World Health Organization
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Health economy reporting: a useful tool for evidence-based investments for health and development

A case review from Germany

Investment for health and development

Review paper

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Abstract

Governments across the WHO European Region need to target investments in health to generate jobs and promote inclusive and sustainable economic growth as they implement the 2030 Agenda for Sustainable Development by building on the WHO European strategy and policy framework, Health 2020. This report reviews a well-established methodology of health economy reporting that quantifies and analyses the health sector's economic impact on growth and employment based on national accounts. The report concludes that the methodology enables evidence-based health policy to steer and guide investments for health, employment and inclusive and sustainable growth within the WHO European Region. Value- and evidence-based public health investment provides effective and efficient, inclusive and innovative solutions that can drive social, economic and environmental sustainability. Investing for health and well-being is a driver and enabler of sustainable development, empowering people to achieve the highest attainable standard of health for all.

Keywords

HEALTH SERV, HEALTH PERSONNEL, HEALTH EMPLOYMENT, HEALTH SYSTEMS, HEALTH POLICY, UNIVERSAL COVERAGE, ECON DEVELOPMENT, METHODS, HEALTH ECONOMY, HEALTH ECONOMY REPORTING, INVESTMENT FOR HEALTH AND WELLBEING, SUSTAINABLE DEVELOPMENT

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CHS	core health segment
EHS	expanded health segment
ESA	European System of Accounts
GDP	gross domestic product
GVA	gross value added
OECD	Organisation for Economic Co-operation and Development
SDG	Sustainable Development Goal
SHA	System of Health Accounts
UHC	universal health coverage
WHO	World Health Organization

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1. Introduction

Health 2020 – the WHO European Region health policy framework – supports action across government and society to improve health for all and reduce health inequalities through improved leadership and governance for health and by promoting health in all policies *(1)*. Health 2020 acknowledges the health sector's importance to the economy: health directly contributes to increased productivity, a more efficient workforce, healthier ageing, less expenditure on sickness and social benefits, and less tax revenue lost. In addition, as one of the world's largest and most rapidly growing industrial and service sectors, the health sector contributes an estimated 8.2% of the gross domestic product (GDP) within the WHO European Region *(2)* and is a strong pillar for employment in most high-income countries. Encompassing a wide range of business sectors, services, manufacturers and suppliers, the health sector is a major employer, landowner, builder and consumer, driver of research and innovation, and a significant sector in terms of international competition for people, ideas and products.

The 2030 Agenda for Sustainable Development *(3)*, with its 17 Sustainable Development Goals (SDGs) and 169 targets, requires integrated approaches, deep interconnections and cross-cutting elements to leave no one behind. SDG 3 – ensuring healthy lives and promoting well-being for all at all ages – is interwoven throughout the 2030 Agenda, with its targets linking directly to other goals, such as those involving poverty (SDG 1), nutrition (SDG 2), education (SDG 4), gender equality (SDG 5), water and sanitation (SDG 6), infrastructure, industrialization and innovation (SDG 9), inequality (SDG 10), cities and communities (SDG 11), production and consumption (SDG 12), climate action (SDG 13) and peace, justice and institutions (SDG 16) *(4)*. These all represent determinants of health and have an impact on health equity. Progress in health critically depends on progress in other sectors, and health in all policies requires health in all SDGs. On the other hand, sustainable health and health systems are critical for achieving the SDGs, and the health sector can play an important role by walking the talk through its own investments and sustainable procurement *(5,6)*.

The High-Level Commission on Health Employment and Economic Growth demonstrated how targeted investments in health play a key role as a job generator and driver of inclusive and sustainable economic growth, focusing on health workforce investment *(7)*. The International Health Partnership for Universal Health Coverage (UHC) 2030 promotes action on service delivery, health financing and governance, and advocates UHC as a critical component of sustainable development *(8)*. Building on but going beyond the health workforce, service delivery and governance for health investments, health economy reporting provides a structured approach for governments, the private sector and general public stakeholders to better understand the scope and impact of the health economy as a starting point for planning and evaluating its strategic role for health and for sustainable and inclusive economic growth.

Given the increasing interest in this approach, this report reviews a well-established methodology of health economy reporting that quantifies and analyses the health sector's economic impact

on growth and employment, based on national accounts, collaboratively developed between ministries of health and ministries of economy. The methodology reviewed here is a concept distinct from that of national health accounts, which aim to support health system governance and decision-making by estimating the amount and characteristics of health spending. Health economy reporting using national accounts goes a step further by comprehensively informing health investment decisions about their employment and growth impacts. This review focuses on the example from Germany, where health economy reporting based on national accounts is a well-established methodology and is broadly applied. The method is also applicable to other countries in the WHO European Region.

By dividing the health economy into various segments, the reporting system comprehensively represents the health economy as a heterogeneous intersectoral industry, which produces goods and provides services. It also shows its structures and interrelations with the population, providers, insurers, and government. The reporting system offers a base for economic impact analysis of the health economy as a whole, as well as its various segments. Moving towards an investment approach to health *(9,10)*, the reporting system analyses a whole array of issues, including the direct, indirect and induced total contributions and related multiplier values for gross value added (GVA), employment and foreign trade of the overall health economy, as well as for selected segments of a country's health economy, depending on existing and methodologically feasible categorizations and disaggregations of it. In addition, the methodology allows for establishing time series[1] to analyse trends and new developments related to the contribution of health economies to growth and trade, as well as the supply and demand of the health economy workforce[2] *(11)*.

This analytical summary report serves as an entry point for Member States of the WHO European Region, who want to use expert services available for health economy reporting and related capacity-building as a practical approach towards the development and implementation of a systematic strategy, to optimize the impact of health sector investments on sustainable and inclusive economic growth. Chapter 2 outlines the frameworks, concepts and methodological background of health economy reporting. Chapter 3 demonstrates the variety of uses and analytical capacities the methodology offers. Chapter 4 summarizes the aspects the methodology can quantify and analyse. Chapter 5 gives an outlook on applying health economy reporting in Member States of the WHO European Region, and Chapter 6 concludes.

1 For most countries within the WHO European Region, data are available from 2008 onwards.

2 It should be noted that the aspects mentioned here can be analysed using data from national accounts and health expenditure surveys only. Complementing those datasets with health financing and distribution, cost-of-illness and health labour accounts enables more detailed analyses of the financing, productivity and health dividends of health economies. Since these analyses are carried out routinely using a range of existing methods and tools available to WHO Member States in the European Region, this analytical review focuses solely on the methods to calculate the GVA, employment and foreign trade impacts of health economies.

