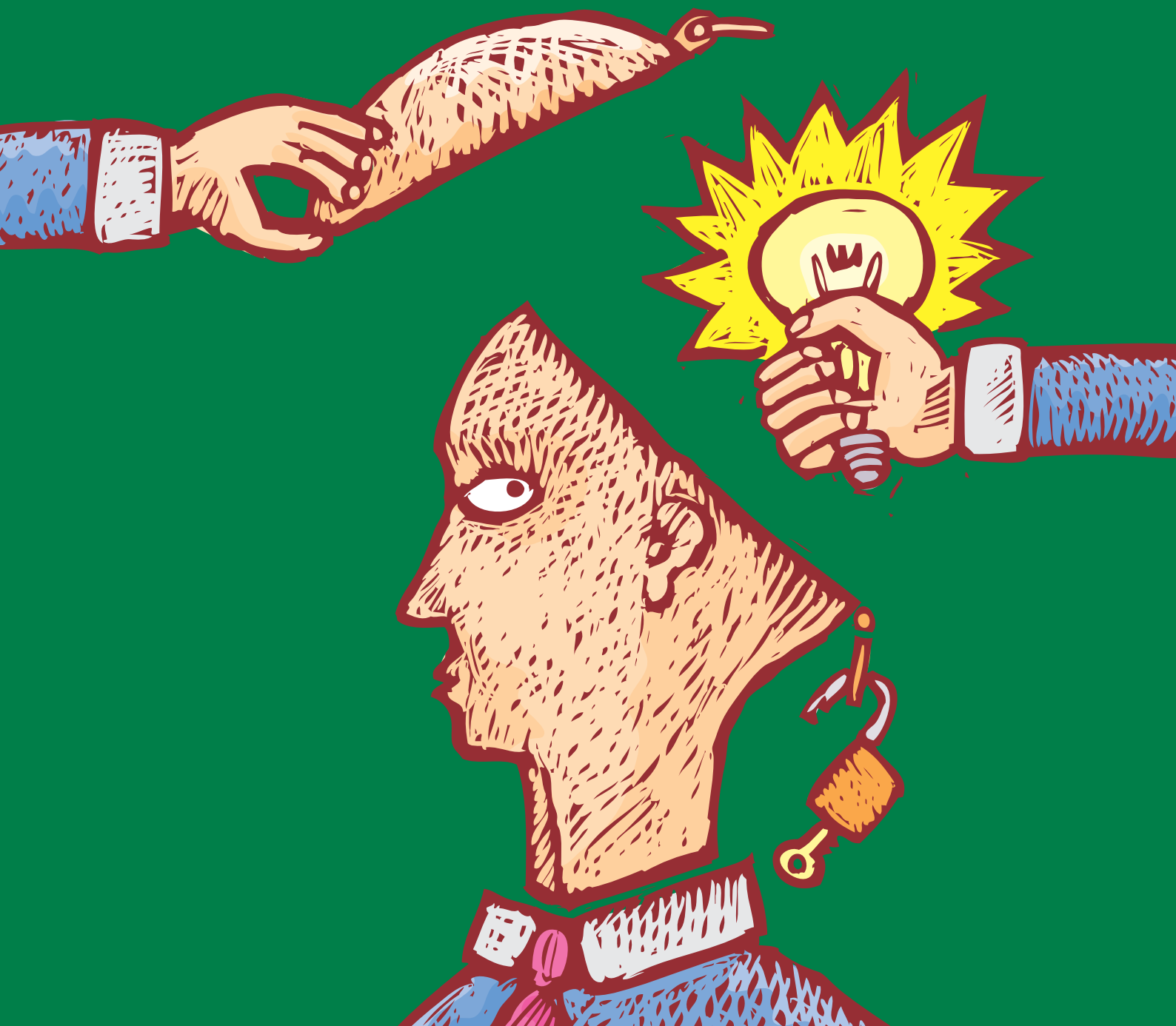


# Intellectual-property environment in Mexico

A report from the Economist Intelligence Unit  
Sponsored by Microsoft





## Executive Summary

- Research-and-development (R&D) spending has historically been low in Mexico relative to more-advanced economies. Expenditures in R&D rose by an annual average of 10% in real terms in 1996–2005, according to the latest figures available.
- The government provides incentives for R&D investment and funds a large share of R&D expenditures in the country.
- Research-and-development investment in Mexico is nearly equally funded by private-sector companies and the public sector. Although business and the government fund a similar share of total R&D, businesses carry out the majority of expenditures.
- Private-sector companies account for 50% of total R&D expenditures in Mexico. By comparison, the business sector in OECD countries accounts for a higher share (70%) of total R&D expenditures.
- The technology content of manufactured exports exceeds that of the regional average of 11.72%. This ratio stood at 19.41% in Mexico in 2008, up from 17.09% a year earlier and reversing a declining trend from 2000–07.
- Intellectual-property rights in Mexico are protected by a combination of national laws and international conventions and agreements. Mexico is a member of the World Intellectual Property Organisation (WIPO) among other major bodies and agreements.
- Mexican law protects intellectual-property rights (IPR), and recent changes have stiffened penalties for violations.
- Enforcement activity in Mexico has increased dramatically over the past few years with the creation of an IP rights enforcement unit that combines federal prosecutors and police forces.



