

Global economic burden of depression in 154 countries from 2025 to 2050

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SI Appendix: Global economic burden of depression in 154 countries from 2025 to 2050

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A: Data description

Education

Age-specific educational attainment data were obtained from the Barro-Lee Educational Attainment Database,¹⁸ which provides educational attainment data by five-year age-sex groups up to 2010. For 2010–2030, no age-specific data are available, but the database provides projections for the population aged 15–64. We approximated the age-specific estimates by assuming that educational attainment for each age-sex group grows at the same rate. Because the Barro-Lee database presents data in five-year intervals, linear interpolation was adopted to extend the estimates to each year. For 2030–2050, we projected the education attainment by assuming the same growth rate as between 2010–2030 for each age and sex group.

Morbidity

The age-sex-specific morbidity (measured in YLLs and YLDs) of depression up to 2050 were obtained from the forecasting analysis conducted by GBD 2021.^{19,20}

GDP projection

GDP projections for the status quo scenario are from research by the Global Burden of Disease Health Financing Collaborator Network that produced estimates for Gross Domestic Product (GDP) from 1960–2050.²¹ Data are provided for GDP in 2020 international dollars and 2022 U.S. dollars. We use the unit of 2022 U.S. dollars and convert it into 2024 U.S. dollars.

Physical capital

For each country, the physical capital stock was obtained from the Penn World Table projections 10.²² We use the unit of 2017 U.S. dollars and convert it into 2024 U.S. dollars. However, since the data in this database are only updated through 2019, we utilized GDP data (in 2024 U.S. dollars) from Global Burden of Disease Health Financing Collaborator Network for the period 2019 to 2024.

Labor participation

For each country, the labor participation rate (by five-year age-sex groups) were obtained from the International Labour Organization database for 2010–2020.²³ For estimates beyond 2020, we assumed that the percentage growth rate of the labor participation rate remains the same as over 2010–2020.

Population

For each country, the population by five-year age group was obtained from the population dynamics database built by the Department of Economic and Social Affairs (DESA) of the United Nations.²⁴ For those countries without five-year age group data, we used the total population from DESA for the imputation of the economic burden.

Saving rate and health expenditure

We obtained country-specific saving rates and health expenditures from the World Bank database.²⁵ For the projection, we assumed that the saving rate remains constant (at the average from 2010–2019), while health expenditures (as a percentage of GDP) grow at the same rate as in 2000–2019. In cases where countries exhibit negative saving rates, we normalize these values to zero for the purpose of labor and capital contribution calculations.

Parameter values and data sources

Table S1 shows parameter values and data sources in the model, where definitions for parameters are taken from Bloom et al. (2020)¹ and Chen et al. (2019).^{4,14}

Table S1. Parameter values and data sources

Parameter	Definition	Value	Source
α	Capital share	Country specific	Penn World Table ^{22,26}
δ	Depreciation rate	0.05	Grossmann et al. (2013) ²⁷
η_1	Mincer elasticity of education	0.091	Psacharopoulos and Patrinos (2018) ²⁸
η_2	First-degree Mincer elasticity of experience	0.1301	Heckman et al. (2006) ²⁹
η_3	Second-degree Mincer elasticity of experience	-0.0023	Heckman et al. (2006) ²⁹
χ_i	Fraction of treatment cost financed out of saving	Set as saving rate	World Bank (2020) ²⁵

Treatment costs

We estimated treatment costs for depression based on data from Dieleman et al. (2025).³⁰ For countries with available data, treatment costs per case were calculated using prevalence estimates from the GBD. For countries without direct estimates, costs were extrapolated by assuming that treatment cost per case is proportional to each country's per capita health expenditure, following approaches used in prior studies.^{9,31,32} Treatment cost per capita was then obtained by multiplying per-case costs by country-specific prevalence of depression. For years beyond 2020, treatment costs were projected to grow at the same rate as per capita health expenditure in each country. To reflect cross-country variation and assess uncertainty, we also present data from three studies reporting treatment costs in select countries for specific years, allowing comparison with the estimates from Dieleman et al., as shown in **Table S2**.

Table S2. Treatment costs comparison in three countries.

Country	Year	Literature result (2024 US dollars)	Dieleman result (2024 US dollars)	Fraction
Spain ³³	2017	40.504	83.551	0.485
Japan ³⁴	2011	458.078	47.403	9.664
India ³⁵	2019	3.276	1.356	2.417

Discount rate

In the main analysis, we used a discount rate of 2%. Additionally, in the sensitivity analysis, we provided results for alternative discount rates of 0% and 3%.