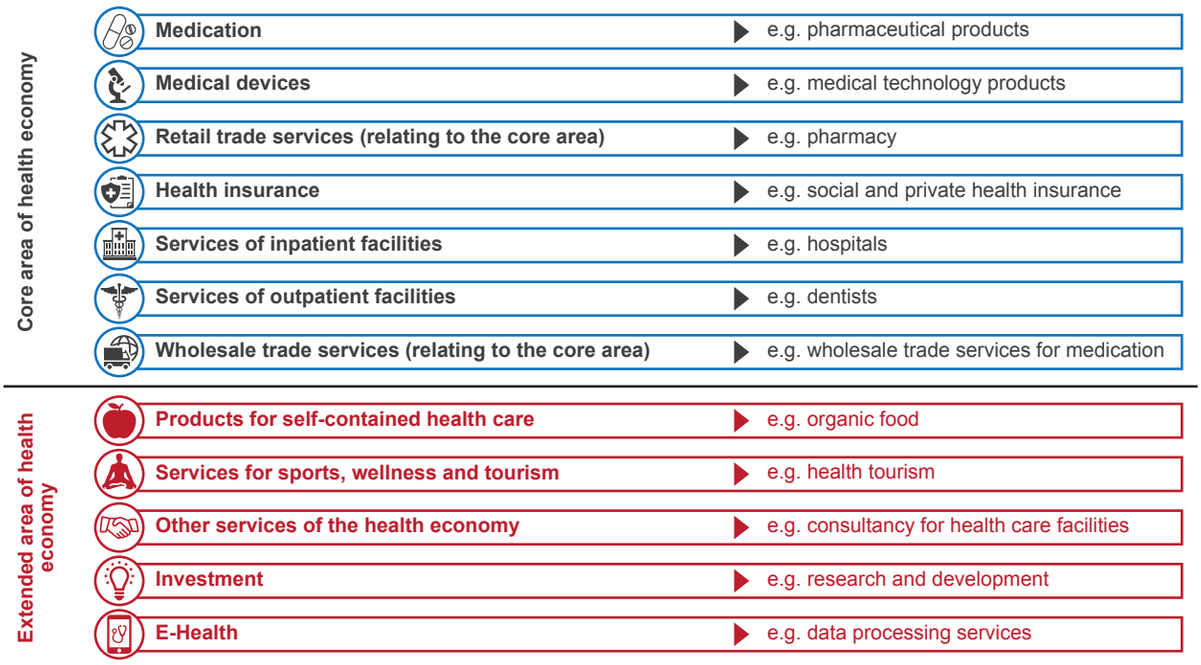
2. Frameworks, concepts and methods

Comprising the production and marketing of products and services, which serve to prevent disease, promote and restore health, the health economy is a key economic sector, a job generator and a driver of inclusive economic growth *(7)*. The frameworks, concepts and methods underlying German health economy reporting were developed within projects on behalf of the Federal Ministry of Economic Affairs and Energy of Germany *(12)*.

2.1 The health economy in the 4-quadrant model

Health economy reporting follows product- and service-specific, rather than sector-specific segmentation, which separates the overall health economy into a core and an expanded area, using a total of 12 aggregate categories of products and services, as shown in Fig. 2.1.

Fig. 2.1 Core and expanded areas of the health economy



Source: adapted from Kronenberg & Schwärzler *(11)*.

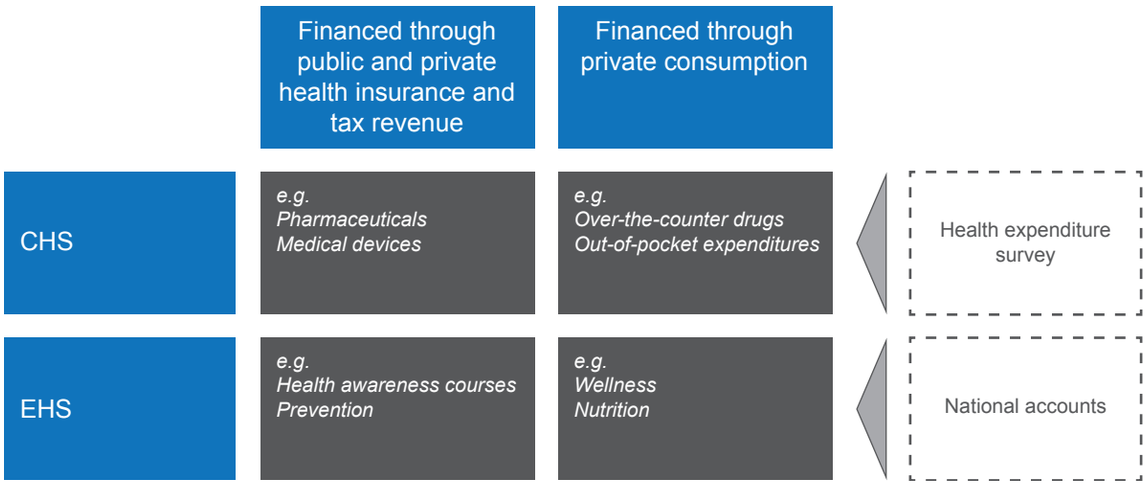
The **core area, or core health segment** (CHS) quantifies **products and services** captured by health expenditure surveys. The **expanded area, or expanded health segment** (EHS) quantifies products and services not captured in health expenditure surveys, although they promote health. The categorical definition of the health economy excludes products and services classified as medical that do not promote and preserve health, such as plastic

surgery or veterinary pharmaceutical products[3] *(11)*.

Further to the product- and service-specific segmentation, the German health economy reporting methodology distinguishes the primary and secondary health markets based on **financing**. The primary health market includes products and services funded by private or statutory health insurance, or through tax revenue-based public expenditure. The secondary health market includes products and services funded through personal consumption expenditure *(11)*.

This segmentation of the health economy by products and financing yields a **4-quadrant model** (see Fig. 2.2), which allows dynamics and interrelationships within the health economy to be analysed.

Fig. 2.2 The health economy in the 4-quadrant model



Source: adapted from Federal Ministry for Economic Affairs and Energy *(13)*.

2.2 The economic footprint of the health economy: direct, indirect and induced effects

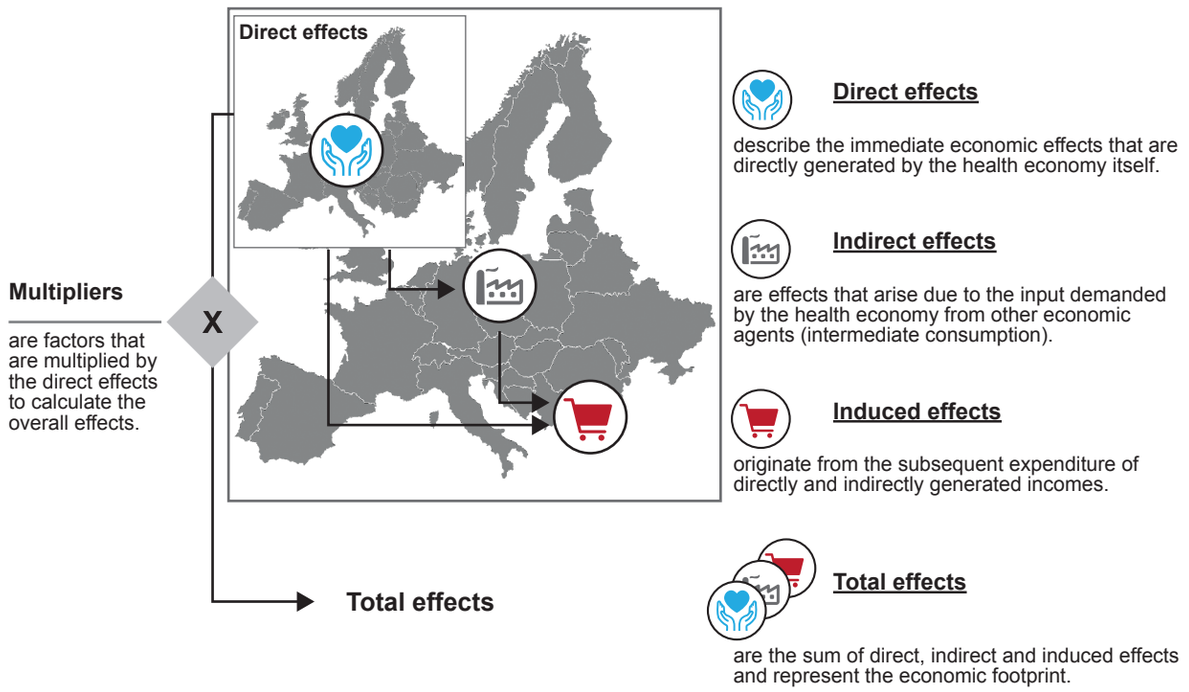
The economic footprint (Fig. 2.3) in the context of the health economy reporting summarizes key economic indicators, considering direct, indirect and induced spillover effects, such as GVA, employment and foreign trade. The economic footprint also includes multipliers to quantify the relationship with direct, indirect and induced effects *(14)*.