## Introduction

**I**ntellectual property (IP) and intellectual assets, defined by the OECD as innovation-oriented activities that rely on research and development, patents, industrial designs and even education, have become important investment factors for companies and economies worldwide. Globalisation, the expansion of the services sector and new information technologies have changed the way companies operate and the way in which value is created. These phenomena have transformed corporate investment, expanded the role of intellectual property in economic development and expansion, and focused a spotlight on the subject.

Enforcement of IP regulations and protection of IP rights have become key issues for this important lever of economic growth. Even in countries not typically regarded as high technology leaders, the role and effect of intellectual property is extensive. For example, Mexico presents a mixed picture with respect to technology and IP, as some relevant indicators exceed the performance of Latin America and Caribbean (LAC) averages, whereas others lag behind. In general, however, the recent trend for most of those metrics is positive.

This report presents an overview of key aspects of the intellectual-property environment in Mexico, with emphasis on the growing significance of the sector and an overview of the regulatory environment.



## Recent performance of the Mexican economy

**T**he Mexican economy was hit hard by the global financial crisis in 2008 and 2009. Real gross domestic product (GDP) expanded by an annual average of 3.9% in 2004–07 before slowing to 1.5% in 2008 and contracting by 6.6% in 2009, according to the National Institute of Statistics, Geography and Information (Instituto Nacional de Estadística, Geografía e Informática—INEGI). The Economist Intelligence Unit forecasts GDP growth of 4.2% in 2010. With a total population of 111.2m in 2009, average per-capita GDP (in terms of purchasing power parity) in Mexico is US\$15,570, above the regional average of US\$11,000 in Latin America and the Caribbean.

Mexico holds one of the highest numbers of signed international agreements among Latin American countries. It has free-trade agreements and bilateral agreements with more than 40 countries, which have broadened the country's network of trade partners and attracted new foreign investment. These agreements also serve to improve the legal framework for IP protection, and can thereby spur additional innovation investments in the private sector.

### R&D spending trails regional average

Research-and-development (R&D) spending, typically a major source of IP, has historically been low in Mexico relative to more-advanced economies. This investment has generally been hindered by an economic structure that has been broadly driven by extraction of natural resources rather than a culture of innovation.

R&D has not been prioritised relative to other corporate-investment alternatives, and local companies have not allocated resources towards creating new processes and products. Historical patterns appear to be changing, however. Expenditures in R&D rose by an annual average of 10% in real terms in 1996–2005, according to the latest figures available.

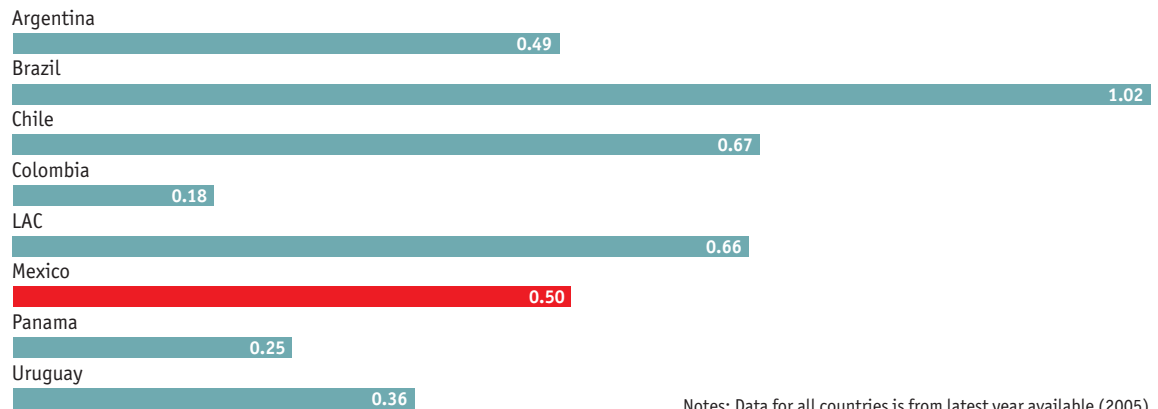
The government provides incentives for R&D investment and funds a large share of R&D expenditures in the country. A 2010 study by KPMG, a US-based tax consultancy company, ranked Mexico's tax competitiveness for R&D—through tax breaks and refundable investments—as more favourable than that in the US, France, Japan, Germany and Italy. In the ten-country ranking, Mexico was in fifth place, behind Australia, Canada, the UK and the Netherlands. Among 41 large international cities, Mexico's Mexico City and Monterrey ranked in tenth and eleventh places, respectively, in terms of R&D tax treatment.

R&D investment as a share of GDP averages 0.66% in the Latin America and Caribbean (LAC) region