B: Modeling details

We aimed to quantify the economic impact of depression, accounting for both healthcare expenditures and morbidity-related productivity losses. To quantify the macroeconomic burden of depression, we compared total output (gross domestic product, GDP) for the period 2025-2050 under two scenarios: (i) the status quo scenario with no interventions to reduce mortality and morbidity from depression relative to current and projected rates; and (ii) the counterfactual scenario assuming complete elimination of depression. The macroeconomic burden of depression was then calculated as the cumulative difference in projected annual GDP for these two scenarios. We calculated all age-sex-specific mortality rates, morbidity rates, education levels, population sizes, and labour force participation rates to estimate the economic burden of depression for each country in our model. We also used the disability weight defined by GBD to analyze the impact of depression disability, where “0” means almost no impact on daily life, and “1” represents an impact equivalent to death. For each country, we thus carried out the following analysis:

Step 1. We identified the disease burden of depression (in terms of morbidity, and treatment costs).

Step 2. We constructed economic projections for two scenarios: a status quo scenario, in which GDP is projected to grow based on current estimates and projections of disease prevalence, and a counterfactual scenario, in which depression prevalence is eliminated from the beginning of the time frame. The economic projections utilize a macroeconomic production function and can be further decomposed into two parts:

- a) Projections of effective labor supply.
- b) Projections of physical capital accumulation.

Step 3. We calculated the economic loss as the discounted (0%, 2%, 3%) cumulative difference in projected annual GDP between these two scenarios.

This detailed model description follows our previous contributions, in which we applied the framework to estimate the economic burden of noncommunicable diseases in China, Japan, and South Korea¹ and in the United States and European countries^{2,3} and the economic burden of diabetes, cancer, dementias, chronic obstructive pulmonary disease, road injuries and other risk factors.³⁻⁹

Production function

Consider an economy in which time $t = 1, 2, \dots, \infty$ evolves discretely. Building on Lucas,¹⁰ we considered the following production function for this economy:

$$Y_t = A_t K_t^\alpha H_t^{1-\alpha}, \quad (1)$$

where Y_t is aggregate output; A_t is the technological level at time t , which we assume evolves exogenously; K_t is the physical capital stock (i.e., machines, factory buildings, etc.); and H_t represents aggregate human capital. The parameter α is the elasticity of final output with respect to physical capital. The aggregate production function recognizes that output is not only produced with physical capital and raw labor as in the Solow framework,¹¹ on which the original EPIC model is based,¹² but with effective labor, of which health is a crucial determinant.

Physical capital evolves according to

$$K_{t+1} = (1 - \delta)K_t + Y_t - C_t - TC_t = (1 - \delta)K_t + \gamma_t Y_t, \quad (2)$$

where δ refers to the depreciation rate, γ_t refers to the saving rate, TC_t refers to the costs of ongoing treatment of depression (or the types of depression under consideration), and C_t refers to the volume of consumption. From Equation (2), it follows that the saving rate is defined as

$$\gamma_t = 1 - \frac{C_t + TC_t}{Y_t}. \quad (3)$$

Note that aggregate output Y_t is used for three purposes: (i) to pay treatment costs TC_t (hospitalization, medication, etc.), (ii) to consume C_t , and (iii) to save.

Individuals of age-sex group (a, s) with age a and sex s are endowed with $h_t^{(a,s)}$ units of human capital and supply $\ell_t^{(a,s)}$ units of labor from age 15 up to their retirement. Children younger than 15 and retirees older than the age of R do not work. R varies by country and could correspond to a high age (e.g., some people older than 80 could also be working). In the theoretical derivations, R indicates the upper bound of the summation. In our simulations, we used labor projections from the International Labour Organization and positive values for the labor force exist for cohorts older than 65. We discretized age less than 65 into 13 groups every five years and all ages older than 65 into 1 group. Thus, we have 28 age-sex groups marked as G . Aggregate human capital in the production function (1) is then defined as the sum over the age-sex-time-specific effective labor supply of each age-sex group:

$$H_t = \sum_{(a,s) \in G} h_t^{(a,s)} \ell_t^{(a,s)} N_t^{(a,s)}, \quad (4)$$

where $N_t^{(a,s)}$ denotes the number of individuals in age-sex group (a, s) . Note that aggregate human capital increases with the number of working-age individuals who live in the economy (i.e., with a higher $N_t = \sum_{(a,s) \in G} N_t^{(a,s)}$), with individual human capital endowment (i.e., with a higher $h_t^{(a,s)}$ for at least one group), and with labor supply (i.e., with a higher $\ell_t^{(a,s)}$ for at least one group).

We followed Mincer¹³ and constructed the average human capital for each age-sex group with age a according to an exponential function of education and work experience:

$$h_t^{(a,s)} = \exp \left[\eta_1 (ye_t^{(a,s)}) + \eta_2 (a - ye_t^{(a,s)} - 5) + \eta_3 (a - ye_t^{(a,s)} - 5)^2 \right], \quad (5)$$

where η_1 is the semi-elasticity of human capital with respect to average years of education as given by $ye_t^{(a,s)}$, and η_2 and η_3 are the semi-elasticities of human capital with respect to the experience of the workforce $(a - ye_t^{(a,s)} - 5)$ and the experience of the workforce squared $(a - ye_t^{(a,s)} - 5)^2$, respectively. We assumed a school entry age of 5 years throughout.

