Global Economic Impact of Tuberculosis

A report for Results UK

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Contents

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1 Executive summary

In this report we outline our estimates of the impact tuberculosis (TB) can have on economic development and growth. The analysis is considered in light of the Millennium Development Goals (MDGs) set by the United Nations (UN) for the years 2000-2015 and the Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, which cover 2015-2030.

Our analysis estimates that, during the period of 2000-2015, TB related mortality caused the loss of US$ 616bn[1] and that, in the absence of radical actions to curb the disease, future TB related mortality may lead to a further loss of US$ 984bn globally between 2015 and 2030 – a figure equivalent to the size of economy of the Netherlands in 2016.

Our forecasts indicate that the greatest burden of the disease falls on less developed countries in South East Asia and Africa. Some countries, such as Lesotho, are projected to have the size of their economy 3.2% smaller in GDP terms by 2030 due to the prevalence of TB.

[1] Economic costs are quoted in 2016 prices throughout this report.

2 The mortality impact of tuberculosis

2.1 Report's assumptions

The aim of this report is to estimate the economic costs of TB related mortality on countries across the world. For this purpose, we have relied exclusively on data and forecasts of TB prevalence produced by the WHO. Forecasts of TB mortality rates make use of the WHO "business as usual" scenario, which assumes a very gradual reduction in mortality, short of the UN's Sustainable Development Goals.

The report first outlines our estimates of the economic costs already incurred from TB over the period covered by UN's Millennium Development Goals (2000-2015). Despite a 20% reduction in overall mortality between 2000 and 2015, there were 1.8 million deaths worldwide due to TB in 2015 alone.

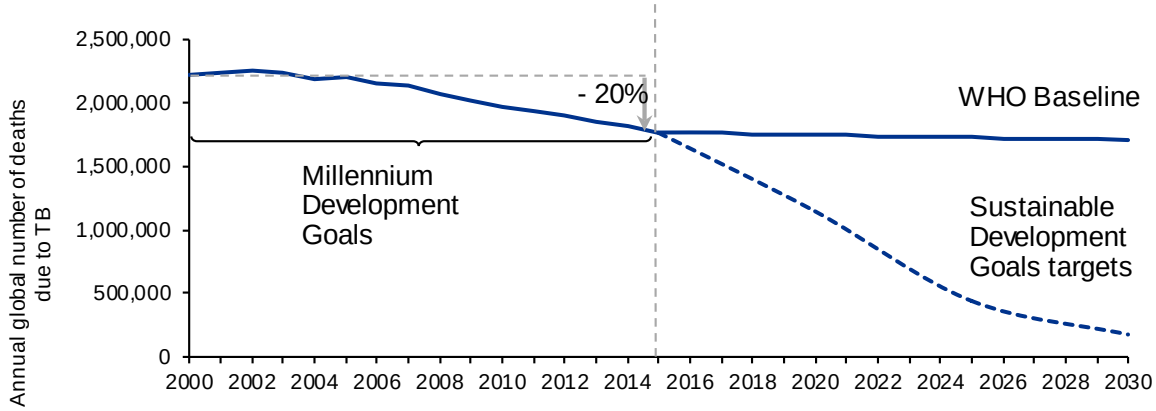
In order to estimate the impact of TB between 2000 and 2015 on the world economy, we created a counter-factual scenario, which was free from the influence of TB on mortality rates. We then compared the outturn from the actual mortality numbers with this scenario.

Similarly, for the forecast period covered by the Sustainable Development Goals (2015-2030), we created a counterfactual scenario which excluded the expected mortality impact of TB. The level of GDP in the TB-free scenario was then compared to our baseline forecast, which included WHO's projections of mortality due to TB.

2.2 Burden of TB

One of the Millennium Development Goals' objectives was to halt and begin to reverse the burden of TB. As Figure 1 below shows, the number of deaths and the incidence of TB have steadily declined since 2000, falling by 20% between 2000 and 2015. However, the disease remains prevalent, with 1.8 million deaths in 2015 alone.

Figure 1: Total deaths due to TB[2]



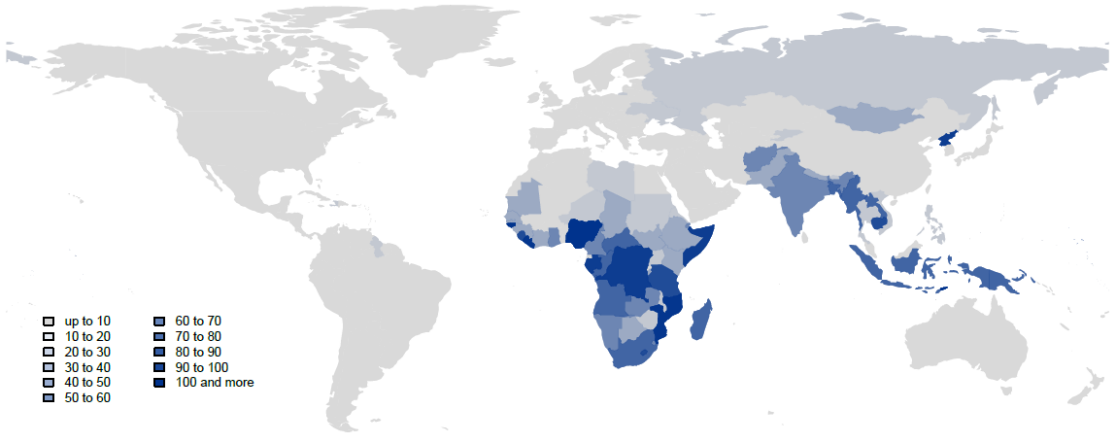
Source: WHO

[2] All TB mortality numbers in this report include deaths of HIV sufferers who also contracted TB, unless otherwise specified.