### R&D spending as a share of GDP

(%), 2005



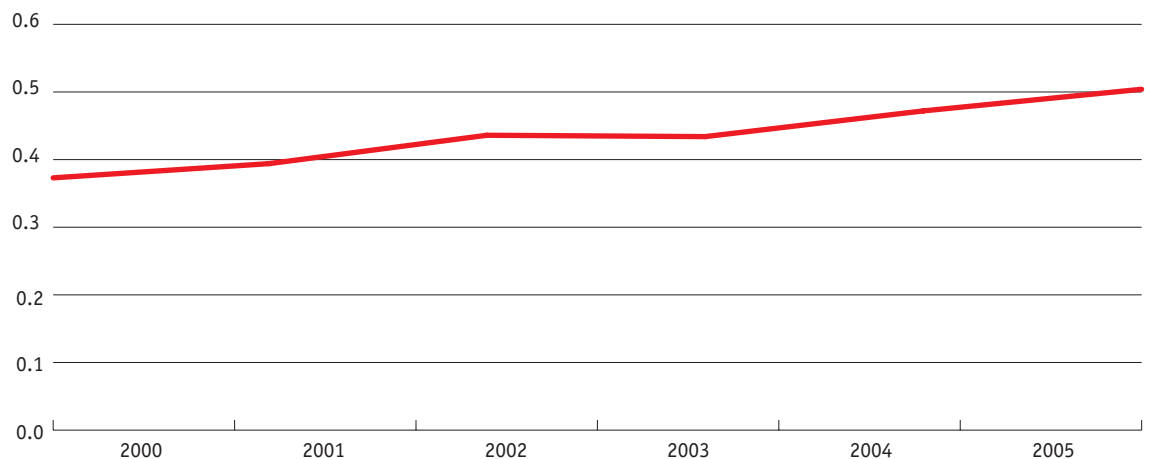
Notes: Data for all countries is from latest year available (2005).  
Data for Chile is from 2004 and for Uruguay is from 2006.  
Source: UNESCO.

and a higher 2.26% in OECD countries. The intensity of Mexico's R&D investment, at 0.50%, remains low compared with both the regional and OECD averages. Economist Intelligence Unit estimates put total R&D spending at nearly US\$4.8bn in 2006.

Over the past five years, R&D investments in Mexico have been positioned to rise as the macroeconomic and investment climate have improved and inflows of foreign-direct investments (particularly in the export-related oil and manufacturing sectors) have followed an upward trajectory. More recently, in the aftermath of the sharp domestic economic downturn in 2009, the need—and opportunity—for innovation to spur the competitiveness of the Mexican economy has been highlighted.

### R&D spending as a share of GDP

(%)



Source: UNESCO.



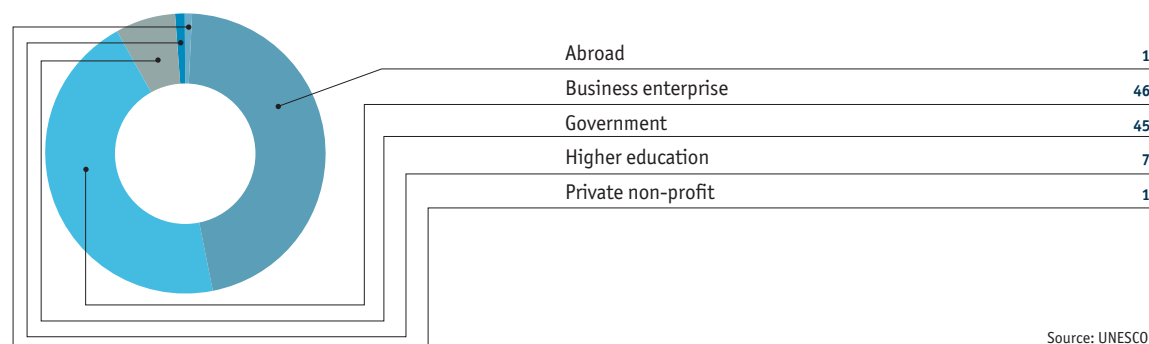
## Business and public sectors are the leading sources of R&D financing

Research-and-development investment in Mexico is nearly equally funded by private-sector companies and the public sector. Although business and the government fund a similar share of total R&D, businesses carry out the majority of expenditures.

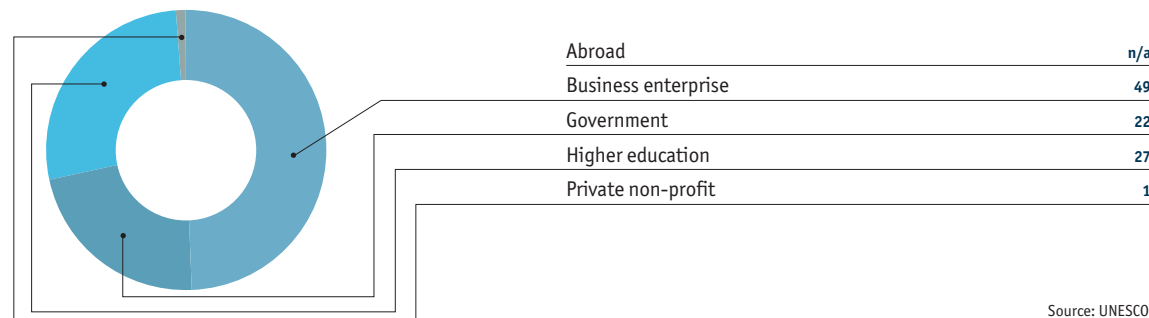
Some 46% of R&D investment comes from private-sector companies, with an additional 45% funded by the Mexican government, according to figures from UNESCO. Private-sector companies account for 50% of total R&D expenditures in Mexico. By comparison, the business sector in OECD countries accounts for a higher share (70%) of total R&D expenditures. According to the OECD, R&D expenditures made by the business sector more closely correlate with the creation of new products and innovation of operations than do R&D expenditures carried out by the public sector or higher-education institutions. In Mexico, business expenditure on R&D as a share of value-added in industry was 0.3% in 2005, according to the latest information available from the OECD. The OECD average was 2.4% in 2007.

