (Figure 3.5).[10] This amounts to an area roughly the size of Chile (Donovan, 2007).

Apart from land holdings, the public domain includes Brazil's massive coastline and a large number of beaches, riverbanks and swamps. Maritime and riparian lands were originally excluded from the Portuguese colonial system of royal land grants (*sesmaria* grants) given their vulnerability to foreign attack and the high salinity rates of coastal soil. In 1678, a royal decree stated that the swamps were the property of the Crown because they were necessary for the public, ships and sugar factories (Souza, 2002). Another royal decree in 1710 forbid *sesmarias* to encroach upon coastal land, so as to preserve this property for the use of the king and for national defence. These precepts were expanded by Article 4 of 14 November 1832 *Instruções*, which stated: "Coastal lands are those bordered by the ocean or by navigable rivers that extend up to a distance of 15 *braças craveiras* (33 metres) measured from the point where the average high tide arrives" (*Instruções de 14 de Novembro de 1832, art. 40*). For national defence, this distance corresponded to the range of a typical canon in 1832. Today, coastal lands are still the property of the federal government, a process that complicates land regularisation of many homes in informal settlements, which are built on stilts above rivers or coastal areas (*palafitas*) (Donovan, 2007).

Box 3.22. **Evaluation as a tool for policy learning: The case of Bolsa Família**

After the introduction of the Bolsa Família Programme in 2003, the Federal Audit Authority (TCU) carried out an assessment of the implementation of the programme. The study, conducted in 2004, concluded that:

- the new programme had eliminated the existing system for monitoring the fulfilment of educational requirements that had been created by the previous programme, *Bolsa Escola*, without defining new mechanisms to follow up on the requirements;
- the system for distributing banking cards to beneficiaries was flawed;
- municipalities faced difficulties in administering the Single Registry;
- diffusion of information about the requirements for the execution of the programme was inadequate.

Following the recommendations included in the assessment, several changes were introduced, which were identified in the 2009 evaluation:

- Several mechanisms were introduced to evaluate the fulfilment of requirements, and to sanction non-compliance. The Ministry of Education was declared responsible for providing information about compliance with educational requirements, while the Ministry of Health reports on compliance with health requirements.
- The fulfilment of health requirements was greater in municipalities with existing programmes such as the Community Health Agents and/or the programme for Family Health Care (reinforcing the argument of policy complementarities).
- Every two months, the Ministry of Education now delivers an assessment of the school attendance of students of beneficiary families. This information is provided by local governments every month and collated by the Ministry of Education on a website.
- A series of communication actions were carried out, including radio programmes and distribution of flyers, to increase awareness about the programme amongst potential beneficiaries and administrators.

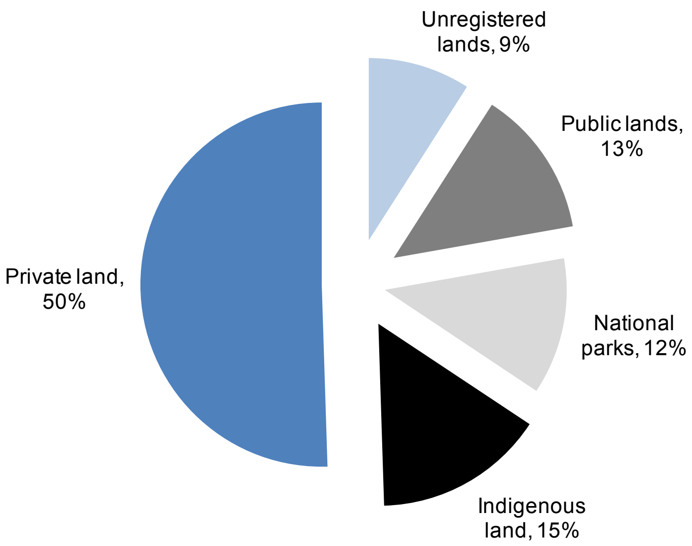
These procedures and clarification of responsibilities made it possible to increase the number of monitored students from 6.3 million in 2004 to 12.7 million in 2008 (i.e. from 51% to 85% of the total number of children who should be monitored). In relation to the fulfilment of health requirements, the Ministry of Health was able to provide information about 58% of the families that needed monitoring (against only 6% in 2004). The Ministry of Health provides the information though a pre-existing web platform.

Source: TCU (2009), *Relatório de Monitoramento: Programa* Bolsa Família, TC n. 001.870/2009-7, fiscl. N. 12/2009, Secretaría de Fiscalização e Avaliação de programas de Governo, Seprog, Distrito Federal, Brasília.

A serious multi-level governance gap occurs in federal land administration. Brazil has had difficulty designing and implementing a land administration system capable of providing transparent cadastral information for the management of federal land across several government ministries and departments. The cadastral system in Brazil has often not encouraged multiple-use management of federal land or an adequate level of inter-agency collection, management and sharing of land record information. In sum, “Brazil does not have an integrated system of land administration that provides for co-ordinated actions at the different levels of government. This diversity of instruments, programmes and actions focusing on land administration resulted in much harm to the country, especially in resource allocation for social and economic development" (Nunes, 2004).