The Sustainable Development Goals set a target for a reduction in mortality due to TB of 90% by 2030 relative to its 2015 level (see Figure 1 above).

In 2015, the latest year for which data is available, the highest mortality rates due to TB were in East Asian countries and in Africa (see Figure 2 below for the distribution of mortality due to TB across the world).

Figure 2: TB mortality in 2015 per 100,000 inhabitants



Source: WHO data

In the absence of radical changes, the WHO baseline scenario projects another 28 million deaths due to TB between 2015 and 2030.

The following section of this report estimate the effect this latter projection would have on GDP in different countries, as well as the losses already incurred between 2000 and 2015.

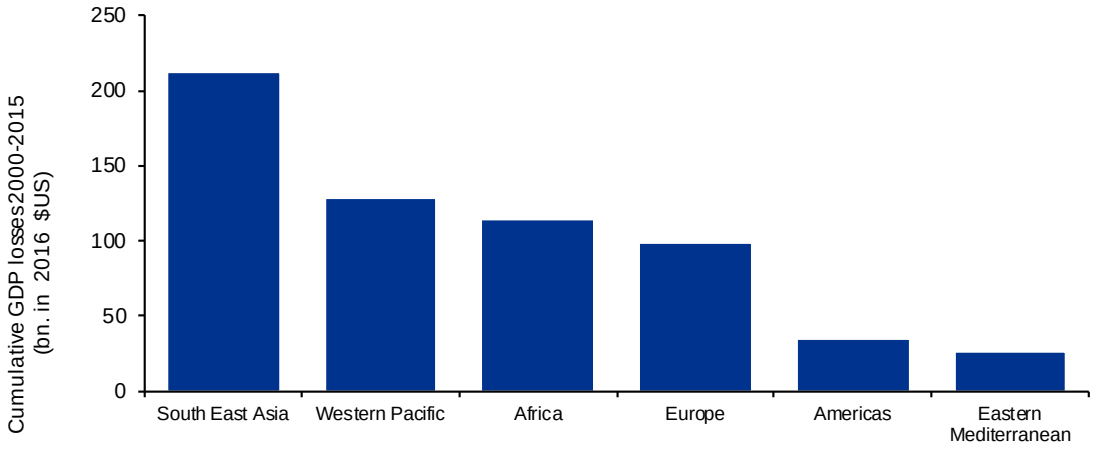
3 The economic impact of TB

3.1 The historic impact of TB between 2000-2015

According to WHO data, there were 33 million deaths due to TB between 2000 and 2015, which according to our analysis caused a loss of US$ 616bn to the world economy. For comparison, this figure is roughly equivalent to the size of the economy of Norway in 2016.

Across the 166 countries covered by our analysis, the greatest losses occurred in the South East Asia region[3], which were caused by the high rates of mortality in large economies such as India and Indonesia, as well as by mortalities in other economies in the region. Figure 3 below outlines the distribution of GDP losses due to TB across regions.

Figure 3: GDP losses across regions 2000-2015

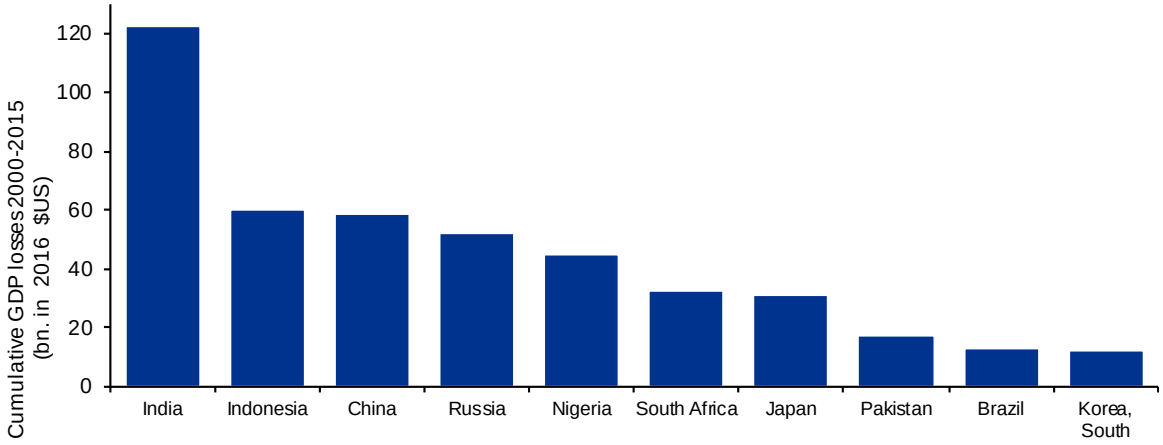


Source: KPMG analysis

The majority of the economic costs associated with TB-related mortality were borne by developing economies such as India, China and Nigeria. Together these countries accounted for 39% of the total global economic costs, as measured by the loss of GDP from TB related mortality. Figure 4 below outlines the cumulative losses in GDP between 2000 and 2015 for the 10 highest affected countries. The high economic burden of TB in India and China, of 123 and 59 bn $US respectively, reflects the large size of these economies relative to the world economy, together with a relatively high TB related mortality rate.

