KfW Research
Emerging Markets Spotlight

Colombia: Harnessing technology and innovation for economic development

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Economic situation Real growth Real private consumption (y-o-y) Inflation rate	**Recovery after oil price shock is slowing** The oil price decline of 2015/2016 dampened growth performance so that, contrary to the regional trend, 2017 was another year of weak performance. After recovering in 2018 the economy gained only little momentum at the start of the year but total annual growth is expected to be a bit stronger than in 2018. Inflation has remained slightly above the 3% target since early 2018 and within the target corridor of +/-1 p.p., while the key interest rate was unchanged over the same period.
Growth financing Budget balance / GDP Current account balance / GDP Debt of private non-fin. sector	**Challenging fiscal policy and twin deficit** Despite the expected additional expenditure, i.e. on health and education for refugees and migrants from Venezuela (maximum 0.4% of GDP expected in 2020), the government remains committed to its fiscal target (budget deficit of 2.4% in 2019 and 2.2% in 2020), although the Advisory Committee had permitted a loosening. Adding to the budget deficit is a current account deficit, which is set to grow given the weakness of the global economy.
Growth resources Investment ratio Share of manufacturing Labour market participation	**Labour market participation is high, share of manufacturing low** Labour market participation is 75% of the working age population, a relatively high share by international standards. Moreover, the working-age population is growing substantially with refugees and migrants entering from Venezuela, which could provide some boost to growth. The investment ratio is slightly above the regional average and investment activity is expected to pick up after the relatively slow start to the year.
Economic relations with Germany Germany's share of exports Germany's share of imports FDI inflows from Germany	**Asymmetric trade relations** As recently as in 1991, Germany was Colombia's second most important export market after the US but with the export share now at 1% it has dropped to 20th place (US is in first place with 25%). Germany's share in goods imports, on the other hand, is a substantial 4.5%. The official Colombian investment portal, ProColombia, mentions Germany explicitly in the context of missed opportunities for direct investment in Colombia.

The current value is among the ...

Legend: lowest | low | medium | high | highest

20% of the past 10 years.

Investment climate – assessment by our local experts

On the one hand, the structure and problems of Colombia's economy fit seamlessly with the Latin American profile. On the other hand, despite its modest share in value added, manufacturing rests on a relatively broad basis and can look back on a long tradition. Monetary and fiscal policy are oriented towards stability and the country has been able to attract substantial direct investment since the 2000s despite all internal problems, particularly in the extractive industries and oil sector. The structural transformation has mainly resulted in more employment in trade and hospitality but agriculture also continues to contribute significantly to employment and economic output.

Continued on p. 2

Focal theme: Productivity growth urgently needed, starting position is quite good

Urgent steps are needed to combat Colombia's weak productivity growth, as the structural transformation has so far gone at the expense of manufacturing. Digital technologies and Industry 4.0 offer new starting points for value creation through data utilisation and process optimisation. The country's long experience with the planning of economic development, a new Ministry for Science, Technology and Innovation (formerly the Administrative Department of Science and Technology – Colciencias) and the measures provided for in the new National Development Plan offer a good starting point for changes.

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Investment climate – assessment by our local experts

The successful conclusion of peace talks with the Fuerzas Armadas Revolucionarias de Colombia (FARC) and the signing and ratification of the peace agreement by the national congress in November 2016 ushered in a new era for Colombia. Resources that were previously tied up in this conflict can now be used to develop the country, including rural areas, as there are major regional disparities. One advantage is that Colombia boasts several industrial centres (Bogotá, Cali, Medellin, Barranquilla) that provide investors with opportunities for diversification at different locations.