Figure 3.5. **Land ownership in Brazil**

Total land area of Brazil: 850 201 546 km²



Source: République Federativa do Brasil Congresso Nacional Comissão Parlamentar Mista de Inquérito da Terra, based on INCRA statistics (2005: 278).

Land fraud, non-existent claimants, the falsification of titles by land sharks (*grileiros*),[11] and double and sometimes triple titling remain just as commonplace as in the past. In the landmark study on the falsification of land titles in Brazil, *O livro branco da grilagem de terras no Brasil* (2002), Brazil's Ministry of Agriculture admitted frequent government complicity in falsifying land titles, particularly in the state of Amazonas, where one-third of the property rested on falsified titles. Irregularities throughout Brazil, particularly in Pará and Mato Grosso, forced the ministry to cancel the land titles of an area more than twice as large as California. The ministry also recognised "institutional breaches" in land administration, particularly the non-existence of a single cadastre on the local level and the poor articulation between federal, state, and municipal land registries (Ministry of Agrarian Development, 2002). Land sharks have taken advantage of the antiquated nature of these registries, combined with frequent corruption of land registrars. Illegal land grabbing, combined with the persistence of large estates, has contributed to an unequal land distribution; in 1998, the Institute for Colonisation and Land Reform (INCRA) reported that 10% of the largest landholders owned 78.6% of the total area of private land in Brazil.

Improving land administration for transparent policy making

Several initiatives are under way to improve the quality of cadastres and mapping information to bolster land administration. The National Spatial Data Infrastructure of Brazil (*Infraestrutura Nacional de Dados Espaciais*, or INDE) was established in 2008 by Presidential Decree 6666/08. Through this agency, a metadata catalogue has been constructed from information from all institutions that are (and will be) participating in the Brazilian Directory of Geospatial Data (*Diretório Brasileiro de Dados Geoespaciais*, or DBDG). IBGE is hosting the National Spatial Data Infrastructure of Brazil Metadata Catalog, along with its own geospatial data.[12] The Brazilian metadata has been designed to meet the requirements of the geospatial data producers in Brazil and is being implemented using the Geonetwork platform (*http://geonetwork-opensource.org*), which was customised by IBGE (Fortes, 2011).[13] The Brazilian government has also dedicated resources to regularisation programmes in the Amazon through the *Terra Legal* Programme, to broaden efforts to reduce regional inequalities through the National Regional Development Policy (*Política Nacional de Desenvolvimento Regional*, or PNDR). Despite these efforts, calls have been made for Brazil to create a National Plan of Land Administration (Nunes, 2004).

Innovative land policies have recently been developed to regularise federal land occupied by residents in informal settlements. Faced with a large amount of federal land and a Constitution that forbids the complete transfer of federal land to private citizens, in 2003, the administration of President Luiz Inácio Lula da Silva proposed a radical rethinking of federal lands and an innovative regularisation programme known as *Papel Passado* (Box 3.23).

Box 3.23. ***Papel Passado*: Brazil's land regularisation programme for informal settlements on federal land**

As the Brazilian Constitution outlaws the complete transfer of federal property to individuals, the *Papel Passado* Programme has opted to revive an ancient form of land tenure known as emphyteusis (*aforamento*), which confers the right of lease in perpetuity. This tool was used extensively by Roman legislators, who borrowed emphyteusis from the Greeks in the fourth century to legislate the use of Rome's enlarged imperial conquests. This institution was later adopted by civil law countries such as France, Italy and Portugal, and then passed on to their colonies. Unlike usufruct rights, which normally last a generation or two, emphyteusis consists of a lifelong tenure that can be passed down to heirs indefinitely.

In *Papel Passado*, the Federal Assets Office (SPU) transfers the user rights to the municipality through a concession, which, in turn, uses its resources to survey the land, divide it into lots and pass the user rights on to individuals through a contract of sale. Owners are required to pay a nominal fee for the transfer of property from the municipality (*laudêmio*) and are also obliged to pay an annual user tax (*foro*) if they live on coastal properties or fail to provide documentation of insufficient income. Residents are exempt from the one-time cost of registering their deeds if their income is below the equivalent of five monthly salaries; they may also be relieved of the obligation to pay the annual user tax if they present income documentation to the regional SPU office each year. Using this technique, the SPU and the Ministry of the Cities have began the most ambitious programme of federal land transfers to *favelados*, or slum-dwellers, in Brazil's history, having initiated emphyteusis in 185 communities across 62 municipalities and 22 states.

The *Papel Passado* Programme has forged a new relationship between the federal government and the municipalities around the responsibilities associated with regularisation. In contrast to Mexico's Commission for the Regularisation of Land Tenure (*Comisión para la Regularización de la Tenencia de la Tierra*, or CORETT) programme, where federal agencies regularised communally owned land (*ejidos*) in a centralised manner with little interaction with local authorities (Azuela and Duhau, 1998), the Brazilian government devolves many responsibilities to municipal governments through *Papel Passado*. While the Mexican federal programme sold land directly to residents in exchange for a title, *Papel Passado* transfers user rights to municipalities, which in turn, sell the land to residents for a nominal fee.

