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## Supplementary appendix

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## Measuring population ageing, an analysis of the Global Burden of Disease

Supplemental materials

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## 1. Selection of age-related diseases

## Defining age-related disease

Following guidance from established ageing literature, ${ }^{1-3}$ we define "age-related diseases" as diseases with incidence rates among the adult population increasing exponentially with age. The adult population is defined as people ages 25 and above., ${ }^{4,5}$ To identify age-related diseases, we applied a two-step linear regression framework to the 2017 global incidence rates:

Step 1: Identify Global Burden of Disease Study 2017 (GBD) causes with incidence rate increasing with age:
incidence $_{i}=\beta_{0}+\beta_{1}$ age $+\varepsilon_{i}$
where $i$ represents GBD causes, age is the median age of 5-year age groups starting from 25-29 (median age 27) and $\varepsilon$ is the error term. GBD causes with positive $\widehat{\beta_{1}}$ across $95 \%$ of 1,000 drawlevel estimates are considered for step 2.

Step 2: Identify diseases with convex relationships between incidence and age:
incidence $_{i}=\beta_{0}+\beta_{1}$ age $+\beta_{2}$ age $^{2}+\varepsilon_{i}$
where $a g e^{2}$ is the quadratic term for the age group and $\varepsilon$ is the error term, capturing the quadratic growth in incidence rates with age. Among causes that passed step 1, we further selected diseases with positive $\widehat{\beta_{2}}$ across $95 \%$ of 1,000 draw-level estimates.

We analyzed incidence data for ages 25 to 80 to remove potential bias due to survival effects, ${ }^{1}$ and then for all adults ages 25 and above (including those above age 80) and identify diseases that pass the steps described above. Finally, for a small subset of GBD causes that do not have incidence data, we relied on prevalence data and applied the same method described above.

We provide the flow chart of the number of causes from the GBD 2017 study that were include and excluded in each of the selection step. Starting with 293 most-detailed GBD cause list, we first separated 12 causes with neither incidence or prevalence data, and 60 causes that do not have incidence data (Appendix Figure 1). Among the remaining 221, we excluded 105 causes that did not have a positive relationship between incidence rates and age, and further 40 that did not have a positive term for the quadratic term, i.e., the relationship between incidence rate and age were not convex, thus excluded from the analysis. Out of the 60 causes with no incidence data, we applied the same methodology using prevalence rates, and included 16 causes that met the criteria. Overall, we identified 92 causes as age-related diseases. The causes excluded at each step are listed in Appendix Table 1.

Appendix Figure 1. Flow chart of age-related disease selection


## Appendix Table 1. GBD causes that were not classified as age-related diseases

| Data availability and exclusion criteria | GBD causes |
| :---: | :---: |
| Causes with incidence data, excluded in Step 1 | Acne vulgaris, Acute hepatitis A, Acute hepatitis B, Acute hepatitis C, Acute hepatitis E, African trypanosomiasis, Alcohol use disorders, Alopecia areata, Amphetamine use disorders, Anorexia nervosa, Anxiety disorders, Appendicitis, Benign and in situ cervical and uterine neoplasms, Bipolar disorder, Bulimia nervosa, Cannabis use disorders, Caries of deciduous teeth, Caries of permanent teeth, Chagas disease, Chlamydial infection, Chronic kidney disease due to hypertension, Cirrhosis and other chronic liver diseases due to alcohol use, Cirrhosis and other chronic liver diseases due to hepatitis B, Cirrhosis and other chronic liver diseases due to hepatitis C, Cirrhosis and other chronic liver diseases due to other causes, Cocaine use disorders, Conflict and terrorism, Cutaneous and mucocutaneous leishmaniasis, Cyclist road injuries, Cystic echinococcosis, Dengue, Diabetes mellitus type 1, Diphtheria, Dysthymia, Ebola, Ectopic pregnancy, Endometriosis, Executions and police conflict, Exposure to forces of nature, Extensively drug-resistant tuberculosis, Fire, heat, and hot substances, Foreign body in eyes, Genital herpes, Gonococcal infection, Guinea worm disease, HIV/AIDS - Drug-susceptible Tuberculosis, HIV/AIDS - Extensively drug-resistant Tuberculosis, HIV/AIDS -Multidrug-resistant Tuberculosis without extensive drug resistance, HIV/AIDS resulting in other diseases, Inflammatory bowel disease, Invasive Non-typhoidal Salmonella (iNTS), Iodine deficiency, Malaria, Maternal abortion and miscarriage, Maternal hemorrhage, Maternal hypertensive disorders, Maternal obstructed labor and uterine rupture, Maternal sepsis and other maternal infections, Measles, Meningococcal meningitis, Migraine, Motor vehicle road injuries, Motorcyclist road injuries, Multidrugresistant tuberculosis without extensive drug resistance, Multiple sclerosis, Nonvenomous animal contact, Opioid use disorders, Other exposure to mechanical forces, Other gynecological diseases, Other meningitis, Other road injuries, Otitis media, Paratyphoid fever, Pedestrian road injuries, Physical violence by firearm, Physical violence by other means, Physical violence by sharp object, Poisoning by carbon monoxide, Poisoning by other means, Polycystic ovarian syndrome, Premenstrual syndrome, Psoriasis, Pulmonary aspiration and foreign body in airway, Rheumatic heart disease, Scabies, Schizophrenia, Self-harm by other specified means, Syphilis, Tensiontype headache, Testicular cancer, Trichomoniasis, Typhoid fever, Unintentional firearm injuries, Upper respiratory infections, Urinary tract infections, Urticaria, Uterine fibroids, Venomous animal contact, Viral skin diseases, Visceral leishmaniasis, Vitamin A deficiency, Whooping cough, Yellow fever, Zika virus |
| Causes with incidence data, excluded in Step 2 | Acute glomerulonephritis, Adverse effects of medical treatment, Asthma, Atopic dermatitis, Benign prostatic hyperplasia, Cervical cancer, Chronic kidney disease due to diabetes mellitus type 1, Contact dermatitis, Diabetes mellitus type 2, Drug-susceptible tuberculosis, Edentulism and severe tooth loss, Epilepsy, Food-borne trematodiases, Gallbladder and biliary diseases, Gastritis and duodenitis, Gastroesophageal reflux disease, Genital prolapse, Gout, H influenzae type B meningitis, Inguinal, femoral, and abdominal hernia, Leprosy, Liver cancer due to hepatitis B, Liver cancer due to other causes, Low back pain, Major depressive disorder, Nasopharynx cancer, Neck pain, Osteoarthritis, Other pharynx cancer, Periodontal diseases, Protein-energy malnutrition, Pruritus, Rabies, Rheumatoid arthritis, Seborrhoeic dermatitis, Self-harm by firearm, Subarachnoid hemorrhage, Tetanus, Urolithiasis, Varicella and herpes zoster |
| Causes with prevalence data, excluded in Step 1 | Ascariasis, Attention-deficit/hyperactivity disorder, Autism spectrum disorders, Congenital heart anomalies, Dietary iron deficiency, Down syndrome, Female infertility, G6PD deficiency, G6PD trait, Hemolytic disease and other neonatal jaundice, Hookworm disease, Idiopathic developmental intellectual disability, Klinefelter syndrome, Latent tuberculosis infection, Lymphatic filariasis, Male infertility, Neonatal encephalopathy due to birth asphyxia and trauma, Neonatal preterm birth, Neonatal sepsis and other neonatal infections, Neural tube defects, Onchocerciasis, Orofacial clefts, Other chromosomal |


|  | abnormalities, Other congenital birth defects, Other drug use disorders, Other mental <br> disorders, Other musculoskeletal disorders, Other neglected tropical diseases, Other oral <br> disorders, Other sexually transmitted infections, Other unspecified infectious diseases, <br> Schistosomiasis, Sexual volonce, Sickle cell disorders, Sickle cell trait, Thalassemias, <br> Thalassemias trait, Trichuriasis, Turner syndrome, Urogenital congenital anomalies |
| :--- | :--- |
| Causes with <br> prevalence data, <br> excluded in Step 2 | Alcoholic cardiomyopathy, Cysticercosis, Near vision loss, Other neurological disorders |
| Causes with neither <br> incidence nor <br> prevalence data | Indirect maternal deaths, Late maternal deaths, Maternal deaths aggravated by HIV/AIDS, <br> Aortic aneurysm, Sudden infant death syndrome, Other intentinal infectious diseases, <br> OOther maternal disorders, Other neonatal disorders, Other nutritional deficiencies, Other <br> chronic respiratory diseases, Other digestive diseases, Other urinary diseases |

Appendix Figure 2. Distribution of non-age-related burden (A) and age-related burden (B) at the global level in 2017, measured in DALYs

A


B


|  | Cardiovascular diseases |
| :--- | :--- |
| Chronic respiratory diseases |  |
| Communicable, maternal, neonatal, and nutritional diseases |  |
| Diabetes and kidney diseases |  |
| Digestive diseases |  |
|  | Injuries |
|  | Neoplasms |
|  | Neurological disorders |
|  | Other NCD |
|  | Sense organ diseases |
|  | Skin and subcutaneous diseases |

Appendix Table 2. Distribution of non-age-related burden and age-related burden at the global level in 2017, measured in DALYs

| GBD category | Non-age-related burden (\%) | Age-related burden (\%) |
| :--- | :--- | :--- |
| Communicable, maternal, neonatal, <br> and nutritional diseases | $17.3(15.9,18.8)$ | $6.5(5.8,7.9)$ |
| Neoplasms | $2.9(2.5,3.4)$ | $22.6(21.6,23.6)$ |
| Cardiovascular diseases | $3.0(2.7,3.5)$ | $38.4(37.1,39.7)$ |
| Chronic respiratory diseases | $2.3(2,2.8)$ | $9.8(9.1,10.4)$ |
| Digestive diseases | $6.7(6.1,7.5)$ | $2.1(2,2.2)$ |
| Neurological disorders | $6.1(4.8,7.7)$ | $4.3(4.1,4.5)$ |
| Mental and substance use disorders | $15.1(13,16.8)$ | $0.0(0.0,0.0)$ |
| Diabetes and kidney diseases | $9.1(8.6,9.7)$ | $2.6(2.4,2.7)$ |
| Other NCD | $5(4.1,6.3)$ | $1.1(0.9,1.3)$ |
| Musculoskeletal disorders | $15.1(13,17.6)$ | $0.0(0.0,0.0)$ |
| Skin and subcutaneous diseases | $1.9(1.5,2.4)$ | $0.8(0.5,1.3)$ |
| Sense organ diseases | $1.0(0.6,1.9)$ | $5.9(4.3,7.7)$ |
| Injuries | $14.0(12.6,15.6)$ | $5.8(5.2,6.5)$ |

## 2. Details of methodology

## I. Age standardization

Age-standardisation is an important method for comparing epidemiologic profiles of diseases across populations (geography or time) with different age structures. It was performed by multiplying the proportion of people in each age group among all adults from the GBD 2017 reference population and summing across all adults. Age-standardized populations in GBD 2017 was developed using the non-weighted means of 2017 age-specific proportional distribution from the GBD 2017 population estimates for all national locations with a population greater than five million people in 2017 to generate an updated standard population age structure. ${ }^{6}$ The values used for the age standard are found in Appendix Table 3.

Appendix Table 3. GBD world population age standard, proportion among adults ages 25 and above

| Age group | Proportion among adults ages 25 and above |
| :---: | :---: |
| $25-29$ | $14.2 \%$ |
| $30-34$ | $13.4 \%$ |
| $35-39$ | $12.4 \%$ |
| $40-44$ | $11.1 \%$ |
| $45-49$ | $10.0 \%$ |
| $50-54$ | $8.9 \%$ |
| $55-59$ | $7.8 \%$ |
| $60-64$ | $6.6 \%$ |
| $65-69$ | $5.3 \%$ |
| $70-74$ | $3.9 \%$ |
| $75-79$ | $2.9 \%$ |
| $80-84$ | $2.0 \%$ |
| $85-89$ | $1.1 \%$ |
| $90-94$ | $0.4 \%$ |
| $95+$ | $0.1 \%$ |

## II. Decomposition

First, we express the age-related disability-adjusted life year (DALY), DALY ${ }_{\mathrm{a}, \mathrm{d}, \mathrm{y}}$, as the product of four factors:
$D A L Y_{y}=\sum_{a, d}$ pop size $_{y} \cdot \frac{\text { pop age }_{a, y}}{\text { pop size }_{y}} \cdot \frac{\text { prevalence }_{a, d, y}}{\text { pop age }_{a, y}} \cdot \frac{\text { DALY }_{a, d, y}}{\text { prevalence }_{a, d, y}}$
Where $a$ is the age group, $d$ is disease, and $y$ is year.
For simplicity, let
R be the age-related disease DALYs by age and disease,
A be the size of the adult population A (the first term on the right-hand side)
$B$ be the age structure of the adult population (or the mean age of the population) (second term)
C be the disease-specific prevalence rate of age-related diseases for each age group (third term), and
D be the severity of age-related diseases (fourth term).
Then, we can simplify the identity for the two time periods of interest into:
$\mathrm{R}_{1990}=\mathrm{A}_{1990} \mathrm{~B}_{1990} \mathrm{C}_{1990} \mathrm{D}_{1990}$
$\mathrm{R}_{2017}=\mathrm{A}_{2017} \mathrm{~B}_{2017} \mathrm{C}_{2017} \mathrm{D}_{2017}$
To estimate the additive contribution of A, for example, Das Gupta (1993)'s approach assumes that B, C, and D remain the same over time by applying a standardised rate of B, C, and D. The additive contribution of population size, A , on the change in age-related disease burden between 1990 and 2017 is then calculated as

$$
\begin{gather*}
\left(\mathrm{A}_{2017}-\mathrm{A}_{1990}\right) \times\left[\frac{\mathrm{B}_{2017} \mathrm{C}_{2017} \mathrm{D}_{2017}+\mathrm{B}_{1990} \mathrm{C}_{1990} \mathrm{D}_{1990}}{4}+\right. \\
\left.\frac{\mathrm{B}_{2017} \mathrm{C}_{2017} \mathrm{D}_{1990}+\mathrm{B}_{2017} \mathrm{C}_{1990} \mathrm{D}_{2017}+\mathrm{B}_{1990} \mathrm{C}_{2017} \mathrm{D}_{2017}+\mathrm{B}_{1990} \mathrm{C}_{1990} \mathrm{D}_{2017}+\mathrm{B}_{1990} \mathrm{C}_{2017} \mathrm{D}_{1990}+\mathrm{B}_{2017} \mathrm{C}_{1990} \mathrm{D}_{1990}}{12}\right] \tag{6}
\end{gather*}
$$

where the latter term in square brackets are the BCD-standardized rates for the two time periods. We follow the same step to estimate the contributions of B, C, and D.
III. Estimating the equivalent age of populations across countries and time, compared to average global 65-year-old in 2017

We estimated the age of populations when other countries have the same health burden as average global 65-year-olds. This approximates an age of equivalence, using global 65-year-olds as the reference group. First, since age-related burden rate is estimated for five-year age groups, we estimated the rate of age-related burden in global 65-year-olds by taking the average of the age-related burden rate of the two adjacent age groups, 60 to 64 and 65 to 69-year-olds. Second, we identified the age groups in other countries with the closest age-related burden rate to global 65 -year-olds. To estimate the exact equivalent age (instead of the five-year age group), we assume a linear relationship between the age-related burden rate in two adjacent age groups.

For example, if we find that the age-related burden rate of the global 65-year-olds is the closest to the burden rate of age group 55 to 59 (median age 57) in country $x$, we estimate the equivalent age by the following equation:
$\frac{\text { Equ age }-52}{62-52}=\frac{\text { rate }_{\text {global } 65}-\text { rate }_{x 52}}{\text { rate }_{x 62}-\text { rate }_{x 52}}$
where rate ${ }_{U S} 65$ is the age-related burden rate for global65-year-olds, rate $x_{52}$ and rate $e_{x 2}$ are the age-related burden rates for age groups 50 to 54 and 60 to 64 (the age groups below and above age group 55 to 59) in country $x$. We solve for Equ age, which is the equivalent age in country $x$ with the same level of age-related burden as global 65-year-olds.
IV. Estimating DALYs and some limitations in GBD 2017

We briefly summarize some of the basic methodologies and assumptions behind the Global Burden of Disease Study (GBD), and details can be found elsewhere. ${ }^{7}$ The Global Burden of Disease Study 2017 spans the period from 1990 to 2017, and estimates deaths, DALYs, prevalence, incidence, and other health metrics for 195 countries and territories, for 23 age groups and both sexes. To allow meaningful comparisons between deaths and non-fatal disease outcomes as well as between diseases, the data on deaths and prevalence are summarized into a single indicator, the DALY, which is the sum of years of life lost (YLLs) and years lived with disability (YLDs). YLLs are estimated as the multiplication of counts of deaths and an 'ideal' remaining life expectancy, which is derived from the lowest empirically observed mortality rates in any population in the world greater than 5 million. YLDs are estimated as the product of prevalence of individual consequences of disease (or sequelae) times a disability weight that quantifies the relative severity of a sequela as a number between zero (representing 'full health’) and 1 (representing death). Disability weights were estimated from population surveys and internet survey, described in detail elsewhere. ${ }^{8}$

Our study is based on GBD 2017 and therefore shares the limitations of the overall study. The limitations that are more relevant to this study include:

1. DALY estimates are influenced by the availability of data for years of life lost (YLL) and years lived with disability (YLD). Availability in the reporting of health data for older age groups and/or locations with scarce or lagged data reporting lead to wider uncertainty
intervals of the DALY estimates. Our study reflects the uncertainty by providing the uncertainty intervals (UI) for our findings.
2. As described in more detail in the most recent GBD capstone papers, ${ }^{9}$ there is considerable heterogeneity in terms of data availability for some locations and diseases, and the study found that data availability does not consistently correlate with burden.
3. The burden of diseases with lower availability of diagnostic and/or poorer reporting systems are associated with greater uncertainty (as reflected in the uncertainty intervals). ${ }^{9}$
4. GBD results are a combination of data and estimation. Lags in data reporting imply that the estimates for more recent years rely more on modelling process.