The Mexican government carries out a lower share (22%) of R&D expenditures. Higher-education institutions account for just 7% of R&D investment in Mexico, but account for 27% of total R&D expenditures in the country.

### R&D investment in Mexico (%)



### R&D expenditure in Mexico (%)





There were approximately 459.5 researchers in R&D per one million people in Mexico in 2005. This was up from 428 in 2004 and 325 in 2003. The number of R&D researchers in Mexico is close to the regional average of 495 in 2005, according to the latest figures available from the World Bank.

## Technology content of exports

Mexico's export-sector grew by an annual average of 8.7% in real terms in 2004–08, according to INEGI. Amid the slowdown in the US market and a fall in oil prices from the 2008 peak, the value of exports rose by just 0.8% in 2008 and contracted by 15.2% in 2009. The value of total exports was US\$229.7bn in 2009, according to the central bank (Banco Central de México—Banxico).

The Economist Intelligence Unit forecasts export growth of 8.3% in 2010, based on a rise in demand for Mexico's manufactured exports (mainly car equipment), an increase in oil prices and an upturn in global trade activity. The Economist Intelligence Unit also expects that Mexico will receive about US\$19bn–20bn of foreign direct investment, with a large share of these inflows going to export-related industries. In the first quarter of 2010, 43% of inward FDI totalling US\$4.3bn went to the trade sector and 35% went to manufacturing.

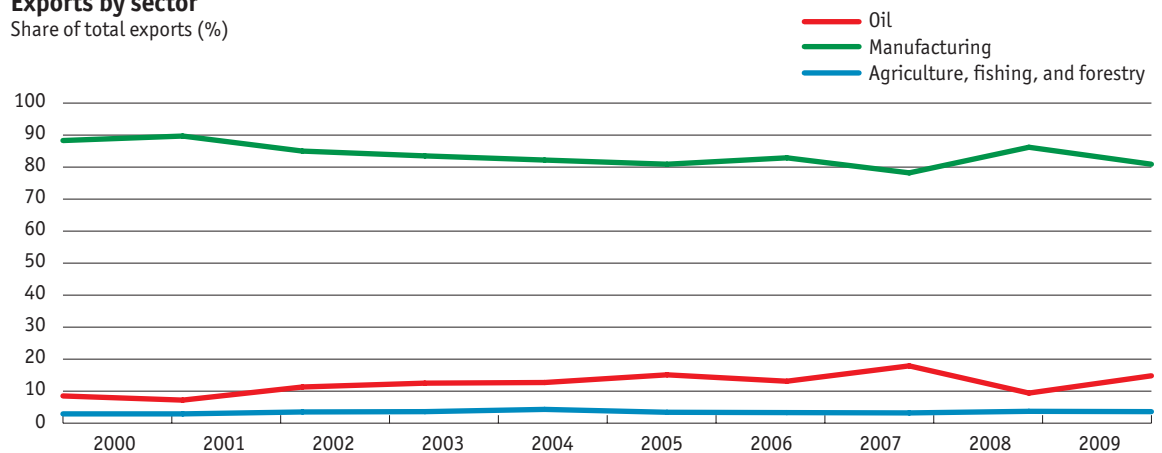
### Mexico's high-technology exports

Indicator	2006	2007	2008
Exports of goods and services as a share of GDP (%)	27.9	28.2	28.2
Exports of goods and services, real annual growth (%)	10.9	5.7	0.8
High-technology exports as a share of total manufactured exports (%)	18.89	17.09	19.41
Value of high-technology exports (current US\$ m)	35,732.4	33,314.0	41,200.6
Value of high-technology exports as a share of LAC high-tech exports (%)	73.1	70.2	70.9

Source: Economist Intelligence Unit; World Development Indicators, World Bank.

### Exports by sector

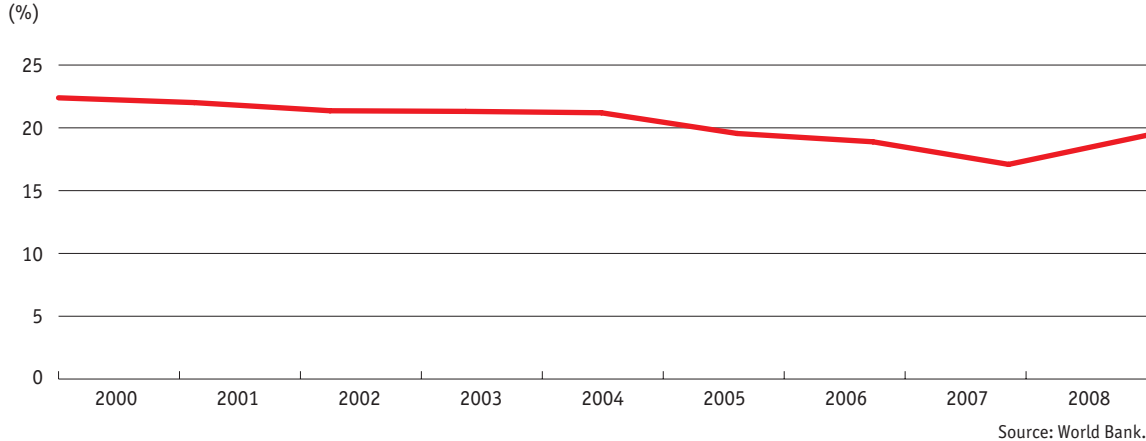
Share of total exports (%)