Box 3.23. *Papel Passado*: Brazil's land regularisation programme for informal settlements on federal land (*cont.*)

The responsibility of the federal government entails several different tasks in the *Papel Passado* Programme. Managers in the regional SPU offices:

1. identify areas on federal lands appropriate for regularisation and process requests from residents who campaign for the registration of their claims;
2. establish a partnership with the municipality and the corresponding terms of technical co-operation;
3. demarcate and register appropriate regularisation areas in conjunction with the municipality and the community;
4. negotiate with intermediaries, such as land registrars, notaries (*Associação dos Notários e Registradores do Brasil*, or ANOREG), residents' associations and federal agencies such as the Ministry of Cities, the Brazilian Institute of the Environment and Renewable Natural Resources (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis*, or IBAMA), and State Environmental Agencies (*Órgãos Estaduais de Meio Ambiente*, OEMAs);
5. mediate conflict between different actors and institutions;
6. furnish the documentation necessary for residents to receive titles; these include official land registries located in local land registries;
7. verify the poverty of residents and exempt low-income residents from tax obligations (Federal Assets Office, 2006).

This strategy departs from traditional models through its engagement with land registrars and notaries, the intermediaries of regularisation. Especially in civil law countries of Latin America and Francophone Africa, these intermediaries verify the reams of documentation often required in the legalisation process. Failure to include notaries in the design of regularisation programmes has dramatically reduced the outcomes of these programmes. Far too often, regularisation programmes suffer high attrition rates because they fail to factor in registration costs and standardise the documentation needed among Brazil's over 3 000 land registries. Responding to these problems, the *Papel Passado* Programme works with municipalities to form partnerships with notaries and registrars in order to streamline registration. Typically, these agreements entail free registration for low-income residents in exchange for donated equipment and staff from the city government.

Source: Azuela, A. and E. Duhau (1998), "Tenure Regularisation, Private Property and Public Order in Mexico," in E. Fernandes and A. Varley (eds.), *Illegal Cities: Law and Urban Change in Developing Countries*, Zed, London; Donovan, M.G. (2007), "At the Doors of Legality: Planners, *Favelados*, and the Titling of Urban Brazil", Ph.D. dissertation, Department of City and Regional Planning, University of California, Berkeley; Federal Assets Office (2006), *Manual de regularização fundiária em terras da união*. Federal Assets Office, Brasília.

Supporting capacity building at sub-national level

Previous sections have emphasised the central role of municipalities in implementing several programmes that constitute important priorities for the federal government. Often, though, municipalities do not have the capacity to carry out their role effectively, as they lack access to information on the existing programmes, capacity to understand how they could benefit from them, and also the capacity to apply to these programmes or make themselves known to the federal authorities. Some progress has already been made, in particular in identifying the municipalities with the greatest capacity problems. This is a prerequisite for being able to target capacity-building programmes to the most needy municipalities. Programmes such as Bolsa Família or the School Census and Basic Education Development Index have helped identify lagging municipalities.

Once the needy municipalities are identified, programmes have to be developed to help support capacity building of their officials. One of the problems faced in this process is the rapid rotation of municipal staff, which requires maintaining capacity-building efforts effectively. Several federal ministries have developed capacity-building programmes for municipal staff. For example, the MIN is actively involved in delivering training courses to sub-national entities, in partnership with major international organisations such as the Institute for Economic and Social Planning of the United Nations Economic Commission for Latin America and the Caribbean (ILPES-CEPAL), which was founded in 1962 to support training and capacity building in local administrations, and the Inter-American Institute for Co-operation in Agriculture (IICA). The training courses are organised on a core module, and a targeted training is given in a topic of interest of the locality hosting the training. The course includes applied planning techniques for developing proposals for applying for regional development funds. The Sub-secretariat for Federal Issues also carries out an agenda to support municipal management capacities (*Agenda nacional de apoio à gestão municipal*). In 2007, the Federal Co-ordination Committee (*Comitê de Articulação Federativa*, or CAF) created a working group for institutional strengthening and qualification for the management of municipalities. Twenty-two federal bodies participate in this group, together with representatives from the municipalities. The objective is to support municipal capacity building for improving public policy implementation. Box 3.24 summarises some important capacities needed for regional development policy.

In the case of Bolsa Família Programme, the policy evaluation carried out in 2004 by the TCU showed a series of deficiencies at the levels of municipalities for managing the programme, which were due not only due to lack of access to information, but also to lack of practice and know-how in project management. The programme required investment in training of programme managers at the municipal level to guarantee effective delivery. The TCU recommended that the Ministry of Social Development invest in training of municipal managers of the Bolsa Família Programme. Between 2007 and 2008, the Ministry of Social Development prioritised the offer of e-learning training services for managing several social development programmes. The monitoring exercise of 2009 shows that the Ministry of Social Development did increase support for capacity building, but that it is still not enough to cater to the demand: courses offered reach less than 50% of total demand (Figure 3.6).