## 3. Full results

Appendix Table 4. Age-standardised age-related burden per thousand adults in 1990 and 2017, share of age-related burden as proportion of all disease burden in 2017, and the equivalent age of populations compared to global 65-year-olds in 2017

| Country | Sociodemographic Index (SDI) | 1990 age-related burden rate | 2017 age-related burden rate | 2017 percent of all burden that is age-related burden | 2017 equivalent age to global 65-year-olds | Country ranking of 2017 agerelated burden rate | Country ranking of 2017 allrelated burden rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Afghanistan | Low | 462.1 (292.4, 528.2) | 380.2 (340.4, 423.3) | 55.1 (52.2, 58.0) | 51.6 (49.2, 53.5) | 192 | 185 |
| Albania | High-middle | 215.9 (203.4, 230.3) | 185.4 (161.1, 215.3) | 59.6 (55.4, 63.7) | 66.7 (64.9, 68.7) | 76 | 45 |
| Algeria | Middle | 222.5 (206.3, 237.8) | 161.0 (149.3, 173.6) | 50.2 (46.3, 54.1) | 69.7 (69.2, 70.2) | 52 | 48 |
| American Samoa | High-middle | 273.0 (257.6, 287.7) | 263.9 (242.1, 286.0) | 55.1 (51.8, 58.0) | 60.4 (58.6, 62.4) | 158 | 133 |
| Andorra | High | 164.4 (148.5, 183.8) | 126.1 (113.8, 140.6) | 47.7 (43.4, 52.1) | 73.6 (72.1, 74.9) | 17 | 14 |
| Angola | Low-middle | 359.1 (305.7, 406.9) | 253.3 (225.3, 283.9) | 42.4 (39.8, 45.1) | 60.4 (57.8, 62.2) | 148 | 169 |
| Antigua and Barbuda | High | 199.5 (188.4, 212.0) | 160.4 (150.8, 172.8) | 48.8 (45.6, 51.8) | 68.4 (67.6, 69.5) | 51 | 54 |
| Argentina | High-middle | 233.2 (224.7, 243.0) | 177.3 (161.5, 195.7) | 51.5 (48.0, 55.1) | 66.4 (64.8, 68.1) | 67 | 58 |
| Armenia | High-middle | 282.4 (268.1, 296.9) | 212.2 (200.2, 225.4) | 57.5 (54.3, 60.9) | 64.1 (63.6, 64.7) | 100 | 81 |
| Australia | High | 188.7 (179.5, 199.7) | 125.7 (112.5, 139.9) | 46.0 (42.3, 50.1) | 73.6 (72.3, 74.9) | 16 | 17 |
| Austria | High | 203.1 (193.7, 214.6) | 130.3 (120.0, 142.0) | 47.6 (43.9, 51.4) | 73.0 (71.9, 74.1) | 21 | 22 |
| Azerbaijan | High-middle | 277.5 (263.7, 292.8) | 283.0 (265.7, 303.6) | 64.4 (61.0, 67.7) | 58.7 (57.7, 59.8) | 169 | 117 |
| Bahrain | High-middle | 298.5 (285.2, 313.3) | 131.1 (118.5, 143.5) | 42.8 (39.8, 45.9) | 71.2 (69.7, 72.4) | 25 | 41 |
| Bangladesh | Low-middle | 310.2 (287.5, 333.6) | 216.4 (197.8, 236.1) | 55.2 (51.9, 58.5) | 62.5 (61.1, 63.8) | 105 | 88 |
| Barbados | High-middle | 195.6 (186.9, 205.5) | 159.6 (147.2, 172.9) | 48.9 (45.8, 52.1) | 70.5 (69.4, 71.7) | 50 | 50 |
| Belarus | High | 286.6 (274.9, 300.3) | 249.9 (234.8, 266.7) | 57.5 (54.3, 60.3) | 60.5 (59.6, 61.1) | 143 | 116 |
| Belgium | High | 201.7 (192.7, 213.0) | 137.1 (126.2, 150.3) | 47.3 (43.7, 51.0) | 71.9 (71.0, 72.8) | 31 | 34 |
| Belize | Middle | 189.5 (177.8, 201.2) | 175.0 (165.7, 185.5) | 44.0 (41.9, 46.2) | 68.4 (67.5, 69.3) | 63 | 96 |
| Benin | Low | 279.3 (254.7, 303.4) | 238.2 (209.1, 275.7) | 45.4 (42.7, 48.3) | 61.8 (58.3, 64.3) | 125 | 151 |
| Bermuda | High | 223.3 (213.1, 234.4) | 130.5 (120.4, 141.8) | 50.2 (46.5, 53.8) | 72.7 (71.8, 73.7) | 22 | 12 |
| Bhutan | Low-middle | 298.2 (268.3, 337.4) | 190.5 (162.7, 216.5) | 51.6 (47.4, 55.3) | 65.2 (62.8, 67.6) | 82 | 80 |
| Bolivia | Middle | 282.6 (264.6, 303.7) | 194.8 (165.4, 224.9) | 50.0 (45.8, 53.2) | 65.2 (62.5, 67.5) | 85 | 90 |
| Bosnia and Herzegovina | High-middle | 254.0 (241.7, 268.6) | 212.3 (197.0, 229.7) | 58.4 (55.0, 61.8) | 64.4 (63.5, 65.0) | 101 | 73 |
| Botswana | Middle | 282.4 (254.9, 316.4) | 204.1 (188.1, 225.4) | 36.3 (33.1, 39.4) | 64.8 (63.1, 65.8) | 91 | 158 |
| Brazil | Middle | 247.4 (238.6, 257.9) | 174.4 (165.9, 184.6) | 47.6 (44.9, 50.3) | 67.6 (67.3, 68.0) | 61 | 77 |
| Brunei | High | 274.5 (260.9, 287.7) | 194.6 (180.8, 210.0) | 53.1 (49.9, 55.9) | 65.2 (63.9, 66.4) | 84 | 78 |
| Bulgaria | High-middle | 304.8 (290.8, 321.4) | 258.6 (241.4, 276.7) | 64.7 (61.5, 67.9) | 59.0 (58.2, 59.8) | 152 | 97 |
| Burkina Faso | Low | 303.9 (280.8, 329.8) | 261.2 (235.8, 290.2) | 46.1 (43.4, 49.0) | 60.2 (57.7, 62.0) | 156 | 159 |
| Burundi | Low | 424.8 (377.7, 472.6) | 263.7 (226.9, 299.5) | 41.5 (38.7, 44.5) | 59.3 (56.9, 61.9) | 157 | 180 |
| Cambodia | Low-middle | 344.6 (317.6, 370.4) | 236.0 (216.7, 260.1) | 49.7 (47.3, 52.1) | 61.7 (60.2, 63.0) | 123 | 130 |
| Cameroon | Low-middle | 293.8 (271.6, 315.8) | 249.3 (212.5, 287.4) | 40.6 (37.7, 43.4) | 60.8 (57.6, 63.5) | 142 | 174 |
| Canada | High | 180.2 (171.9, 189.8) | 125.5 (116.2, 136.3) | 46.0 (42.4, 50.0) | 73.2 (72.3, 74.0) | 15 | 18 |
| Cape Verde | Low-middle | 198.1 (186.5, 210.8) | 168.8 (154.5, 182.6) | 46.1 (43.6, 48.7) | 70.9 (68.7, 71.9) | 56 | 76 |
| Central <br> African <br> Republic | Low | 408.7 (354.3, 447.9) | 364.6 (313.6, 418.4) | 37.8 (35.1, 40.4) | 53.6 (50.8, 56.0) | 190 | 194 |
| Chad | Low | 281.7 (257.2, 309.6) | 275.4 (245.8, 310.9) | 45.0 (42.5, 47.7) | 58.6 (56.2, 61.2) | 165 | 173 |
| Chile | High-middle | 210.4 (201.8, 220.5) | 138.1 (125.9, 153.2) | 45.1 (41.5, 48.6) | 71.1 (69.8, 72.6) | 35 | 42 |
| China | Middle | 261.7 (251.2, 272.2) | 183.9 (173.9, 194.9) | 57.9 (54.5, 61.3) | 66.0 (65.7, 66.4) | 75 | 46 |
| Colombia | High-middle | 202.3 (193.1, 212.7) | 124.4 (111.3, 137.3) | 45.4 (42.8, 48.2) | 73.7 (72.2, 75.3) | 12 | 19 |
| Comoros | Low | 360.7 (324.8, 403.4) | 240.3 (212.5, 272.2) | 51.5 (48.4, 54.8) | 61.3 (58.8, 63.4) | 130 | 128 |
| Congo | Low-middle | 395.8 (359.0, 430.1) | 287.9 (249.5, 323.8) | 42.5 (40.0, 45.0) | 57.9 (56.0, 60.4) | 174 | 183 |
| Costa Rica | High-middle | 174.6 (165.9, 184.8) | 145.2 (135.2, 156.9) | 50.1 (47.2, 53.0) | 70.8 (70.1, 71.6) | 39 | 32 |
| Cote d'Ivoire | Low | 288.7 (262.3, 316.5) | 260.7 (231.2, 294.2) | 43.4 (40.4, 45.9) | 59.5 (57.0, 62.2) | 154 | 170 |
| Croatia | High-middle | 278.3 (265.3, 293.8) | 183.7 (170.8, 199.6) | 56.1 (52.6, 59.7) | 66.1 (65.2, 67.0) | 74 | 52 |
| Cuba | High-middle | 201.6 (193.3, 211.4) | 169.4 (155.2, 185.0) | 54.9 (51.2, 58.5) | 66.7 (65.1, 68.3) | 57 | 44 |
| Cyprus | High | 188.2 (178.9, 199.0) | 129.9 (118.4, 142.4) | 48.2 (44.4, 52.5) | 72.1 (71.0, 73.1) | 20 | 16 |
| Czech Republic | High | 327.1 (312.4, 345.2) | 185.5 (169.4, 202.8) | 56.7 (53.5, 59.9) | 65.7 (64.6, 66.7) | 77 | 51 |
| Democratic Republic of the Congo | Low | 291.2 (258.2, 328.2) | 260.8 (227.9, 294.5) | 41.8 (38.7, 44.8) | 59.4 (57.1, 61.9) | 155 | 177 |
| Denmark | High | 218.4 (209.8, 229.1) | 137.6 (127.4, 149.0) | 47.3 (43.6, 51.2) | 71.1 (70.3, 72.0) | 33 | 30 |
| Djibouti | Low-middle | 303.8 (249.4, 373.0) | 233.5 (183.6, 297.2) | 45.6 (42.2, 48.9) | 61.3 (56.6, 65.2) | 121 | 145 |
| Dominica | High-middle | 207.1 (198.1, 216.9) | 198.7 (186.3, 211.7) | 51.9 (49.0, 54.8) | 65.1 (64.4, 66.0) | 89 | 86 |
| Dominican Republic | High-middle | 170.8 (159.1, 184.4) | 190.6 (171.0, 211.8) | 48.4 (45.4, 51.4) | 65.2 (64.2, 67.2) | 83 | 91 |
| Ecuador | High-middle | 185.8 (176.7, 196.2) | 147.1 (135.0, 162.7) | 44.8 (42.3, 47.3) | 72.6 (71.2, 73.9) | 42 | 53 |