[3] The WHO's definitions of geographical regions were used in this report. See http://www.who.int/about/regions/en.

Figure 4: Largest individual country GDP losses due to TB related mortality, 2000-2015

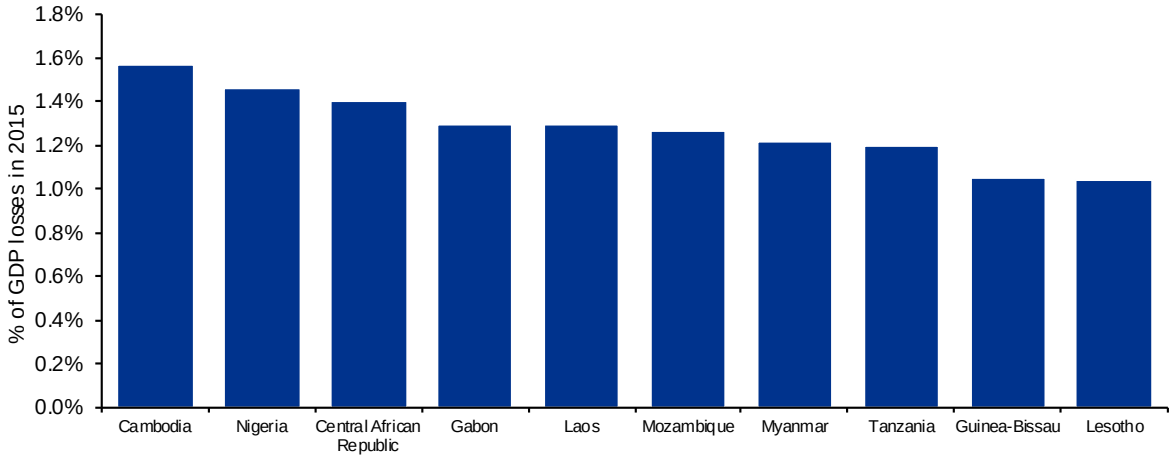


Source: KPMG analysis

The economic losses due to TB related mortality stem from the loss of output as a result of a smaller labour force. Countries with more productive labour will therefore experience a higher loss of output per person than countries with a lower productivity per person. Japan is an example of a country whose TB related mortality was not among the world's top ten, but given its relatively stronger productivity it still featured among the top ten economies to be affected (see Figure 4 above). The full list of countries and the associated TB mortality related losses over the period of 2000-2015 is listed in Appendix 2.

It is often smaller economies, however, that suffer a heavier economic burden proportionally. Figure 5 below outlines the countries with the highest economic burden from TB related mortality, as measured by the proportion of their GDP lost in 2015.

Figure 5: GDP losses as a share of GDP, 2000-2015



Source: KPMG analysis

Relative to the size of their economies, Cambodia and Nigeria borne the greatest economic costs from TB related mortality in 2015, equivalent to 1.6% and 1.5% respectively of the size of their economies.

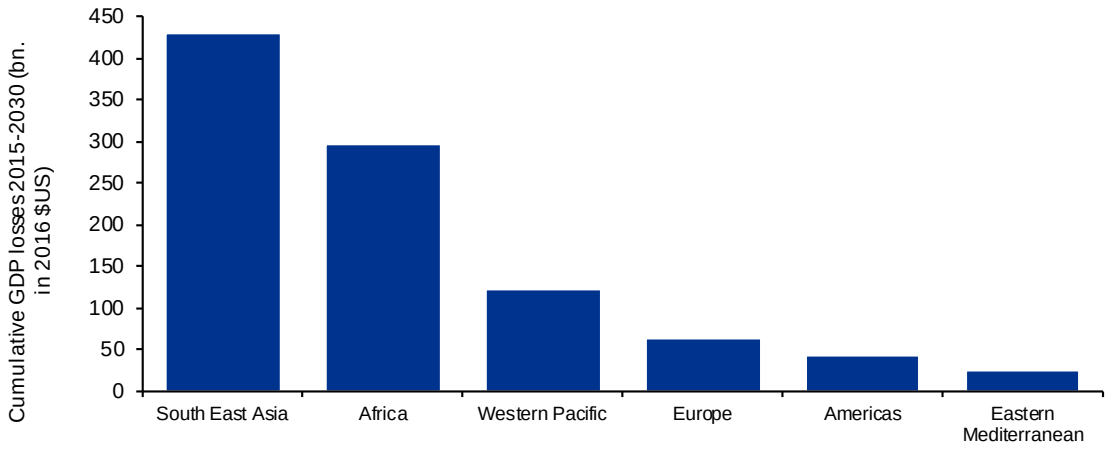
3.2 The expected economic impact of TB between 2015-2030

In this section, we outline the possible trajectory for the evolution of the economic costs associated with TB related mortality between 2015 and 2030. Our analysis compared our baseline economic growth projections for each country to 2030 with an alternative scenario that added back to each country's labour force all the TB related mortality projected by WHO.