Training can help build capacity, but sharing experiences is also useful. A common mechanism for supporting knowledge-sharing among implementers in Brazil is the institution of prizes for the dissemination of good practices and the creation of observatories for sharing experiences and cross-learning. Both have been instituted in the case of the Bolsa Família Programme. The Ministry for Social Development created an observatory in which each state and municipality can describe a good practice related to one of the following categories: registration in the Single Registry, benefit management, management of requirements, integrated management, fiscalisation, social control, co-ordination with complementary programmes, family follow-up. The ministry then publicises the best practices among the community through a web platform. In the same spirit, the MIN has created a prize for the best regional development project. Municipalities therefore have an incentive to share the information about their projects, and this allows the MIN to create a database of interesting projects for regional development, which can then be implemented in other municipalities.

Box 3.24. **Important capacities for regional development policy**

The effectiveness of regional policies can break down if the relevant institutions and people lack the capacity to design, implement, monitor and adjust their implementation. Capacity weaknesses can undermine development and implementation of effective and mutually reinforcing policies that generate economic growth and reduce regional disparities. The idea of capacity development is appealing, but no easy task. Given the difficulty of building capacity effectively and the limitations of public budgets, efforts must therefore be highly strategic (OECD, 2007c). Five capabilities emerge as particularly relevant for regional development policy at all levels of government:

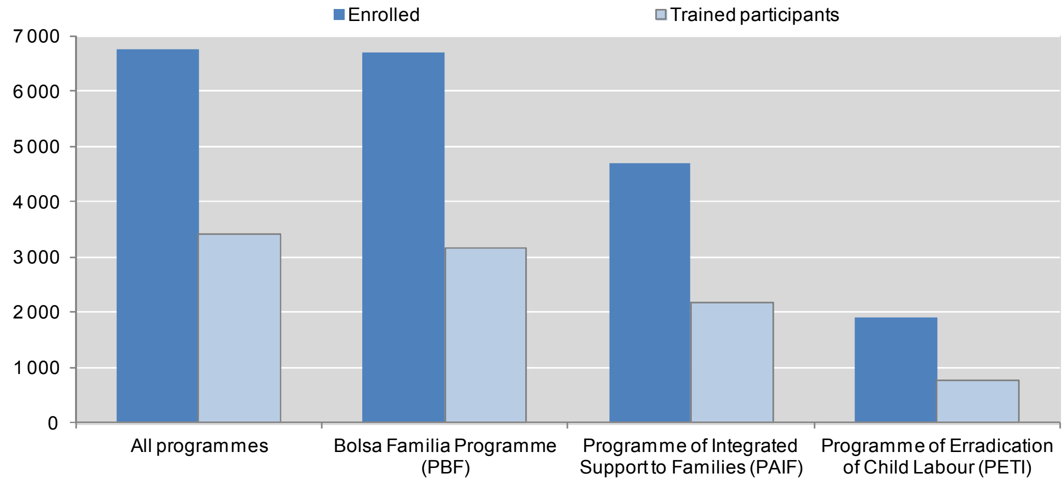
1. **A qualified, professional workforce:** the administrative capacity and infrastructure to design and undertake technical projects involving the use of professional skills, to assess and reward professional competence, and to recruit and retain qualified personnel. Orienting actors to a territorial approach to regional development is important.
2. **Management of diverse stakeholders in a co-operative context:** the capacity to identify and manage the involvement of diverse stakeholders through systems for consultation and participation throughout the policy processes. This further requires the capacity to co-operate among actors, to identify and validate points of contact, to make joint decisions and to resolve conflicts during policy formulation and during implementation.
3. **Monitoring, evaluation, and adjustment:** the capacity to design, monitor and evaluate policy plans and actions and to use evaluation results to make mid-course adjustments to ensure attainment of policy goals.
4. **Strategic resource management:** the capacity to finance public goods for regional development and to attract related private investment.
5. **Accountability and enforcement:** the capacity to design and respect agreements (contracts), to enforce commitments and to hold parties accountable for outcomes.

These capabilities have been identified based on their relationship to key characteristics of regional development policy: *i*) the need to address the twin goals of reducing inequality while also increasing regional competitiveness for economic growth; *ii*) the context of multi-level governance and co-operation; *iii*) the reliance on cross-sector co-operation for design and implementation; *iv*) the need to involve diverse stakeholders such as government, civil society, the private sector, and citizens; and *v*) the long-term nature of interventions and outcomes.

Source: OECD (2007), *OECD Rural Policy Reviews: Mexico 2007*, OECD Publishing, Paris, doi: *10.1787/9789264011687-en*.

It is not only the municipal level that suffers from capacity shortages: after years of economic turmoil that limited the possibility of carrying out long-term investment projects, states and federal administrations are also short on planning capacity, technical capacity to elaborate investment projects and the ability to conduct bidding processes. Disparities in the states' ability to present structured investment projects were obvious in the design phase of the PAC, because some states had great difficulties in presenting projects. This partly explains the uneven allocation of PAC funds between states.

Figure 3.6. **Offer of training for capacity building to municipalities by the Ministry of Social Development**



Source: TDU (2009) on the basis of Oficio n. 775/SENARC/MDS, 25 March 2009.