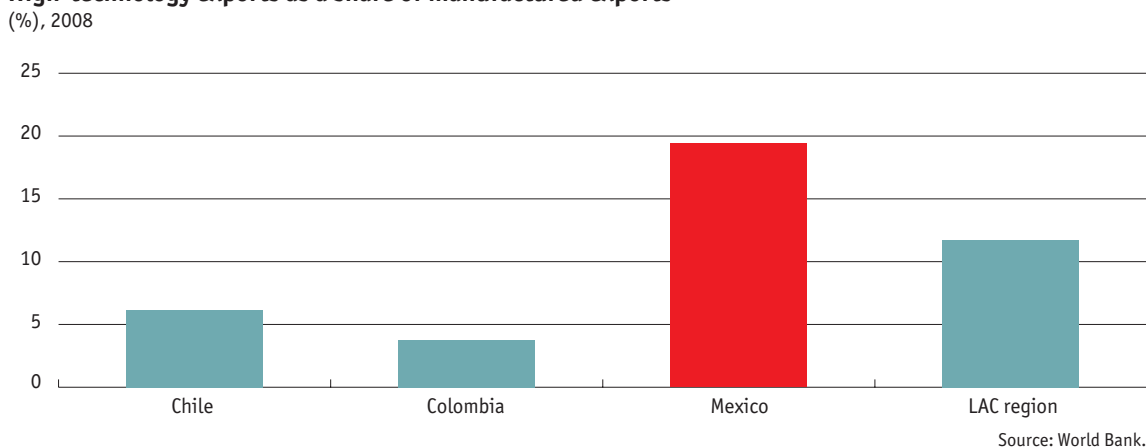
Source: Central Bank of Mexico (Banco Central de México —Banxico)



### High-technology exports as a share of manufactured exports



### High-technology exports as a share of manufactured exports



Manufactured goods have consistently been Mexico's leading exports, accounting for 80–90% of total exports in 2000–09, according to figures from the central bank. Although the level of these exports has declined as a share of total exports, they remain dominant. Manufactured exports accounted for 80.9% of total exports in 2009, down from 88.3% in 2000. Oil exports, mainly of crude oil, accounted for 14.8% of total exports in 2009 whereas agricultural exports accounted for just 3.6%.

The technology content of manufactured exports exceeds that of the regional average of 11.72%. This ratio stood at 19.41% in Mexico in 2008, up from 17.09% a year earlier and reversing a declining trend from 2000–07. Manufactured exports, including maquila goods, are primarily electronic equipment and appliances, and automotive products. Legislation promoting maquiladoras has made the country an attractive place to manufacture for export to the US.

The United States is Mexico's most important trading partner, with trade flows supported by the countries' geographical proximity and the North American Free-Trade Agreement (NAFTA). The US received 80.5% of Mexico's total exports in 2009. Other important export markets in 2009 included the





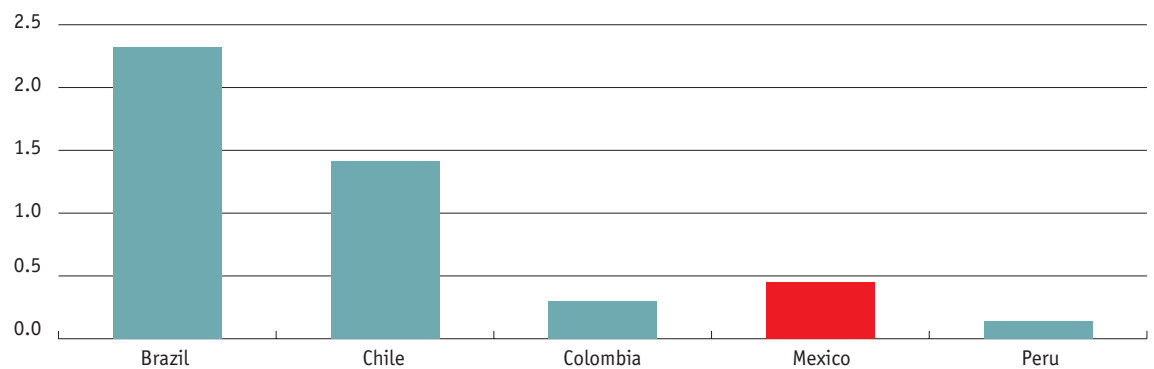
European Union (receiving 5.1% of total exports), Canada (3.6%), Colombia (1.1%), Brazil (1.1%) and China (1.0%), according to the central bank.

### Patents

Mexico has a high number of gross annual patent filings; more than 16,000 applications, from residents and non-residents combined, were submitted in 2007, according to figures from the World Intellectual Property Organisation (WIPO). However, patents in Mexico have a high concentration of foreign ownership, with most patent applications filed by—and granted to—companies or individuals based outside of Mexico. Indeed, slightly over 96% of patent filings in 2007 were submitted by foreigners.