| Egypt | Middle | 302.1 (288.2, 320.1) | 286.0 (262.7, 313.8) | 57.5 (53.9, 61.4) | 58.0 (56.5, 59.5) | 172 | 142 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| El Salvador | Middle | 191.9 (181.4, 203.2) | 177.7 (155.3, 203.1) | 44.0 (41.6, 46.5) | 68.4 (65.9, 71.1) | 68 | 99 |
| Equatorial Guinea | Middle | 410.4 (349.0, 484.1) | 195.6 (147.4, 255.9) | 33.9 (29.8, 37.9) | 64.7 (60.1, 69.6) | 86 | 163 |
| Eritrea | Low | 475.8 (393.3, 526.5) | 325.7 (277.4, 374.9) | 45.8 (42.7, 48.7) | 56.6 (54.1, 59.1) | 186 | 187 |
| Estonia | High | 312.7 (300.0, 326.8) | 181.9 (163.2, 202.2) | 51.5 (48.2, 54.6) | 66.1 (64.5, 68.4) | 70 | 65 |
| Ethiopia | Low | 373.1 (329.7, 411.1) | 208.9 (192.5, 226.9) | 45.9 (43.8, 48.2) | 63.8 (62.7, 64.8) | 98 | 125 |
| Federated States of Micronesia | Middle | 377.9 (340.8, 422.2) | 325.1 (275.5, 371.1) | 53.7 (45.7, 57.4) | 55.0 (52.4, 57.7) | 185 | 171 |
| Fiji | High-middle | 292.1 (269.6, 317.1) | 267.3 (241.3, 299.2) | 48.2 (45.8, 50.4) | 58.1 (56.1, 61.6) | 162 | 157 |
| Finland | High | 213.8 (204.3, 224.7) | 131.5 (121.1, 144.3) | 45.5 (42.1, 49.2) | 72.3 (71.4, 73.2) | 26 | 29 |
| France | High | 174.4 (165.6, 185.3) | 119.3 (109.3, 130.6) | 45.8 (42.1, 49.5) | 76.0 (75.1, 76.9) | 8 | 11 |
| Gabon | Middle | 305.5 (276.3, 335.3) | 227.0 (203.8, 253.6) | 43.5 (40.7, 45.9) | 61.8 (59.7, 63.4) | 114 | 150 |
| Georgia | High-middle | 287.9 (273.6, 303.6) | 268.5 (255.7, 282.2) | 61.0 (57.9, 64.0) | 60.1 (59.7, 60.6) | 163 | 118 |
| Germany | High | 211.9 (202.6, 223.0) | 144.7 (131.5, 160.1) | 49.7 (45.8, 53.8) | 70.7 (69.1, 72.1) | 38 | 33 |
| Ghana | Low-middle | 271.9 (242.7, 305.5) | 256.4 (231.4, 282.7) | 46.1 (43.1, 48.8) | 60.3 (57.9, 62.1) | 150 | 156 |
| Greece | High-middle | 180.8 (171.9, 190.8) | 147.6 (137.4, 159.1) | 51.8 (47.5, 56.1) | 71.4 (70.6, 72.3) | 44 | 28 |
| Greenland | High-middle | 347.4 (333.0, 362.9) | 224.5 (212.0, 236.8) | 53.5 ( $50.3,56.6)$ | 60.7 (60.2, 61.4) | 113 | 105 |
| Grenada | High-middle | 279.1 (268.6, 291.6) | 208.0 (195.9, 221.0) | 53.1 (50.2, 55.9) | 63.4 (62.5, 64.4) | 96 | 89 |
| Guam | High | 226.8 (215.2, 238.4) | 247.6 (231.0, 266.1) | 57.4 (54.3, 60.2) | 61.4 (58.9, 62.9) | 140 | 113 |
| Guatemala | Low-middle | 265.5 (255.2, 276.7) | 175.2 (160.1, 190.6) | 43.1 (41.1, 45.0) | 69.6 (68.0, 71.2) | 64 | 101 |
| Guinea | Low | 288.5 (266.2, 309.0) | 292.7 (262.5, 323.3) | 46.2 (43.9, 48.5) | 57.0 (55.3, 59.0) | 176 | 179 |
| GuineaBissau | Low | 421.1 (375.6, 471.4) | 343.4 (306.4, 386.7) | 46.9 (43.9, 49.8) | 54.5 (52.4, 56.2) | 187 | 190 |
| Guyana | Middle | 303.2 (293.6, 313.5) | 247.7 (225.7, 271.1) | 48.3 (45.7, 50.7) | 59.6 (57.8, 61.5) | 141 | 146 |
| Haiti | Low-middle | 372.2 (344.4, 405.3) | 285.5 (249.0, 325.0) | $49.9(46.8,52.6)$ | 57.5 (55.3, 60.7) | 171 | 162 |
| Honduras | Middle | 209.2 (190.8, 230.5) | 189.5 (164.2, 218.4) | 48.3 (45.5, 51.2) | 65.9 (64.0, 68.2) | 80 | 92 |
| Hungary | High | 340.0 (325.0, 357.9) | 219.6 (204.7, 237.5) | 59.1 (56.0, 62.3) | 61.0 (60.1, 61.8) | 106 | 82 |
| Iceland | High | 184.5 (174.9, 195.3) | 124.8 (115.2, 136.2) | 47.9 (44.2, 52.0) | 73.0 (72.4, 73.6) | 13 | 10 |
| India | Low-middle | 331.2 (311.8, 351.5) | 265.6 (252.9, 279.7) | 54.3 (51.7, 56.8) | 59.6 (59.1, 60.0) | 159 | 138 |
| Indonesia | Middle | 262.9 (248.1, 278.0) | 235.8 (220.9, 250.1) | 54.3 (51.8, 56.8) | 61.7 (61.0, 62.5) | 122 | 115 |
| Iran | High-middle | 217.2 (205.3, 228.1) | 164.8 (156.3, 174.7) | 47.5 (44.1, 51.2) | 69.0 (68.7, 69.3) | 54 | 59 |
| Iraq | Middle | 322.7 (291.0, 357.3) | 147.5 (135.7, 160.6) | 41.4 (38.5, 44.3) | 70.8 (69.2, 72.0) | 43 | 69 |
| Ireland | High | 233.4 (224.2, 244.5) | 131.1 (120.4, 142.9) | 47.9 (43.8, 52.2) | 71.9 (71.1, 72.8) | 24 | 20 |
| Israel | High | 184.8 (174.4, 197.1) | 120.2 (109.6, 133.0) | 47.2 (43.6, 51.2) | 74.0 (73.2, 75.6) | 9 | 7 |
| Italy | High | 181.6 (173.0, 192.1) | 115.2 (105.5, 126.8) | 46.2 (42.4, 50.8) | 74.8 (74.3, 75.4) | 5 | 5 |
| Jamaica | High-middle | 173.2 (163.8, 184.9) | 175.3 (157.2, 197.2) | 46.3 (43.4, 49.1) | 66.2 (64.6, 68.1) | 66 | 85 |
| Japan | High | 154.9 (146.0, 165.5) | 110.6 (101.3, 121.7) | 47.0 (43.5, 50.4) | 76.1 (75.6, 76.7) | 4 | 2 |
| Jordan | High-middle | 237.1 (218.2, 258.7) | 149.3 (136.2, 164.8) | 48.7 (44.9, 53.0) | 70.0 (69.0, 71.1) | 45 | 39 |
| Kazakhstan | High-middle | 311.5 (299.7, 325.5) | 266.9 (253.9, 282.9) | 57.4 (54.7, 60.1) | 59.7 (58.9, 60.1) | 161 | 127 |
| Kenya | Low-middle | 252.4 (236.0, 269.3) | 228.4 (214.6, 242.8) | 40.0 (38.0, 42.0) | 62.1 (61.4, 62.9) | 117 | 161 |
| Kiribati | Low-middle | 386.6 (363.9, 407.5) | 347.5 (311.8, 386.3) | 47.8 (45.8, 49.7) | 54.2 (51.3, 56.1) | 188 | 189 |
| Kuwait | High | 171.6 (161.7, 183.7) | 118.2 (107.7, 129.7) | 45.9 (42.4, 49.7) | 75.3 (74.6, 76.4) | 6 | 9 |
| Kyrgyzstan | Middle | 312.8 (296.8, 329.5) | 232.7 (222.1, 245.2) | 55.3 (52.4, 58.1) | 61.3 (60.9, 61.7) | 120 | 106 |
| Laos | Low-middle | 405.2 (361.0, 450.1) | 260.3 (227.4, 292.4) | 55.1 (50.6, 58.0) | 59.4 (57.3, 61.8) | 153 | 131 |
| Latvia | High | 317.3 (304.8, 332.5) | 228.2 (206.2, 248.7) | 54.6 (51.5, 57.7) | 61.7 (59.9, 63.4) | 116 | 104 |
| Lebanon | High-middle | 260 (235.0, 280.4) | 187.2 (174.6, 201.2) | 52.6 (48.9, 56.9) | 66.5 (65.4, 67.5) | 79 | 67 |
| Lesotho | Low-middle | 324.1 (295.1, 354.3) | 360.5 (308.7, 410.9) | 35.6 (32.7, 38.3) | 53.6 (51.0, 56.1) | 189 | 195 |
| Liberia | Low | 277.5 (251.3, 309.1) | 244.6 (216.0, 274.3) | 42.3 (39.3, 45.4) | 61.3 (58.1, 63.7) | 138 | 165 |
| Libya | Middle | 225.8 (202.3, 251.0) | 236.2 (210.1, 259.9) | 52.8 (49.2, 56.4) | 62.6 (61.2, 64.3) | 124 | 122 |
| Lithuania | High | 284.5 (271.9, 298.7) | 231.9 (217.2, 248.9) | 54.7 ( $51.8,57.4$ ) | 61.5 (60.6, 62.4) | 119 | 111 |
| Luxembourg | High | 215.4 (204.4, 228.0) | 136.1 (124.5, 150.6) | 47.8 (43.9, 51.9) | 71.8 (70.6, 72.9) | 30 | 27 |
| Macedonia | High-middle | 271.2 (258.7, 287.1) | 212.4 (197.5, 229.2) | 60.9 (57.3, 64.5) | 63.4 (62.5, 64.3) | 102 | 60 |
| Madagascar | Low | 367.4 (344.3, 392.1) | 314.0 (273.7, 359.8) | 54.5 (51.4, 57.5) | 56.0 (53.9, 58.7) | 184 | 164 |
| Malawi | Low | 304.6 (211.6, 344.5) | 240.3 (214.9, 268.2) | 40.5 (37.9, 43.4) | 61.3 (59.2, 63.0) | 131 | 168 |
| Malaysia | High-middle | 260.0 (250.3, 271.0) | 223.9 (208.2, 242.2) | 59.4 (56.1, 63.0) | 62.5 (61.4, 63.5) | 111 | 84 |
| Maldives | Middle | 321.9 (308.8, 335.3) | 133.8 (123.6, 145.2) | 52.1 (48.2, 55.9) | 71.0 (69.8, 72.1) | 28 | 8 |
| Mali | Low | 339.7 (313.8, 368.7) | 250.8 (222.2, 279.4) | 46.8 (43.9, 50.0) | 61.1 (58.7, 63.0) | 145 | 155 |
| Malta | High-middle | 201.0 (191.2, 212.5) | 140.7 (130.9, 152.6) | 50.4 (46.3, 54.8) | 70.9 (70.4, 71.4) | 36 | 24 |
| Marshall Islands | Middle | 419.0 (400.6, 439.2) | 396.9 (358.3, 442.7) | 58.1 (55.2, 60.6) | 51.0 (49.3, 53.3) | 194 | 184 |
| Mauritania | Low | 330.9 (302.8, 359.6) | 220.5 (193.9, 248.4) | 51.3 (48.6, 54.2) | 62.6 (60.4, 64.9) | 107 | 112 |
| Mauritius | High-middle | 286.2 (275.6, 297.8) | 182.6 (170.8, 195.9) | 46.4 (43.9, 49.0) | 67.1 (66.2, 68.1) | 71 | 93 |
| Mexico | Middle | 178.3 (169.6, 188.4) | 156.2 (147.7, 166.1) | 43.4 (41.2, 45.5) | 70.3 (69.9, 70.7) | 48 | 71 |
| Moldova | High-middle | 317.0 (305.2, 331.0) | 250.8 (239.2, 264.5) | 56.2 (53.4, 59.1) | 58.9 (58.4, 59.4) | 146 | 120 |
| Mongolia | High-middle | 384.2 (368.5, 402.9) | 307.4 (284.5, 330.9) | 58.7 (56.1, 61.2) | 55.3 (54.2, 56.6) | 181 | 149 |
| Montenegro | High-middle | 242.1 (229.5, 257.1) | 223.0 (206.0, 243.1) | 60.6 (57.0, 64.2) | 62.3 (61.1, 63.4) | 110 | 79 |
| Morocco | Low-middle | 272.4 (255.6, 290.6) | 222.9 (195.4, 252.9) | 54.2 (49.8, 58.2) | 63.1 (61.0, 65.2) | 109 | 103 |
| Mozambique | Low | 336.6 (308.8, 363.0) | 291.4 (255.8, 328.6) | 37.3 (34.1, 39.8) | 57.0 (55.2, 59.3) | 175 | 191 |
| Myanmar | Low-middle | 351.7 (307.5, 392.2) | 239.6 (216.0, 262.5) | 49.7 (47.6, 51.9) | 61.6 (60.3, 63.0) | 129 | 134 |
| Namibia | Middle | 327.8 (303.2, 351.9) | 224.1 (201.9, 251.1) | 38.2 (34.6, 41.3) | 62.6 (60.7, 64.4) | 112 | 167 |
| Nepal | Low-middle | 324.4 (288.4, 362.8) | 241.9 (214.7, 264.5) | 53.1 (48.6, 56.3) | 60.7 (59.1, 62.6) | 135 | 124 |
| Netherlands | High | 189.6 (181.5, 198.9) | 133.8 (123.6, 144.4) | 48.1 (44.1, 52.7) | 71.9 (71.1, 72.7) | 27 | 23 |
| New Zealand | High | 211.6 (201.7, 224.1) | 138.0 (126.8, 152.0) | 47.5 (43.9, 51.6) | 72.5 (71.6, 73.3) | 34 | 31 |
| Nicaragua | Middle | 167.3 (154.9, 180.4) | 134.1 (120.8, 148.2) | 44.5 (41.9, 47.1) | 73.6 (72.0, 75.1) | 29 | 38 |


| Niger | Low | 303.0 (276.3, 331.5) | 241.8 (214.4, 273.0) | 45.6 (42.0, 48.7) | 61.4 (58.7, 63.7) | 134 | 153 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nigeria | Low-middle | 230.5 (189.4, 285.1) | 186.1 (150.5, 242.0) | 36.8 (33.4, 40.6) | 66.1 (61.7, 69.5) | 78 | 144 |
| North Korea | Middle | 248.6 (218.6, 276.9) | 256.2 (229.2, 282.1) | 60.8 (57.1, 64.1) | 59.5 (58.1, 61.2) | 149 | 108 |
| Northern Mariana Islands | High | 218.0 (197.9, 248.4) | 190.0 (173.6, 208.7) | 52.2 (49.0, 55.6) | 66.6 (63.7, 68.0) | 81 | 75 |
| Norway | High | 194.7 (185.9, 204.8) | 125.2 (116.2, 135.9) | 45.7 (42.0, 49.7) | 72.9 (72.4, 73.4) | 14 | 21 |
| Oman | High-middle | 264.8 (230.1, 304.6) | 174.5 (151.8, 197.9) | 49.8 (46.6, 53.2) | 66.0 (63.5, 68.3) | 62 | 62 |
| Pakistan | Low-middle | 294.0 (274.9, 311.4) | 298.3 (260.9, 341.1) | 57.4 (54.1, 60.3) | 56.1 (54.3, 58.1) | 177 | 148 |
| Palestine | Middle | 251.0 (220.9, 282.7) | 183.5 (170.8, 197.4) | 51.0 (47.1, 54.8) | 65.1 (64.7, 65.9) | 73 | 72 |
| Panama | High-middle | 162.4 (153.0, 173.1) | 128.5 (118.1, 139.9) | 45.2 (42.7, 47.6) | 74.1 (73.2, 75.0) | 18 | 26 |
| Papua New Guinea | Low-middle | 569.1 (511.2, 632.8) | 506.6 (452.3, 576.1) | 58.5 (55.9, 61.3) | 45.6 (42.6, 48.2) | 195 | 193 |
| Paraguay | Middle | 184.0 (171.5, 197.5) | 167.4 (147.0, 191.1) | 46.9 (43.8, 50.2) | 67.8 (65.3, 70.2) | 55 | 68 |
| Peru | High-middle | 171.0 (158.3, 184.2) | 123.8 (108.2, 139.5) | 45.9 (42.7, 49.0) | 74.3 (72.4, 76.5) | 11 | 15 |
| Philippines | Middle | 243.3 (228.8, 257.5) | 276.2 (247.7, 306.9) | 56.3 (53.5, 59.0) | 59.5 (57.5, 61.5) | 166 | 137 |
| Poland | High | 309.0 (295.5, 325.1) | 198.0 (183.7, 214.7) | 56.7 (53.7, 59.7) | 63.9 (63.1, 64.8) | 88 | 61 |
| Portugal | High-middle | 216.7 (207.4, 228.1) | 130.7 (121.0, 141.5) | 46.3 (42.3, 50.6) | 73.7 (72.8, 74.6) | 23 | 25 |
| Puerto Rico | High | 183.1 (175.3, 192.7) | 128.9 (119.8, 138.8) | 40.3 (36.9, 43.1) | 74.6 (73.6, 75.1) | 19 | 47 |
| Qatar | High-middle | 274.2 (246.3, 301.2) | 137.5 (119.5, 156.9) | 44.8 (41.6, 48.5) | 70.3 (68.3, 73.0) | 32 | 40 |
| Romania | High-middle | 313.8 (299.2, 330.8) | 238.4 (222.9, 255.5) | 60.1 (57.2, 63.3) | 61.0 (60.1, 62.0) | 128 | 95 |
| Russian Federation | High-middle | 308.9 (296.4, 322.8) | 266.4 (253.7, 281.2) | 54.1 (51.9, 56.3) | 59.2 (58.9, 59.5) | 160 | 140 |
| Rwanda | Low | 382.0 (349.9, 415.7) | 203.5 (181.3, 227.3) | 42.2 (39.8, 44.9) | 64.1 (62.3, 65.8) | 90 | 135 |
| Saint Lucia | High-middle | 243.5 (234.5, 253.3) | 177.7 (166.4, 190.3) | 48.7 (45.9, 51.4) | 67.5 (66.5, 68.5) | 69 | 74 |
| Saint Vincent and the Grenadines | High-middle | 224.0 (214.0, 234.9) | 206.8 (194.5, 219.2) | 48.8 (46.1, 51.3) | 64.8 (63.9, 65.3) | 95 | 110 |
| Samoa | Middle | 259.1 (230.9, 289.2) | 238.2 (213.0, 260.3) | 55.1 (51.2, 58.2) | 61.8 (60.5, 63.4) | 126 | 114 |
| Sao Tome and Principe | Low-middle | 248.4 (228.2, 270.1) | 257.7 (231.1, 284.9) | 54.2 (51.4, 56.9) | 60.7 (58.2, 62.5) | 151 | 132 |
| Saudi Arabia | High-middle | 203.0 (177.0, 233.9) | 183.2 (168.1, 203.3) | 51.0 (47.6, 54.7) | 66.3 (64.7, 67.3) | 72 | 70 |
| Senegal | Low | 282.7 (260.6, 307.3) | 242.1 (219.1, 269.0) | 48.7 (46.3, 51.6) | 61.0 (58.8, 62.7) | 136 | 141 |
| Serbia | High-middle | 296.1 (283.2, 311.2) | 245.0 (229.0, 261.9) | 62.1 (58.8, 65.4) | 61.6 (60.9, 62.4) | 139 | 94 |
| Seychelles | High-middle | 288.2 (276.9, 301.1) | 231.3 (217.9, 244.2) | 57.3 (54.3, 60.1) | 62.4 (61.7, 63.2) | 118 | 100 |
| Sierra Leone | Low | 308.6 (275.3, 342.6) | 284.9 (251.4, 322.7) | 46.4 (43.2, 49.5) | 58.1 (55.7, 61.2) | 170 | 172 |
| Singapore | High | 205.5 (196.4, 216.2) | 108.3 (98.6, 119.9) | 49.7 (45.9, 53.7) | 76.0 (75.1, 76.9) | 2 | 1 |
| Slovakia | High | 326.7 (311.9, 344.4) | 208.8 (193.7, 227.9) | 59.1 (55.9, 62.4) | 63.6 (62.8, 64.5) | 97 | 66 |
| Slovenia | High | 245.7 (231.1, 263.0) | 154.4 (139.7, 172.4) | 52.0 (48.9, 55.2) | 70.0 (68.9, 71.0) | 47 | 37 |
| Solomon <br> Islands | Low-middle | 439.4 (392.9, 493.1) | 368.0 (330.3, 405.5) | 58.4 (55.6, 60.9) | 53.4 (51.1, 55.1) | 191 | 178 |
| Somalia | Low | 375.2 (266.9, 476.2) | 311.4 (255.2, 382.6) | 44.8 (42.1, 47.5) | 56.0 (52.7, 59.6) | 182 | 186 |
| South Africa | Middle | 240.5 (226.7, 254.1) | 204.2 (194.1, 215.8) | 32.7 (30.9, 34.3) | 64.2 (63.7, 64.8) | 92 | 176 |
| South Korea | High | 240.5 (230.3, 252.4) | 110.1 (100.7, 120.4) | 43.6 (40.3, 46.7) | 75.1 (74.4, 75.8) | 3 | 6 |
| South Sudan | Low | 327.3 (242.8, 424.7) | 278.3 (227.9, 349.4) | 41.8 (37.1, 45.6) | 57.7 (54.3, 62.6) | 167 | 182 |
| Spain | High-middle | 178.7 (170.3, 189.6) | 119.2 (110.1, 130.0) | 47.9 (44.0, 52.1) | 75.1 (74.4, 75.8) | 7 | 4 |
| Sri Lanka | High-middle | 229.7 (219.1, 241.6) | 151.0 (132.3, 173.0) | 46.5 (43.6, 49.3) | 70.4 (67.8, 72.6) | 46 | 49 |
| Sudan | Low-middle | 329.9 (291.2, 368.7) | 240.9 (205.2, 278.9) | 53.9 (49.7, 57.9) | 61.2 (58.1, 64.2) | 133 | 123 |
| Suriname | High-middle | 231.8 (219.0, 245.6) | 206.1 (187.2, 224.3) | 48.8 (46.2, 51.2) | 64.1 (62.3, 66.0) | 94 | 107 |
| Swaziland | Middle | 334.4 (304.1, 365.2) | 306.7 (263.8, 355.7) | 36.9 (34.2, 39.4) | 56.0 (53.3, 59.0) | 180 | 192 |
| Sweden | High | 178.6 (170.0, 188.7) | 122.1 (112.4, 133.3) | 46.3 (42.8, 50.2) | 73.3 (72.6, 74.2) | 10 | 13 |
| Switzerland | High | 169.7 (159.9, 181.7) | 104.9 (95.7, 115.5) | 43.0 (39.3, 47.2) | 76.1 (75.4, 76.7) | 1 | 3 |
| Syria | Middle | 284.3 (264.4, 306.1) | 213.1 (186.0, 240.1) | 44.0 (39.9, 48.4) | 63.5 (61.2, 65.6) | 103 | 136 |
| Taiwan | High | 195.5 (187.0, 204.8) | 146.3 (136.0, 156.8) | 49.7 (46.7, 52.6) | 72.4 (71.7, 73.1) | 40 | 35 |
| Tajikistan | Middle | 261.0 (248.3, 274.8) | 251.9 (231.7, 272.5) | 59.5 (56.1, 62.6) | 60.5 (58.9, 61.6) | 147 | 109 |
| Tanzania | Low-middle | 271.6 (224.7, 300.0) | 212.1 (193.1, 233.5) | 43.0 (40.6, 45.5) | 63.1 (61.5, 64.6) | 99 | 139 |
| Thailand | High-middle | 211.1 (199.7, 222.7) | 146.4 (132.6, 160.5) | 44.3 (41.6, 46.8) | 72.6 (71.4, 74.2) | 41 | 55 |
| The Bahamas | High | 237.1 (228.0, 247.3) | 205.8 (190.4, 223.6) | 50.3 (47.7, 52.8) | 65.9 (63.5, 67.0) | 93 | 102 |
| The Gambia | Low | 296.9 (260.6, 338.3) | 272.6 (245.2, 304.8) | 46.9 (44.3, 49.7) | 58.2 (56.4, 60.5) | 164 | 166 |
| Timor-Leste | Low-middle | 289.8 (257.8, 319.2) | 238.3 (203.0, 264.2) | 53.9 (46.9, 57.1) | 61.3 (59.0, 63.2) | 127 | 119 |
| Togo | Low | 286.8 (258.2, 311.5) | 250.7 (219.8, 286.8) | 44.2 (41.3, 47.0) | 60.3 (57.2, 62.5) | 144 | 160 |
| Tonga | Middle | 245.4 (231.2, 258.8) | 227.9 (205.7, 252.8) | 49.3 (46.7, 51.9) | 63.2 (61.4, 64.8) | 115 | 126 |
| Trinidad and Tobago | High | 250.1 (241.2, 260.3) | 175.2 (150.0, 205.1) | 44.9 (41.9, 47.7) | 67.3 (64.6, 70.6) | 65 | 87 |
| Tunisia | Middle | 208.9 (196.5, 221.8) | 170.4 (144.5, 197.5) | 51.4 (47.0, 55.9) | 68.0 (65.6, 70.5) | 59 | 56 |
| Turkey | High-middle | 257.2 (243.6, 270.7) | 157.7 (144.6, 169.7) | $51.1(47.3,55.3)$ | 67.9 (66.7, 69.2) | 49 | 43 |
| Turkmenistan | High-middle | 318.9 (307.7, 331.2) | 287.6 (269.2, 307.7) | 61.1 (58.2, 63.9) | $57.7(56.8,58.6)$ | 173 | 129 |
| Uganda | Low | 264.4 (231.7, 296.7) | 222.3 (197.1, 247.0) | 41.8 (39.1, 44.6) | 62.5 (60.9, 64.5) | 108 | 154 |
| Ukraine | High-middle | 304.4 (292.2, 318.4) | 301.4 (284.0, 318.7) | 57.0 (54.3, 59.6) | $57.4(56.6,58.1)$ | 179 | 152 |
| United Arab Emirates | High | 257.1 (226.5, 289.5) | 240.4 (206.9, 277.5) | 53.9 (49.5, 57.5) | 58.0 (56.1, 61.6) | 132 | 121 |
| United Kingdom | High | 217.9 (208.9, 228.5) | 143.3 (134.1, 154.0) | 48.7 (44.9, 52.7) | 70.8 (70.5, 71.1) | 37 | 36 |
| United States | High | 207.5 (197.7, 218.2) | 161.5 (152.0, 171.4) | 46.0 (43.0, 49.2) | 68.5 (68.0, 68.9) | 53 | 63 |
| Uruguay | High-middle | 231 (222.5, 241.2.0) | 173.8 (157.8, 192.2) | 51.0 (47.4, 54.4) | 66.6 (65.0, 68.3) | 60 | 57 |
| Uzbekistan | High-middle | 263.1 (252.8, 275.3) | 312.6 (285.5, 340.8) | 62.8 (59.4, 65.7) | 57.8 (56.6, 59.0) | 183 | 143 |