Increasing civil society participation

Reducing the gap between the citizens and the state (especially in poor and marginal areas) is a major pillar of the present social development agenda in Brazil. Increasing civil society participation and citizen awareness of public policies is essential, both to increase the capacity of policies to address specific needs, and to increase policy accountability and improve the functioning of the democratic system. In a country where there are vast disparities between people and territories, it is a challenge to build a state, in addition to a national, identity. The Brazilian Constitution of 1988 institutionalises the participation of civil society in public policy by the creation of municipal councils (*conselhos municipais*). These institutions promote the participation of civil society in the design, implementation and control of public action. They are frequent in areas such as health, education, social assistance and environment, but there are also municipal councils for urban development, protection of the elderly, culture, etc.

In recent years, public participation in the process of public policy has been on the rise, although high levels of social fragility and exclusion persist. The MIN has played a major role in initiatives to promote a participatory approach in public policy. Targeted brochures and audiovisual aids were developed to publicise basic information about regional policies and governmental initiatives for regional development. These traditional tools have been accompanied by initiatives using web-based platforms to support community engagement in the discussion of public policy, and to increase information accountability and transparency in public policy action. The MIN also promoted Expo-regions, an initiative that responds to a willingness to promote greater visibility of public policy action in the territory, and to contribute to the establishment of a regional information system on territorial policies. The MIN fostered the participation of civil society in integrated territorial actions in support of APLs, and in structuring initiatives around major infrastructure programmes, such as the integration of the San Francisco Basin in the Northeast.

Increased "social control" of policy was one of the specific objectives of the Bolsa Família Programme. However, the evaluation performed by the TCU in 2004 revealed that there was no explicit institution responsible for social control. A law was therefore introduced in 2004 to create social control councils (*Instâncias de Controle Social*, or ICS), which are composed of representatives from civil society, and which must participate in the execution of the programme. According to the monitoring evaluation of 2009, this was the area in which the Bolsa Família Programme advanced the least: in 2009, 5 561 municipalities instituted social control councils with 51 895 participants, 48% from government and 52% from civil society.

The initiative of Territories of Citizenship also aims to promote citizen participation in public policy, through web-based platforms and discussion forums. In addition, the governing boards of the Territories of Citizenship (*colegiados territoriais*) include representatives from the organised civil society (NGOs, unions, citizen associations, etc.). These governing boards discuss the proposals (*Matriz de Ações*) presented by the federal government every year. These include the menu of options that could be implemented in the territories.

Conclusion

Decentralisation is still a long historical process in Brazil, characterised by advances and setbacks, and has intensified with the greater municipal autonomy granted through the Constitution of 1988. Brazil is still exploring different mechanisms for multi-level governance and multi-dimensional policy co-ordination. This chapter has shown that there are some important challenges in co-ordinating government action across sectors and across levels of government, such as dealing with the unusually wide autonomy of states and municipalities, overcoming a multiple fragmentation of policies (horizontally and vertically), in a context where many crucial actors lack the capacity to carry out their tasks. Still, much progress has been made since 2003, with new co-ordination instruments and institutions being created and tested. This experimentation phase may include some overlaps between different initiatives and some duplication of institutional effort, but this is only to be expected at this stage in the process. It is now time to evaluate the effectiveness of the different instruments created, to generalise and strengthen those that seem to work better and to fine-tune the overall coherence of the system. Such an investment in governance institutions is a necessary step to maximise the benefits of the policies designed to implement Brazil's ambitious agenda.

Notes

1. The large share of municipal revenues is not well illustrated in Figure 3.1, because the *OECD Revenue Statistics* used the revised guidelines of the 2008 version of the *System of National Accounts*, which attributes taxes to the level of government that collects them, and not to the level of government that receives them. In the case of Brazil, the states act as collecting agents for municipalities. In the *OECD Revenue Statistics*, revenues that in practice belong to the municipalities appear as state revenues.
2. For more information on the OECD taxonomy of grants, see Bergvall et al. (2006).
3. Replacing shared taxes by earmarked grants presents pros and cons. See Bergvall et al. (2006).
4. The board included representatives of the Ministry of Agriculture and Livestock, the Ministry of Cities, and the Ministries of Science and Technology; Communication; Culture; Agrarian Development; Industrial Development and Foreign Trade; Social Development; Education; Finance; National Integration; Justice; Environment, Mining and Energy; Planning, Budget and Management; Foreign Affairs; Health; the Secretariat for Institutional Affairs; the Special Secretariat for Fishery, Labor and Employment; Transportation and Tourism.
5. In Sydney in 2000, "it became clear that the only way to deliver what were not just support services, but rather essential facets of the Games, was through the strong involvement of government agencies and departments in the organisational process. Rather than relying on fragmented support, it became obvious that government support could best be provided in a co-ordinated manner through a single body, which resulted in the creation of the OCA" (Sydney Organising Committee for the Olympic Games, 2001).
6. The council will include the president of the Olympic Development Authority, its director, three representatives of the federal government, a representative of the Rio de Janeiro municipality, an official from the state of Rio de Janeiro, a representative of civil society and one from the Comitê Rio 2016 organisation. For more information, see "Lei Nº 12.396, de 21 de Março DE 2011" (*www.planalto.gov.br/ccivil_03/_Ato2011-2014/2011/Lei/L12396.htm*).
7. This agreement was negotiated and signed by Canada, the province of British Columbia, the city of Vancouver, the Resort Municipality of Whistler, the Canadian Olympic Authority, the Canadian Paralympic Committee, and the Vancouver 2010 Bid Corporation.
8. The 1988 Constitution of Brazil, in its Article 20, specifies a large public domain that includes unoccupied boundary lands essential to national defence, riparian waterways, beaches, the territorial sea, tidal areas, subsoil mineral resources, the continental shelf, and land that the federal government owns, whether used or unused.
9. This is a conservative estimate: during testimony in a Brazilian Congressional Land Inquiry (*Comissão Parlamentar Mista de Inquérito da Terra*), it was estimated that as