Direct effects originate from production within the health economy itself, while indirect effects are generated through investments and auxiliary production of intermediary inputs from other

3 For details on the segmentation of products and services, see Annex 1.

sectors, such as energy, cleaning services, equipment and construction, and chemicals for the production of medicine. Induced effects stem from spending of generated income and revenue *(14)*.

Fig. 2.3 The economic footprint of the health economy



Source: adapted from Schwärzler & Legler *(15)*.

2.3 Databases and international statistical standards

Compiling national health economy reports requires two datasets, both of which are based on international statistical standards and are usually provided annually by national statistical offices.

On the one hand, **national accounts** provide the macroeconomic statistical framework, wherein satellite accounts serve to describe, analyse and quantify aspects of interest, such as trends and patterns of consumption, investment or intermediary use. The compilation of national accounts is based on the European System of Accounts (ESA) *(16)*.

On the other hand, **health expenditure surveys** focus on consumption, provision and financing patterns of health products and services. They consider all products and services, which primarily aim to promote and preserve health or prevent illness and are compiled based on the System of Health Accounts (SHA) *(17)* – an international guideline for the definition and accounting mechanisms of health expenditure.

2.4 Developing health economy reports

2.4.1 Compiling health-specific supply and use tables

To account for health-related products and respective producing entities within the overall economy, while maintaining balancing conditions and concepts of national accounts, data from national accounts need to be matched with the health expenditure surveys.[4]

To do this, first, products and sectors are disaggregated into the core and expanded health areas (CHS and EHS), as well as a non-health area, which is excluded from the analysis. Second, tables are aggregated to reconcile with official aggregated data. Third, the 12 health-specific categories are defined and aggregation is applied on the product side of the disaggregated health-specific tables to obtain tangible classifications. Then, input structures are adjusted between the CHS and EHS and the non-health area. Finally, data are aggregated sector-wise in accordance with the previously defined product-side classifications.

This results in square supply and use tables, consisting of 14 core and 18 extended health-related product and sector categories, as well as 64 non-health categories. In order to match the health expenditure survey with the final consumption patterns of the use table, the health-specific supply and use tables are then compiled using purchasers' prices to allow straightforward calculations *(11)*.

2.4.2 Calculating key indicators using input-output analyses

First, an input-output table must be calculated from the aforementioned (recently derived) health-specific supply and use tables. In order to calculate the direct, indirect and induced GVA[5] and employment, as well as foreign trade impacts of health economies as key performance indicators, input-output analyses are used. The multiplier values can then be calculated from the total values for each indicator. This can be done for the overall health economy, as well as for selected categories or segments, depending on the specific area of interest and the possibility for disaggregation at country level *(11)*.

4 Refer to Fig. 2.2 to see how the datasets are matched.

5 GVA includes the compensation of employees, net taxes on production, consumption of fixed capital and net operating surplus. Imports and supplies are subtracted.

3. Examples

While the following excerpts from various German health economy reports demonstrate the variety of uses and analytical capacities of health economy reporting, the selection does not capture the full breadth and depth of analytical possibilities, which would be beyond the scope of this review.

3.1 National health economy reports

3.1.1 GVA, employment and trade impacts

Health economy reports typically analyse basic health economy indicators (that is, GVA, employment and foreign trade) for the overall health economy in absolute and relative numbers, as a snapshot of individual reporting years, as well as annual growth rates. In addition to these parameters, the reports may zoom into various segments and markets in more detail, depending on the specific areas of interest. For example, the latest German health economy report focused on inpatient and outpatient services, the industrial health economy and pharmacies (see Table 3.1) *(18)*.

Table 3.1 GVA, employment and export effects of the German health economy, 2016

	GVA			Employment			Exports		
	Absolute (billion €)	Relative (%)*	Growth (% per annum)**	Absolute (million people)	Relative (%)*	Growth (% per annum)**	Absolute (billion €)	Relative (%)*	Growth (% per annum)**
Total health economy	336.4	12.0	+ 3.8	7.0	16.1	+ 1.6	116.1	8.2	+ 7.4
Inpatient services	94.1	28.0	+ 3.8	2.0	28.0	+ 1.8	–	–	–
Outpatient services	88.1	26.2	+ 4.3	2.4	34.4	+ 1.8	–	–	–
Industrial health economy	71.7	21.3	+ 3.5	0.9	13.2	+ 1.2	106.9	92.1	+ 7.4
Pharmacies	5.1	–	+ 1.3	163 200	–	+ 1.1	–	–	–

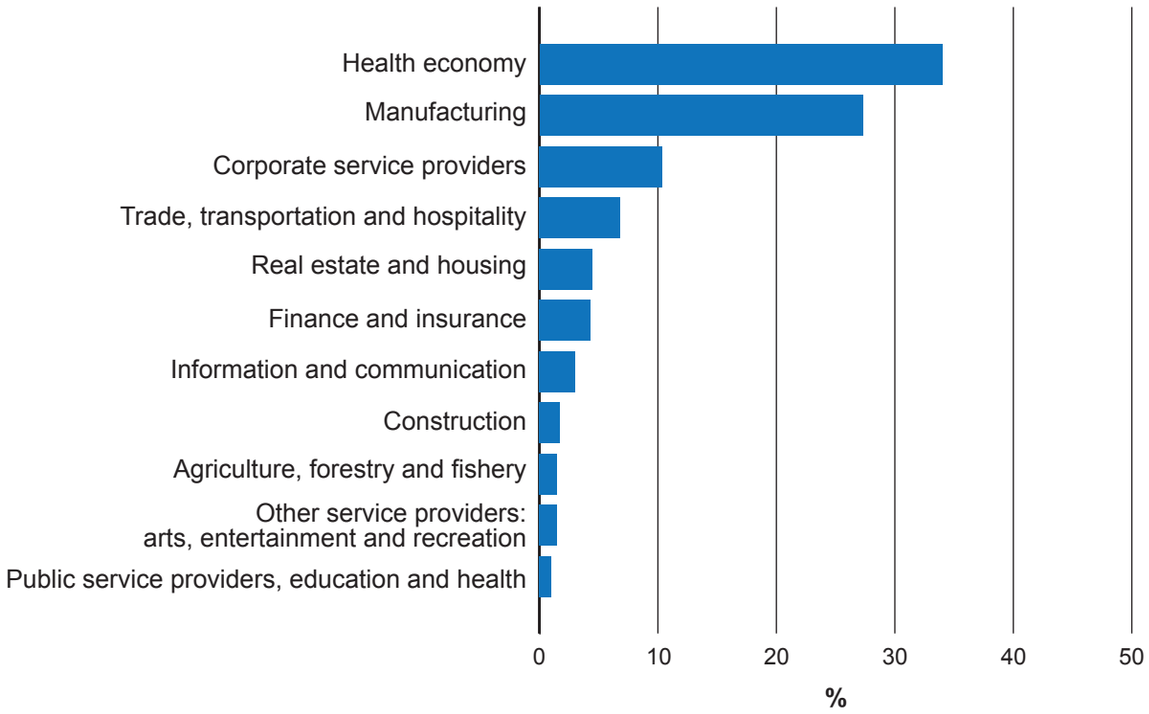
* The percentages express the relative contribution towards the total economy in the case of the total health economy, and towards the total health economy in the case of selected segments and markets.
** The values reflect average annual growth rates between 2005 and 2016 based on the latest health economy report.
Source: extracted from Federal Ministry for Economic Affairs and Energy *(18)*.