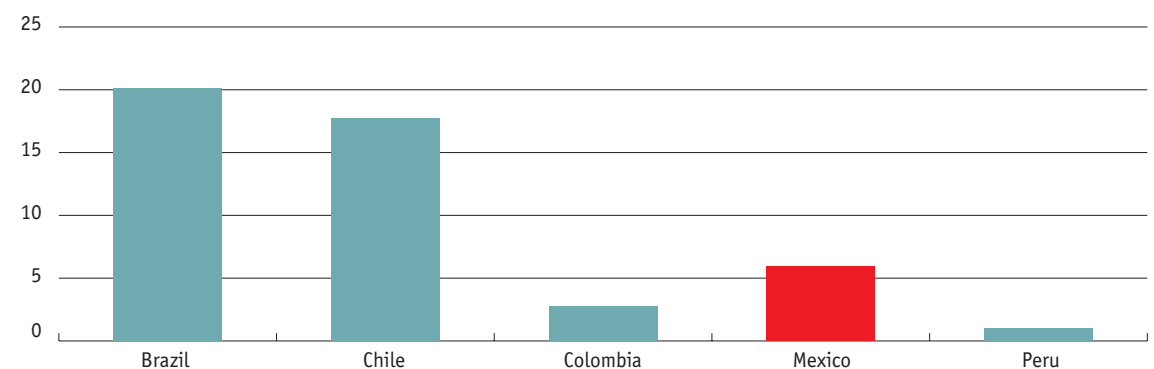
Accordingly, the intensity of patent filings submitted by residents, both in relation to the size of the economy and the population, is low. Resident patent filings as a share of GDP approximated just 0.45% in Mexico in 2007, compared with 2.32% in Brazil and 1.41% in Chile. Resident patent filings per one million people approximated 5.97% in Mexico in 2007, trailing a share of 20.12% in Brazil and 17.71% in Chile.

#### Resident patent filings as a share of GDP (%), 2007



Notes: Data for Brazil and Chile are from 2006; GDP figures are in US\$bn.  
Source: World Intellectual Property Organisation (WIPO).

#### Resident patent filings as a share population (%), 2007



Notes: Data for Brazil and Chile are from 2006; populations figures are in millions.  
Source: World Intellectual Property Organisation (WIPO).



Of the more than 66,000 patents in force in Mexico in 2007, the US held the highest share of ownership of these inventions, followed by Germany, France and Switzerland, according to figures from WIPO. Foreigners held 98% of all patents granted as at end-2007. Mexicans held just 1,291 patents in force, or about 2% of the total.

For industrial designs and utility models, the application process largely follows the procedures for patents, except that an examination process is not required. Trademark registration can take up to a year. Mexico has no “objection period” (publication of the application followed by a waiting or public-comment period). Moreover, trademarks may be used from the moment the IMPI receives the appropriate documents and application, rather than having to wait for the approval of registry. The application process is quick for most copyrights works.

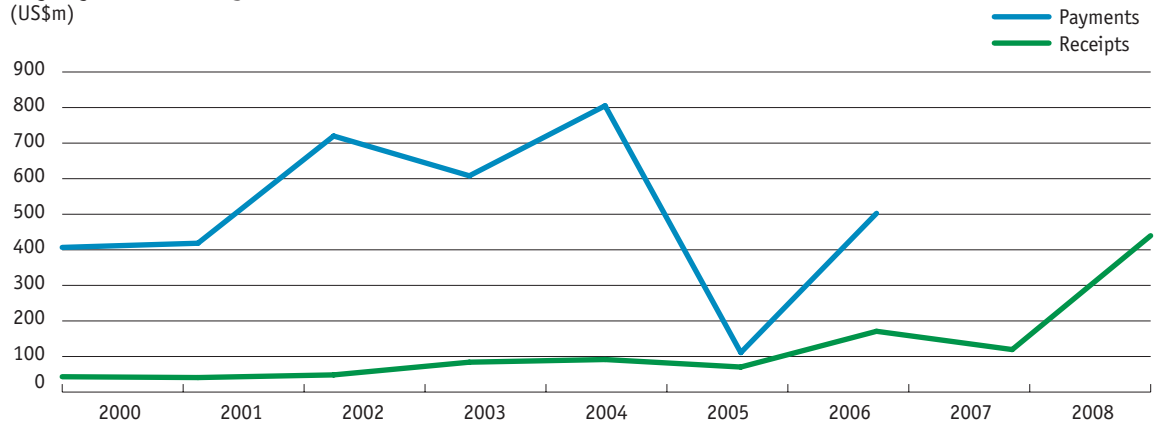
Patent filings in Mexico	
Indicator	2007
Number of patent filings, total	16,599
Number of patent filings, residents	15,970
Number of patent filings, non-residents	629
Number of non-resident patent filings as a share of total patent filings (%)	96.2
Resident patent filings as a share of GDP in US\$ bn (%)	0.45
Number of patents granted, total	9,957
Number of patents granted, residents	201
Number of patents granted, non-residents	9,756
Number of non-resident patents granted as a share of total patents granted (%)	98

Patents in force in Mexico (2007)	
Country of origin (top 10)	Number
United States	37,249
Germany	6,043
France	4,280
Switzerland	3,020
Japan	2,534
Netherlands	1,881
United Kingdom	1,783
Mexico	1,291
Canada	1,220
Italy	1,070
Sub-total (top 10)	60,371
Total	66,865

Source: World Intellectual Property Organisation—WIPO.



**Royalty and licensing fees, Mexico**  
(US\$m)



Note: Figures are from the balance of payments.  
Source: World Bank.

## Licences

Licensing agreements are common, particularly for agreements in which Mexican companies obtain technology, knowledge or brand transfer from companies in other countries. Mexican payments of royalties and licensing fees abroad totalled US\$502.6m in 2006, whereas receipts from abroad amounted to US\$170.9m, according to the latest information available from the World Bank.



