

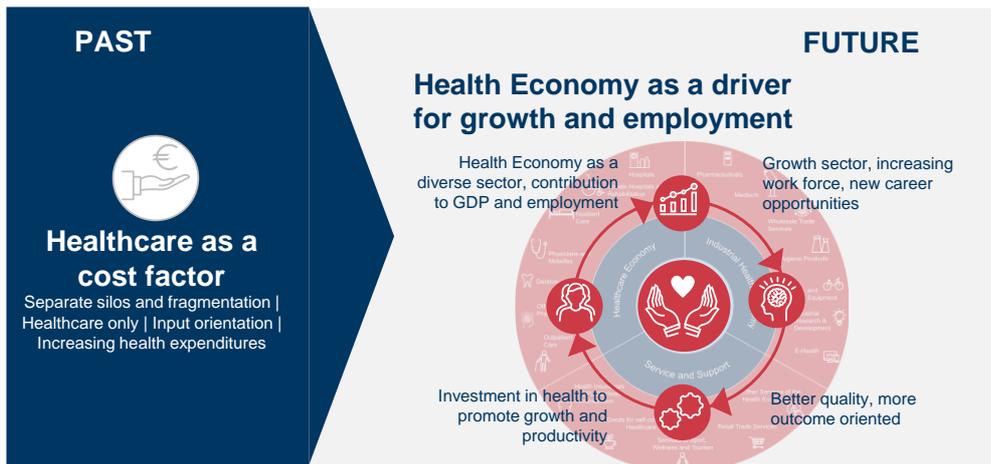
MANAGEMENT SUMMARY JULY 2020

The Economic Footprint of the Health Economy in Brazil

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Challenging the past understanding of healthcare

Health expenditures have a substantial impact on the economy. New data, calculated by WifOR, is challenging the past understanding of healthcare as an economic burden, and fostering the paradigm shift towards a global Health Economy. WifOR's calculations show that the global Health Economy accounted for 7.6 percent of the global gross value added (GVA) and secured 5.8 percent of global employment in 2014. For 2020, WifOR estimates the contribution of the Health Economy to global GVA to be 9.3 percent.



Investments in health lead to economic growth, wealth and employment

Health expenditures create economic growth, wealth, and well-being along the value chain of care: from the inpatient and outpatient sector (e. g. hospitals, practitioners, care) to the Industrial Health Economy (e. g. pharma, biotech, medtech, R&D, e-health). By measuring the contributions along the entire value chain, Health Economy Reporting (HER) can offer robust conclusions and actionable recommendations to key decision makers. It also makes comparisons with other important sectors of the economy possible while enabling the impact assessment of future health policy decisions.

„Health investment is the smartest investment – it pays off.“

Dr. Zsuzanna Jakob, WHO Regional Director for Europe

WifOR's research is aligned with initiatives of the World Health Organisation (WHO). The WHO also stresses the fact that health systems are essential in determining the economic performance and stability of a country. Further, health systems have a positive impact on the economic performance of other sectors of the economy. Beyond that is their crucial role as a key sector for driving forward the implementation of local and national goals for sustainable development, by enhancing its employment, training, and purchasing functions both locally and nationally.¹

¹ World Health Organization, "Economic and Social Impacts and Benefits of Health Systems" (Copenhagen, 2019).

Increasing health investments are necessary to achieve the Sustainable Development Goals (SDGs)

SDG 3 aims to “ensure healthy lives and promote well-being for all at all ages”. According to the Lancet, additional health investments of USD 371 billion are needed per year in lower- and middle-income countries by 2030 to reach health system targets.² The authors estimate a financing gap of USD 20-54 billion per year. If funds should be made available, those investments would save 97 million lives and increase life expectancy drastically.

Health investments in Brazil are below the global average

With a 9.5 percent share in the gross domestic product (GDP), health expenditures in Brazil are below the global average. However, investments in health have been increasing steadily since 2013.³ Against the background of their multidimensional benefits put forward by research done by the WHO and WifOR health investments should continue to increase towards the global average in the future.