3.1.2 Indirect and induced growth and employment impacts

Beyond its direct economic impact, the health economy as a cross-sectoral industry has spillover effects on other sectors. **Indirect effects** arise from intermediate consumption

through the supply of inputs from other sectors to the health economy. Fig. 3.1 demonstrates the reciprocal relationships of the German health economy with various other sectors, in particular the manufacturing sector, and to a lesser extent with corporate services, and with trade, transportation and hospitality. **Induced effects** originate from the subsequent expenditure of directly and indirectly generated compensation of employees *(11)*.

Fig. 3.1 Proportional input (%) of industries to the German health economy, 2016

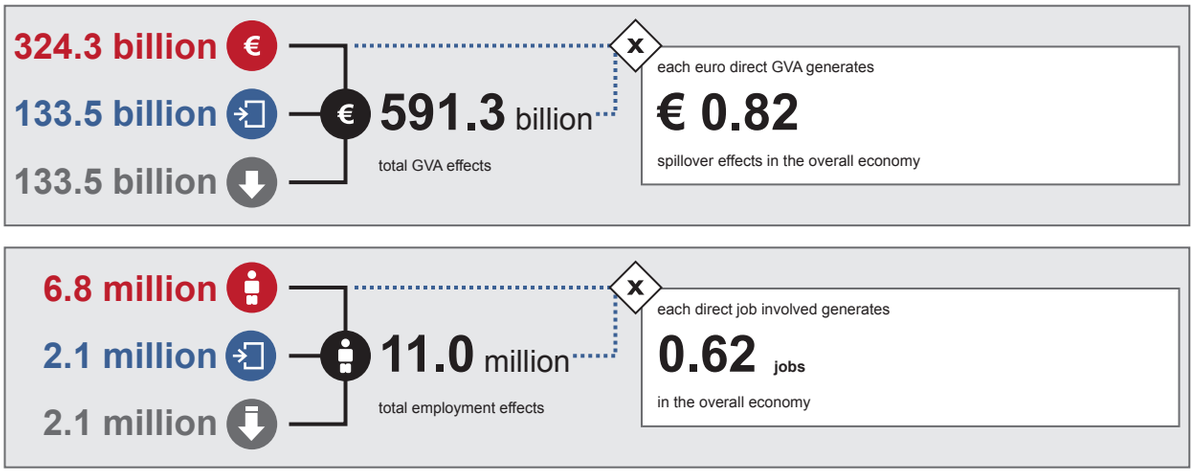


Source: adapted from Federal Ministry for Economic Affairs and Energy *(18)*.

In 2015 the German health economy generated €324.3 billion in GVA directly, €133.5 billion indirectly, and €133.5 billion induced. This translates into a multiplier of 0.41 for indirect and 0.41 for induced GVA effects. Each euro of GVA created within the health economy generated an additional €0.82 within the overall economy in 2015, amounting to a total of €591.3 billion in GVA *(15)*.

In the same year, the health economy directly employed 6.8 million people and created approximately 2.1 million jobs indirectly, along with another 2.1 million jobs induced. This translates into a multiplier of 0.31 for indirect and 0.31 for induced employment effects. Thus, each job within the health economy generated an additional 0.62 jobs in the overall economy. The health economy accounted for 11 million jobs in 2015 *(15)* (see Fig. 3.2).

Fig. 3.2 Direct, indirect and induced GVA and employment effects of the German health economy, 2015

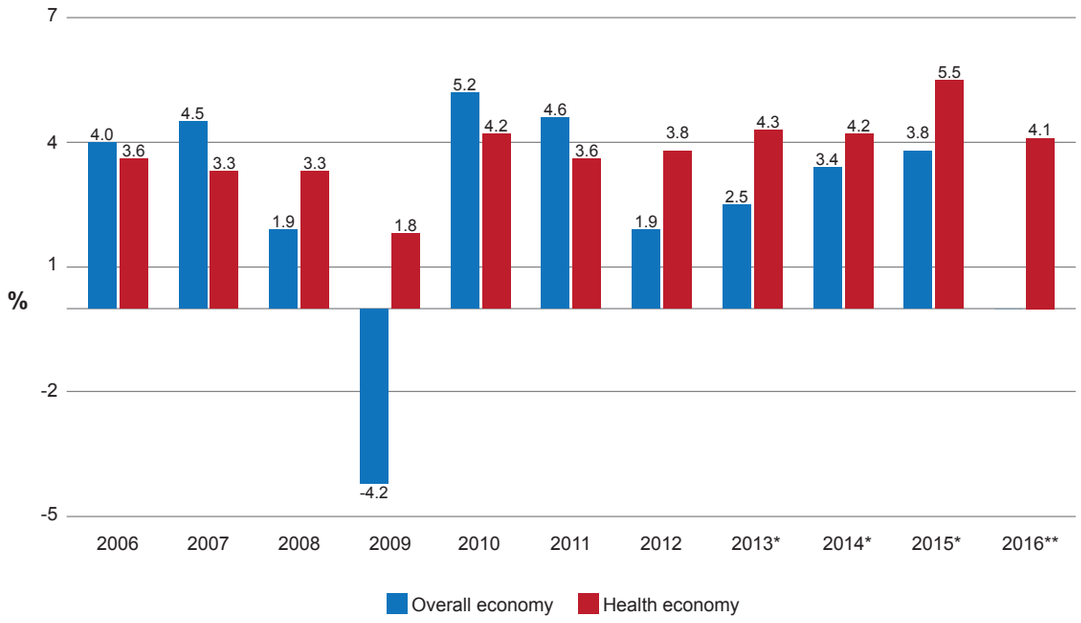


Source: adapted from Schwärzler & Legler *(15)*.

3.1.3 The role of the health economy within the overall economy

The health economy's importance to the overall German economy is demonstrated through its 16.1% contribution to employment, 12.0% to GVA, and 8.2% to exports. Comparing and contrasting its growth with that of the total economy over time allows more precise interpretation. Fig. 3.3 shows the health economy's GVA growth rates have been positive since 2006, and growth has been increasing more rapidly since 2010. Compared to the overall economy, health economy GVA growth is less volatile, thereby stabilizing growth over the past decade *(18)*.