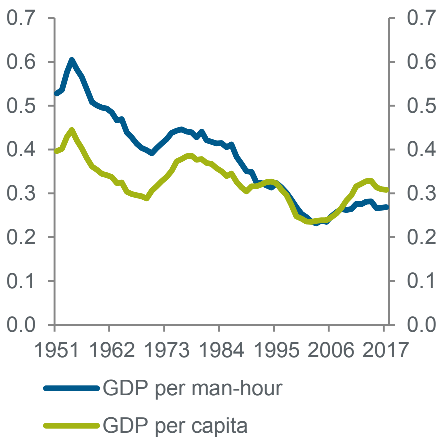
The 50 years of conflict between the state and the guerrilla have shaped society, including business practices. More than in other Latin American economies, business circles in Colombia are relatively closed, so networks and door openers are necessary. Bureaucracy is prevalent, as it is in other countries of the region. According to the World Bank, for example, it takes 92 days for a business to receive a permanent electricity connection for a newly established warehouse. Opening a bank account is also a complex undertaking but borrowing conditions (credit information system, collateral and insolvency law) are very good.

Manufacturing has a long tradition and household appliances have been made in the country since the 1930s. Important industries are automotive suppliers, the chemical industry, the agricultural industry and the related packaging industry. The 68 technological centres and laboratories accredited by the Ministry of Science, Technology and Innovation and the universities' engineering focus encourage technological development. Under the 4G Initiative that was launched in 2014, the transport infrastructure is to be expanded, which is a particular challenge given the country's geography. This will also provide a boost to the development of the transport and logistics sector. The renewables sector is regarded as a growth market. However, tenders for independent electricity generators failed in 2018 but improvements are planned. The growing middle class makes the country attractive for consumer goods manufacturers. With the subsidence of violence and as a result of the peace process, tourism is gaining importance as well, although an urgent travel alert remains in place for some regions and the peace talks with the guerilla group Ejército de Liberación Nacional (ELN) have been suspended.

Based on an interview conducted with Dr Jörg Seyfart (Director of the DEG Representative Office for the Andean countries) on 7 August 2019. ■

Figure 1: Labour productivity

Relation to OECD average



Source: Feenstra, R. C., Inklaar, R. and Timmer, M. P. (2015), 'The Next Generation of the Penn World Table' American Economic Review, 105(10), 3150–3182; own calculations.

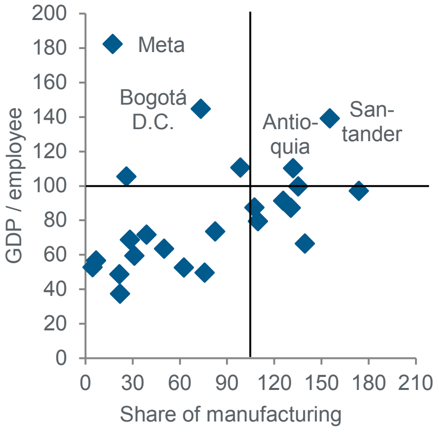
Focal theme: Productivity growth urgently needed, starting position is not bad

Based on its economic history and low productivity, Colombia is a typical representative of Latin America. Until the 1980s, the country followed an import substitution strategy to boost industrialisation, subsequently opened its economy and has placed innovation and competitiveness at the heart of its development strategy since the mid-1990s. Various plans have been adopted to this end – 11 alone between 1994 in 2018 – but implementation has been inadequate. As a result, the process of converging with developed economies has stalled.

Labour productivity and competitiveness leave something to be desired. According to OECD estimates, four fifths of the income gap between the OECD average and Colombia is due to low labour productivity. Gains that have occurred are mainly due to developments within economic sectors and not so much the result of structural change. The share of manufacturing in economic output has declined again since 2007 and, at 11%, is slightly lower than the Latin American average. Its share in employment, however, has been a relatively constant 12% since 1950, which illustrates the productivity problem yet again. Another problem is the relatively low competitiveness of the manufacturing sector, which is reflected in the fact that Colombia ranks 70th of 150 countries on the UNIDO Competitive Industrial Performance Index. For the subcomponent of per-capita manufactured goods exports, Colombia even ranks a mere 108th and this is partly due to the dominance of commodities in exports.