| Vanuatu | Low-middle | $431.5(364.8,514.0)$ | $392.1(332.0,469.3)$ | $59.0(54.9,62.1)$ | $52.2(47.2,55.5)$ | 193 | 181 |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| Venezuela | High-middle | $210.5(201.7,220.6)$ | $169.6(152.1,192.0)$ | $48.1(45.5,50.5)$ | $67.9(65.7,70.2)$ | 58 | 64 |
| Vietnam | Middle | $239.8(216.7,259.1)$ | $197.7(180.7,219.9)$ | $52.8(50.0,55.7)$ | $64.1(62.1,65.5)$ | 87 | 83 |
| Virgin <br> Islands, U.S. | High | $221.2(209.0,235.5)$ | $213.2(185.7,233.9)$ | $53.0(49.8,55.9)$ | $62.3(61.0,65.4)$ | 104 |  |
| Yemen | Low-middle | $358.8(269.0,448.9)$ | $280.6(229.5,342.2)$ | $53.8(49.3,57.6)$ | $58.1(54.5,61.5)$ | 168 | 98 |
| Zambia | Low-middle | $337.9(297.6,367.8)$ | $243.7(218.5,268.7)$ | $39.6(37.2,42.1)$ | $61.2(59.1,63.0)$ | 137 | 147 |
| Zimbabwe | Low-middle | $249.4(227.9,269.2)$ | $300.6(268.4,338.6)$ | $42.0(39.5,44.3)$ | $56.0(54.5,58.4)$ | 178 | 175 |

Appendix Table 5. Data for Figure 1: age-standardised rate and proportion of all health burden among the adult population that is age-related, by SDI quintile and GBD super-region in 2017

|  | Location | Age-related burden rate (per 1,000 adults) | Non-age-related burden rate (per 1,000 adults) | Proportion of agerelated burden among all burden (\%) |
| :---: | :---: | :---: | :---: | :---: |
|  | Global | 196.5 (186.8, 207.5) | 187.1 (160.6, 218.6) | 51.3 (48.5, 53.9) |
| SDI | Low SDI | 265.9 (251.0, 280.1) | 265.3 (234.8, 300.7) | 50.0 (47.6, 52.4) |
|  | Low-middle SDI | 249.8 (237.5, 262.5) | 237.6 (209.0, 271.9) | 51.2 (48.9, 53.5) |
|  | Middle SDI | 196.9 (186.9, 207.7) | 176.2 (151.1, 205.9) | 52.8 (50.1, 55.4) |
|  | High-middle SDI | 197.7 (188.1, 209.6) | 156.6 (130.6, 185.8) | 55.9 (52.8, 59.1) |
|  | High SDI | 137.8 (128.9, 148.3) | 152.2 (124.2, 184.4) | 47.6 (44.2, 51.1) |
| GBD superregion | High-income | 136.4 (127.6, 146.3) | 155.9 (127.5, 188.6) | 46.7 (43.4, 50.3) |
|  | Latin America and Caribbean | 163.1 (154.6, 172.9) | 188.6 (162.7, 219.0) | 46.4 (44.0, 48.8) |
|  | Southeast Asia, East Asia, and Oceania | 192.8 (183.3, 203.7) | 150.7 (127.0, 178.6) | 56.2 (53.2, 59.2) |
|  | North Africa and Middle East | 198.6 (187.5, 209.7) | 188.9 (158.2, 225.3) | 51.3 (48.0, 54.8) |
|  | Sub-Saharan Africa | 232.9 (217.2, 248.9) | 331.8 (300.2, 369.7) | 41.2 (39.4, 43.1) |
|  | Central Europe, Eastern Europe, and Central Asia | 252.4 (239.7, 266.6) | 193.7 (166.1, 226.2) | 56.6 (54.0, 59.2) |
|  | South Asia | 263.6 (251.2, 277.4) | 219.5 (191.2, 251.5) | 54.6 (52.0, 57.2) |

Appendix Table 6. Data for Figure 3: Changes in age-standardised age-related burden rate between 1990 and 2017, by SDI and GBD super-region

|  | Location | 1990 Age-related burden rate (per 1,000 adults) | 2017 Age-related burden rate (per 1,000 adults) | Percentage change 1990-2017 (\%) |
| :---: | :---: | :---: | :---: | :---: |
|  | Global | 255.3 (244.3, 267.2) | 196.5 (186.8, 207.5) | -23.1 (-24.4, -21.6) |
| SDI | Low SDI | 335.2 (310.1, 359.1) | 265.9 (251.0, 280.1) | -20.9 (-24.7, -15.6) |
|  | Low-middle SDI | 303.4 (288.6, 319.8) | 249.8 (237.5, 262.5) | -17.8 (-20.5, -14.8) |
|  | Middle SDI | 250.1 (239.6, 260.9) | 196.9 (186.9, 207.7) | -21.3 (-23.3, -19.2) |
|  | High-middle SDI | 274.3 (263.6, 285.3) | 197.7 (188.1, 209.6) | -27.8 (-29.7, -26.0) |
|  | High SDI | 201.1 (191.7, 212.1) | 137.8 (128.9, 148.3) | -31.5 (-33.0, -30.0) |
| GBD superregion | High-income | 195.1 (185.9, 205.9) | 136.4 (127.6, 146.3) | -30.1 (-31.6, -28.6) |
|  | Latin America and Caribbean | 217.0 (208.2, 227.1) | 163.1 (154.6, 172.9) | -24.8 (-26.0, -23.5) |
|  | Southeast Asia, East Asia, and Oceania | 260.8 (250.5, 271.0) | 192.8 (183.3, 203.7) | -26.0 (-28.3, -23.9) |
|  | North Africa and Middle East | 269.9 (255.1, 282.5) | 198.6 (187.5, 209.7) | -26.4 (-29.1, -22.7) |
|  | Sub-Saharan Africa | 288.1 (270.8, 308.4) | 232.9 (217.2, 248.9) | -19.3 (-23.5, -14.4) |


|  | Central Europe, <br> Eastern Europe, and <br> Central Asia | $305.0(292.7,319.7)$ | $252.4(239.7,266.6)$ | $-17.2(-18.2,-16.2)$ |
| :--- | :--- | :--- | :--- | :--- |
|  | South Asia | $324.3(306.1,344.4)$ | $263.6(251.2,277.4)$ | $-18.7(-21.8,-15.3)$ |

Appendix Table 7. Appendix Table 7. Data for Figure 4: Decomposition of age-related burden between 1990 and 2017, by SDI and GBD super-region

|  | Location | Population size (\%) | Population age (\%) | Prevalence (\%) | Severity (\%) |
| :--- | :--- | :--- | :--- | :--- | :--- |
| SDI | High SDI | $31.2(30.9,31.4)$ | $24.0(23.7,24.2)$ | $1.9(0.6,3.4)$ | $-43.3(-45.6,-40.8)$ |
|  | High-middle SDI | $59.6(58.8,60.3)$ | $18.8(18.5,19.1)$ | $7.0(4.8,9.2)$ | $-48.7(-51.7,-46.2)$ |
|  | Middle SDI | $83.1(82.1,84.2)$ | $28.9(28.4,29.4)$ | $6.4(4.5,8.2)$ | $-42.3(-44.9,-39.7)$ |
|  | Low-middle SDI | $88.5(87.0,90.0)$ | $9.0(8.8,9.3)$ | $-2.3(-3.8,-0.6)$ | $-25.9(-29.9,-22.0)$ |
|  | Low SDI | $95.7(93.4,99.3)$ | $5.2(4.9,5.5)$ | $-5.7(-7.7,-3.5)$ | $-28.2(-33.9,-19.9)$ |
|  | High-income | Latin America and <br> Caribbean | $99.9(29.6,30.1)$ | $24.3(24,24.5)$ | $2.1(0.8,3.8)$ |
|  | Southeast Asia, East <br> Asia, and Oceania | $73.9(72.8,74.9)$ | $32.3(31.8,32.9)$ | $17.6(14.7,20.2)$ | $-61.8(-44.1,-39.4)$ |
|  | North Africa and Middle <br> East | $120.6(118.6,123.7)$ | $4.2(4.1,4.3)$ | $-3.2(-5.4,-0.6)$ | $-43.8(-48.5,-38.0)$ |
|  | Sub-Saharan Africa | $105.6(102.8,108.9)$ | $-7.1(-7.5,-6.8)$ | $-8.9(-11.4,-6.3)$ | $-24.0(-30.0,-17.1)$ |
|  | Central Europe, Eastern <br> Europe, and Central Asia | $13.6(13.6,13.7)$ | $12.3(12.2,12.5)$ | $-0.2(-1.2,1.0)$ | $-19.8(-21.3,-18.3)$ |
|  | South Asia | $94.2(92.4,96.2)$ | $17.5(17.0,18.1)$ | $-1.9(-3.7,0.0)$ | $-29.2(-34.1,-23.7)$ |

The percentages are the change in DALYs associated with each factor compared to 1990 age-related DALYs.

## 4. Measuring the onset of ageing through cumulative age-related deaths, 2017

For each five-year age group starting at age 25, we estimated the cumulative, age-standardised age-related death rates. Countries with the lowest cumulative age-related death rate for each age group in 2017 were identified and set as frontiers: Switzerland (ages 25 to 65 and 70 to 85), South Korea (65 to 70), Singapore (85 to 90), and Kuwait (90 and older). We grouped countries into 10 categories based on similar levels of age-standardised death rates and graphed the different patterns of cumulative age-related deaths. To facilitate comparison of the ageing patterns across countries and to the frontier countries, we further scaled all cumulative death rates to a range of 0 to 1 , using country-specific cumulative death rate at age group 80 to 84 (the highest observed life expectancy) as the reference point.

Appendix Figure 3. Comparison of the timing of ageing by deciles (ten countries with similar levels of cumulative age-related death rate among adults in each decile).

The first decile includes countries with the lowest age-standardised age-related death rates among adults, and the tenth decile includes countries with the highest rates. The graphs on the left are in the original unit, and the graphs on the right are in the scaled form (ranging 0 to 1 ).
$1^{\text {st }}$ decile (ten countries with the lowest age-standardised age-related death rate)

$2^{\text {nd }}$ decile

$3^{\text {rd }}$ decile

$4^{\text {th }}$ decile

$5^{\text {th }}$ decile

$6^{\text {th }}$ decile

$7^{\text {th }}$ decile

$8^{\text {th }}$ decile

$9^{\text {th }}$ decile

$10^{\text {th }}$ decile (ten countries with the highest age-standardised age-related death rate)


## 5. Sensitivity analysis

We included the following conditions that have been proposed by others as age-related, but did not match our criteria for defining age-related diseases: diabetes mellitus type 2, low back pain, neck pain, osteoarthritis, major depressive disorders, and anxiety disorders. ${ }^{10-12}$

The relationship between incidence rates and age groups for diabetes mellitus, low back and neck pain, osteoarthritis, major depressive disorders, and anxiety disorders

To identify age-related diseases, we followed a systematic approach assessing the relationship between age and incidence rates. There were several diseases that, prior to the assessment, one may consider as age-related, such as the diseases listed above. However, data suggested that these conditions did not meet our criteria (Appendix Figure 4, which can also be easily viewed in GBD Compare: https://vizhub.healthdata.org/gbd-compare/). For example, we saw that global age-specific incidence rates of most musculoskeletal disorders (except gout) do not follow the quadratic, convex pattern we were looking for. For example, incidence rates for low back pain and neck pain increase linearly but not quadratically with age; incidence rate for osteoarthritis increases from ages 25-50 but drops after age 50 .