	 Brazil	 Colombia	 Argentina	 Mexico	 Turkey	 Global	 Germany
Share of health expenditures in GDP in 2017	9.5 %	7.2 %	9.1 %	5.5 %	4.2 %	9.9 %	11.2 %
Share of Health Economy in GDP in 2017	7.2 %	6.8 %	8.8 %	5.3 %	4.1 %	8.0 %	12.0 %
Labor force share in overall economy in 2017	7.4 %	7.4 %	8.6 %	5.6 %	5.7 %	6.2 %	17.0 %

Gross value added and employment as key economic indicators of the Health Economy

Gross value added (GVA) measures the contribution of sectors to the economic performance of a country. The sum of GVA over all sectors plus the net tax on goods is commonly known as the gross domestic product (GDP). As a key economic indicator within countries' national accounts, GVA makes comparisons between local units (e. g. countries, regions, districts) and sectors possible. The second indicator, employment, comprises all persons of working age that are either in paid employment or are self-employed.

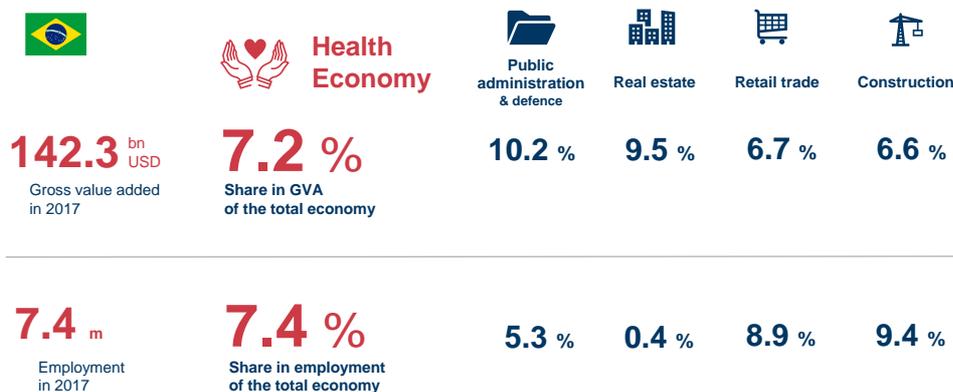
² Karin Stenberg et al., “Financing Transformative Health Systems towards Achievement of the Health Sustainable Development Goals: A Model for Projected Resource Needs in 67 Low-Income and Middle-Income Countries,” *The Lancet Global Health*, 2017.

³ See Global Health Expenditure Database (WHO). URL: <https://apps.who.int/nha/database> and The World Bank data, URL: <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS> (Accessed on 07 July 2020).

By means of those two indicators, HER quantifies the contribution of the Health Economy to the total Brazilian economy. The main data source of the Brazilian HER is the World Input-Output Database⁴ (WIOD) that offers information on GVA and employment for 56 Brazilian sectors. Further, the WIOD contains information about the interdependencies of those sectors, so that indirect and induced effects can be calculated. The Health Economy is extracted from various sectors (e. g. human health and social work activities, manufacture of pharmaceutical products, wholesale and retail trade, scientific R&D) and, therefore, is called a cross-sectional sector.

The Health Economy is a stabilizer for the Brazilian economy

A direct GVA of USD 142.3 billion meant a 7.2 percent share of the Health Economy in Brazil's economic performance. With an employment of 7.4 million, the share of the Health Economy was 7.4 percent in total employment in Brazil. The sector is, therefore, one of the most important for growth and employment in Brazil.



Even more strikingly, the average annual growth rate of the sector's GVA during the last decade was 4.4 percent and, therefore, higher than GVA growth of the total economy in Brazil (3.6 percent). During the same period, employment of the Health Economy has increased by 2.3 percent every year. Again, this number is higher than employment growth of the total Brazilian economy (0.1 percent).