Impact of depression on labor supply

Following Bloom et al.¹ and Chen et al.,^{2,4,5,14} the evolution of labor supply in the status quo scenario is given by

$$L_t^{(a,s)} = \ell_t^{(a,s)} N_t^{(a,s)} \text{ with } N_t^{(a,s)} = [1 - \sigma_{t-1}^{(a-1,s)}] N_{t-1}^{(a-1,s)}, \quad (6)$$

where $\sigma_t^{(a,s)}$ is the overall mortality rate of the age-sex group with age a and sex s in time t , which is set to zero in the main analysis. Mortality and morbidity reduce effective labor supply. The reduction of the population size $N_t^{(a,s)}$ captures the mortality effect.

Let $\sigma_{r,t}^{(a,s)}$ denote the mortality rate of people in each age-sex group due to depression and let $\sigma_{-r,t}^{(a,s)}$ be the overall mortality rate due to causes other than depression. Then we have

$$(1 - \sigma_t^{(a,s)}) = (1 - \sigma_{r,t}^{(a,s)})(1 - \sigma_{-r,t}^{(a,s)}). \quad (7)$$

Next, we considered the mortality effect of depression. In general, depression reduces labor supply by reducing the population $N_t^{(a,s)}$ (through $\sigma_{r,t}^{(a,s)}$). In the counterfactual case, where depression is eliminated from time $t = 0$ onward, the evolution of labor supply is defined similarly to equation (6), but with a different overall mortality rate ($\sigma_{-r,t}^{(a,s)}$ instead of $\sigma_t^{(a,s)}$). For simplicity, we assumed that the number of births is the same in both cases at each point in time t .

In the counterfactual scenario, the size of the cohort with age a and sex s at time t ($\bar{N}_t^{(a,s)}$) evolves according to

$$\bar{N}_t^{(a,s)} = [1 - \sigma_{-r,t-1}^{(a-1,s)}] \bar{N}_{t-1}^{(a-1,s)}, \bar{N}_0^{(a,s)} = N_0^{(a,s)}, \bar{N}_t^{(0,s)} = N_t^{(0,s)}. \quad (8)$$

Following Bloom et al.,¹ the loss of labor due to mortality accumulates over the years according to

$$\bar{N}_t^{(a,s)} = \frac{N_t^{(a,s)}}{\prod_{\tau=0}^{\min\{t,a\}-1} [1 - \sigma_{r,t-1-\tau}^{(a-1-\tau,s)}]}. \quad (9)$$

The reduction of the labor participation rate $\ell_t^{(a,s)}$ captures the morbidity effect because people with an illness typically reduce their labor supply, either by reducing working hours or by leaving the workforce. Following Bloom et al.,¹ the labor participation rate in the counterfactual scenario $\bar{\ell}_t^{(a,s)}$ can be established as

$$\bar{\ell}_t^{(a,s)} \approx \frac{\ell_t^{(a,s)}}{\prod_{\tau=0}^{\min\{t,a\}-1} [1 - p^\tau m^{(a-1-\tau,s)}]}. \quad (10)$$

where $m^{(a,s)}$ measures the rate of people leaving the labor force due to morbidity of the disease, and p^τ is the probability of a patient not recovering from depression morbidity in each year.

The value of p can be inferred from the average duration of the disease through

$$p = 1 - \frac{1}{D}. \quad (11)$$

where D denotes the average duration time of the disease. For a disease, we can estimate its average duration time by

$$P = I * D. \quad (12)$$

where P and I denote the prevalence and incidence rate of the disease, respectively. For depression, we use the prevalence and incidence from GBD data¹⁵, and the average duration of the disease is estimated as 1.06 years. Previous studies have reported the duration of depression. For instance, ten Have et al.¹⁶ estimated that the median duration of depression is 10.7 months, while Herrman et al.¹⁷ reported that most depressive episodes remit within one year. Since our study primarily relies on GBD data, we calculated the global average disease duration by dividing the prevalence rate by the incidence rate of depression in GBD 2023 data. The disease duration estimates for individual countries are presented in **Table S3**. As shown, the shortest duration is observed in the Netherlands, at 0.79 years, while the longest is in Taiwan (province of China), at 1.42 years. Therefore, we consider the use of a global uniform duration of 1.06 years to be comparable with existing evidence, and a reasonable assumption when estimating the economic burden of depression at a global level.

Table S3. Duration of diseases calculated by the fraction of prevalence rate and incidence rate in 204 countries and globally using GBD data.