much as 200 million hectares of land was absent from any cadastre in Brazil (Républica Federativa do Brasil Congresso Nacional Comissão Parlamentar Mista de Inquérito da Terra, 2005).

10. This was calculated by subtracting the registered land area, indigenous lands, national parks, conservation areas (primarily in Amazonia), lands of the National Institute for Colonisation and Land Reform (*Instituto Nacional de Colonização e Reforma Agrária*, or INCRA), and publicly owned land. It also discounts rivers, lakes, streams, and other water resources (Républica Federativa do Brasil Congresso Nacional Comissão Parlamentar Mista de Inquérito da Terra, 2005). The study attributes the calculation to the II *Plano Nacional de Reforma Agrária*, citing the following data sources: *Apuração Especial do SNCR–INCRA* (October 2003), ISA, *Censo Agropecuário do IBGE* (1995-96), and INCRA *Estatísticas Cadastrais* (1998).

11. *Grileiros* are professional title-falsifiers. There name derives from the Portuguese term *grilo*, which means “cricket”. To make titles appear older, the *grileiros* would place the falsified title in a cabinet with a *grilo* for a week, which made the papers appear yellow and worn with time (Donovan, 2007).

12. For further information, consult the INDE Metadata Catalog (*www.metadados.inde.gov.br*), the IBGE geospatial data (*www.metadados.ibge.gov.br*), and the INDE (*www.inde.gov.br*).

13. This follows officially adopted regulations based on the ISO TC 211-19115 and 19139 standards, *www.concar.gov.br/arquivo/Perfil_MGB_Final_v1_homologado.pdf*.

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Annex 3.A1

Social, infrastructure and economic indicators

Table 3.A1.1. **Indicators used in Table 3.1**

	HDI	Illiteracy	Child mortality	Access to health	Paved road density	Access to water	Gini coefficient	Average income *per capita*
		% of illiterate people above 15 years old	Deaths before 1 year per 1 000 births	N° of health establishments per 10 000 people	km of paved roads per km²	% of households with secure access to water network		In BRL
Top ranking	Above 0.84	Below 7	Below 19	Above 7	Above 0.09	Above 88%	0.463 to 0.486	Above 1 300
Medium ranking	0.80 a 0.84	7 a 9.8	10 a 29	5.5 a 7	0.045 a 0.09	82% a 88%	0.486 a 0.518	1 000 a 1 300
Low ranking	0.75 to 0.80	9.8 to 17.6	29 to 40	4 to 5.5	0.010 to 0.045	74% to 82%	0.518 to 0.544	800 to 1 000
Very low ranking	Below 0.80	Above 17.6	Above 40	Below 4	Below 0.01	Below 74%	0.544 to 0.596	Below 800

Annex 3.A2

Inter-governmental grants in Brazil

Table 3.A2.1. **Main inter-governmental grants in Brazil (2006)**

	Total consolidated (federal, states and municipalities)	Category	
		General purpose	Earmarked
Current transfers	165 271	76.13%	23.87%
Inter-governmental transfers	159 474	75.26%	24.74%
Transfers from federal to states	61 845	71.56%	28.44%
Share of the State Participation Fund and the Federal District (FPE)	29 251	100.00%	
Transfer of resources of the Unified Health System (SUS)	8 570		100.00%
Transfer of resources of the National Education Fund (FNDE)	2 700		100.00%
Transfer of resources of the Fund for Maintenance and Development of Education (FUNDEF)	4 623		100.00%
Other transfers from the federal government	16 701	89.84%	10.16%
Transfers from federal to municipalities	46 556	64.32%	35.68%
Share of the Municipal Participation Fund (FPM)	20 880	100.00%	
Transfer of resources of the Unified Health System (SUS)	12 080		100.00%
Transfer of resources of the National Education Fund (FNDE)	5 879	80.23%	19.75%
Transfer of resources of the FUNDEF	2 618		100.00%
Other transfers from the federal government	5 099	85.27%	14.71%
Transfers from states to municipalities	40 496	100.00%	0.00%
Share of the taxes on goods and services (ICMS)	28 398	100.00%	
Share of the vehicle tax (IPVA)	5 256	100.00%	
Transfer of resources of the FUNDEF	4 952	100.00%	
Other transfers from states	1 899	99.47%	0.00%
Other inter-governmental transfers	10 578	50.38%	49.63%
Other current transfers	5 796	100.00%	

Source: Mont'Alverne Duarte et al. (2009), "Tranferências fiscais intergovernamentais no Brasil: Avaliação das transferencias federais, com ênfase no sistema único de saúde", CEPAL, Serie Gestión Pública, Instituto Latinoamerican y del Caribe de Planificación Económica y Social, Santiago de Chile.