The WHO scenario we used as a reference in our work was denoted by the WHO as a "business-as-usual" scenario – where the Sustainable Development Goals are not achieved (SDGs call for a 90%[4] reduction in TB mortality by 2030, relative to 2015 levels). This scenario features a small and gradual reduction in deaths due to TB of 3% between 2015 and 2030 (see Figure 1 above).

Assuming that TB related mortality follows WHO's 'business-as-usual' scenario, and including the effects of HIV, TB will cause the death of a further 28 million people around the world between 2015 and 2030, which will lead to an estimated total economic loss of $US 984bn globally according to our projections, an amount approximately equivalent to the loss of an economy the size of the Netherlands in 2016.

Figure 6: Projected GDP losses in 2015-2030 across different regions

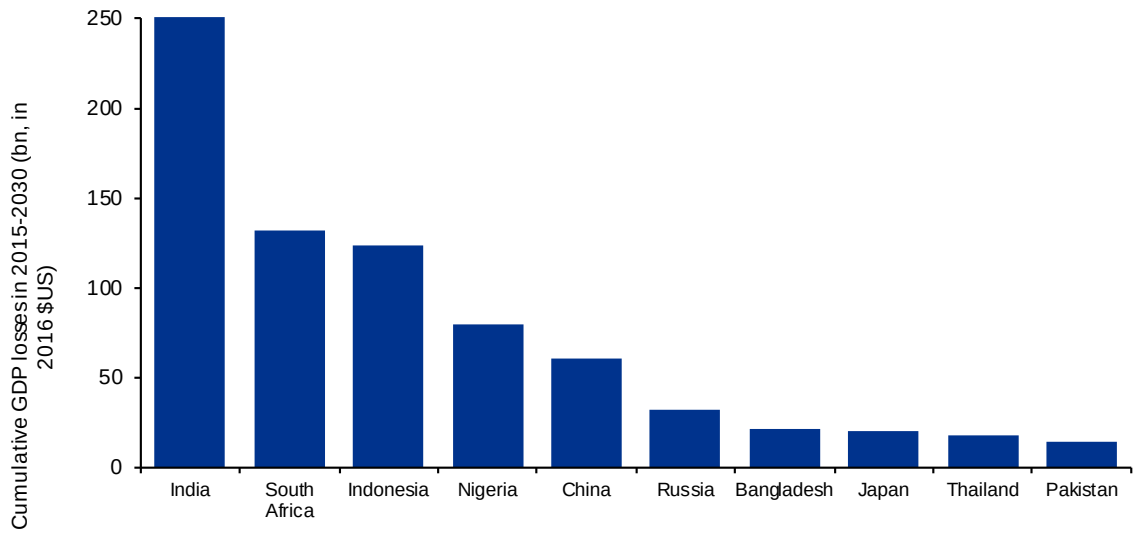


Source: KPMG analysis

As in the period between 2000 and 2015, the highest losses are expected to occur in the South East Asia region, with Africa in second place between 2015 and 2030 (see Figure 6 above). Expected rises in labour productivity see higher expected GDP losses between 2015 and 2030 than in the preceding period.

[4] SDG call for a 90% reduction. Additional WHO initiative "END TB" calls for a 95% reduction by 2030.

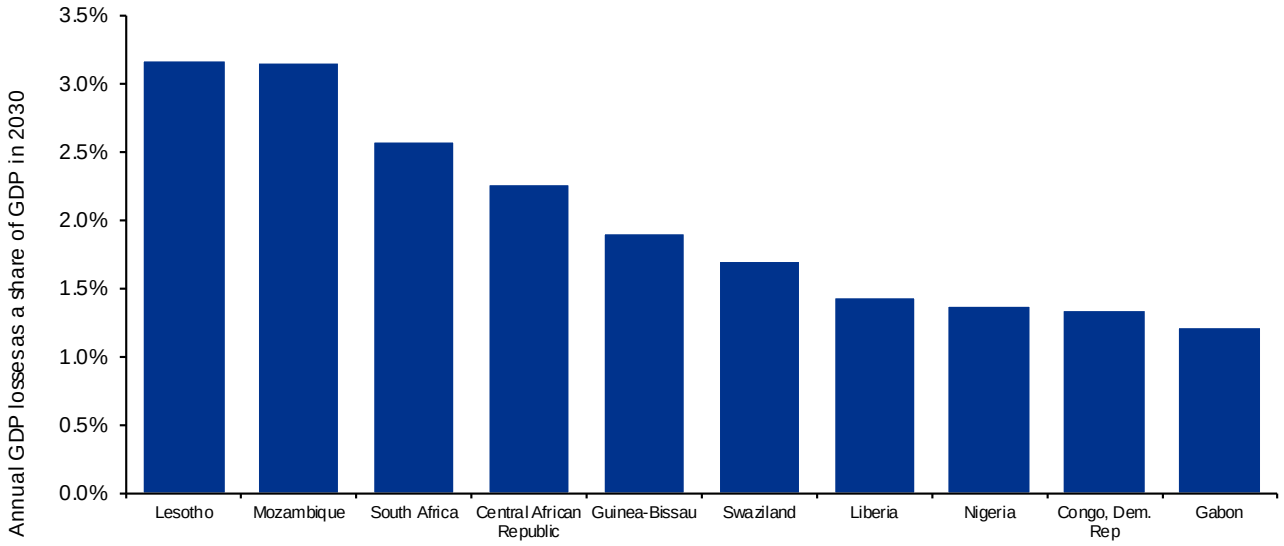
Figure 7: Largest individual country GDP losses due to TB-related mortality, 2015-30



Source: KPMG analysis

Economic losses from TB related mortality, as measured by the loss of GDP, are expected to be highest in India for the period between 2015 and 2030 (see Figure 7 above). Comparing these figures to the 2000-2015 period shows that even as mortality gradually declines, the increase in productivity leads to higher losses of GDP in the future in these countries.