Location	Duration	Location	Duration	Location	Duration
Afghanistan	1.02	Germany	1	Palau	1.2

Albania	1.14	Ghana	0.99	Palestine	0.95
Algeria	1.05	Greece	0.9	Panama	0.98
American Samoa	1.16	Greenland	1.06	Papua New Guinea	1.06
Andorra	1	Grenada	1.04	Paraguay	0.93
Angola	0.94	Guam	1.2	Peru	1.02
Antigua and Barbuda	1.07	Guatemala	0.95	Philippines	1.21
Argentina	0.99	Guinea	0.98	Poland	1.23
Armenia	1.13	Guinea-Bissau	0.98	Portugal	1.02
Australia	0.95	Guyana	1.02	Puerto Rico	1.12
Austria	1.17	Haiti	0.88	Qatar	1.11
Azerbaijan	1.08	Honduras	0.94	Republic of Korea	0.95
Bahamas	1.07	Hungary	1.14	Republic of Moldova	1.26
Bahrain	1.07	Iceland	0.91	Romania	1.36
Bangladesh	1.02	India	1.11	Russian Federation	1.06
Barbados	1.04	Indonesia	1.35	Rwanda	1.01
Belarus	1.15	Iran (Islamic Republic of)	1.14	Saint Kitts and Nevis	1.03
Belgium	0.92	Iraq	1.04	Saint Lucia	1.05
Belize	1.12	Ireland	1.02	Saint Vincent and the Grenadines	1.01
Benin	0.95	Israel	0.87	Samoa	1.14
Bermuda	1.04	Italy	1.21	San Marino	1.02
Bhutan	1.02	Jamaica	1.11	Sao Tome and Principe	1.08

Bolivia (Plurinational State of)	0.98	Japan	0.94	Saudi Arabia	0.99
Bosnia and Herzegovina	1.12	Jordan	1.03	Senegal	1.02
Botswana	1.01	Kazakhstan	1.11	Serbia	1.15
Brazil	0.95	Kenya	1.05	Seychelles	1.29
Brunei Darussalam	0.93	Kiribati	1.06	Sierra Leone	0.98
Bulgaria	1.2	Kuwait	1.07	Singapore	1.01
Burkina Faso	0.95	Kyrgyzstan	1.07	Slovakia	1.26
Burundi	0.96	Lao People's Democratic Republic	1.27	Slovenia	1.23
Cabo Verde	1.13	Latvia	1.21	Solomon Islands	1.11
Cambodia	1.28	Lebanon	1.04	Somalia	0.97
Cameroon	1	Lesotho	1.05	South Africa	1.08
Canada	1.12	Liberia	1.01	South Sudan	0.95
Central African Republic	0.92	Libya	1.04	Spain	1.01
Chad	0.92	Lithuania	1.19	Sri Lanka	1.24
Chile	0.99	Luxembourg	0.94	Sudan	0.95
China	1.16	Madagascar	0.97	Suriname	1.07
Colombia	0.97	Malawi	0.94	Sweden	0.87
Comoros	0.96	Malaysia	1.14	Switzerland	0.93
Congo	0.88	Maldives	1.21	Syrian Arab Republic	0.97
Cook Islands	1.19	Mali	1.02	Taiwan	1.42
Costa Rica	0.88	Malta	1.14	Tajikistan	1.04

Croatia	1.36	Marshall Islands	1.12	Thailand	1.41
Cuba	1.07	Mauritania	1.03	Timor-Leste	1.14
Cyprus	0.95	Mauritius	1.02	Togo	0.99
Czechia	1.21	Mexico	1.06	Tokelau	1.16
Côte d'Ivoire	1.03	Micronesia (Federated States of)	1.14	Tonga	1.16
Democratic People's Republic of Korea	1.08	Monaco	1	Trinidad and Tobago	1.14
Democratic Republic of the Congo	0.94	Mongolia	1.09	Tunisia	1.05
Denmark	0.9	Montenegro	1.26	Turkmenistan	1.13
Djibouti	0.96	Morocco	1.04	Tuvalu	1.14
Dominica	1.02	Mozambique	0.98	Türkiye	1.06
Dominican Republic	1.06	Myanmar	1.15	Uganda	0.97
Ecuador	0.98	Namibia	1.06	Ukraine	1.03
Egypt	1.06	Nauru	1.11	United Arab Emirates	1.1
El Salvador	0.96	Nepal	1.06	United Kingdom	0.86
Equatorial Guinea	0.98	Netherlands	0.79	United Republic of Tanzania	0.98
Eritrea	0.99	New Zealand	0.99	United States Virgin Islands	1.1
Estonia	1.2	Nicaragua	0.97	United States of America	1.06
Eswatini	1.06	Niger	0.96	Uruguay	1.04
Ethiopia	0.91	Nigeria	0.97	Uzbekistan	1
Fiji	1.2	Niue	1.2	Vanuatu	1.11
Finland	1.05	North Macedonia	1.27	Venezuela (Bolivarian Republic of)	0.97

France	0.99	Northern Mariana Islands	1.18	Viet Nam	1.19
Gabon	0.97	Norway	1.02	Yemen	0.99
Gambia	0.97	Oman	1.16	Zambia	0.97
Georgia	1.02	Pakistan	0.98	Zimbabwe	1.03

Because the impact of morbidity is hard to estimate directly and the mortality for depression cannot be taken from the GBD study, we used the estimation of disability weights (DW) to get morbidity for each age-sex group:

$$m^{(a,s)} = DW * I^{(a,s)}. \quad (13)$$

where $I^{(a,s)}$ denotes the incidence rate of corresponding age and sex group. Noting that as incidence of depression is harder to estimate than prevalence, so we used equation (12) to obtain incidence data on the basis of prevalence.