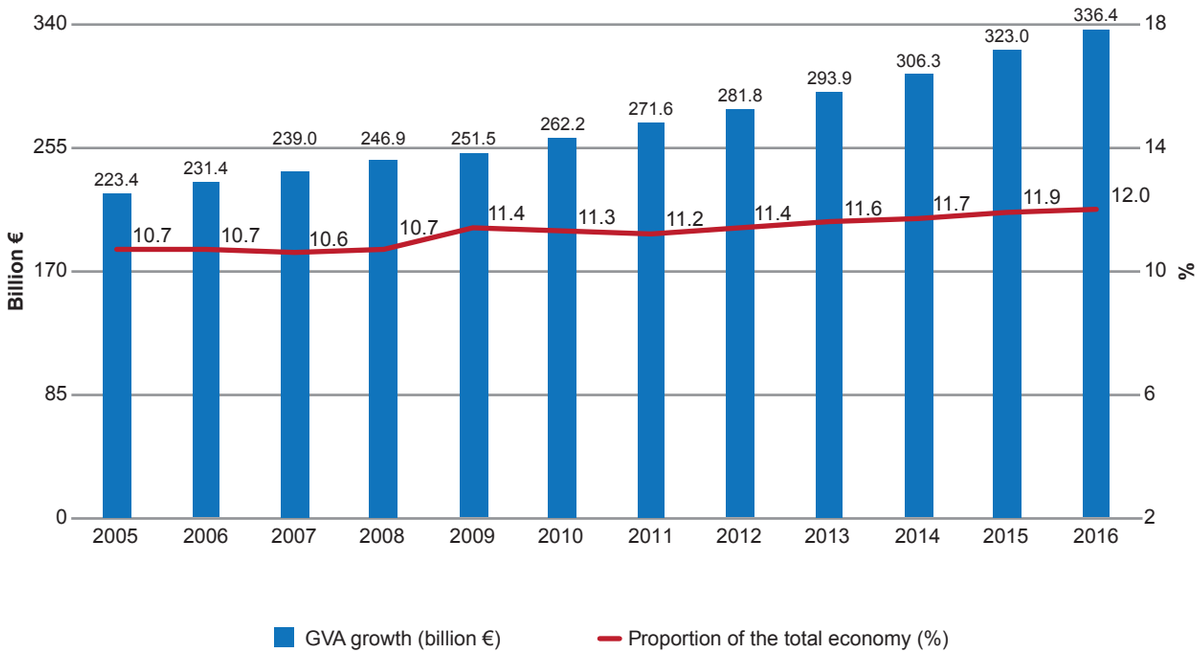
Fig. 3.3 GVA growth rates (%) of the health and overall economies, 2006–2016



Notes. Data on GVA growth of the overall economy were not available from the database release used.
* Extrapolation. ** Prognosis.
Source: adapted from Federal Ministry for Economic Affairs and Energy *(18)*.

Since 2005 the health economy has grown nominally each year, including during the financial crisis in 2009, and since 2007 its GVA contribution to the overall economy has also risen steadily (Fig. 3.4) *(18)*.

Fig. 3.4 Health economy GVA growth, total and as a proportion (%) of the total economy



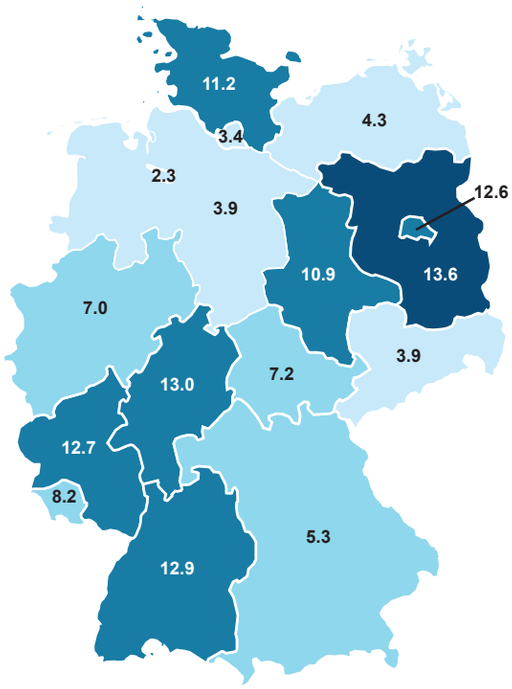
Source: adapted from Federal Ministry for Economic Affairs and Energy *(18)*.

3.2 Subnational reports

The economic footprint and the structure and importance of different health economy segments show considerable regional variation. For example, the health economy accounts for 13.6% of foreign trade in Brandenburg, but only 2.3% in Bremen (Fig. 3.5) *(18)*.

Subnational health economy reports serve to compare regional economic footprints with each other and with the national health economy, to identify potential future growth opportunities and to monitor and adjust regional and national strategies in the context of competition and market regulations. The selected excerpts from various federal state health economy reports in this subsection compare and contrast the structure and importance of different segments of the health economy. Table 3.2 presents basic health economy performance indicators for three selected federal states.

Fig. 3.5 Contribution of the health economy (%) to foreign trade across Germany's 16 federal states, 2016



Source: Federal Ministry for Economic Affairs and Energy *(18)*.

Table 3.2 Key health economy indicators for selected German federal states, 2013–2014

	GVA (% of total economy)	**Health economy employment** (% of total employment)	**Foreign trade** (% of total exports)
Hamburg (2013) *(19)*	€8.2 billion (9.4%)	162 000 people (directly employed) (13.7%)	€2.7 billion (5.5%)
Mecklenburg-Western Pomerania (2014) *(20)*	€5.1 billion (direct) (14.6%)	136 600 people (directly employed) (18.7%)	€97.2 million (1.4%)
Thuringia (2013) *(21)*	€6.0 billion (13.1%)	155 000 people (15.1%)	€900 million (7.4%)

Hamburg's federal health economy report identified several priorities. First, with €2.7 billion – a 5.5% contribution to the region's exports – the industrial health economy provides important impetus for foreign trade, particularly in light of the region's export deficit. Second, with its high density of hospitals and practitioners, Hamburg provides health care not only for its own population, but also for those of Lower Saxony and Schleswig-Holstein. Third, the secondary health market, which generates approximately €2 billion in GVA or a quarter of the total health economy, offers prospects for employment, as its growth is 0.6% higher than in the primary health market *(19)*.

In Mecklenburg-Western Pomerania and Thuringia, health tourism and organic food, which sit within the EHS and are predominantly financed through private consumption, play increasingly important roles. In Mecklenburg-Western Pomerania, health tourism contributes 4% to the overall health economy in GVA, which is double its national average. And each euro of GVA contributed through the production of organic food in turn contributes an additional €2.57 in indirect and induced effects across the whole federal state economy *(20)*. In Thuringia, health tourism contributes 2.4% of employment (3,700 jobs). Overnight stays are growing more rapidly than in Germany as a whole on average, and more rapidly than for other forms of tourism in Thuringia,[6] and organic food experienced a 30% growth in GVA from €15.1 million to around €55 million from 2005 to 2013 *(21)*.

While these trends demonstrate the growing importance of the EHS and health-promoting products and services financed through private consumption, they need to be put into perspective with developments in the CHS. In Mecklenburg-Western Pomerania, with an average 2.7% annual GVA growth, growth in the medical technology segment is almost four times as high as in the overall health economy. In Thuringia, life sciences[7] are an important driver of growth and employment. From 2005 to 2013, GVA within the production of medicines grew 10% more than the national average, and employment grew 22% more. GVA in research and development grew by 33.8%, equalling more than double the average national increase, while employment grew by 36.6%, outweighing the national average by 14.5% *(20,21)*.