Figure 8: GDP losses as a share of GDP, 2015-2030



Source: KPMG analysis

Looking at the future economic burden of TB on individual economies, as measured by the share of the economy that will be lost due to future TB related mortality, the costs of TB are projected to be particularly significant for countries such as Lesotho and Mozambique, with around 3.2% of their potential GDP lost due to TB related mortality in 2030 (see Figure 8 above).

Our projections show that it is developing economies, which tend to have weaker health systems and a higher rate of mortality per person infected with TB, that are to carry the largest economic burden of TB related mortality between 2015 and 2030, while large developing economies such as India will continue to suffer some of the largest costs in absolute terms.

Appendix 1 The macroeconomic model

This appendix describes the macroeconomic model used to construct the economic projections for the calculations of the economic costs of TB.

The model is based on a production function approach. Economic output in the long run can be interpreted to be closely related to the supply-side potential of the economy. The level of output is determined by the following Cobb-Douglas production function[5]:

$$Y_t = A_t K_t^{\alpha} L_t^{1-\alpha}$$

This consists of two main factors of production: labour (L_t) and capital (K_t), which are combined through a specific technology to produce output (Y_t). The effectiveness of this technology is determined by the level of total factor productivity (A_t). The value of α is set at 0.31, consistent with other studies[6,7]. The methodology for projections of these factors is described in the following sub-sections.

3.3 Labour and capital

The size of the available labour pool is a key determinant of the size of the economy alongside the level of the capital stock and the technology used to produce output. Keeping other factors of production and technology constant; a larger pool of workers can produce more output and therefore a larger economy.

The effect of increased mortality due to TB reduces the size of the available workforce, which limits the potential size of the economy. This denotes the loss of economic production, and does not include the effect of human suffering caused by the disease. In addition, the analysis did not include the effects of morbidity, which would further reduce the size of the available workforce for people dropping out of the labour force due to being unable to work.

Projections by the UN[8] were used to estimate the projected populations of the individual economies. The latest available participation rate was used to extrapolate the data into the future size of the labour force.

The level of capital in the economy denotes the aggregate quantity of machines and tools, which improves the productivity of workers in the economy. The level of capital stock was assumed to follow historical patterns, which were projected using the assumption that the capital-output ratio remains steady in the forecast period. This was consistent with findings in economic literature[9].

3.4 Productivity process in the model

Productivity is a key determinant of the level of output produced in any economy. An increase in productivity means that more economic output can be produced with the same input levels of capital and labour.

[5] We separate the oil/gas and the non-oil/gas sectors of the economy. This production function refers to the non-oil sector. For the oil/gas producing sector we employ a separate model which is included in total GDP of oil/gas producing economies.
[6] CEPII, 2012; www.cepii.fr/PDF_PUB/wp/2012/wp2012-03.pd

[7] Douglas Gollin , "Getting Income Shares Right," *Journal of Political Economy* 110, no. 2 (April 2002): 458-474.
[8] UN, World Population Prospects, 2017 revision; https://esa.un.org/unpd/wpp/
[9] "The New Kaldor Facts: Ideas, Institutions, Population, and Human Capital," American Economic Journal: Macroeconomics, American Economic Association, vol. 2(1), pages 224-45, January: http://www.nber.org/papers/w15094

There exists a hypothetical technology frontier in the global economy, which we proxy with the US[10]. Over time, innovation and research leads to the development of new technologies that support improvements in productivity. This means that the frontier expands with time as new technologies are developed which enhance the productivity of the cutting-edge developed economies.

For developing economies, their levels of productivity typically sit behind the frontier; and require a period of catch-up which is driven by imitation to reach the productivity levels of countries at or near the frontier. In order for a developing economy to catch up, it must undergo a period where its productivity grows at a faster rate than the frontier.

However, the process of catch-up does not tend to occur in a uniform way across all economies. This led us to develop a framework for assessing an economy's potential for catch-up.

3.5 Productivity enabling framework

A strong productivity enabling framework is one of the key pre-requisites for rapid economic development for economies catching-up to the technology frontier.

The framework is captured by our Variables for Sustained Growth index (VSG)[11] and this determines the rate at which the catch-up countries adopt new technologies and improve their productivity. The VSG index is an estimate for the quality of the institutional and infrastructure framework of each country.

The VSG index combines 24 series which are organised into 5 pillars corresponding to:

— Macroeconomic stability;
— Trade and openness;
— Infrastructure;
— Human capital and education;
— Institutional quality.

Together, these productivity enabling factors determine the quality of the pre-requisite conditions for economic growth. Significant weaknesses in any of these may lead to constraints which could significantly hamper economic development. In the model, this corresponds to countries with a low level of the VSG index.

Countries with low levels of the VSG may see the gap between the frontier and their local economy shrink very slowly or even widen if the quality of the productivity enhancing framework is insufficient.