## Overview of Mexico's intellectual-property environment

**I**ntellectual-property rights in Mexico are protected by a combination of national laws and international conventions and agreements. Mexico is a member of the World Trade Organisation (WTO) and the World Intellectual Property Organisation (WIPO). It has signed the Paris Convention for the Protection of Industrial Property, the Patent Co-operation Treaty (PCT) and the Union for the Protection of New Plant Varieties (UPOV).

Mexican law protects intellectual-property rights (IPR), and recent changes have stiffened penalties for violations; nevertheless, enforcement remains weak and pirated goods are commonly found throughout Mexico. Piracy in the country primarily affects the entertainment, pharmaceuticals, software, publishing and clothing industries.

To improve enforcement, Mexico created an IPR enforcement unit in 2003 that combines federal prosecutors and police forces. Public-awareness campaigns have also been published in newspapers and shown on television and at cinemas to discourage consumers from purchasing pirated goods. Despite attempts to improve enforcement of the law, consumer demand for pirated goods remains strong, and the sale of pirated goods represents a large source of informal employment in Mexico.

In January 2009 the government created a special intellectual-property tribunal that forms part of the Federal Courts for Tax and Administrative Issues (Sala Regional en Materia de Propiedad Intelectual del Tribunal Federal de Justicia Fiscal y Administrativa). The new tribunal had some 3,000 cases pending at end-2009.

In May 2010, Mexican President Felipe Calderón and US President Barack Obama—meeting to discuss a series of pertinent economic and political issues—announced, among other intentions, their aim of working towards simplifying the framework for IPR protection in order to boost competitiveness.

Mexico has also been involved in negotiations to sign on to the Anti-Counterfeiting Trade Agreement (ACTA), a proposed new international legal framework for IPR enforcement. A handful of countries of countries, including Mexico, are likely to join this voluntary treaty which primarily aims at fighting the production and exchange of counterfeit and pirated goods. A draft of the treaty was released in April 2010 and was under a period of public comment as of July 2010.



## USTR Watch List

In its latest annual report, released in April 2010, the US Trade Representative (USTR) kept Mexico on the official lower-level Watch List for high levels of piracy (one notch below the Priority Watch List rankings). Latin American and Caribbean countries Argentina, Chile and Venezuela were put on the Priority Watch List, whereas Brazil, Colombia, Costa Rica, the Dominican Republic, Ecuador, Guatemala and Peru were on the Watch List. The USTR added Mexico to its Watch List in 2002.

The USTR cited Mexico's need to strengthen lax enforcement of intellectual-property law and to increase resources directed towards improving co-ordination of these efforts. In addition, it called for consistency in the issuance of deterrent penalties.

## International Property Rights Index

In the 2010 International Property Rights Index (IPRI), created by the Property Rights Alliance (US) to compare the respect for physical- and intellectual-property rights among countries, Mexico ranked in 72nd place overall out of 125 countries. In terms of intellectual-property rights specifically, Mexico received a ranking of 59th place. On a regional level, Mexico's IPR protection ranked eighth out of 22 countries in Latin America, behind Chile and Colombia.

## Business-software piracy

Business-software piracy is common, particularly among small and medium-sized companies. The Business Software Alliance (BSA) and International Data Corporation (IDC) estimate that the piracy rate in business software in Mexico was 60% in 2009, compared to 59% in 2008 and 61% in 2007. The estimated average rate of software piracy in Latin America was 63% in 2009, down from 65% in 2008. Estimated financial losses from software piracy in Mexico are the second-highest in the region (after Brazil); these totalled US\$1,056m in Mexico in 2009, up from US\$823m a year earlier.



## Intellectual-property protection

Copyrights, patents, trademarks and industrial property are legally recognised in Mexico.

The Law for the Promotion and Protection of Industrial Property came into force in June 1991 and was revised and renamed the Industrial Property Law (Ley de Propiedad Industrial) in 1994. The 1991 law lengthened the initial term for trademarks to ten years (from five) and increased the patent term to 20 years (from 14).

For the first time in Mexico, legislation extended eligibility for product patents to pharmaceuticals, chemicals, biotechnology products, metal alloys and agrochemicals. Inventions not patentable are biological processes for producing and reproducing plants and animals, biological and genetic material as found in a natural state, animal breeds, and human tissue and plant varieties.

Trademarks are protected for ten years, but those not used for three consecutive years may be cancelled. In order to recognise the priority of a mark, reciprocity need no longer exist with the country of origin of the application.

The law requires universal novelty of industrial designs/utility models (only local or national novelty was required before). Commercial and industrial applications that retain information on an individual or entity are considered trade secrets.

Mexico's Federal Copyright Law (Ley Federal de Derechos de Autor) was implemented in March 1997, replacing the 1963 Federal Copyright Law. The copyright law grants the author both moral and patrimonial rights (moral rights make the author the first and only perpetual owner of the rights of his or her works; patrimonial rights allow the owner to "exploit the work exclusively or authorise others to exploit the work"). The 1997 law expanded the definition of copyrightable materials and brought Mexico into compliance with its obligations under the North American Free-Trade Agreement (NAFTA). Although the legislation decriminalised copyright violations, it increased financial penalties.