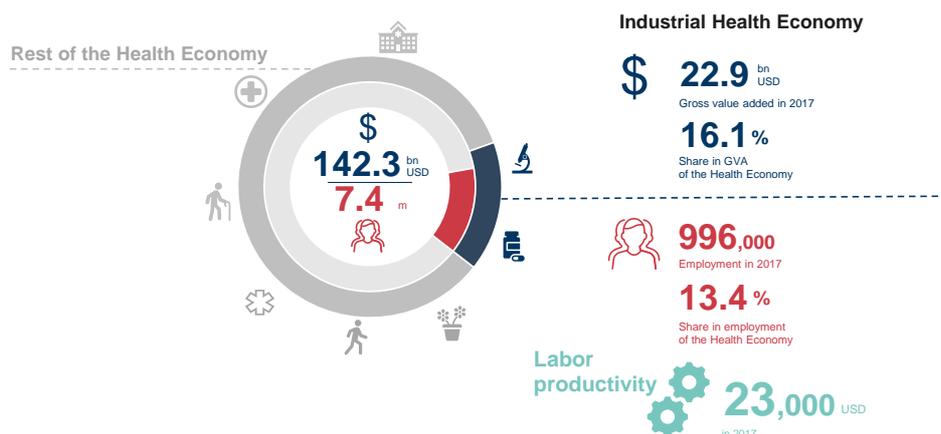
Beyond direct effects, the Health Economy generates spillover effects within the Brazilian economy. Due to intermediate products and the partial spending of income generated in the Health Economy and its suppliers, the sector generates indirect and induced effects. The sum of direct, indirect, and induced effects, the economic footprint of the sector, amounted to USD 294 billion and an employment of over 15.8 million. This means that, for every USD 1 generated by the Health Economy, an additional USD 1.1

⁴ Marcel P. Timmer u. a., "An Illustrated User Guide to the World-Input-Output Database: the Case of Global Automotive Production", *Review of International Economics*, 2015.

were generated in the Brazilian economy. Ten jobs in the Health Economy secure eleven additional jobs within the Brazilian economy.

The Industrial Health Economy is the productive pillar of the sector

The share of the Industrial Health Economy in the sector's GVA was 16.1 percent in 2017. The sub-sector generated USD 22.9 billion and supported 996,000 jobs (13.4 percent in employment of the Health Economy). The labor productivity of the sub-sector was USD 23,000.



The sub-sector's growth during the last decade remains behind the growth rate of the Health Economy as a whole. Since 2008, the sub-sector's GVA has grown 1.0 percent every year while employment decreased by 1.5 percent annually. Against this background, there is a need for action in Brazil to develop the sub-sector into a strong industrial pillar in terms of value added and employment.

The Industrial Health Economy itself is a heterogeneous sub-sector. It comprises the manufacture of pharmaceutical products and medical technology as well as service-oriented goods like R&D and wholesale trade.

Novartis contributes USD 104 million to the GVA of the Brazilian Health Economy

In 2019, the contribution of Novartis' operations and R&D activities in Brazil was a GVA of USD 104 million and an employment of 2,195.⁵ With USD 47,380, Novartis' labor productivity was much higher than the sector's labor productivity in Brazil.

In addition, Novartis Brazil shows high global interdependencies. The company's global spillover effects amounted to a GVA of USD 412 million and an employment of 16,342. Hence, its global economic footprint was a GVA of

⁵ FES impact valuation figures are reported for the year 2019. Due to data availability, HER figures are reported until the year 2017.

USD 515 million and an employment of 18,537. Every USD 1 of GVA by Novartis Brazil generates USD 4.0 globally. Every job secures 7.4 additional jobs.

By incorporating HER into its materiality assessment, Novartis creates better understanding of the societal and economic value of corporate activity. HER adds to Novartis' existing FES impact valuation that combines financial, environmental, and societal indicators measuring Novartis' impact in Brazil.

Health investments in Brazil are crucial to set up a defence plan against future pandemics

In the light of the COVID-19 pandemic, it has become obvious that substantial health investments in Brazil are crucial not only to stabilize the economy but also to set up a defence plan against future pandemics.

During the COVID-19 pandemic, policymakers in Brazil need to address urgent measures that are primarily ensuring access of the vulnerable to diagnostics and treatment and improving R&D for accelerated development of diagnostics, treatments, and vaccines.

However, it is equally important to increase investments in health after the pandemic. Instead of budgeting health expenditures on an annual basis, policymakers in Brazil should consider those expenditures as an investment with its return being a resilient Brazilian health system that features a pandemic preparedness.

HER should be set up as an evidence-based monitoring tool to support political decision making in Brazil

Besides strengthening all sub-sectors of the Health Economy, a continuous reporting of the sector by the Brazilian ministries together with the national statistical institute would provide an evidence-based monitoring tool to support decision making of economic and health policymakers. The present report is a starting point for a new, objective dialogue between politicians, statistical institutes, associations, and companies.

WifOR Institute is an independent economic research institute that originated from a spin-out of the Department of Public Economics and Economic Policy at the Technical University of Darmstadt, Germany. WifOR's fields of research include Economic, Environmental and Social Impact Analyses as well as Labour Market and Health Economy research.

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