In sum, by reducing the prevalence of depression, the *counterfactual scenario* is associated with an increase in labor supply as compared with the *status quo scenario*. We approximated the change in labor supply (at time t for each age-sex group) by

$$\Delta L_t^{(a,s)} \approx \ell_t^{(a,s)} N_t^{(a,s)} \sum_{\tau=0}^{\min\{t,a\}-1} [\sigma_{r,t-1-\tau}^{(a-1-\tau,s)} + p^\tau m^{(a-1-\tau,s)}]. \quad (14)$$

Bloom et al. (2020)¹ provides the detailed mathematical proof.

Impact of depression on physical capital accumulation

Depression also impedes the accumulation of physical capital because savings finance part of the treatment costs. Following Bloom et al.¹ and Chen et al.,² physical capital accumulation in the counterfactual scenario can be written as

$$\begin{aligned} \bar{K}_{t+1} &= \bar{\gamma}_t \bar{Y}_t + (1 - \delta) \bar{K}_t, \\ \bar{\gamma}_t \bar{Y}_t &= \bar{I}_t = \bar{Y}_t - \bar{C}_t = \gamma_t \bar{Y}_t + \chi T C_t, \end{aligned} \quad (15)$$

where an overbar indicates the counterfactual scenario and where χ is the fraction of the treatment cost that is diverted to savings. The counterfactual saving rate is thus defined by

$$\bar{\gamma}_t = \frac{\gamma_t \bar{Y}_t + \chi T C_t}{\bar{Y}_t}. \quad (16)$$

For more details, see Bloom et al. (2020)¹ and Chen et al. (2018).²

Because depression is assumed to be eliminated in the counterfactual scenario, the resources that were devoted to its treatment can now be used for savings or for consumption. Notice that this creates an income effect that, in reality, could affect the division of households' income between savings and consumption. For tractability, we assumed that aggregate investment consists of two parts in the counterfactual scenario: a fixed share γ_t of total output and an additional part from TC_t that would otherwise have been used to pay to treat depression:

$$\bar{I}_t = \gamma_t \bar{Y}_t + \chi TC_t. \quad (17)$$

Decomposing the Economic Burden: Contributions of Physical Capital Accumulation and Effective Labor Supply Dynamics

From equation (1), taking logarithms on both sides gives:

$$\log(Y_t) = \log(A_t) + \alpha \log(K_t) + (1 - \alpha) \log(H_t). \quad (18)$$

In this model, we assume that A_t evolves exogenously ($\bar{A}_t = A_t$), then we have:

$$\log(\bar{Y}_t) - \log(Y_t) = \alpha(\log(\bar{K}_t) - \log(K_t)) + (1 - \alpha)(\log(\bar{H}_t) - \log(H_t)) \quad (19)$$

Thus, we can break down the change in $\log(Y_t)$ into two components: one driven by the change in physical capital K_t ($\alpha(\log(\bar{K}_t) - \log(K_t))$) and the other by the change in human capital or effective labor supply H_t ($(1 - \alpha)(\log(\bar{H}_t) - \log(H_t))$).

The contribution of physical capital to the economic burden is given by:

$$C_{K_t} = \frac{\alpha(\log(\bar{K}_t) - \log(K_t))}{\log(\bar{Y}_t) - \log(Y_t)}. \quad (20)$$

Similarly, the contribution of human capital or effective labor supply is:

$$C_{H_t} = \frac{(1 - \alpha)(\log(\bar{H}_t) - \log(H_t))}{\log(\bar{Y}_t) - \log(Y_t)}. \quad (21)$$

where C_{K_t} and C_{H_t} represent contribution of physical capital and human capital at time t respectively.

C: Yearly economic burden in 154 countries.

Table S4: Yearly economic burden of 154 countries in millions of 2024 USD, discounting at 2%.

Country	2025	2030	2035	2040	2045	2050
Albania	65.175	64.797	59.926	56.304	53.034	48.803
Algeria	1005.869	1089.202	1122.143	1151.19	1148.654	1114.447
Angola	964.254	1153.59	1322.676	1488.82	1643.609	1792.048
Argentina	1475.126	1635.56	1690.603	1700.111	1653.895	1587.395