Annex 3.A3

Share of sub-national governments in tax revenues in OECD countries

Table 3.A3.1. **Attribution of tax revenue to sub-sectors of general government as a percentage of total tax revenue (2008)**

	Supra national	Central	State or region	Local	Social Security Funds
Federal and regional countries OECD					
Australia		81.9	14.9	3.2	-
Austria	0.3	52.7	9.8	9.7	27.5
Belgium	1.0	46.9	16.0	4.5	31.7
Canada		43.1	39.1	9.1	8.7
Germany	0.8	30.6	22.5	8.4	37.6
Mexico		84.3	1.9	1.1	12.7
Spain[1]	0.4	32.4	22.3	8.9	35.9
Switzerland		37.2	24.6	15.2	23.0
United States		38.9	20.8	15.2	25.1
Unweighted average, OECD federal and regional	0.6	49.8	19.1	8.4	22.5
Federal and regional countries, selected LAC[2]					
Argentina		69.2	14.3		16.6
Brazil		48.5	23.3	3.8	24.4
Colombia[1]		74.9	2.8	11.1	11.2
Mexico		84.3	1.9	1.1	12.7
Venezuela, Bolivarian Rep.		94.7			5.3
Unweighted average, LAC[2]		74.3	10.6	5.3	14.0
Unitary countries OECD					
Chile		89.1		6.1	4.7
Czech Republic	0.5	40.4		14.5	44.6
Denmark	0.5	72.7		24.8	2.0
Finland	0.3	49.7		22.0	28.0
France	0.2	36.1		12.1	51.5
Greece	0.4	60.5		0.8	38.3
Hungary	0.3	62.3		6.4	31.0
Iceland		74.1		25.9	-
Ireland	0.4	81.8		2.6	15.2
Israel		76.0		7.5	16.5
Italy	0.3	52.4		16.1	31.2
Japan		32.9		28.4	38.6
Korea		61.5		16.7	21.8
Luxembourg	0.1	67.6		4.5	27.7
Netherlands	0.9	58.8		3.3	37.0
New Zealand		93.7		6.3	-
Norway		88.2		11.8	-

Table 3.A3.1. **Attribution of tax revenue to sub-sectors of general government as a percentage of total tax revenue (2008)** (*cont.*)

	Supra national	Central	State or region	Local	Social Security Funds
Poland	0.4	53.0		13.5	33.1
Portugal	0.3	59.6		6.6	33.5
Slovak Republic	0.8	47.5		11.6	40.1
Slovenia	0.5	53.1		8.9	37.4
Sweden	0.4	53.0		34.7	11.9
Turkey		66.3		8.7	25.0
United Kingdom	0.5	75.7		4.8	19.0
Unweighted average, OECD unitary	0.4	62.8		12.4	24.5
Unitary countries, selected LAC[2]					
Chile		89.1		6.1	4.7
Costa Rica		69.5		2.6	27.9
Dominican Republic		99.6			0.4
El Salvador		89.0			11.0
Guatemala		86.5		1.3	12.3
Peru		87.3		3.6	9.1
Uruguay		78.7			21.3
Unweighted average, selected LAC[2]		85.7		3.4	12.4

Notes: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

1. Constitutionally non-federal country with a high autonomy of territorial entities. 2. Represents a selected group of Latin American countries. Chile and Mexico are also part of the OECD (33) group.

Source: OECD (2010), *Revenue Statistics 2010*, OECD Publishing, Paris, doi: *10.1787/rev_stats-2010-en-fr*; OECD/Economic Commission for Latin America and the Caribbean/Inter-American Centre of Tax Administrations (2011), *Revenue Statistics in Latin America 2011*, OECD Publishing, Paris, doi: *10.1787/9789264110540-en-fr*.

Annex 3.A4

Allocation of responsibilities across levels of government in Brazil

Table 3.A4.1. **Allocation of responsibilities across levels of government in Brazil**

Function	Federal	State	Municipal
Education			
Preschool education		X	X
Primary education		X	X
Secondary education		X	X
Vocational and technical	X		
Higher education	X		
Public health			
Hospitals	X	X	X
Health protection	X	X	X
Social welfare			
Kindergarten and nursery		X	X (most)
Family welfare services	X	X	X
Welfare homes	X	X	X
Social Security	X (most)	X	X
Direct and indirect exploration of logistical systems of airports, ports, roads, railways, energy and telecommunication	X	X (roads)	X (roads)
Water management and allocation of uses	X		
Environment and historical heritage protection	X	X	X
Urban development (guidelines and infrastructure)	X (both)	X (infrastructure)	X (infrastructure)