Figure 2: Regional differences

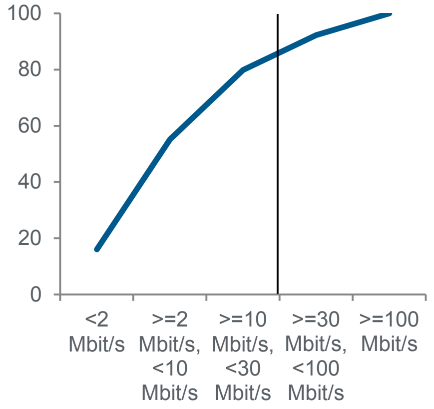
100=national average



Source: DANE; own calculations.

Figure 3: Download speed

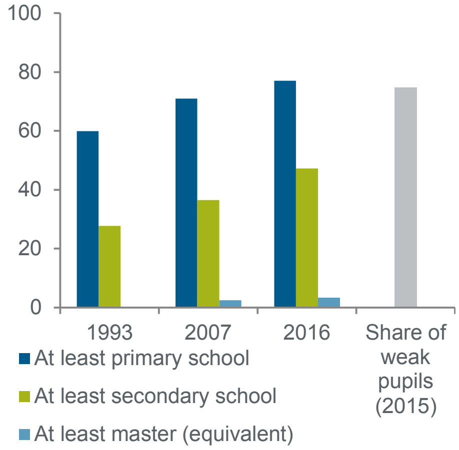
Businesses with at least ten employees, cumulative share in per cent



Source: OECD

Figure 4: Level of education

Share in population over 25 years in per cent



Sources: World Bank (WDI), OECD.

Raising productivity and continuing to develop as an emerging industrial nation is also compatible with UN Sustainable Development Goal 9. This involves building resilient infrastructure, promoting inclusive and sustainable industrialisation and fostering innovation. In doing so, Colombia needs to overcome major regional productivity differentials to be able to develop national value chains. The labour productivity gap between its regions is the second widest in Latin America after Mexico. The shares of manufacturing in value added vary even more widely between the regions.

Colombia has potential for improving its infrastructure, local knowledge base and innovation and digitalisation should also be taken into consideration here. Digital technologies spread more quickly than technologies of the industrial age. They enable new ways of creating value added to be developed through new business models and process optimisation. At present, Colombian businesses use the Internet primarily for expanding their market access and less for transforming their business processes. Thus, around two thirds of enterprises with at least ten employees have an internet presence. Although almost all businesses have a broadband internet connection, speeds are still unsatisfactory. Colombia has an above-average telecommunications infrastructure, both in a regional comparison and compared with countries with the same income level. The development of postal services, which are important for parcel deliveries and online trade, among other things, is also in the global mid-range, with Colombia occupying rank 66.

Developing new industries and adapting traditional ones requires workers to have appropriate abilities and skills. According to the digitalisation index of the Latin American Development Bank, production factors are lagging behind primarily in (investment in) innovation but less in human capital. Approximately 60% of tertiary institutions offer courses in computer sciences, electrical engineering and information technology, where the focus is on robotics and control technology, with nine courses per 1 million inhabitants, and less on courses in artificial intelligence or data analysis (with around four courses each). But despite all progress, the quality of (school) education remains too low and the most recent reforms need time to work. Moreover, educational levels vary greatly from region to region, mainly because of the higher poverty rates in rural areas.