Armenia	98.997	104.521	103.419	100.151	92.326	81.889
Australia	9281.008	10074.366	10147.319	10095.608	9955.197	9665.386
Austria	1850.515	1880.745	1765.101	1671.894	1581.851	1485.36
Azerbaijan	298.445	312.026	306.205	297.037	280.355	257.125
Bahamas	51.753	54.938	53.362	50.546	47.288	44.175
Bahrain	158.096	177.539	180.371	174.542	164.365	153.455
Bangladesh	2697.583	3104.903	3224.712	3279.588	3249.028	3150.852
Barbados	33.083	32.744	30.105	27.637	25.425	23.236
Belarus	404.993	410.848	399.064	379.706	351.855	317.567
Belgium	3068.739	3143.67	3018.738	2893.735	2756.699	2617.262
Belize	12.65	14.411	15.075	15.378	15.422	15.278
Benin	102.955	121.47	134.484	148.191	161.291	174.588
Bhutan	15.617	17.616	18.285	18.726	18.772	18.349
Bolivia						
(Plurinational State of)	181.128	201.386	210.361	216.959	219.272	217.431
Bosnia and Herzegovina	87.598	88.941	84.516	79.974	73.034	66.47
Botswana	55.343	66.446	73.674	79.487	83.26	84.342
Brazil	8686.382	9090.881	8892.768	8637.14	8222.941	7692.683
Brunei Darussalam	34.643	35.36	32.943	30.337	27.488	24.32
Bulgaria	330.414	344.312	323.014	294.319	264.028	235.848
Burkina Faso	101.543	122.978	139.817	158.968	178.625	198.099
Burundi	25.587	30.826	34.731	38.755	42.595	46.266
Côte d'Ivoire	297.859	352.939	391.998	433.739	471.917	507.122
Cabo Verde	15.262	17.375	18.179	18.651	18.604	17.919

Cambodia	123.962	141.6	148.286	153.658	157.208	155.88
Cameroon	223.114	267.551	301.715	334.278	361.387	384.29
Canada	9546.678	9998.012	9879.446	9671.122	9369.044	9006.168
Central						
African	5.01	5.988	6.868	7.913	9.027	10.101
Republic						
Chad	82.978	98.11	110.172	122.32	134.908	148.174
Chile	1014.707	1079.37	1090.63	1081.648	1052.294	1008.071
China	73618.062	81281.424	81800.226	81211.428	78432.059	74369.203
Colombia	1016.023	1074.988	1051.956	1031.331	993.113	939.302
Comoros	7.137	8.02	8.471	8.88	9.219	9.452
Congo	117.345	137.834	151.34	161.589	169.83	176.609
Costa Rica	322.714	347.309	345.842	340.384	323.923	301.089
Croatia	349.501	345.557	316.248	287.893	257.111	226.077
Cyprus	119.528	126.908	126.456	125.787	122.302	114.429
Czechia	1040.146	1107.163	1075.151	1002.327	920.429	851.829
Democratic						
Republic of	531.295	630.35	698.036	761.008	811.237	846.99
the Congo						
Denmark	2073.116	2128.305	2022.296	1919.157	1837.38	1762.833
Djibouti	20.594	23.118	23.643	23.873	23.238	22.28
Dominican						
Republic	649.135	705.821	704.439	700.463	686.56	660.491
Ecuador	361.552	405.701	426.08	439.576	441.009	434.934
Egypt	1392.205	1636.551	1803.893	1973.154	2086.468	2161.963
El Salvador	145.16	153.062	151.839	149.216	142.53	133.759
Estonia	190.663	196.25	186.527	174.723	161.01	144.966
Eswatini	29.261	33.11	36.043	38.919	41.093	42.341

Ethiopia	779.321	959.539	1063.861	1162.38	1262.535	1354
Fiji	15.706	16.869	16.941	16.871	16.224	15.312
Finland	1587.54	1634.641	1576.298	1502.073	1412.487	1315.501
France	15775.106	16177.479	15450.679	14658.153	13917.244	13149.576
Gabon	80.576	94.388	101.436	106.693	109.993	112.242
Gambia	13.666	16.288	18.135	20.069	21.997	23.595
Georgia	134.015	137.081	132.668	127.88	120.59	111.842
Germany	19476.723	19520.88	18263.096	17540.797	16671.608	15603.944
Ghana	359.176	414.398	449.809	483.884	509.293	524.195
Greece	1221.176	1190.785	1066.465	953.951	845.615	753.873
Guatemala	294.911	343.434	373.188	394.611	408.595	416.832
Guinea	117.452	141.06	159.29	177.318	194.618	211.962
Guinea-Bissau	9.401	11.058	12.233	13.441	14.547	15.533
Haiti	84.977	89.722	90.237	90.752	89.831	87.168
Honduras	122.522	141.244	150.621	157.648	161.589	162.649
Hungary	736.671	766.163	721.3	661.865	601.154	558.193
Iceland	132.654	134.4	127.055	119.775	112.932	105.763
India	14549.114	16703.177	17278.397	17512.502	17412.067	17016.471
Indonesia	3696.26	4089.433	4127.774	4131.779	4089.289	4013.769
Iran (Islamic Republic of)	2298.377	2434.689	2399.423	2314.388	2142.451	1929.674
Iraq	600.146	744.733	838.641	903.328	949.897	989.35
Ireland	2431.709	2616.747	2586.809	2489.102	2340.854	2190.2
Israel	2683.894	3029.889	3148.141	3201.68	3197.155	3152.208
Italy	9025.368	8889.834	8065.067	7243.714	6547.136	5985.945
Jamaica	73.922	76.269	72.527	67.973	62.825	56.625
Japan	12280.036	12356.829	11360.715	10171.416	9147.901	8293.254