3.3 Thematic reports

In addition to regional variations, the relative importance of different health economy segments is of interest to policy-makers and other stakeholders. The following excerpts from thematic reports look at subsegments based on particular interests within the German health economy reports.

3.3.1 Medical products and technology

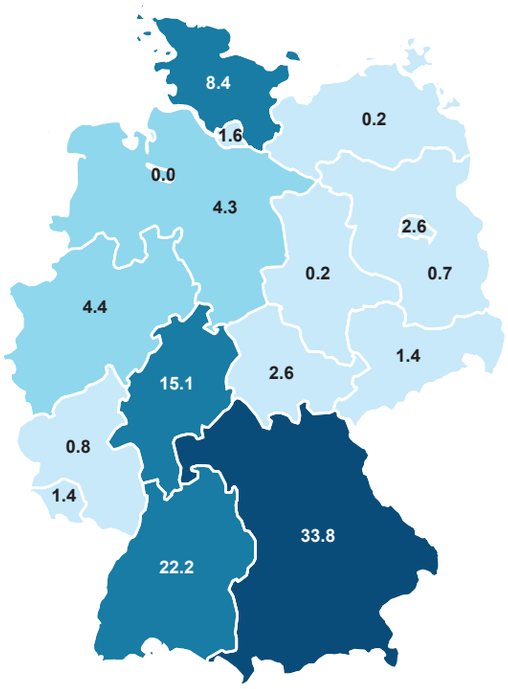
With a 10.2% share of global medical products and technology production, Germany is the third biggest producer of medical technology worldwide. While the industrial health economy further comprises medication, body, mouth and dental care products, sports and fitness equipment, research and development, and wholesale trade, analysing closely the medical products and technology subsegment of the industrial health economy can inform policy-

6 Health tourism incorporates the EHS categories E2 and E3. While hotel and accommodation services are extracted from E2, the E3 services offered by tour operators and public baths and spas add to the quantification of health tourism. For a comprehensive look at the segmentation categories, see Annex 1.

7 According to the State Development Corporation of Thuringia, life science incorporates the medical technology, biotechnology and pharmaceutical industries. While these three branches are commonly summarized as the industrial health economy, the definition applied here incorporates economic activities of research and development institutions. Thus, life science comprises the CHS categories H1, H2 and an aspect of the EHS category E3 (see Annex 1).

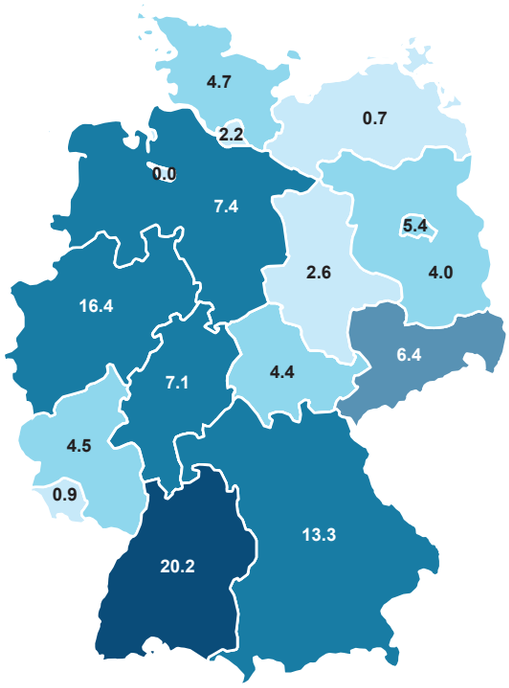
making and investment decisions based on growth, employment and foreign trade objectives. Fig. 3.6 and Fig. 3.7 show the distribution of the medical products and technology subsector's share of total sales and total enterprises across Germany's 16 federal states *(22)*.

Fig. 3.6 Regional share (%) of total sales in the medical products and technology subsector, 2014



Source: Federal Ministry for Economic Affairs and Energy *(22)*.

Fig. 3.7 Regional share (%) of total enterprises* in the medical products and technology subsector, 2014



*Enterprises are defined as those employing more than 20 people.
Source: Federal Ministry for Economic Affairs and Energy *(22)*.

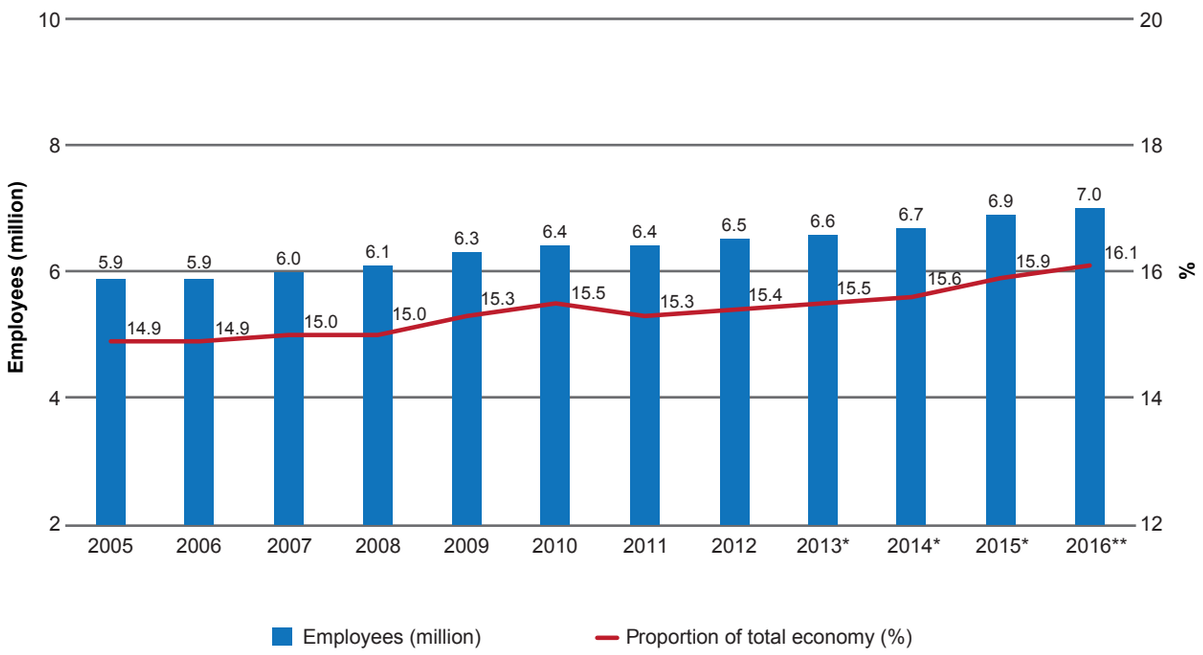
In 2014, the medical products and technology segment had 188 500 direct employees, which constituted 2.7% of health economy employment and 20.3% of employment in the industrial health economy. The GVA through the production of medical products and technology amounted to €13.2 billion, which constituted 3.9% of the overall and 18.4% of the industrial health economy. With its annual exports amounting to €26.0 billion in 2016, the segment contributed about 22.4% of total health economy exports. While the subsector's exports had been growing at an average rate of 4.7% per annum since 2005, which is similar to that of the total economy (at 4.8% per annum), its growth was below that of the overall health economy (7.4% per annum) *(22)*.