In recognition of its economic progress, the OECD invited Colombia to become its 37th member in 2018. Real GDP per capita has nearly quadrupled since 1950, with a surge taking place during the oil-driven investment boom of the 2000s. The country is currently facing the challenge of implementing the peace agreement with the FARC, as well as providing for and integrating the refugees and migrants who have come from Venezuela – at least 1.3 million persons since 2015 with a Colombian population of around 50 million. Even if productivity growth is not the top priority, it needs to gain momentum at least in the medium term to revive the process of converging with industrialised countries. Increasing public and private investment in science, technology and innovation to 1.5% of GDP, as provided for under the National Development Plan 2018–2022, should help achieve this. ■

Charts

Economic situation

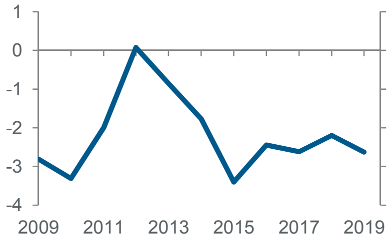
Real GDP (y-o-y, in per cent)

Real private consumption (y-o-y, in per cent)

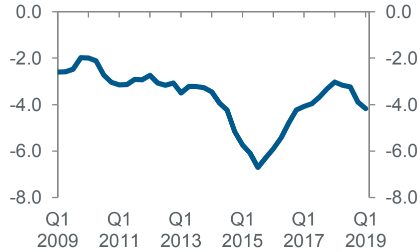
Consumer price inflation (in per cent)

Source: Datastream; OECD, World Bank, DANE; own calculations

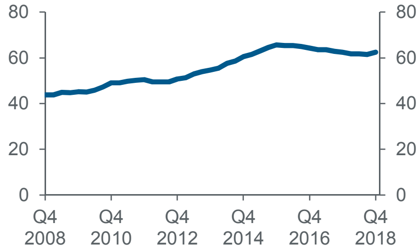
Growth financing



Budget balance (in per cent of GDP)



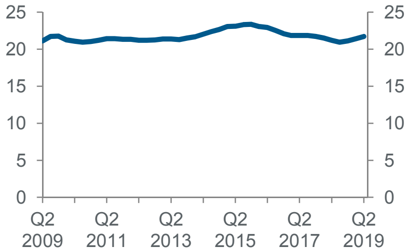
Current account balance (in per cent of GDP)



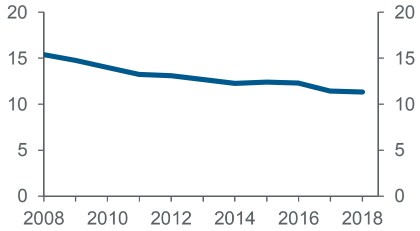
Debt of private non-financial sector (in % of GDP)

Source: Datastream; IMF, World Bank, BIS; own calculations

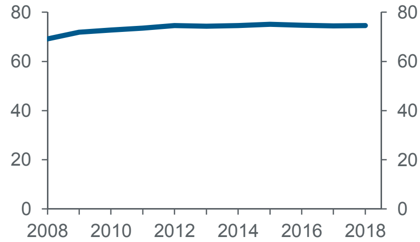
Growth resources



Gross fixed capital formation (in per cent of GDP)



Manufacturing (share of economic performace, in per cent)

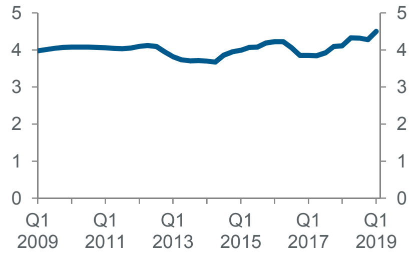


Labour force participation (in per cent of population aged 15–64 years)

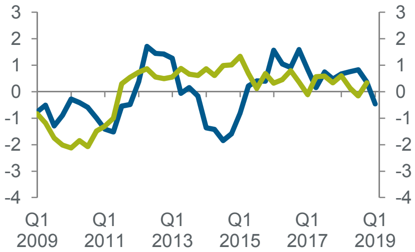
Source: Datastream; OECD, World Bank; own calculations

Economic relations with Germany

Exports to Germany (share of total exports, in per cent)



Imports from Germany (share of total imports, in per cent)



FDI inflows from DE (0,1 standardised)
FDI inflows, total (0,1 standardised)

Source: Deutsche Bundesbank; Datastream; IMF; own calculations

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