Jordan	169.902	184.903	187.544	188.593	186.516	182.32
Kazakhstan	781.405	837.859	847.759	847.794	835.72	800.515
Kenya	569.669	691.274	763.867	818.274	855.501	882.68
Kuwait	394.344	446.03	449.029	432.816	399.504	352.598
Kyrgyzstan	50.677	54.76	56.561	58.217	58.948	58.36
Lao People's Democratic Republic	57.724	64.543	67.291	70.232	72.373	72.618
Latvia	218.685	214.655	197.748	180.521	163.298	145.824
Lebanon	148.125	142.837	135.314	128.014	118.023	105.352
Lesotho	18.435	20.552	21.673	22.481	22.892	23.034
Lithuania	314.504	308.05	281.983	258.555	236.464	214.767
Luxembourg	321.249	333.73	323.159	313.322	302.506	290.269
Madagascar	88.547	103.692	113.126	120.822	127.04	132.45
Malaysia	1710.476	1923.306	1984.917	2015.744	1990.292	1917.137
Maldives	27.266	29.924	30.702	30.747	29.691	27.562
Mali	86.952	104.296	118.321	133.399	148.458	164.065
Malta	60.316	65.669	65.719	64.537	62.458	59.62
Mauritania	38.662	46.861	53.099	59.008	64.017	68.331
Mauritius	48.454	50.103	47.963	46.235	43.593	41.093
Mexico	4687.923	5147.933	5221.622	5171.509	5028.768	4823.141
Mongolia	75.205	82.792	86.765	89.295	89.496	88.854
Montenegro	24.486	24.772	23.309	21.895	20.261	18.537
Morocco	736.385	806.373	822.735	834.169	830.068	811.96
Mozambique	89.911	116.214	138.5	162.47	186.351	210.598
Myanmar	224.071	247.345	252.869	257.98	259.542	258.129
Namibia	56.966	65.474	70.319	74.46	77.281	78.939

Nepal	257.875	295.452	308.094	317.783	321.701	317.05
Netherlands	4682.238	4788.949	4504.875	4260.163	4066.885	3857.36
New Zealand	1046.824	1121.453	1109.734	1082.612	1046.907	999.57
Nicaragua	65.034	71.713	73.295	73.636	71.957	68.757
Niger	60.962	77.109	92.101	108.896	126.971	146.175
Nigeria	2147.953	2461.725	2666.116	2857.45	3040.784	3207.212
North Macedonia	46.923	48.356	45.638	42.444	38.437	34.193
Norway	2762.542	2944.592	2866.823	2741.918	2612.458	2476.69
Oman	672.413	755.633	796.706	811.074	790.208	745.954
Pakistan	1764.412	2037.343	2193.528	2333.059	2434.736	2489.215
Panama	213.241	253.737	274.404	288.23	293.599	294.133
Paraguay	175.025	197.765	206.528	212.066	211.45	205.614
Peru	357.563	400.731	413.327	420.094	417.451	403.837
Philippines	1033.433	1209.03	1264.779	1295.313	1293.906	1276.789
Poland	2278.046	2357.733	2242.214	2089.112	1881.854	1657.078
Portugal	1492.96	1473.386	1343.974	1219.982	1107.645	1019.272
Qatar	485.746	562.957	566.382	545.868	508.216	456.128
Republic of Korea	3869.064	4053.356	3860.883	3595.431	3288.747	3016.863
Republic of Moldova	116.257	119.84	111.935	100.998	87.107	70.982
Romania	887.61	940.987	865.18	789.281	713.683	654.005
Russian Federation	11589.736	11516.128	10904.882	10053.991	9038.071	8021.699
Rwanda	118.783	144.013	159.082	173.098	185.645	196.176
Saudi Arabia	3010.943	3446.449	3539.887	3457.639	3217.793	2892.002

Senegal	106.951	130.97	148.952	167.183	184.734	201.108
Serbia	327.927	344.118	327.51	304.456	275.122	245.93
Sierra Leone	19.348	22.022	23.493	25.11	26.652	28.038
Singapore	870.649	918.986	890.503	857.674	785.515	715.717
Slovakia	424.647	442.259	425.361	397.218	361.957	324.95
Slovenia	291	293.403	274.436	253.577	230.255	208.745
South Africa	2209.153	2369.012	2393.114	2382.805	2321.439	2207.66
Spain	8641.425	8747.979	8130.858	7412.082	6700.584	6186.27
Sri Lanka	269.066	283.942	276.32	266.567	251.6	236.473
Sudan	183.134	217.68	240.715	261.963	278.663	291.156
Suriname	19.788	20.78	20.209	19.512	18.767	17.928
Sweden	3144.829	3371	3344.387	3285.827	3203.6	3091.754
Switzerland	4730.65	4843.181	4579.141	4342.659	4090.35	3810.813
Syrian Arab Republic	135.736	162.275	157.544	149.217	142.381	139.696
Tajikistan	27.92	31.656	34.182	37.448	40.218	41.47
Thailand	1302.59	1338.951	1251.525	1159.703	1073.182	992.856
Togo	68.11	79.531	86.866	93.798	99.416	103.729
Tunisia	254.342	271.772	272.098	270.015	259.154	243.525
Turkey	3395.589	3638.789	3690.713	3647.855	3494.229	3311.512
Uganda	441.721	545.945	623.637	699.892	770.821	836.011
Ukraine	1016.82	1000.243	913.737	811.432	699.086	584.879
United Kingdom	18695.919	19307.607	18639.552	18044.634	17352.973	16523.358
United Republic of Tanzania	457.389	565.132	645.439	727.401	805.005	879.044