3.5.1 Baseline forecasts

In evaluating the economic costs of TB, the baseline forecast is compared to a counterfactual scenario without TB. Table 1 below highlights the size of the top ten economies in 2050 in

[10] Daron Acemoglu & Philippe Aghion & Fabrizio Zilibotti, 2006. "Distance to Frontier, Selection, and Economic Growth," Journal of the European Economic Association, MIT Press, vol. 4(1), pages 37-74, 03
[11] https://home.kpmg.com/uk/en/home/insights/2017/01/kpmg_s-variables-for-sustained-growth-2016-index.html

our baseline projection and the share of the global economy that these countries will represent.

Table 1: Baseline projections in 2050

Country	2050 GDP, bn US$ (in 2016 prices)	Share of global economy, %
China	56,941	23.8%
United States	36,300	15.2%
India	14,876	6.2%
Japan	14,697	6.1%
Brazil	8,993	3.8%
Germany	8,666	3.6%
United Kingdom	6,687	2.8%
France	6,371	2.7%
Indonesia	5,402	2.3%
Italy	4,628	1.9%

Source: KPMG analysis

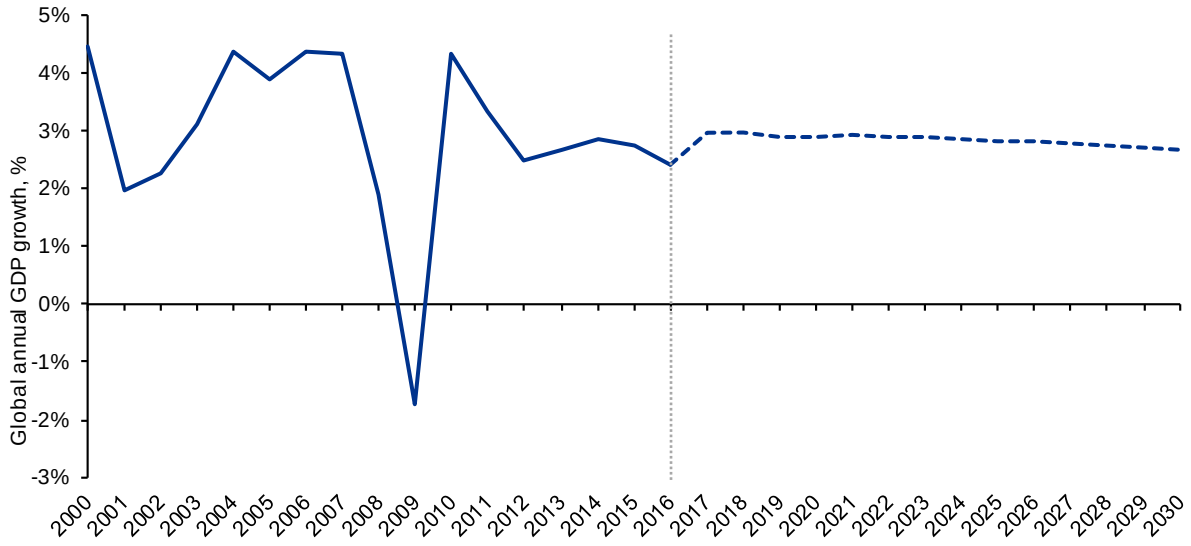
By 2050, China is projected to be the largest economy in the world in our baseline projection, followed by the US and India. For India and other developing economies, the large demographic endowments, as well as a modest degree of catch-up, mean that by 2050 these economies will make up a much larger share of the global economy than in 2016.

3.5.2 The impact of technological progress

As with all forecasts, there are substantial uncertainties regarding the outturn and the realisation of economic growth in the future. Figure 9 below outlines the model's projection of global GDP growth. This growth profile is consistent with the recent observation of a slowdown in the rate of productivity growth in the US, and assumes that it will drop to around 0.9%[12] per year from 2022.

[12] See Economic models vs 'techno-optimism': Predicting medium-term total factor productivity rates in the US; Nicholas Crafts, Terence Mills; December 2017; https://www2.warwick.ac.uk/fac/soc/economics/research/.../68_crafts_mills_17.pdf

Figure 9: Historical outturn and projection of global GDP growth



Source: IMF, KPMG analysis

The assumption that future growth performance is aligned with historical trends underlines the basis of our projections. However, there are a number of risks associated with Artificial Intelligence and automation that could lead to a discontinuity in the rate of improvement of technological progress, particularly to the upside. If the productivity potential of extensive automation can be realised, higher growth rates of total factor productivity may lead to a rise in the profile of global productivity growth.

In the context of our model, this upside risk would be associated with a faster productivity growth rate in the technology frontier country. A higher growth rate of productivity in the US would also raise the growth rate of the developing countries, which are catching-up to the frontier hence causing the economic cost per TB related mortality to be higher.

In other words, if the world of the future opens many more possibilities for development, the loss of human life to diseases such as TB would represent a bigger loss to the global economy and society.

Detailed estimates of the costs of TB in this report are presented in Appendix 2.