Small and medium-sized enterprises,[8] which have grown in numbers in recent years, constituted 99.4% of enterprises within the subsector and produced over 75.8% of its GVA. In contrast, large enterprises[9] made up only 0.6% of enterprises and had been decreasing in numbers recently, but still produced 24.2% of GVA within the industrial health economy *(22)*.

3.3.2 Health economy workforce

With continuous growth over the past decade (see Fig. 3.8) and 7 million people directly employed in 2016, the health economy contributes 16.1% of total employment in Germany and from 2000 to 2009 contributed 50% of total employment growth or 620 000 out of 1.1 million new jobs *(18)*.

Fig. 3.8 Health economy employment in Germany, 2005–2016



*Extrapolation. **Prognosis.
Source: adapted from Federal Ministry for Economic Affairs and Energy *(18)*.

About 75% of health economy employment is attributed to the CHS, largely in inpatient and outpatient institutions, such as doctors and physiotherapists, nursing care services and homes, hospitals, and rehabilitation clinics, while 25% of employment is attributed to the EHS. Employment growth is strong in labour-intensive services segments, while the technology-

8 Small and medium-sized enterprises are defined as those employing fewer than 250 employees and generating less than €50 million in annual revenue.

9 Large enterprises are defined as those generating more than €50 million in annual revenue.

and capital-intense upstream goods and services can substitute labour. From 2000 to 2009, more than two thirds of new jobs were generated in the outpatient segment, while employment in inpatient services increased exclusively in nursing, but decreased in hospitals. Simultaneously, employment growth in the production of medicine increased slightly, but full-time staff numbers declined. In medical technology, the optical industry, medical laboratories and wholesale trading, employment grew by over 18%, and staff numbers in research and development continued to rise *(18)*.

The expansion of privately financed health consumption, technological developments and demographic change promote innovation and change with regards to the knowledge and skills of health economy employees. For instance, e-health interventions to provide general practitioner health care in sparely populated rural regions enable nursing personnel and doctors' assistants to make home visits under remote supervision of a doctor. Demographic ageing, by raising demand for the management of noncommunicable diseases and multimorbidity, increases employment of individuals as case managers, in areas such as specialist wound treatment. Since the 2000s, the German health economy has also seen growth in wellness occupations as a result of increased privately financed health consumption *(23)*.

Since the mid-2000s, the proportion of female doctors employed in hospitals grew from 38.1% in 2005 to 46.2% in 2015, at an average annual growth rate of 4.9% compared to 1.5% for male doctors. As a growing employer of women, the health economy can play an important role in promoting gender equality *(7)*.

4. Applicability

Health economy reporting allows for a range of detailed analyses of the economic impacts of health economies. Based on product-specific segmentation, the health economy reporting methodology quantifies:

- the direct GVA, employment and foreign trade impacts on the overall health economy *(11,14,15)*, as well as for selected components and geographic areas, depending on the areas of interest (basic health economy indicators) *(19,20,21,24)*;
- the indirect and induced GVA, employment and foreign trade impacts, or spillover effects of the health economy on the overall economy, as well as for selected components and geographic areas, depending on the areas of interest *(11,14)*;
- interlinkages of different segments, as well as interlinkages of segments of the health economy with the overall economy, based on spillover effects *(23)*;
- trends and developments of the health economy workforce; overall and disaggregated by the various segments of the health economy *(18,22,23)*; and
- the distribution of publicly and privately financed consumption within the health economy, based on the finance-specific segmentation.

Complementing the health economy reports with the social accounting matrix[10] and integrating comprehensive social and health statistics enables countries to analyse *(14)*:

- the financing of the health economy – namely, the impacts of the health economy on primary and secondary income distribution, and the impacts on the financing agencies, including government and social insurance *(12,13)*;
- the health dividend – namely, the impact of the health economy and consumption of its products and services on health, based on selected health indicators, such as life expectancy or well-being *(23)*; and
- the productivity of health economy – namely, the relationship between input and outputs, measured as the change in the value of output per hour worked *(14)*.

5. Outlook: opportunities for application in other countries

5.1 Strategic opportunity

Health economy reporting provides a structured approach for governments, the private sector and general public stakeholders to better understand the scope and impact of the health economy as a starting point for planning and evaluating its strategic role for health and for sustainable and inclusive economic growth. The methodology of health economy reporting applies an economic policy perspective to health, in matching health expenditure surveys with national accounts to review the health economy as part of the overall national economy.

As acknowledged by the High-Level Commission on Health Employment and Economic Growth *(7)*, health economy reporting is a very useful tool for advocacy and capacity-building to enable evidence-based health policy that can steer and guide investments for health, employment and inclusive and sustainable growth within the WHO European Region. The following subsections provide strategic entry points for future engagement opportunities.

5.2 Going beyond national health accounts

The system of national health accounts is used widely across countries within the WHO European Region to systematically track both the magnitude (that is, the total amount of funding for health in the country) as well as the flow of funding through the health sector. The

10 The social accounting matrix extends the input-output systems of the health economy by including distribution and redistribution transactions. This integrated system ensures consistency of the different viewpoints on the health system, and their links to each other *(12)*.

existing methodology uses a comprehensive approach, which looks at the total expenditure from all sources, including public, private and donor contributions, as well as both current and capital expenditure, and across all disease areas. It describes expenditure for all health activities on an annual basis. As an internationally standardized methodology, the national health accounts allow countries to understand the source, magnitude and flow of funds through their health sectors *(25)*.

The methodology reviewed here is a distinct concept to that of the national health accounts, as it matches data from health expenditure surveys with data from national accounts to picture the health economy within the overall national economy and to reveal its contribution to growth and employment. While it builds on the methodology of the national health accounts, it goes beyond its pure analytical capability to comprehensively inform health investment decisions about their employment and growth impacts.

5.3 Requirements and entry points for implementation

Conducting health economy reporting in other countries within the WHO European Region involves certain technical standards, capacity-building and national ownership.

5.3.1 Data availability

As discussed, compiling health economy reports requires two datasets. **National accounts** provide the macroeconomic statistical framework based on the 2010 ESA *(16)*. **Health expenditure surveys** focus on the consumption, provision and financing patterns of health products and services and are compiled based on the 2011 SHA *(17)*.

In the WHO European Region, data from national accounts are available for all 53 Member States, while data from health expenditure surveys are available in all but the nine member states and two associate members of the Commonwealth of Independent States, for which preparatory collaborative work with national statistical offices is needed.