Annex 3.A5

General government accounts

Table 3.A5.1. **General Government Accounts (2008)**

BRL millions

Federal government budget 2008*

Type	General government	Federal	State	Municipal**
I. Total revenue	1 158 736 649	714 699 064	403 401 384	240 171 619
I.1. Tax revenue	556 787 467	254 624 172	254 970 466	47 192 830
IPI	37 361 124	37 361 124	0	0
State VAT tax (ICMS)	217 297 922	0	217 297 922	0
Import tax	17 171 274	17 171 274	0	0
Tax on services (ISS)	23 366 441	0	708 864	22 657 577
Tax on financial operations (IOF)	20 340 268	20 340 268	0	0
Tax on personal property (IPTU)	12 718 387	0	338 956	12 379 431
Tax on motor vehicles (IPVA)	16 629 265	0	16 629 265	0
Income tax (IR)	179 249 426	179 249 426	0	0
Other taxes	32 653 360	502 080	19 995 458	12 155 822
I.2. Incoming revenue	404 191 720	380 455 794	16 804 168	6 931 758
Social contributions	394 349 186	373 590 770	16 286 006	4 472 409
Economic contributions	9 842 534	6 865 024	518 162	2 459 348
I.3. Other receipts	197 757 462	79 619 098	131 626 750	186 047 031
II. Total expenditure	1 056 316 548	642 788 679	376 914 414	236 148 873
II.1. Personal	425 057 162	130 829 102	186 817 570	107 410 490
II.2. Inter-government transfers[1]	0	133 075 503	65 877 836	582 079
II.3. Transfers of aid and	200 435 491	199 562 012	401 379	472 099
II.5. Other expenses[3]	430 823 895	179 322 061	123 817 629	127 684 205
III. PRIMARY RESULT (I-II)	102 420 101	71 910 385	26 486 971	4 022 746
IV. Nominal interest	174 344 310	108 560 465	55 645 877	10 137 968
V. NOMINAL RESULT (III-IV)	(71 924 209)	(36 650 081)	(29 158 907)	(6 115 222)

Notes: * Does not include the operations of the Central Bank or state agencies. ** Includes 76% of Brazilian municipalities. 1. The consolidated figure excludes inter-governmental transfers.

Source: STN e Bacen Elaboração STN/CESEF.

Annex 3.A6

Share of different taxes in revenues across levels of government

Table 3.A6.1. **Share of different taxes in tax revenues across levels of government (2008)**

	Federal	State	Municipal
Tax revenues	100.00%	100.00%	100.00%
Tax on industrial products (IPI)	14.67%		
Tax on goods and services (ICMS)		85.22%	
Import tax (*Imposto sobre importação*)	6.74%		
Tax on services (ISS)		0.28%	48.01%
Tax on financial operations (IOF)	7.99%		
Tax on urban property (IPTU)		0.13%	26.23%
Tax on motor vehicles (IPVA)		6.52%	
Income tax (IR)	70.40%		
Other taxes	0.20%	7.84%	25.76%

Source: National Treasury of Brazil.

Annex 3.A7

Revenue mix by state in Brazil

Table 3.A7.1. **Revenue mix by state (2006)**

State/region	Share in current revenues of		
	Own taxes (%)	Other own revenues (%)	Inter-governmental transfers (%)
North	47.2	4.9	47.8
Rorâima	19.9	3.6	76.5
Amapá	22.2	4.5	73.3
Acre	25.5	4.2	70.3
Tocatins	33.1	5.5	61.3
Rondônia	51.9	6.2	41.9
Pará	53.2	5.8	41
Amazonas	65.7	3.6	30.7
Northeast	54.2	5.4	40.4
Piauí	39.8	4.3	55.9
Maranhão	43.2	4	52.9
Alagoas	45.4	3.9	50.8
Sergipe	45	8.8	46.2
Paraiba	47	7.2	45.9
Rio Grande do Norte	50.8	5.1	44.1
Ceará	56.9	5.3	37.8
Pernambuco	59.8	3.1	37.1
Bahia	62	7.1	31
Centre-West	69.9	7.7	22.4
Mato Grosso	66.2	8.4	25.4
Goiás	68.6	8.5	23
Mato Grosso do Sul	72	6.9	21.1
Distrito Federal	72.8	7	20.21
Southeast	74.3	10.4	15.3
Rio de Janeiro	59	16.5	24.5
Minas Gerais	72.6	8.2	19.2
Espírito Santo	77.3	7.7	15
São Paulo	80.8	8.9	10.4
South	69.5	7.8	22.7
Santa Catarina	63.4	9.4	27.3
Paraná	66.6	9.9	23.6
Rio Grande do Sul	74.4	5.6	20.1
BRAZIL	67.3	8.4	24.2

Source: Mont'Alverne Duarte, A.J. et al. (2009), "Tranferências fiscais intergovernamentais no Brasil: Avaliação das transferencias federais, com ênfase no sistema único de saúde", CEPAL, Serie Gestión Pública, Instituto Latinoamericano y del Caribe de Planificación Económica y Social, Santiago de Chile.