Appendix 2 Detailed results of our study

Country	% GDP losses in 2015	Cumulative GDP losses 2000-2015 (bn. in 2016 US$)	% GDP losses in 2030	Cumulative GDP losses 2015-2030 (bn. in 2016 US$)
Angola	0.7%	4.9	0.6%	7.3
Albania	0.0%	0.0	0.0%	0.0
United Arab Emirates	0.0%	0.9	0.0%	0.3
Argentina	0.0%	1.4	0.0%	2.1
Armenia	0.1%	0.1	0.0%	0.1
Antigua and Barbuda	0.0%	0.0	0.0%	0.0
Australia	0.0%	0.7	0.0%	0.6
Austria	0.0%	0.4	0.0%	0.6
Azerbaijan	0.1%	0.7	0.0%	0.0
Burundi	0.5%	0.1	0.4%	0.1
Belgium	0.0%	0.6	0.0%	0.5
Benin	0.2%	0.2	0.2%	0.3
Burkina Faso	0.2%	0.2	0.1%	0.3
Bangladesh	1.0%	11.9	0.7%	22.0
Bulgaria	0.0%	0.3	0.0%	0.1
Bahrain	0.0%	0.0	0.0%	0.0
Bahamas	0.0%	0.0	0.0%	0.0
Bosnia and Herzegovina	0.1%	0.2	0.0%	0.1
Belarus	0.1%	0.8	0.1%	0.4
Belize	0.1%	0.0	0.0%	0.0
Bolivia	0.1%	0.2	0.1%	0.3
Brazil	0.1%	13.0	0.0%	14.3
Barbados	0.0%	0.0	0.0%	0.0
Brunei	0.1%	0.1	0.1%	0.1
Bhutan	0.3%	0.0	0.2%	0.1
Botswana	0.5%	0.8	1.0%	2.9
Central African Republic	1.4%	0.3	2.3%	0.5
Canada	0.0%	1.0	0.0%	1.0
Switzerland	0.0%	0.5	0.0%	0.3
Chile	0.1%	1.3	0.1%	1.7
China	0.1%	58.6	0.0%	60.4
Cote d'Ivoire	0.7%	2.0	0.4%	3.0

Country	% GDP losses in 2015	Cumulative GDP losses 2000-2015 (bn. in 2016 US$)	% GDP losses in 2030	Cumulative GDP losses 2015-2030 (bn. in 2016 US$)
Cameroon	0.8%	2.0	0.6%	3.3
Congo, Dem. Rep	1.0%	2.1	1.3%	5.9
Congo	0.5%	0.4	1.0%	1.7
Colombia	0.0%	1.3	0.0%	2.3
Comoros	0.1%	0.0	0.1%	0.0
Cabo Verde	0.1%	0.0	0.2%	0.0
Costa Rica	0.0%	0.1	0.0%	0.1
Cyprus	0.0%	0.0	0.0%	0.0
Czech Republic	0.0%	0.2	0.0%	0.2
Germany	0.0%	3.2	0.0%	3.0
Djibouti	0.8%	0.1	0.5%	0.1
Denmark	0.0%	0.3	0.0%	0.2
Dominican Republic	0.1%	0.5	0.1%	1.4
Algeria	0.1%	2.0	0.2%	4.0
Ecuador	0.1%	0.8	0.1%	0.6
Egypt	0.0%	0.4	0.0%	0.1
Spain	0.0%	2.2	0.0%	1.5
Estonia	0.1%	0.2	0.0%	0.1
Ethiopia	0.9%	2.9	0.3%	3.5
Finland	0.0%	0.6	0.0%	0.3
Fiji	0.1%	0.0	0.1%	0.1
France	0.0%	6.1	0.0%	4.1
Gabon	1.3%	1.9	1.2%	3.0
United Kingdom	0.0%	3.0	0.0%	2.0
Georgia	0.1%	0.1	0.1%	0.1
Ghana	0.8%	2.7	0.8%	6.2
Guinea	0.7%	0.4	0.7%	0.8
Gambia	0.4%	0.0	0.4%	0.1
Guinea-Bissau	1.1%	0.1	1.9%	0.4
Equatorial Guinea	0.1%	0.2	0.2%	0.3
Greece	0.0%	0.4	0.0%	0.3
Grenada	0.0%	0.0	0.0%	0.0
Guatemala	0.0%	0.2	0.0%	0.2
Hong Kong	0.1%	2.0	0.0%	1.1
Honduras	0.0%	0.1	0.0%	0.1

Country	% GDP losses in 2015	Cumulative GDP losses 2000-2015 (bn. in 2016 US$)	% GDP losses in 2030	Cumulative GDP losses 2015-2030 (bn. in 2016 US$)
Croatia	0.0%	0.3	0.0%	0.1
Haiti	0.6%	0.4	0.3%	0.3
Hungary	0.0%	0.5	0.0%	0.2
Indonesia	0.7%	59.9	0.7%	123.6
India	0.7%	122.8	0.5%	252.7
Ireland	0.0%	0.3	0.0%	0.2
Iran	0.0%	1.2	0.0%	1.7
Iraq	0.0%	0.5	0.0%	0.8
Iceland	0.0%	0.0	0.0%	0.1
Israel	0.0%	0.3	0.0%	0.1
Italy	0.0%	2.5	0.0%	2.1
Jamaica	0.0%	0.0	0.0%	0.0
Jordan	0.0%	0.0	0.0%	0.0
Japan	0.1%	31.2	0.0%	20.1
Kazakhstan	0.3%	5.4	0.1%	2.4
Kenya	0.3%	1.0	0.4%	3.7
Kyrgyzstan	0.3%	0.2	0.2%	0.2
Cambodia	1.6%	2.1	0.8%	2.4
Korea, South	0.1%	12.5	0.1%	10.5
Kuwait	0.0%	0.1	0.0%	0.0
Laos	1.3%	1.1	0.6%	1.5
Lebanon	0.0%	0.1	0.0%	0.1
Liberia	1.0%	0.1	1.4%	0.4
Saint Lucia	0.0%	0.0	0.0%	0.0
Sri Lanka	0.1%	0.7	0.1%	1.0
Lesotho	1.0%	0.3	3.2%	1.6
Lithuania	0.1%	0.6	0.1%	0.6
Luxembourg	0.0%	0.1	0.0%	0.0
Latvia	0.1%	0.4	0.1%	0.2
Morocco	0.2%	1.5	0.2%	2.9
Moldova	0.2%	0.2	0.2%	0.2
Madagascar	1.0%	0.9	0.9%	1.6
Maldives	0.1%	0.0	0.1%	0.0
Mexico	0.0%	4.6	0.0%	6.1
Macedonia FYR	0.0%	0.0	0.0%	0.0