Appendix Figure 4. 2017 global incidence rates by age for diabetes mellitus type 2, low back pain, neck pain, osteoarthritis, major depressive disorders, and anxiety disorders







## Global distribution of age-related and non-age-related burden

With the addition of the diseases listed above, we would expect 7.4\% (6.7-8.2) of age-related burden to be from all diabetes and chronic kidney diseases, 4.2 (3.3, 5.2) from mental disorders, and $8.8(6.9,11.0)$ from musculoskeletal disorders.

Appendix Figure 5. Sensitivity analysis: Distribution of non-age-related (A) and age-related burden (B), global 2017


Appendix Table 8. Sensitivity analysis: distribution of non-age-related burden and age-related burden at the global level in 2017

| GBD category | Non-age-related burden (\%) | Age-related burden (\%) |
| :--- | :--- | :--- |
| Communicable, maternal, neonatal, <br> and nutritional diseases | $22.6(21.4,23.9)$ | $5.3(4.8,6.5)$ |
| Neoplasms | $3.8(3.4,4.4)$ | $18.4(17,19.9)$ |
| Cardiovascular diseases | $4.0(3.6,4.4)$ | $31.3(29.3,33.3)$ |
| Chronic respiratory diseases | $3.0(2.6,3.6)$ | $8.0(7.2,8.6)$ |
| Digestive diseases | $8.7(8.2,9.5)$ | $1.7(1.6,1.9)$ |
| Neurological disorders | $8.0(6.1,10.2)$ | $3.5(3.3,3.7)$ |
| Mental and substance use disorders | $12.7(10.8,14.4)$ | $4.2(3.3,5.2)$ |
| Diabetes and kidney diseases | $3.1(2.8,3.5)$ | $7.4(6.7,8.2)$ |
| Other NCD | $6.5(5.2,8.2)$ | $0.9(0.8,1.0)$ |


| Musculoskeletal disorders | $5.1(3.9,6.5)$ | $8.8(6.9,11.0)$ |
| :--- | :--- | :--- |
| Skin and subcutaneous diseases | $2.5(1.9,3.1)$ | $0.6(0.4,1.1)$ |
| Sense organ diseases | $1.4(0.7,2.5)$ | $4.8(3.6,6.2)$ |
| Injuries | $18.3(16.9,19.8)$ | $4.7(4.4,5.2)$ |

## Estimating levels of age-related burden in 2017 across SDI and GBD regions

The addition of the six GBD causes would inevitably increase the proportion of age-related burden as a share of all disease burden among adults. Overall, the largest rates of agestandardised age-related burden are still observed in low-SDI and low-middle-SDI, and in South Asia and Central Europe, Eastern Europe, and Central Asia, the same as the original findings in the main manuscript. The gap between high-SDI and others would narrow down, as we estimate proportionally higher age-related burden (17\% increase) than other SDIs. Similarly, across GBD regions, we estimate regions with lower age-related burden to have greater proportion of additional age-related burden compared to regions with higher age-related burden in the main findings (Appendix Figure 6). Pearson correlation coefficients between the sensitivity analysis and the original results for the ranks of age-standardised age-related burden rate and proportion of age-related burden in all burden are 99.4 and $88.6 \%$, respectively.

Appendix Figure 6. Sensitivity analysis: proportion of health burden that is age-related burden (age-standardised), by socio-demographic Index and region, 2017

Panel A: Socio-demographic Index (SDI)


Panel B: GBD super-regions


Analyzing the changes in age-related burden, 1990-2017
Estimated changes in age-related burden between 1990 and 2017 are estimated to be smaller with the addition of the six causes, with the differences between the sensitivity analysis and original results to be in the range of 1 to $6 \%$. There is no change in the rankings across SDI and GBD regions.

Appendix Figure 7. Sensitivity analysis: change in age-related burden rate between 1990 and 2017, by socio-demographic Index and region

Panel A: Socio-demographic Index (SDI)


Panel B: GBD super-regions


Appendix Figure 8. Sensitivity analysis: Decomposition of changes in age-related burden between 1996 and 2017, by socio-demographic Index and region

The percentages listed in the graphs are the change in DALYs associated with the factor compared to 1990 age-related DALYs
Panel A: Socio-demographic Index (SDI)


Appendix Table 9. Sensitivity analysis: results from the decomposition analysis, comparing results from the sensitivity analysis to the original results, by SDI

|  | Sensitivity analysis |  |  |  | Original result |  |  |  | Difference between original and sensitivity analysis results (percentage point) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SDI | $\begin{gathered} \text { Population } \\ \text { size (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Population } \\ \text { age (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Prevalence } \\ (\%) \\ \hline \end{gathered}$ | $\begin{gathered} \text { Severity } \\ (\%) \\ \hline \end{gathered}$ | $\begin{gathered} \text { Population } \\ \text { size (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Population } \\ \text { age (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Prevalence } \\ (\%) \\ \hline \end{gathered}$ | Severity (\%) | $\begin{gathered} \text { Population } \\ \text { size (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Population } \\ \text { age (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Prevalence } \\ (\%) \end{gathered}$ | Severity (\%) |
| High | 31.8 | 21.1 | 2.3 | -35.9 | 31.2 | 24.0 | 1.9 | -43.3 | -0.6 | 2.8 | -0.5 | -7.4 |
| High-middle | 60.3 | 17.4 | 5.4 | -41.6 | 59.6 | 18.8 | 7.0 | -48.7 | -0.7 | 1.4 | 1.6 | -7.1 |
| Middle | 84.2 | 26.9 | 6.4 | -35.3 | 83.1 | 28.9 | 6.4 | -42.3 | -1.1 | 2.0 | 0.0 | -7.0 |
| Low-middle | 90.1 | 8.4 | -0.6 | -21.7 | 88.5 | 9.0 | -2.3 | -25.9 | -1.6 | 0.6 | -1.7 | -4.3 |
| Low | 97.4 | 4.8 | -4.0 | -24.5 | 95.7 | 5.2 | -5.7 | -28.2 | -1.7 | 0.4 | -1.7 | -3.6 |

## Panel B: GBD super-regions



Appendix Table 10. Sensitivity analysis: results from the decomposition analysis, comparing results from the sensitivity analysis to the original results, by region

|  | Sensitivity analysis |  |  |  | Original result |  |  |  | Difference between original and sensitivity analysis results (percentage point) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Region | $\begin{gathered} \hline \text { Population } \\ \text { size (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Population } \\ \text { age (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Prevalence } \\ \text { (\%) } \\ \hline \end{gathered}$ | Severity <br> (\%) | $\begin{aligned} & \hline \text { Population } \\ & \text { size (\%) } \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \text { Population } \\ \text { age (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Prevalence } \\ \text { (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Severity } \\ (\%) \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Population } \\ \text { size (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Population } \\ \text { age (\%) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Prevalence } \\ \text { (\%) } \end{gathered}$ | Severity <br> (\%) |
| High-income | 30.4 | 21.2 | 2.9 | -34.4 | 29.9 | 24.3 | 2.1 | -41.7 | -0.6 | 3.1 | -0.8 | -7.3 |
| Latin America and Caribbean | 97.6 | 25.6 | -2.6 | -30.1 | 95.7 | 28.1 | -3.8 | -38.1 | -1.9 | 2.5 | -1.2 | -8.1 |
| Southeast Asia, East Asia, and Oceania | 74.5 | 30.1 | 15.1 | -52.8 | 73.9 | 32.3 | 17.6 | -61.8 | -0.6 | 2.2 | 2.6 | -8.9 |
| North Africa and Middle East | 124.9 | 4.0 | 0.0 | -36.1 | 120.6 | 4.2 | -3.2 | -43.8 | -4.2 | 0.2 | -3.1 | -7.8 |
| Sub-Saharan Africa | 108.4 | -6.7 | -5.6 | -20.4 | 105.6 | -7.1 | -8.9 | -24.0 | -2.8 | -0.4 | -3.3 | -3.6 |
| Central Europe, Eastern Europe, and Central Asia | 13.7 | 11.5 | -0.3 | -17.0 | 13.6 | 12.3 | -0.2 | -19.8 | -0.1 | 0.9 | 0.1 | -2.8 |
| South Asia | 95.4 | 16.3 | -0.9 | -24.8 | 94.2 | 17.5 | -1.9 | -29.2 | -1.2 | 1.2 | -1.0 | -4.4 |

Appendix Table 11. Sensitivity analysis: country-level results, 2017 age-related burden rate (per 1,000 adults), 2017 age-related burden as share of all burden, and 2017 equivalent age to global 65-year-olds

| Country | SDI | 2017 age-related burden rate (per 1,000 adults) |  |  | 2017 age-related burden as share of all burden (\%) |  |  | 2017 equivalent age to global 65-year-olds (years) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sensitivity analysis | Original result | Dif (\%) | Sensitivity analysis | Original result | Dif (\%) | Sensitivity analysis | Original result | Dif (\%) |
| Afghanistan | Low | 446.8 (397.1, 496.7) | 380.2 (340.4, 423.3) | 17.5\% | 64.8 (62.8, 66.7) | 55.1 (52.2, 58) | 17.6\% | $51.2(49,53)$ | 51.6 (49.2, 53.5) | -0.6\% |
| Albania | High-middle | 228.9 (195.7, 265) | 185.4 (161.1, 215.3) | 23.5\% | 73.4 (71.2, 75.4) | 59.6 (55.4, 63.7) | 23.1\% | 66.8 (65, 68.8) | 66.7 (64.9, 68.7) | 0.2\% |
| Algeria | Middle | 213.6 (189.4, 240.3) | 161 (149.3, 173.6) | 32.6\% | 66.8 (64.6, 68.7) | 50.2 (46.3, 54.1) | 32.9\% | 69.2 (68.3, 69.9) | 69.7 (69.2, 70.2) | -0.7\% |
| American Samoa | High-middle | 348.8 (313.8, 384.7) | 263.9 (242.1, 286) | 32.2\% | 72.8 (71.4, 74) | $55.1(51.8,58)$ | 32.0\% | 57.1 (55.5, 59) | 60.4 (58.6, 62.4) | -5.5\% |
| Andorra | High | $177.2(153.7,205)$ | 126.1 (113.8, 140.6) | 40.5\% | 67 (65.1, 68.9) | 47.7 (43.4, 52.1) | 40.6\% | 73.4 (71.9, 74.8) | 73.6 (72.1, 74.9) | -0.3\% |
| Angola | Low-middle | 311.3 (274.6, 351.5) | 253.3 (225.3, 283.9) | 22.9\% | 52.1 (50.2, 54.2) | 42.4 (39.8, 45.1) | 23.0\% | 59.1 (57.3, 61.6) | 60.4 (57.8, 62.2) | -2.1\% |
| Antigua and Barbuda | High | 212.3 (193, 235.3) | 160.4 (150.8, 172.8) | 32.3\% | 64.5 (62.6, 66.1) | 48.8 (45.6, 51.8) | 32.1\% | 67.1 (66.3, 68.1) | 68.4 (67.6, 69.5) | -2.0\% |
| Argentina | High-middle | 230.9 (205.1, 261) | 177.3 (161.5, 195.7) | 30.2\% | 67.1 (65.6, 68.6) | $51.5(48,55.1)$ | 30.3\% | 65.8 (64.3, 67.4) | 66.4 (64.8, 68.1) | -0.9\% |
| Armenia | High-middle | 263.9 (241.3, 289.7) | 212.2 (200.2, 225.4) | 24.4\% | 71.4 (69.9, 72.9) | 57.5 (54.3, 60.9) | 24.3\% | 63.1 (62.5, 63.6) | 64.1 (63.6, 64.7) | -1.6\% |
| Australia | High | 172.4 (150, 196.6) | 125.7 (112.5, 139.9) | 37.1\% | 63.2 (61.3, 64.9) | 46 (42.3, 50.1) | 37.2\% | 73.6 (72.3, 74.9) | 73.6 (72.3, 74.9) | 0.0\% |
| Austria | High | 176.8 (154.9, 200.9) | 130.3 (120, 142) | 35.7\% | 64.6 (62.8, 66.4) | 47.6 (43.9, 51.4) | 35.8\% | 72.6 (71.6, 73.8) | 73 (71.9, 74.1) | -0.5\% |
| Azerbaijan | High-middle | 329.9 (304, 360.1) | 283 (265.7, 303.6) | 16.6\% | 75 (73.2, 76.8) | $64.4(61,67.7)$ | 16.5\% | 58.6 (57.6, 59.6) | 58.7 (57.7, 59.8) | -0.1\% |
| Bahrain | High-middle | 207.7 (182.3, 236.8) | 131.1 (118.5, 143.5) | 58.4\% | 67.8 (66.1, 69.8) | 42.8 (39.8, 45.9) | 58.6\% | 66.5 (65.5, 67.5) | 71.2 (69.7, 72.4) | -6.6\% |
| Bangladesh | Low-middle | 265.4 (238.6, 293.9) | 216.4 (197.8, 236.1) | 22.6\% | 67.8 (66, 69.5) | 55.2 (51.9, 58.5) | 22.8\% | 62.4 (61.1, 63.7) | 62.5 (61.1, 63.8) | 0.0\% |
| Barbados | High-middle | 212.5 (191, 236.4) | 159.6 (147.2, 172.9) | 33.2\% | 65.2 (63.5, 66.7) | 48.9 (45.8, 52.1) | 33.4\% | 69 (67.8, 70.1) | 70.5 (69.4, 71.7) | -2.1\% |
| Belarus | High | 294.8 (268.8, 323) | 249.9 (234.8, 266.7) | 18.0\% | 67.7 (66.2, 69) | 57.5 (54.3, 60.3) | 17.8\% | 60.8 (60.1, 61.4) | 60.5 (59.6, 61.1) | 0.5\% |
| Belgium | High | 192.1 (168, 220.3) | 137.1 (126.2, 150.3) | 40.1\% | 66.1 (64.5, 67.6) | 47.3 (43.7, 51) | 39.9\% | 71.4 (70.5, 72.4) | 71.9 (71, 72.8) | -0.6\% |
| Belize | Middle | 231 (211.9, 253) | 175 (165.7, 185.5) | 32.0\% | 58.2 (57.2, 59.1) | 44 (41.9, 46.2) | 32.1\% | 66.1 (65.3, 66.8) | 68.4 (67.5, 69.3) | -3.3\% |
| Benin | Low | 288 (250.3, 330.9) | 238.2 (209.1, 275.7) | 20.9\% | 54.9 (52.6, 56.9) | 45.4 (42.7, 48.3) | 20.8\% | 61.5 (58.2, 63.8) | 61.8 (58.3, 64.3) | -0.4\% |
| Bermuda | High | 170.4 (152, 191.6) | 130.5 (120.4, 141.8) | 30.6\% | 65.5 (63.4, 67.4) | 50.2 (46.5, 53.8) | 30.3\% | 72.6 (71.7, 73.5) | 72.7 (71.8, 73.7) | -0.2\% |
| Bhutan | Low-middle | 235.1 (200.8, 268.5) | 190.5 (162.7, 216.5) | 23.4\% | 63.6 (60.5, 65.7) | 51.6 (47.4, 55.3) | 23.2\% | 65.1 (62.8, 67.5) | 65.2 (62.8, 67.6) | -0.1\% |
| Bolivia | Middle | 247 (209.9, 284.8) | 194.8 (165.4, 224.9) | 26.8\% | 63.3 (59.9, 65) | $50(45.8,53.2)$ | 26.6\% | 64.5 (61.9, 66.7) | 65.2 (62.5, 67.5) | -1.0\% |
| Bosnia and Herzegovina | High-middle | 264.8 (238.5, 294.3) | 212.3 (197, 229.7) | 24.7\% | 72.7 (70.7, 74.5) | 58.4 (55, 61.8) | 24.4\% | 63.6 (62.7, 64.6) | 64.4 (63.5, 65) | -1.2\% |
| Botswana | Middle | 265 (239.7, 295.5) | 204.1 (188.1, 225.4) | 29.8\% | 47.3 (43.3, 50.3) | 36.3 (33.1, 39.4) | 30.3\% | 63.1 (61.6, 64.1) | 64.8 (63.1, 65.8) | -2.6\% |
| Brazil | Middle | 224.3 (205.1, 247.5) | 174.4 (165.9, 184.6) | 28.6\% | 61.2 (59.9, 62.3) | 47.6 (44.9, 50.3) | 28.8\% | 67.1 (66.8, 67.5) | 67.6 (67.3, 68) | -0.8\% |
| Brunei | High | 255.7 (232, 284.6) | 194.6 (180.8, 210) | 31.4\% | 69.7 (68.4, 70.9) | 53.1 (49.9, 55.9) | 31.3\% | 63.6 (62.4, 64.7) | 65.2 (63.9, 66.4) | -2.5\% |
| Bulgaria | High-middle | 302.4 (275.8, 331.7) | 258.6 (241.4, 276.7) | 17.0\% | 75.7 (74, 77.1) | 64.7 (61.5, 67.9) | 16.9\% | 59.3 (58.5, 60.4) | 59 (58.2, 59.8) | 0.6\% |
| Burkina Faso | Low | 309.8 (278.2, 346.7) | $261.2(235.8,290.2)$ | 18.6\% | 54.8 (52.4, 57.1) | 46.1 (43.4, 49) | 18.9\% | 60.2 (57.7, 61.8) | 60.2 (57.7, 62) | -0.1\% |
| Burundi | Low | 313.4 (270.9, 354.4) | 263.7 (226.9, 299.5) | 18.9\% | 49.3 (46.5, 51.9) | 41.5 (38.7, 44.5) | 18.9\% | $59(56.9,61.7)$ | 59.3 (56.9, 61.9) | -0.4\% |
| Cambodia | Low-middle | 283 (254.7, 313.5) | 236 (216.7, 260.1) | 19.9\% | 59.6 (58.1, 60.9) | 49.7 (47.3, 52.1) | 19.8\% | 61.6 (60.1, 62.9) | 61.7 (60.2, 63) | -0.2\% |
| Cameroon | Low-middle | 299.3 (256.6, 344) | 249.3 (212.5, 287.4) | 20.0\% | 48.7 (46.1, 51.1) | 40.6 (37.7, 43.4) | 20.0\% | 60.6 (57.6, 63.1) | 60.8 (57.6, 63.5) | -0.2\% |
| Canada | High | 172.4 (152.9, 196.3) | 125.5 (116.2, 136.3) | 37.3\% | 63.4 (61.7, 65.1) | 46 (42.4, 50) | 37.6\% | 72.8 (71.9, 73.7) | 73.2 (72.3, 74) | -0.5\% |
| Cape Verde | Low-middle | 215.5 (192, 240.7) | 168.8 (154.5, 182.6) | 27.7\% | $59(57.3,60.4)$ | 46.1 (43.6, 48.7) | 27.8\% | 69 (68.2, 71.3) | 70.9 (68.7, 71.9) | -2.7\% |
| Central African <br> Republic | Low | 426.3 (367.4, 483.4) | 364.6 (313.6, 418.4) | 16.9\% | 44.1 (41.5, 46.4) | 37.8 (35.1, 40.4) | 16.6\% | 53.4 (50.9, 55.7) | 53.6 (50.8, 56) | -0.3\% |
| Chad | Low | 326.6 (289.4, 368.9) | 275.4 (245.8, 310.9) | 18.6\% | 53.3 (51.2, 55.6) | 45 (42.5, 47.7) | 18.6\% | 58.6 (56.3, 61.1) | 58.6 (56.2, 61.2) | -0.1\% |
| Chile | High-middle | 196.9 (173.1, 224) | 138.1 (125.9, 153.2) | 42.5\% | 64.1 (62.6, 65.3) | 45.1 (41.5, 48.6) | 42.0\% | 70.3 (69, 71.7) | 71.1 (69.8, 72.6) | -1.2\% |
| China | Middle | 215.9 (198.7, 235.8) | 183.9 (173.9, 194.9) | 17.4\% | 68 (66.2, 69.8) | 57.9 (54.5, 61.3) | 17.6\% | 66.7 (66.3, 67.1) | 66 (65.7, 66.4) | 1.0\% |
| Colombia | High-middle | 157.9 (138.2, 178.6) | 124.4 (111.3, 137.3) | 26.9\% | 57.6 (56.2, 59) | 45.4 (42.8, 48.2) | 26.9\% | 74.3 (72.8, 75.7) | 73.7 (72.2, 75.3) | 0.7\% |
| Comoros | Low | 289.4 (255.4, 328.1) | 240.3 (212.5, 272.2) | 20.4\% | 62 (59.8, 64.3) | 51.5 (48.4, 54.8) | 20.4\% | 61.1 (58.6, 63.2) | 61.3 (58.8, 63.4) | -0.3\% |