The National Copyright Institute (Instituto Nacional de Derechos de Autor—INDA), an independent agency of the Ministry of Education, is responsible for the administrative enforcement of the copyright law. The institute is permitted to conduct investigations, request appropriate inspections, perpetuate temporary termination of copyright violations and impose penalties.

The Mexican Institute of Industrial Property (Instituto Mexicano de Propiedad Industrial—IMPI) oversees broad IPR enforcement and intervenes in copyright infringements that involve commerce. The law protects all original works that can be "disclosed or reproduced by any means" from the moment they



### Intellectual-property law

**Conventions.** Paris Convention, 1883–1967; member of the World Intellectual Property Organisation. Bern Convention for the Protection of Literary and Artistic Works (June 1967); Brussels Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite (August 1979); Treaty on the International Registration of Audiovisual Works (Film Register Treaty, February 1991); Convention for the Protection of Producers of Phonograms Against Unauthorised Duplication of Their Phonograms (December 1973); Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations (May 1964); WIPO Copyright Treaty (WCT, March 2002); and WIPO Performances and Phonograms Treaty (WPPT, May 2002).

**Basic laws.** Industrial Property Law (renamed and reformed in 1994, with regulations published in 1999); Federal Copyright Law (1996) and its procedural regulations (1997).

#### Patents

**Types and duration.** Patents of invention or improvement, 20 years; no renewal. Patents for pharmaceutical products and chemical pharmaceutical products may be extended to 23 years when the patent holder grants a licence for the exploitation of the patent to a majority Mexican-owned company within

six months of the date of granting of the patent. A list of Mexican patents relating to pharmaceutical products, indicating not only the patent in question but also the generic name and the pharmaceutical identity of the active material, must be submitted to the authorities.

**Unpatentable.** Unless specifically prohibited by the Industrial Property Law of 1994, inventions are considered to be patentable if they meet the other requirements including non-obviousness, novelty and industrial application. The only inventions that may not be patented are animal species and breeds, plant species, biological material in its natural state, genetic material, and the human body and its living parts.

Compulsory licensing is limited to where patents are not worked within three years, or for reasons of national emergency or national security. Importation of the patented item qualifies as working the patent.

#### Industrial designs and utility models

The application procedure is similar to that for patents; duration is 15 years for industrial designs and ten years for utility models, non-renewable. Utility-model protection is designed for minor improvements in tools, utensils or objects that provide practical advantages.

#### Trademarks

**Duration.** Good for ten years and renewable for like periods as long as marks are put to commercial use. Marks not put to use within three years are voided.

**Legal effect.** Right is established through use. Registration establishes an exclusive right to use by the registrant, but prior rights may be granted to earlier non-registered users of trademarks.

**Not registrable.** Animated three-dimensional names, figures or forms; generic words and technical names commonly used to describe the product; foreign-language translations or artificial compositions of non-registrable words; marks that could mislead the public; and marks identical or confusingly similar to a previously registered mark.

#### Copyrights

**Types and duration.** Copyright can apply to a variety of works, including literary, musical, dramatic, broadcasting, photography, works of art (graphic design, pictorial, drawing, sculpture, caricature), cinematography, audiovisual work, editorial compilations (such as encyclopaedias and anthologies), and computer programmes and operating systems. Copyright lasts for 75 years after the author's death.

**Legal effect.** Copyright is an author's automatic legal right on eligible works. However, registration is recommended in the event legal action is taken. Penalties can be brought against anyone who reproduces, edits or exploits the work for gain without obtaining the author's permission, including anyone who reproduces the work in greater numbers than contractually agreed. Copyright law is weighted in favour of the rights of the original author versus the rights of a company, though an author may transfer a copyright to a company.



are tangible, regardless of whether they have been registered. In May 2004 Congress altered the Federal Law against Organised Crime (Ley Federal Contra el Crimen Organizado) to categorise copyright violation and trademark counterfeiting as punishable crimes. Persons charged with piracy now face 20–40 years in jail, along with monetary fines.

Changes to Mexico's penal code over the years have increased the consequences faced by those who violate IP rights. The 1994 law decriminalised most unauthorised uses of patents and trademarks but raised financial penalties. Regulations, published in 1999, state that infringers face fines of up to 20,000 times the daily minimum wage and are also punishable by damages of at least 40% of the sales value of unauthorised goods and services. Infringers also face prison terms of 2–6 years. The law eliminated the possibility of offenders or pirates being released on bail. Those charged with trade-secret disclosure also face prison terms of 2–6 years. Theft of client lists is included in violations of trade secrets.

Criminal penalties apply only to repeat offenders who traffic in pirated goods. In December 2006 IMPI created a unit, known as the Alianza para la Prosperidad y Seguridad de America del Norte, to investigate the points of entry that register the most contraband goods. The unit works with Canada and the United States to share information and best practices in combating piracy. Nonetheless, piracy remains widespread.





## Registering property

**T**he Mexican Institute of Industrial Property (Instituto Mexicano de Propiedad Industrial—IMPI) oversees the registration of intellectual property, including patents, trademarks and licences. Registration of copyrights is through the National Copyright Institute (Instituto Nacional de Derechos de Autor—INDA). The patent-approval process can average 3–5 years.

Whilst every effort has been taken to verify the accuracy of this information, neither The Economist Intelligence Unit Ltd. nor the sponsors of this report can accept any responsibility or liability for reliance by any person on this white paper or any of the information, opinions or conclusions set out in the white paper.

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