Country	% GDP losses in 2015	Cumulative GDP losses 2000-2015 (bn. in 2016 US$)	% GDP losses in 2030	Cumulative GDP losses 2015-2030 (bn. in 2016 US$)
Mali	0.2%	0.2	0.2%	0.4
Malta	0.0%	0.0	0.0%	0.0
Myanmar	1.2%	7.4	0.9%	12.7
Montenegro	0.0%	0.0	0.0%	0.0
Mongolia	0.4%	0.3	0.3%	0.7
Mozambique	1.3%	1.6	3.2%	8.8
Mauritania	0.5%	0.3	0.3%	0.3
Mauritius	0.0%	0.0	0.0%	0.1
Malawi	0.3%	0.2	0.6%	1.0
Malaysia	0.1%	2.8	0.1%	6.4
Namibia	0.6%	0.7	0.9%	1.9
Niger	0.5%	0.3	0.3%	0.4
Nigeria	1.5%	45.2	1.4%	79.4
Nicaragua	0.1%	0.1	0.0%	0.1
Netherlands	0.0%	0.6	0.0%	0.4
Norway	0.0%	0.6	0.0%	0.2
Nepal	0.3%	0.5	0.3%	1.0
New Zealand	0.0%	0.1	0.0%	0.1
Oman	0.0%	0.1	0.0%	0.0
Pakistan	0.8%	17.2	0.4%	14.4
Panama	0.1%	0.3	0.1%	0.9
Peru	0.1%	2.2	0.1%	3.1
Philippines	0.5%	10.8	0.2%	11.6
Poland	0.0%	1.7	0.0%	1.2
Portugal	0.0%	1.1	0.0%	0.8
Paraguay	0.1%	0.2	0.1%	0.3
Qatar	0.0%	0.1	0.0%	0.1
Romania	0.1%	2.4	0.1%	2.0
Russia	0.3%	52.3	0.1%	31.7
Rwanda	0.1%	0.1	0.1%	0.1
Saudi Arabia	0.0%	1.8	0.0%	1.7
Sudan	0.4%	2.0	0.2%	2.4
Senegal	0.4%	0.5	0.4%	1.3
Singapore	0.0%	0.8	0.0%	0.7
Sierra Leone	1.0%	0.3	0.9%	0.5

Country	% GDP losses in 2015	Cumulative GDP losses 2000-2015 (bn. in 2016 US$)	% GDP losses in 2030	Cumulative GDP losses 2015-2030 (bn. in 2016 US$)
El Salvador	0.0%	0.1	0.1%	0.1
Serbia	0.0%	0.1	0.0%	0.1
Sao Tome and Principe	0.2%	0.0	0.1%	0.0
Suriname	0.0%	0.0	0.1%	0.0
Slovakia	0.0%	0.1	0.0%	0.1
Slovenia	0.0%	0.1	0.0%	0.1
Sweden	0.0%	0.6	0.0%	0.4
Swaziland	0.7%	0.3	1.7%	1.1
Seychelles	0.0%	0.0	0.0%	0.0
Chad	0.4%	0.4	0.6%	1.0
Togo	0.1%	0.0	0.1%	0.1
Thailand	0.3%	9.5	0.3%	17.6
Turkmenistan	0.4%	1.1	0.1%	0.7
Trinidad and Tobago	0.0%	0.1	0.0%	0.1
Tunisia	0.0%	0.2	0.0%	0.3
Turkey	0.0%	2.0	0.0%	1.6
Tanzania	1.2%	3.7	1.2%	9.8
Uganda	0.4%	0.8	0.5%	2.1
Ukraine	0.3%	5.0	0.2%	3.6
Uruguay	0.0%	0.1	0.0%	0.3
United States	0.0%	5.9	0.0%	5.9
Uzbekistan	0.2%	0.9	0.1%	1.2
Saint Vincent and the Grenadines	0.0%	0.0	0.0%	0.0
Venezuela	0.0%	1.1	0.1%	1.1
Vietnam	0.4%	4.9	0.2%	7.0
Yemen	0.2%	0.6	0.1%	0.3
South Africa	0.9%	33.0	2.6%	131.5
Zambia	0.5%	1.1	1.2%	5.8
Zimbabwe	0.3%	0.3	0.6%	1.0

Source: KPMG analysis

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