| Congo | Low-middle | 348.2 (302.9, 392.3) | 287.9 (249.5, 323.8) | 20.9\% | 51.5 (49, 53.6) | 42.5 (40, 45) | 21.0\% | 57.3 (55.5, 59.3) | 57.9 (56, 60.4) | -1.2\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Costa Rica | High-middle | 179.3 (162.5, 199.6) | 145.2 (135.2, 156.9) | 23.5\% | 61.8 (60.2, 63.2) | 50.1 (47.2, 53) | 23.2\% | 71.4 (70.6, 72.1) | 70.8 (70.1, 71.6) | 0.8\% |
| Cote d'Ivoire | Low | 308.4 (272.9, 347.6) | 260.7 (231.2, 294.2) | 18.3\% | 51.3 (48.6, 53.5) | 43.4 (40.4, 45.9) | 18.2\% | 59.6 (57.2, 62.1) | 59.5 (57, 62.2) | 0.2\% |
| Croatia | High-middle | 234.4 (210.7, 263.9) | 183.7 (170.8, 199.6) | 27.6\% | 71.6 (70.1, 73) | 56.1 (52.6, 59.7) | 27.7\% | 65.6 (64.6, 66.5) | 66.1 (65.2, 67) | -0.8\% |
| Cuba | High-middle | 206.4 (185.7, 229.8) | 169.4 (155.2, 185) | 21.9\% | 67 (64.8, 68.8) | 54.9 (51.2, 58.5) | 22.0\% | 67.2 (65.6, 68.9) | 66.7 (65.1, 68.3) | 0.8\% |
| Cyprus | High | 184.4 (161, 210.6) | 129.9 (118.4, 142.4) | 41.9\% | 68.3 (66.6, 70.2) | 48.2 (44.4, 52.5) | 41.8\% | 71.2 (70.1, 72.2) | 72.1 (71, 73.1) | -1.2\% |
| Czech Republic | High | 234.9 (208.7, 267.3) | 185.5 (169.4, 202.8) | 26.7\% | 71.8 (70.5, 73.2) | 56.7 (53.5, 59.9) | 26.7\% | 65.4 (64.3, 66.4) | 65.7 (64.6, 66.7) | -0.5\% |
| Democratic Republic of the Congo | Low | 316.5 (275.3, 355.7) | 260.8 (227.9, 294.5) | 21.4\% | 50.8 (48.1, 53.1) | 41.8 (38.7, 44.8) | 21.3\% | 58.8 (56.8, 61.4) | 59.4 (57.1, 61.9) | -1.0\% |
| Denmark | High | 194.8 (172.2, 223.8) | 137.6 (127.4, 149) | 41.6\% | 67.2 (65.8, 68.6) | 47.3 (43.6, 51.2) | 42.1\% | 70.4 (69.1, 71.3) | 71.1 (70.3, 72) | -1.0\% |
| Djibouti | Low-middle | 283.8 (228.7, 349.3) | 233.5 (183.6, 297.2) | 21.6\% | 55.6 (53, 57.9) | 45.6 (42.2, 48.9) | 22.1\% | 61 (56.4, 64.7) | 61.3 (56.6, 65.2) | -0.6\% |
| Dominica | High-middle | 251.4 (230.6, 274.4) | 198.7 (186.3, 211.7) | 26.5\% | 65.7 (64.1, 67) | 51.9 (49, 54.8) | 26.5\% | 64.8 (64.2, 65.4) | 65.1 (64.4, 66) | -0.4\% |
| Dominican Republic | High-middle | 234.3 (210.1, 262.6) | 190.6 (171, 211.8) | 22.9\% | 59.6 (57.7, 61.4) | 48.4 (45.4, 51.4) | 23.2\% | 65.2 (64.2, 67.1) | 65.2 (64.2, 67.2) | -0.1\% |
| Ecuador | High-middle | 195 (174.4, 219.1) | $147.1(135,162.7)$ | 32.5\% | 59.3 (58.3, 60.4) | 44.8 (42.3, 47.3) | 32.4\% | 71.6 (70.3, 72.9) | 72.6 (71.2, 73.9) | -1.4\% |
| Egypt | Middle | 345.3 (313, 383.4) | 286 (262.7, 313.8) | 20.7\% | 69.4 (67.4, 72.1) | 57.5 (53.9, 61.4) | 20.6\% | 57.4 (56.1, 58.8) | 58 (56.5, 59.5) | -0.9\% |
| El Salvador | Middle | 226.7 (199.4, 261.4) | 177.7 (155.3, 203.1) | 27.6\% | 56.2 (54.3, 57.9) | 44 (41.6, 46.5) | 27.5\% | 67.4 (64.9, 70.3) | 68.4 (65.9, 71.1) | -1.5\% |
| Equatorial Guinea | Middle | 258.8 (205.3, 328.8) | 195.6 (147.4, 255.9) | 32.3\% | 44.9 (40.7, 48.4) | 33.9 (29.8, 37.9) | 32.4\% | 63.2 (58.3, 67.5) | 64.7 (60.1, 69.6) | -2.3\% |
| Eritrea | Low | 374.7 (322.1, 427.2) | 325.7 (277.4, 374.9) | 15.0\% | 52.8 (49.7, 55.2) | 45.8 (42.7, 48.7) | 15.3\% | $56.7(54.3,59)$ | 56.6 (54.1, 59.1) | 0.1\% |
| Estonia | High | 228.5 (200, 258.3) | 181.9 (163.2, 202.2) | 25.6\% | 64.7 (63.3, 65.9) | 51.5 (48.2, 54.6) | 25.5\% | 66 (64.4, 68.1) | 66.1 (64.5, 68.4) | -0.2\% |
| Ethiopia | Low | 254.4 (229.8, 281.7) | 208.9 (192.5, 226.9) | 21.8\% | 55.9 (54.3, 57.6) | 45.9 (43.8, 48.2) | 21.7\% | 63.6 (62.6, 64.5) | 63.8 (62.7, 64.8) | -0.3\% |
| Federated States of Micronesia | Middle | 414.2 (358.3, 472.8) | 325.1 (275.5, 371.1) | 27.4\% | 68.8 (60.2, 71.1) | 53.7 (45.7, 57.4) | 28.1\% | 52.6 (50.3, 54.8) | 55 (52.4, 57.7) | -4.4\% |
| Fiji | High-middle | 406.7 (366.9, 455) | 267.3 (241.3, 299.2) | 52.1\% | 73.3 (72, 74.5) | 48.2 (45.8, 50.4) | 52.0\% | $53(51.4,54.6)$ | 58.1 (56.1, 61.6) | -8.9\% |
| Finland | High | 183.2 (160.6, 210.4) | 131.5 (121.1, 144.3) | 39.4\% | 63.4 (62.1, 64.7) | 45.5 (42.1, 49.2) | 39.3\% | $72(71,72.9)$ | 72.3 (71.4, 73.2) | -0.4\% |
| France | High | 167.5 (146.9, 192.1) | 119.3 (109.3, 130.6) | 40.5\% | 64.4 (62.9, 65.7) | 45.8 (42.1, 49.5) | 40.6\% | $75.9(75,76.8)$ | 76 (75.1, 76.9) | -0.1\% |
| Gabon | Middle | 289.1 (257.8, 324.3) | 227 (203.8, 253.6) | 27.4\% | 55.2 (52.9, 57.3) | 43.5 (40.7, 45.9) | 27.1\% | 60.8 (58.4, 62.2) | 61.8 (59.7, 63.4) | -1.7\% |
| Georgia | High-middle | 314.7 (291.5, 341.5) | 268.5 (255.7, 282.2) | 17.2\% | 71.5 (70.1, 72.8) | 61 (57.9, 64) | 17.2\% | 60 (59.5, 60.6) | 60.1 (59.7, 60.6) | -0.1\% |
| Germany | High | 198.5 (174.5, 227.8) | 144.7 (131.5, 160.1) | 37.2\% | 68.2 (66.6, 69.8) | 49.7 (45.8, 53.8) | 37.2\% | 70.4 (68.8, 71.7) | 70.7 (69.1, 72.1) | -0.5\% |
| Ghana | Low-middle | 303.7 (273.8, 337.6) | 256.4 (231.4, 282.7) | 18.4\% | 54.8 (52.3, 56.9) | 46.1 (43.1, 48.8) | 18.7\% | 60.2 (57.9, 61.8) | 60.3 (57.9, 62.1) | -0.1\% |
| Greece | High-middle | 198.5 (176.6, 224) | 147.6 (137.4, 159.1) | 34.5\% | 69.6 (67.5, 71.6) | 51.8 (47.5, 56.1) | 34.4\% | 71.2 (70.4, 72.1) | 71.4 (70.6, 72.3) | -0.3\% |
| Greenland | High-middle | 273.7 (251.8, 299.3) | 224.5 (212, 236.8) | 21.9\% | 65.3 (63.8, 66.6) | 53.5 (50.3, 56.6) | 22.0\% | 60.9 (60.4, 61.7) | 60.7 (60.2, 61.4) | 0.4\% |
| Grenada | High-middle | 265.2 (244.8, 291.1) | 208 (195.9, 221) | 27.5\% | 67.8 (66.3, 69.2) | 53.1 (50.2, 55.9) | 27.7\% | $62(61.3,62.8)$ | 63.4 (62.5, 64.4) | -2.2\% |
| Guam | High | 301.7 (275, 331.8) | 247.6 (231, 266.1) | 21.8\% | 69.8 (68.5, 71.1) | 57.4 (54.3, 60.2) | 21.6\% | 59.5 (58.2, 61.9) | 61.4 (58.9, 62.9) | -3.2\% |
| Guatemala | Low-middle | 234 (208.7, 259.1) | 175.2 (160.1, 190.6) | 33.6\% | 57.4 (56.6, 58.4) | 43.1 (41.1, 45) | 33.4\% | 67.6 (65.9, 69.3) | 69.6 (68, 71.2) | -3.0\% |
| Guinea | Low | 339.2 (301.8, 377.2) | 292.7 (262.5, 323.3) | 15.9\% | 53.7 (51.7, 55.4) | 46.2 (43.9, 48.5) | 16.2\% | 57.2 (55.5, 59.3) | $57(55.3,59)$ | 0.4\% |
| Guinea-Bissau | Low | 395.7 (351, 444.3) | 343.4 (306.4, 386.7) | 15.2\% | $54(51.3,56.5)$ | 46.9 (43.9, 49.8) | 15.2\% | 54.7 (52.8, 56.3) | 54.5 (52.4, 56.2) | 0.3\% |
| Guyana | Middle | 313.3 (282.8, 345.4) | 247.7 (225.7, 271.1) | 26.5\% | $61(59.8,62.1)$ | 48.3 (45.7, 50.7) | 26.4\% | 58.1 (56.5, 59.6) | 59.6 (57.8, 61.5) | -2.5\% |
| Haiti | Low-middle | 340.1 (297.1, 387.2) | 285.5 (249, 325) | 19.1\% | 59.5 (57.3, 61.1) | 49.9 (46.8, 52.6) | 19.3\% | 57.1 (55.1, 60.3) | 57.5 (55.3, 60.7) | -0.7\% |
| Honduras | Middle | 229.4 (198.6, 264.2) | 189.5 (164.2, 218.4) | 21.0\% | 58.4 (56.8, 59.8) | 48.3 (45.5, 51.2) | 20.8\% | 66.1 (64.2, 68.4) | 65.9 (64, 68.2) | 0.3\% |
| Hungary | High | 270.8 (244.6, 302.1) | 219.6 (204.7, 237.5) | 23.3\% | 72.9 (71.6, 74.1) | 59.1 (56, 62.3) | 23.3\% | 60.7 (59.9, 61.6) | 61 (60.1, 61.8) | -0.4\% |
| Iceland | High | 174.8 (153.9, 201.1) | 124.8 (115.2, 136.2) | 40.1\% | 67.2 (65.5, 68.9) | 47.9 (44.2, 52) | 40.2\% | 72.7 (72, 73.4) | 73 (72.4, 73.6) | -0.4\% |
| India | Low-middle | 307.5 (286.3, 332.2) | 265.6 (252.9, 279.7) | 15.8\% | 62.8 (61.2, 64.3) | 54.3 (51.7, 56.8) | 15.8\% | 59.8 (59.4, 60.2) | 59.6 (59.1, 60) | 0.4\% |
| Indonesia | Middle | 287.4 (263.3, 312) | 235.8 (220.9, 250.1) | 21.9\% | 66.1 (64.8, 67.3) | 54.3 (51.8, 56.8) | 21.9\% | $61.2(60.5,62)$ | 61.7 (61, 62.5) | -0.9\% |
| Iran | High-middle | 227.2 (204.7, 254.1) | 164.8 (156.3, 174.7) | 37.9\% | 65.6 (63.9, 67.2) | 47.5 (44.1, 51.2) | 38.0\% | 67.6 (67.2, 68.1) | 69 (68.7, 69.3) | -2.0\% |
| Iraq | Middle | 204.2 (180.3, 231.9) | 147.5 (135.7, 160.6) | 38.5\% | 57.3 (54.8, 59.2) | 41.4 (38.5, 44.3) | 38.5\% | 68.9 (67.6, 70.6) | 70.8 (69.2, 72) | -2.6\% |
| Ireland | High | 182.4 (160.9, 208.5) | 131.1 (120.4, 142.9) | 39.1\% | 66.7 (64.9, 68.6) | 47.9 (43.8, 52.2) | 39.2\% | 71.7 (70.8, 72.5) | 71.9 (71.1, 72.8) | -0.4\% |
| Israel | High | 171.8 (149, 197.8) | 120.2 (109.6, 133) | 42.9\% | 67.3 (65.6, 69) | 47.2 (43.6, 51.2) | 42.7\% | 73.2 (72.3, 74.1) | 74 (73.2, 75.6) | -1.1\% |
| Italy | High | 166.1 (145.1, 191.1) | 115.2 (105.5, 126.8) | 44.1\% | 66.6 (64.8, 68.6) | 46.2 (42.4, 50.8) | 44.1\% | 74.5 (73.5, 75) | 74.8 (74.3, 75.4) | -0.4\% |