5.3.2 Stakeholder involvement

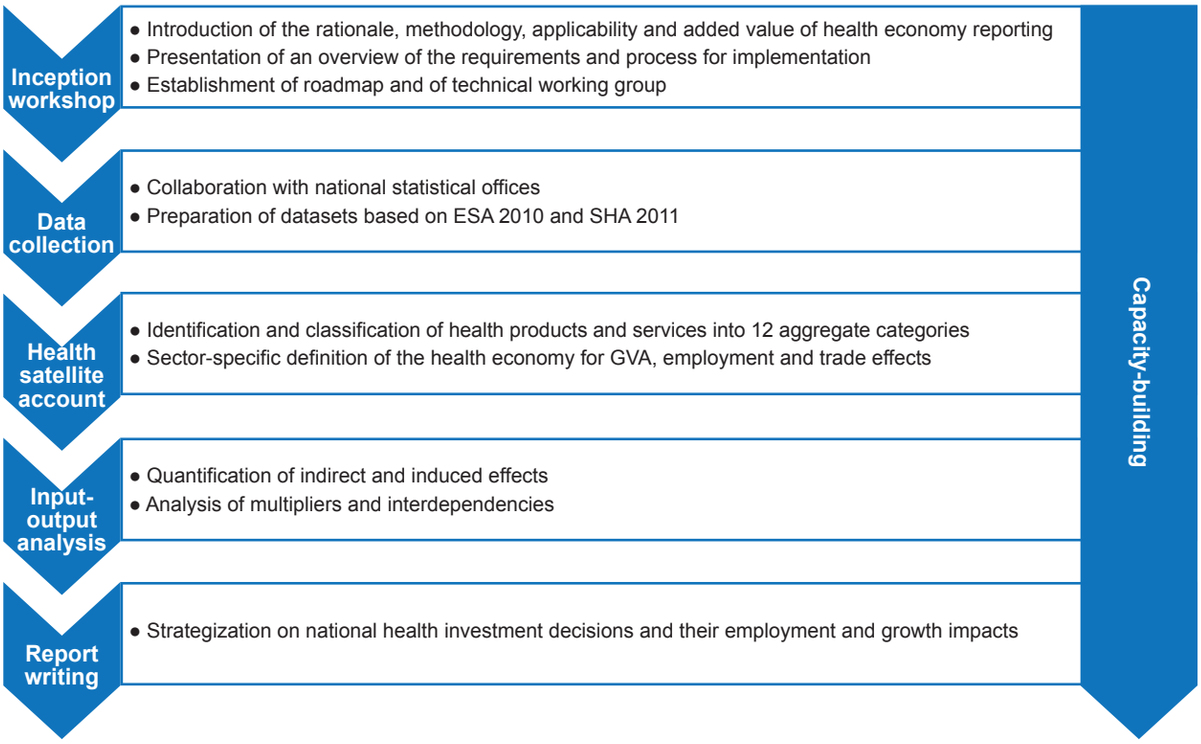
Implementing the methodology and building national capacities to ensure sustainability can take both a national approach, focusing on individual WHO Member States, and a subregional approach, focusing on existing subregional networks within the WHO European Region. At **national level**, ministries of economy and ministries of health, supported by WHO country offices, take the lead in establishing a system of health economy reporting. National statistical offices and relevant subnational bodies and associations also need to be involved. At **regional level**, subregional networks, such as the South-eastern Europe Health Network and the WHO Small Countries Initiative provide suitable platforms for advocacy, knowledge translation, capacity-building and implementation of health economy reporting.

5.3.3 Implementation process

As illustrated in Fig. 5.1, the process of implementing national health economy reporting should be accompanied by capacity-building components to train key national and/or regional stakeholders to implement health economy reporting with full ownership. The implementation process outlined here is an example of a modular approach that can be adapted to the specific requirements of countries or subregions.

The **inception workshop** should first and primarily introduce the rationale, methodology, applicability and value added involved in introducing health economy reporting based on national accounts, generating interest among relevant stakeholders. The event should also feature an overview of the requirements, steps and capacity-building components required to implement the methodology, and identify the principal stakeholders' responsibilities to agree on a roadmap with key milestones and the establishment of national technical working groups with focal points.

Fig. 5.1 Implementation process for health economy reporting



The **collection and preparation of statistical data** requires collaboration with national statistical offices to access and prepare the required datasets based on the statistical standards of the 2010 ESA *(16)* and the 2011 SHA *(17)*.

The **calculation of a health satellite account** involves the identification and classification of health products and services within the overall economy into the 12 aggregate categories of the health economy. This quantification of the health economy is based on official data according to the international standards (the 2011 SHA) *(17)*. Based on supply and use information, the health economy is then defined from the sector side to conclude on its relevance in terms of GVA, employment and foreign trade.

The **input-output analysis**, based on the health-specific supply and use tables, then serves to quantify the indirect and induced effects of the health economy, and to analyse the multipliers and interdependencies of the health economy with the overall economy.

Finally, the process of **report writing and dissemination** puts the analysis and results into the perspective of (sub)regional, national and subnational health investment decisions and their employment and growth impacts. The reports, which serve to evaluate and strategize on health investment decisions, should be disseminated among the stakeholders involved in the process.

The implementation process should be accompanied by **capacity-building measures**, for example through hands-on working sessions and webinars.

6. Conclusions

Targeted investments in health play a key role as job generator and driver of inclusive and sustainable economic growth. Health economy reporting provides a structured approach for governments, the private sector and general public stakeholders to better understand the scope and impact of the health economy as a starting point for planning and evaluating its strategic role for health and for sustainable and inclusive economic growth.

This analytical summary report reviews a well-established methodology of health economy reporting that quantifies and analyses the health sector's economic impact on growth and employment, based on national accounts. Beyond this, the report identifies the strategic opportunity to use the method as a tool for advocacy and capacity-building to enable evidence-based health policy to steer and guide investments for health, employment, and inclusive and sustainable growth within the WHO European Region.

As such, the report serves as an entry point for Member States of the WHO European Region, who want to use expert services available for health economy reporting and related capacity-building as a practical approach for implementing the 2030 Agenda for Sustainable Development by building on the European strategy and policy framework, Health 2020.

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Annex 1. Segmentation of products and services in the health economy based on the 4-quadrant model

Core health area/segment (CHS)

H1 Medication
- H11 Pharmaceutical products
- H12 Chemical products

H2 Medical devices
- H21 Medical technology products
- H22 Wheelchairs
- H23 Digital medical technology products

H3 Retail trade services relating to the core area
- H31 Retail trade services for medication
- H32 Retail trade services for medical devices

H4 Health insurance
- H41 Social health insurance and public administration
- H42 Private health insurance

H5 Services in inpatient facilities

H6 Services in non-inpatient [outpatient] facilities

H7 Wholesale trade services relating to the core area
- H71 Wholesale trade services for medication
- H72 Wholesale trade services for medical devices
- H73 Commission trade services

Expanded health area/segment (EHS)

E1 Products for self-contained health care
- E11 Products for personal hygiene, nutritional supplements
- E12 Organic food
- E13 Anti-allergenic clothing
- E14 Literature for health and medical science
- E15 Sports equipment

E2 Services for sports, wellness and tourism

- E21 Services for sports
- E22 Services for wellness and tourism

E3 Other services of the health economy

- E31 Consultancy for health care facilities
- E32 Other services provided by health care facilities
- E33 Advocacy and information services of the health economy
- E34 Trade services

E4 Investment

- E41 Education of health professionals
- E42 Research and development of the health economy
- E43 Advocacy and information services of the health economy
- E44 Architectural services for the construction of health care facilities

E5 E-Health

- E51 Appliances of telecommunication technology and data processing for the health care sector
- E52 Information technology services within the health care sector
- E53 Data processing services within the heath care sector

The definition and segmentation of products and services within the health economy is based on official statistical standards for national accounts and the System of Health Accounts (SHA). This enables accounting for "health-related products and respective producing entities within the overall economy", while maintaining balancing conditions and concepts of national accounts.
Source: Kronenberg & Schwärzler, 2016 (p.15).[11]

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