| Jamaica | High-middle | 238.8 (213.1, 270.4) | 175.3 (157.2, 197.2) | 36.2\% | 63.1 (61.6, 64.6) | 46.3 (43.4, 49.1) | 36.4\% | 64.1 (62.3, 65.8) | 66.2 (64.6, 68.1) | -3.1\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Japan | High | 154.9 (134.1, 179.8) | 110.6 (101.3, 121.7) | 40.1\% | 65.8 (64.4, 67) | 47 (43.5, 50.4) | 40.1\% | 76.4 (75.7, 77) | 76.1 (75.6, 76.7) | 0.3\% |
| Jordan | High-middle | 207.9 (184.8, 236.8) | 149.3 (136.2, 164.8) | 39.3\% | 68 (65.9, 70.2) | 48.7 (44.9, 53) | 39.7\% | 68.9 (67, 70.2) | 70 (69, 71.1) | -1.6\% |
| Kazakhstan | High-middle | 310.9 (288.4, 337.3) | 266.9 (253.9, 282.9) | 16.5\% | 66.9 (65.6, 68.2) | 57.4 (54.7, 60.1) | 16.4\% | 59.8 (59.2, 60.3) | 59.7 (58.9, 60.1) | 0.2\% |
| Kenya | Low-middle | 277.3 (255.5, 301.8) | 228.4 (214.6, 242.8) | 21.4\% | 48.6 (46.9, 50.2) | $40(38,42)$ | 21.5\% | $61.8(61,62.6)$ | 62.1 (61.4, 62.9) | -0.5\% |
| Kiribati | Low-middle | 474.9 (425.6, 526.1) | 347.5 (311.8, 386.3) | 36.7\% | 65.3 (64.3, 66.4) | 47.8 (45.8, 49.7) | 36.6\% | 49.3 (47.1, 51.6) | 54.2 (51.3, 56.1) | -9.1\% |
| Kuwait | High | $170.2(147.7,197.5)$ | 118.2 (107.7, 129.7) | 44.0\% | 66 (64.2, 68) | 45.9 (42.4, 49.7) | 44.0\% | 74.9 (73.8, 75.6) | 75.3 (74.6, 76.4) | -0.6\% |
| Kyrgyzstan | Low-middle | 273.7 (253.8, 297.4) | 232.7 (222.1, 245.2) | 17.6\% | 65.1 (63.6, 66.4) | 55.3 (52.4, 58.1) | 17.7\% | 61.6 (61.1, 62) | 61.3 (60.9, 61.7) | 0.4\% |
| Laos | Low-middle | 309.1 (270.2, 347.2) | 260.3 (227.4, 292.4) | 18.8\% | 65.4 (61.7, 67.2) | 55.1 (50.6, 58) | 18.7\% | 59.2 (57.1, 61.6) | 59.4 (57.3, 61.8) | -0.4\% |
| Latvia | High | 277.7 (246.5, 307.5) | 228.2 (206.2, 248.7) | 21.7\% | 66.4 (65.1, 67.6) | 54.6 (51.5, 57.7) | 21.6\% | 61.6 (60.1, 63.2) | 61.7 (59.9, 63.4) | -0.2\% |
| Lebanon | High-middle | 246.6 (222.5, 275.5) | 187.2 (174.6, 201.2) | 31.7\% | 69.3 (67.2, 71.6) | 52.6 (48.9, 56.9) | 31.7\% | 65.4 (64.6, 66.4) | 66.5 (65.4, 67.5) | -1.6\% |
| Lesotho | Low-middle | 441.3 (379.8, 499.2) | 360.5 (308.7, 410.9) | 22.4\% | 43.6 (40.3, 46.2) | 35.6 (32.7, 38.3) | 22.4\% | 52.8 (50.4, 55.1) | 53.6 (51, 56.1) | -1.6\% |
| Liberia | Low | 294.2 (259.3, 334.7) | 244.6 (216, 274.3) | 20.3\% | 50.8 (48.3, 53.3) | 42.3 (39.3, 45.4) | 20.2\% | 61.1 (58.1, 63.3) | 61.3 (58.1, 63.7) | -0.3\% |
| Libya | Middle | 299.7 (262.7, 337) | 236.2 (210.1, 259.9) | 26.9\% | $66.9(65,69.1)$ | 52.8 (49.2, 56.4) | 26.6\% | 61.6 (58.7, 63.2) | 62.6 (61.2, 64.3) | -1.6\% |
| Lithuania | High | 281.6 (254.5, 310.7) | 231.9 (217.2, 248.9) | 21.4\% | $66.1(65,67)$ | 54.7 (51.8, 57.4) | 20.9\% | 61.4 (60.6, 62.3) | 61.5 (60.6, 62.4) | 0.0\% |
| Luxembourg | High | 189.3 (165.3, 217.6) | 136.1 (124.5, 150.6) | 39.1\% | 66.4 (64.6, 68) | 47.8 (43.9, 51.9) | 39.0\% | 71.4 (70.2, 72.5) | 71.8 (70.6, 72.9) | -0.6\% |
| Macedonia | High-middle | 263.1 (237.9, 291.6) | 212.4 (197.5, 229.2) | 23.9\% | 75.4 (73.6, 77.2) | 60.9 (57.3, 64.5) | 23.8\% | 62.8 (61.9, 63.7) | 63.4 (62.5, 64.3) | -0.9\% |
| Madagascar | Low | 361.6 (315.7, 411.9) | 314 (273.7, 359.8) | 15.2\% | 62.7 (60.3, 64.7) | 54.5 (51.4, 57.5) | 15.1\% | 56.1 (54.4, 58.8) | 56 (53.9, 58.7) | 0.3\% |
| Malawi | Low | 289.8 (258.2, 325.1) | 240.3 (214.9, 268.2) | 20.6\% | 48.9 (46.6, 51.4) | 40.5 (37.9, 43.4) | 20.7\% | 61 (58.9, 62.7) | 61.3 (59.2, 63) | -0.4\% |
| Malaysia | High-middle | 265.2 (241.7, 291.9) | 223.9 (208.2, 242.2) | 18.4\% | $70.4(68.8,72)$ | 59.4 (56.1, 63) | 18.5\% | 62.8 (61.7, 63.9) | 62.5 (61.4, 63.5) | 0.5\% |
| Maldives | Middle | 174.9 (155.9, 196.8) | 133.8 (123.6, 145.2) | 30.7\% | 68 (65.8, 70) | 52.1 (48.2, 55.9) | 30.6\% | 70.8 (69.5, 71.8) | 71 (69.8, 72.1) | -0.4\% |
| Mali | Low | 293.7 (260.1, 328.9) | 250.8 (222.2, 279.4) | 17.1\% | 54.8 (52.4, 57.5) | 46.8 (43.9, 50) | 17.1\% | $61.3(59,63.1)$ | 61.1 (58.7, 63) | 0.3\% |
| Malta | High-middle | 197.7 (174.8, 225.9) | 140.7 (130.9, 152.6) | 40.5\% | 70.8 (68.9, 72.6) | 50.4 (46.3, 54.8) | 40.4\% | 70.2 (69.5, 70.8) | 70.9 (70.4, 71.4) | -1.0\% |
| Marshall Islands | Middle | 481.8 (433.3, 534.5) | 396.9 (358.3, 442.7) | 21.4\% | 70.4 (68.7, 72.1) | 58.1 (55.2, 60.6) | 21.3\% | 49.9 (48.1, 51.7) | 51 (49.3, 53.3) | -2.3\% |
| Mauritania | Low | 269.7 (237, 306) | 220.5 (193.9, 248.4) | 22.3\% | 62.7 (60.9, 64.5) | 51.3 (48.6, 54.2) | 22.3\% | 62.3 (60.3, 64.4) | 62.6 (60.4, 64.9) | -0.5\% |
| Mauritius | High-middle | 263.4 (239.2, 289.3) | 182.6 (170.8, 195.9) | 44.3\% | 67 (65.5, 68.4) | 46.4 (43.9, 49) | 44.4\% | 63.2 (62.2, 64.1) | 67.1 (66.2, 68.1) | -5.9\% |
| Mexico | Middle | 215.5 (196.5, 237.7) | 156.2 (147.7, 166.1) | 37.9\% | 59.8 (58.9, 60.6) | 43.4 (41.2, 45.5) | 37.9\% | 67.9 (67.4, 68.4) | 70.3 (69.9, 70.7) | -3.3\% |
| Moldova | High-middle | 296.8 (274.4, 323.4) | 250.8 (239.2, 264.5) | 18.4\% | 66.5 (65.3, 67.6) | 56.2 (53.4, 59.1) | 18.3\% | 59.1 (58.6, 59.9) | 58.9 (58.4, 59.4) | 0.3\% |
| Mongolia | High-middle | 347.5 (317.7, 378.7) | 307.4 (284.5, 330.9) | 13.1\% | 66.4 (65.1, 67.6) | 58.7 (56.1, 61.2) | 13.1\% | $56(54.8,57.3)$ | 55.3 (54.2, 56.6) | 1.2\% |
| Montenegro | High-middle | 270.4 (244.6, 302) | 223 (206, 243.1) | 21.3\% | 73.5 (71.9, 74.9) | 60.6 (57, 64.2) | 21.2\% | 62.3 (61.1, 63.4) | 62.3 (61.1, 63.4) | 0.0\% |
| Morocco | Low-middle | 285.9 (249, 326.7) | 222.9 (195.4, 252.9) | 28.3\% | 69.5 (67.3, 71.3) | 54.2 (49.8, 58.2) | 28.3\% | 62.2 (60.2, 64.4) | 63.1 (61, 65.2) | -1.4\% |
| Mozambique | Low | 343 (302.3, 386.6) | 291.4 (255.8, 328.6) | 17.7\% | 43.9 (40.5, 46.4) | 37.3 (34.1, 39.8) | 17.7\% | 56.9 (55.1, 59) | 57 (55.2, 59.3) | -0.3\% |
| Myanmar | Low-middle | 289.4 (258.3, 318.3) | 239.6 (216, 262.5) | 20.8\% | 60.1 (58.8, 61.4) | 49.7 (47.6, 51.9) | 20.9\% | 61.1 (59.5, 62.5) | 61.6 (60.3, 63) | -0.7\% |
| Namibia | Middle | 278.6 (247.6, 311.1) | 224.1 (201.9, 251.1) | 24.3\% | 47.5 (43.4, 50.3) | 38.2 (34.6, 41.3) | 24.2\% | 61.8 (59.9, 63.3) | 62.6 (60.7, 64.4) | -1.4\% |
| Nepal | Low-middle | 290.6 (258.6, 321.2) | 241.9 (214.7, 264.5) | 20.1\% | 63.9 (60.2, 65.8) | 53.1 (48.6, 56.3) | 20.3\% | 60.7 (59.1, 62.4) | 60.7 (59.1, 62.6) | 0.0\% |
| Netherlands | High | $190.5(168,216.7)$ | 133.8 (123.6, 144.4) | 42.4\% | 68.7 (66.8, 70.4) | 48.1 (44.1, 52.7) | 42.6\% | 71.4 (70.5, 72.2) | 71.9 (71.1, 72.7) | -0.7\% |
| New Zealand | High | 192.6 (170.2, 221.1) | 138 (126.8, 152) | 39.6\% | 66.4 (64.6, 68) | 47.5 (43.9, 51.6) | 39.7\% | 72.2 (71.3, 73.1) | 72.5 (71.6, 73.3) | -0.5\% |
| Nicaragua | Middle | 178.4 (158, 201.7) | 134.1 (120.8, 148.2) | 33.1\% | 59.2 (57.6, 60.7) | 44.5 (41.9, 47.1) | 33.1\% | 72.8 (71.1, 74.4) | 73.6 (72, 75.1) | -1.1\% |
| Niger | Low | 288.1 (254.6, 325.9) | 241.8 (214.4, 273) | 19.1\% | 54.3 (51.1, 56.9) | 45.6 (42, 48.7) | 19.2\% | 61.4 (58.8, 63.5) | 61.4 (58.7, 63.7) | 0.0\% |
| Nigeria | Low-middle | 231 (189, 290.2) | 186.1 (150.5, 242) | 24.1\% | 45.8 (42.9, 48.7) | 36.8 (33.4, 40.6) | 24.3\% | 66 (61.8, 69.3) | 66.1 (61.7, 69.5) | -0.1\% |
| North Korea | Middle | 290.6 (258.6, 321.2) | 256.2 (229.2, 282.1) | 13.4\% | 68.9 (66.2, 70.9) | 60.8 (57.1, 64.1) | 13.3\% | 60.4 (58.9, 62) | 59.5 (58.1, 61.2) | 1.5\% |
| Northern Mariana Islands | High | 248.2 (223.1, 278.7) | 190 (173.6, 208.7) | 30.6\% | 68.1 (66.7, 69.7) | $52.2(49,55.6)$ | 30.3\% | 64.1 (62.3, 66.4) | 66.6 (63.7, 68) | -3.8\% |
| Norway | High | 179.9 (157.8, 207) | 125.2 (116.2, 135.9) | 43.7\% | 65.7 (64.1, 67.4) | $45.7(42,49.7)$ | 43.9\% | 72.5 (71.9, 73.1) | 72.9 (72.4, 73.4) | -0.6\% |
| Oman | High-middle | 234.2 (200, 267.3) | 174.5 (151.8, 197.9) | 34.2\% | 66.7 (65.3, 68.2) | 49.8 (46.6, 53.2) | 34.0\% | 64.2 (62.3, 66.8) | 66 (63.5, 68.3) | -2.7\% |
| Pakistan | Low-middle | 348.1 (303.9, 394.4) | 298.3 (260.9, 341.1) | 16.7\% | $67(65,68.7)$ | 57.4 (54.1, 60.3) | 16.6\% | 56.1 (54.5, 58.1) | 56.1 (54.3, 58.1) | 0.1\% |
| Palestine | Middle | $248.2(223,276.1)$ | 183.5 (170.8, 197.4) | 35.3\% | 68.8 (66.5, 71.1) | 51 (47.1, 54.8) | 35.0\% | $64.2(63.3,65)$ | 65.1 (64.7, 65.9) | -1.5\% |
| Panama | High-middle | 168.5 (150.1, 188.9) | 128.5 (118.1, 139.9) | 31.1\% | 59.2 (57.9, 60.3) | 45.2 (42.7, 47.6) | 31.0\% | 73.6 (72.6, 74.6) | 74.1 (73.2, 75) | -0.7\% |


| Papua New Guinea | Low-middle | 576.2 (513.1, 652.7) | 506.6 (452.3, 576.1) | 13.7\% | 66.5 (64.4, 68.7) | 58.5 (55.9, 61.3) | 13.7\% | 45.7 (42.8, 48) | 45.6 (42.6, 48.2) | 0.3\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Paraguay | Middle | 224.8 (196.5, 258) | 167.4 (147, 191.1) | 34.3\% | 63 (61.5, 64.6) | 46.9 (43.8, 50.2) | 34.3\% | 66.3 (64, 68.5) | 67.8 (65.3, 70.2) | -2.2\% |
| Peru | High-middle | 162.8 (139.3, 186.2) | 123.8 (108.2, 139.5) | 31.5\% | 60.3 (58.7, 61.8) | 45.9 (42.7, 49) | 31.5\% | 74.3 (72.4, 76.4) | 74.3 (72.4, 76.5) | -0.1\% |
| Philippines | Middle | 331.1 (296.4, 369.6) | 276.2 (247.7, 306.9) | 19.9\% | 67.6 (66.2, 68.8) | 56.3 (53.5, 59) | 19.9\% | 58.9 (57, 61) | 59.5 (57.5, 61.5) | -1.0\% |
| Poland | High | 243.2 (218.3, 271.6) | 198 (183.7, 214.7) | 22.8\% | 69.7 (68.3, 71) | 56.7 (53.7, 59.7) | 23.0\% | 63.8 (63, 64.7) | 63.9 (63.1, 64.8) | -0.1\% |
| Portugal | High-middle | 189.1 (165.6, 215.8) | 130.7 (121, 141.5) | 44.7\% | 66.8 (65.2, 68.5) | 46.3 (42.3, 50.6) | 44.4\% | 72.4 (71.5, 73.3) | 73.7 (72.8, 74.6) | -1.7\% |
| Puerto Rico | High-middle | 179.7 (160.7, 202.1) | 128.9 (119.8, 138.8) | 39.4\% | 56.3 (52.3, 58.3) | 40.3 (36.9, 43.1) | 39.8\% | 72.7 (71.7, 73.8) | 74.6 (73.6, 75.1) | -2.5\% |
| Qatar | High-middle | 206 (175.6, 239.3) | 137.5 (119.5, 156.9) | 49.8\% | $67.2(65.6,69)$ | 44.8 (41.6, 48.5) | 49.9\% | 67.4 (65.4, 69.4) | 70.3 (68.3, 73) | -4.2\% |
| Romania | High-middle | 284 (258.2, 313.8) | 238.4 (222.9, 255.5) | 19.1\% | 71.6 (70.1, 72.9) | 60.1 (57.2, 63.3) | 19.0\% | 61.2 (60.3, 62.1) | 61 (60.1, 62) | 0.3\% |
| Russian Federation | High-middle | 307.9 (285.9, 334.8) | 266.4 (253.7, 281.2) | 15.6\% | 62.6 (61.6, 63.5) | 54.1 (51.9, 56.3) | 15.6\% | 60.5 (59.4, 60.8) | 59.2 (58.9, 59.5) | 2.1\% |
| Rwanda | Low | 249.3 (221.1, 279.7) | 203.5 (181.3, 227.3) | 22.5\% | 51.8 (49.9, 53.7) | 42.2 (39.8, 44.9) | 22.7\% | 63.9 (62.2, 65.4) | 64.1 (62.3, 65.8) | -0.4\% |
| Saint Lucia | High-middle | 233.3 (212.5, 255.1) | 177.7 (166.4, 190.3) | 31.3\% | 64 (62.7, 65.2) | 48.7 (45.9, 51.4) | 31.3\% | 65.8 (64.9, 66.8) | 67.5 (66.5, 68.5) | -2.4\% |
| Saint Vincent and the Grenadines | High-middle | 271.3 (249.2, 294.7) | 206.8 (194.5, 219.2) | 31.2\% | $64(62.8,65.1)$ | 48.8 (46.1, 51.3) | 31.2\% | 62.9 (62.2, 63.7) | 64.8 (63.9, 65.3) | -2.9\% |
| Samoa | Middle | 304 (269.6, 334.7) | 238.2 (213, 260.3) | 27.6\% | 70.1 (67.2, 71.9) | 55.1 (51.2, 58.2) | 27.2\% | 60.3 (58.8, 61.7) | 61.8 (60.5, 63.4) | -2.5\% |
| Sao Tome and Principe | Low-middle | 299.4 (265.7, 334.1) | 257.7 (231.1, 284.9) | 16.2\% | 63 (61.1, 64.8) | 54.2 (51.4, 56.9) | 16.1\% | 61.1 (58.7, 62.7) | 60.7 (58.2, 62.5) | 0.6\% |
| Saudi Arabia | High-middle | 237 (209.5, 266.4) | 183.2 (168.1, 203.3) | 29.3\% | 65.7 (64.2, 67.6) | 51 (47.6, 54.7) | 28.7\% | 65.7 (64.1, 66.8) | 66.3 (64.7, 67.3) | -0.8\% |
| Senegal | Low | 290.4 (261.9, 324.5) | 242.1 (219.1, 269) | 20.0\% | 58.5 (56.9, 60.4) | 48.7 (46.3, 51.6) | 20.0\% | 60.8 (58.8, 62.4) | $61(58.8,62.7)$ | -0.3\% |
| Serbia | High-middle | 296.8 (270.2, 328.3) | 245 (229, 261.9) | 21.2\% | 75.2 (73.8, 76.7) | 62.1 (58.8, 65.4) | 21.1\% | 61.3 (60.6, 62) | 61.6 (60.9, 62.4) | -0.5\% |
| Seychelles | High-middle | 276.1 (253.7, 300.7) | 231.3 (217.9, 244.2) | 19.4\% | 68.4 (67.1, 69.5) | 57.3 (54.3, 60.1) | 19.3\% | 62.4 (61.7, 63.1) | 62.4 (61.7, 63.2) | -0.1\% |
| Sierra Leone | Low | 331.6 (293.8, 376) | 284.9 (251.4, 322.7) | 16.4\% | 54.2 (51.5, 56.7) | 46.4 (43.2, 49.5) | 16.9\% | 58.2 (55.9, 61.2) | 58.1 (55.7, 61.2) | 0.3\% |
| Singapore | High | 146.3 (127.5, 169) | 108.3 (98.6, 119.9) | 35.1\% | 67.1 (65.4, 69) | 49.7 (45.9, 53.7) | 35.0\% | 76.3 (75.4, 77.2) | 76 (75.1, 76.9) | 0.4\% |
| Slovakia | High | 256.4 (229.7, 287.3) | 208.8 (193.7, 227.9) | 22.8\% | 72.6 (71.2, 74.2) | 59.1 (55.9, 62.4) | 22.9\% | 63.5 (62.6, 64.3) | 63.6 (62.8, 64.5) | -0.2\% |
| Slovenia | High | 202.8 (177.8, 233.3) | 154.4 (139.7, 172.4) | 31.4\% | 68.2 (66.9, 69.4) | 52 (48.9, 55.2) | 31.0\% | 69.7 (68.4, 70.6) | 70 (68.9, 71) | -0.4\% |
| Solomon Islands | Low-middle | 443.9 (397.7, 494.4) | 368 (330.3, 405.5) | 20.6\% | 70.3 (68.2, 71.7) | 58.4 (55.6, 60.9) | 20.5\% | 52.1 (49.9, 54) | 53.4 (51.1, 55.1) | -2.5\% |
| Somalia | Low | 362.7 (301.2, 434.7) | 311.4 (255.2, 382.6) | 16.5\% | 52.2 (50, 54.6) | 44.8 (42.1, 47.5) | 16.5\% | 56 (53, 59.5) | 56 (52.7, 59.6) | 0.0\% |
| South Africa | Middle | 263 (242.5, 287.1) | 204.2 (194.1, 215.8) | 28.8\% | 42.2 (40.3, 43.8) | 32.7 (30.9, 34.3) | 29.0\% | 62.3 (61.8, 62.7) | 64.2 (63.7, 64.8) | -3.1\% |
| South Korea | High | 158.3 (137.9, 182.6) | 110.1 (100.7, 120.4) | 43.8\% | 62.7 (61.5, 63.9) | 43.6 (40.3, 46.7) | 43.8\% | 74.4 (73.6, 75.2) | 75.1 (74.4, 75.8) | -0.9\% |
| South Sudan | Low | 329.1 (274.7, 403.6) | 278.3 (227.9, 349.4) | 18.3\% | 49.5 (44.3, 52.5) | 41.8 (37.1, 45.6) | 18.4\% | 57.6 (54.4, 62.2) | 57.7 (54.3, 62.6) | -0.3\% |
| Spain | High-middle | 163.5 (144.3, 187) | 119.2 (110.1, 130) | 37.1\% | 65.8 (63.7, 67.9) | 47.9 (44, 52.1) | 37.2\% | 75 (74.2, 75.7) | 75.1 (74.4, 75.8) | -0.1\% |
| Sri Lanka | High-middle | 202.3 (175.9, 234.3) | 151 (132.3, 173) | 34.0\% | 62.3 (60.9, 63.5) | 46.5 (43.6, 49.3) | 34.0\% | 68.4 (66.4, 71.1) | 70.4 (67.8, 72.6) | -2.9\% |
| Sudan | Low-middle | 294 (253.6, 338.4) | 240.9 (205.2, 278.9) | 22.0\% | 65.7 (63.2, 67.9) | 53.9 (49.7, 57.9) | 22.0\% | $61.1(58,63.9)$ | 61.2 (58.1, 64.2) | -0.3\% |
| Suriname | High-middle | 261 (234.6, 289.7) | 206.1 (187.2, 224.3) | 26.6\% | 61.9 (60.8, 62.9) | 48.8 (46.2, 51.2) | 26.9\% | 62.9 (61.3, 64.7) | 64.1 (62.3, 66) | -1.8\% |
| Swaziland | Middle | 392.7 (339.8, 455) | 306.7 (263.8, 355.7) | 28.0\% | 47.3 (44.7, 49.9) | 36.9 (34.2, 39.4) | 28.1\% | 54.5 (51.9, 56.5) | $56(53.3,59)$ | -2.8\% |
| Sweden | High | 172.5 (150.1, 199.3) | 122.1 (112.4, 133.3) | 41.3\% | 65.3 (63.7, 67.1) | 46.3 (42.8, 50.2) | 41.2\% | 73 (72.2, 73.9) | 73.3 (72.6, 74.2) | -0.4\% |
| Switzerland | High | 161.6 (138.7, 188.4) | 104.9 (95.7, 115.5) | 54.0\% | 66.1 (64.6, 67.6) | 43 (39.3, 47.2) | 53.8\% | 75.6 (74.8, 76.4) | 76.1 (75.4, 76.7) | -0.6\% |
| Syria | Middle | 261.4 (227.1, 294.2) | 213.1 (186, 240.1) | 22.7\% | 54.1 (49.7, 57.8) | 44 (39.9, 48.4) | 23.0\% | 63.6 (61.4, 65.6) | 63.5 (61.2, 65.6) | 0.1\% |
| Taiwan | High | 184.8 (167.1, 204.4) | 146.3 (136, 156.8) | 26.3\% | 62.9 (61.4, 64.2) | 49.7 (46.7, 52.6) | 26.5\% | 72.1 (71.4, 72.8) | 72.4 (71.7, 73.1) | -0.4\% |
| Tajikistan | Middle | 300.9 (273.2, 332.1) | 251.9 (231.7, 272.5) | 19.4\% | 71.1 (69.3, 72.7) | 59.5 (56.1, 62.6) | 19.5\% | 59.7 (58.4, 61.3) | 60.5 (58.9, 61.6) | -1.4\% |
| Tanzania | Low-middle | 256.7 (230.1, 285.5) | 212.1 (193.1, 233.5) | 21.0\% | 52.2 (50.1, 54.4) | 43 (40.6, 45.5) | 21.3\% | 63 (61.5, 64.5) | 63.1 (61.5, 64.6) | -0.2\% |
| Thailand | High-middle | 186.3 (165.5, 208.6) | 146.4 (132.6, 160.5) | 27.3\% | 56.3 (55, 57.6) | 44.3 (41.6, 46.8) | 27.1\% | 72.3 (71, 74) | 72.6 (71.4, 74.2) | -0.4\% |
| The Bahamas | High | 253.3 (230.1, 279.1) | 205.8 (190.4, 223.6) | 23.0\% | 61.9 (60.7, 62.9) | 50.3 (47.7, 52.8) | 23.0\% | 65.4 (63.1, 66.5) | 65.9 (63.5, 67) | -0.7\% |
| The Gambia | Low | 323.1 (288.3, 362.5) | 272.6 (245.2, 304.8) | 18.5\% | 55.6 (53.4, 57.8) | 46.9 (44.3, 49.7) | 18.7\% | 58.2 (56.4, 60.4) | 58.2 (56.4, 60.5) | 0.0\% |
| Timor-Leste | Low-middle | 281.6 (241.5, 318.1) | 238.3 (203, 264.2) | 18.2\% | 63.9 (56.8, 66.1) | 53.9 (46.9, 57.1) | 18.6\% | $61.4(59,63.2)$ | 61.3 (59, 63.2) | 0.1\% |
| Togo | Low | 298.4 (260.9, 338.5) | 250.7 (219.8, 286.8) | 19.0\% | 52.5 (50, 54.8) | 44.2 (41.3, 47) | 18.8\% | 60.4 (57.4, 62.5) | 60.3 (57.2, 62.5) | 0.1\% |
| Tonga | Middle | 315.8 (282.2, 353.3) | 227.9 (205.7, 252.8) | 38.6\% | 68.3 (66.8, 69.6) | 49.3 (46.7, 51.9) | 38.6\% | 59.1 (57.1, 60.8) | 63.2 (61.4, 64.8) | -6.5\% |
| Trinidad and Tobago | High | 250.5 (215.4, 292.1) | 175.2 (150, 205.1) | 43.0\% | 64.1 (62.7, 65.4) | 44.9 (41.9, 47.7) | 42.7\% | 63.5 (60.7, 65.8) | 67.3 (64.6, 70.6) | -5.7\% |


| Tunisia | Middle | 221.9 (188.6, 259.9) | 170.4 (144.5, 197.5) | 30.2\% | 66.9 (65, 69.1) | 51.4 (47, 55.9) | 30.3\% | 67.4 (65.1, 69.9) | 68 (65.6, 70.5) | -0.9\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Turkey | High-middle | 210.1 (186.8, 236.5) | 157.7 (144.6, 169.7) | 33.2\% | 68.2 (66.1, 70.3) | 51.1 (47.3, 55.3) | 33.5\% | $67.1(66,68.3)$ | 67.9 (66.7, 69.2) | -1.2\% |
| Turkmenistan | Middle | 335 (307.2, 364.8) | 287.6 (269.2, 307.7) | 16.5\% | 71.1 (69.7, 72.3) | 61.1 (58.2, 63.9) | 16.4\% | 57.7 (56.8, 58.6) | 57.7 (56.8, 58.6) | -0.1\% |
| Uganda | Low | 272.9 (240.5, 303.9) | 222.3 (197.1, 247) | 22.8\% | 51.3 (48.9, 53.5) | 41.8 (39.1, 44.6) | 22.7\% | $62.2(60.6,64)$ | 62.5 (60.9, 64.5) | -0.5\% |
| Ukraine | High-middle | 350.4 (323.2, 377.5) | 301.4 (284, 318.7) | 16.3\% | 66.2 (64.9, 67.2) | 57 (54.3, 59.6) | 16.1\% | 57.6 (56.8, 58.4) | 57.4 (56.6, 58.1) | 0.4\% |
| United Arab Emirates | High | 301.4 (259.8, 347.5) | 240.4 (206.9, 277.5) | 25.4\% | 67.6 (64.3, 69.8) | 53.9 (49.5, 57.5) | 25.5\% | 57.5 (55.9, 60.9) | 58 (56.1, 61.6) | -0.9\% |
| United Kingdom | High | 194.7 (172.7, 221.6) | 143.3 (134.1, 154) | 35.9\% | 66.1 (64.6, 67.7) | 48.7 (44.9, 52.7) | 35.8\% | 70.7 (70.3, 71.2) | 70.8 (70.5, 71.1) | -0.1\% |
| United States | High | 215.9 (193.5, 240.4) | 161.5 (152, 171.4) | 33.7\% | 61.5 (60.3, 62.6) | $46(43,49.2)$ | 33.6\% | 67.6 (67, 68.2) | $68.5(68,68.9)$ | -1.3\% |
| Uruguay | High-middle | 224.3 (199.9, 251.4) | 173.8 (157.8, 192.2) | 29.1\% | 65.7 (64.2, 66.9) | 51 (47.4, 54.4) | 28.7\% | 66.2 (64.5, 67.9) | 66.6 (65, 68.3) | -0.7\% |
| Uzbekistan | High-middle | 365.8 (331, 401.8) | 312.6 (285.5, 340.8) | 17.0\% | 73.2 (71.6, 74.7) | 62.8 (59.4, 65.7) | 16.6\% | 57.3 (56.2, 58.5) | 57.8 (56.6, 59) | -0.8\% |
| Vanuatu | Low-middle | 457.2 (389.8, 538.9) | 392.1 (332, 469.3) | 16.6\% | 68.8 (65.3, 70.9) | 59 (54.9, 62.1) | 16.7\% | 51.8 (47.2, 54.9) | 52.2 (47.2, 55.5) | -0.8\% |
| Venezuela | High-middle | 213.4 (189, 242.9) | 169.6 (152.1, 192) | 25.8\% | 60.5 (59.1, 61.8) | 48.1 (45.5, 50.5) | 25.8\% | 67.3 (65.1, 69.5) | 67.9 (65.7, 70.2) | -0.9\% |
| Vietnam | Middle | 241.2 (217.3, 270.1) | 197.7 (180.7, 219.9) | 22.0\% | 64.3 (63.1, 65.6) | 52.8 (50, 55.7) | 21.8\% | 63.9 (62.1, 65.3) | 64.1 (62.1, 65.5) | -0.3\% |
| Virgin Islands, U.S. | High-middle | 262.7 (229.8, 292.3) | 213.2 (185.7, 233.9) | 23.2\% | 65.4 (63.7, 66.8) | 53 (49.8, 55.9) | 23.5\% | 61.9 (60.6, 64.9) | 62.3 (61, 65.4) | -0.7\% |
| Yemen | Low-middle | 330.4 (274.7, 398.9) | 280.6 (229.5, 342.2) | 17.7\% | 63.4 (60.3, 65.8) | 53.8 (49.3, 57.6) | 17.7\% | 58.3 (54.7, 61.5) | 58.1 (54.5, 61.5) | 0.3\% |
| Zambia | Low-middle | 292.7 (261.6, 324.1) | 243.7 (218.5, 268.7) | 20.1\% | 47.7 (45.5, 49.7) | 39.6 (37.2, 42.1) | 20.2\% | 60.9 (58.8, 62.6) | $61.2(59.1,63)$ | -0.5\% |
| Zimbabwe | Low-middle | 355.8 (317, 401.8) | 300.6 (268.4, 338.6) | 18.4\% | 49.9 (47.4, 51.8) | 42 (39.5, 44.3) | 18.7\% | 55.7 (54.4, 57.9) | 56 (54.5, 58.4) | -0.5\% |

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