United States of America	149588.393	162360.201	161074.404	158152.688	153104.861	146339.643
Uruguay	233.568	250.963	252.741	248.782	237.935	225.605
Uzbekistan	349.626	375.468	379.992	387.157	383.486	365.472
Venezuela (Bolivarian Republic of)	720.374	746.563	707.427	660.047	598.246	535.601
Viet Nam	1501.632	1684.596	1708.842	1699.613	1643.8	1562.123
Zambia	167.168	205.979	235.558	263.206	285.637	305.233
Zimbabwe	118.565	131.592	137.774	142.948	145.703	146.888

D: Sensitivity analyses

Variation of all parameters

Tables S5 and **Table S6** show the total economic burden of depression in 2025–2050 for each country incorporating sensitivity analyses based on variations in all input parameters.

Table S5. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ with lower and upper bound, variation in all input parameters.

	Economic cost, 2024	Proportion of total GDP ($\times 10^{-3}$), 2025–	Per capita cost, 2024
	U.S.\$ million	2050	U.S.\$
East Asia and Pacific			
Australia	225388(168089-315050)	560(437-712)	7528(5614-10522)
Brunei Darussalam	720(533-1019)	192(149-248)	1495(1106-2116)
Cambodia	3429(2416-5000)	363(264-484)	171(121-250)
China	1854105(1269365-2639361)	372(267-489)	1282(877-1824)
Fiji	380(278-538)	292(217-377)	377(275-534)
Indonesia	93698(68092-129932)	246(185-312)	300(218-416)
Japan	246547(195088-321139)	289(242-344)	2141(1694-2789)
Lao People's Democratic Republic	1565(1096-2280)	334(241-444)	179(125-261)

Malaysia	44965(32272-64115)	397(295-518)	1186(851-1691)
Mongolia	1973(1446-2792)	397(302-505)	494(362-699)
Myanmar	5779(3993-8702)	276(194-379)	96(66-145)
New Zealand	24606(18301-33470)	455(357-571)	4598(3420-6254)
Philippines	28669(21333-39348)	238(183-296)	217(162-298)
Republic of Korea	84509(65517-112632)	237(197-289)	1696(1315-2260)
Singapore	19679(15157-26601)	181(148-224)	3096(2384-4185)
Thailand	27793(19825-39900)	258(188-343)	403(287-578)
Viet Nam	38169(26989-55761)	320(231-428)	358(253-524)
Europe and Central Asia			
Albania	1355(984-1905)	313(235-404)	509(370-716)
Armenia	2282(1650-3230)	418(310-541)	783(566-1108)
Austria	39241(30005-53467)	410(327-505)	4275(3269-5824)
Azerbaijan	6815(4851-9796)	366(266-479)	624(444-897)
Belarus	8787(6398-12376)	531(394-682)	974(709-1372)
Belgium	66619(50633-91197)	530(422-659)	5531(4204-7571)
Bosnia and Herzegovina	1878(1359-2649)	353(264-460)	633(458-893)
Bulgaria	7040(5122-9896)	351(261-456)	1170(851-1644)
Croatia	6972(5060-9877)	451(332-589)	1891(1372-2678)
Cyprus	2827(2105-3978)	335(261-424)	2161(1609-3040)
Czechia	23336(17117-32691)	367(276-471)	2189(1606-3067)
Denmark	44801(33451-61577)	518(399-654)	7344(5484-10094)
Estonia	4101(2909-5891)	518(370-691)	3323(2358-4774)
Finland	34675(26714-46792)	569(464-699)	6247(4813-8429)
France	339097(256185-467345)	577(449-728)	5046(3812-6955)
Georgia	2982(2068-4314)	461(322-619)	800(555-1157)
Germany	409930(312173-563835)	496(394-615)	4990(3800-6864)
Greece	23361(17009-33371)	547(408-718)	2433(1771-3475)
Hungary	15722(11209-22589)	408(296-541)	1745(1244-2507)
Iceland	2793(2098-3891)	480(373-607)	7602(5710-10590)
Ireland	56459(43519-75479)	465(381-565)	10417(8030-13926)
Italy	176232(136229-237269)	437(351-534)	3066(2370-4128)
Kazakhstan	19084(14173-26529)	318(246-401)	870(646-1210)
Kyrgyzstan	1301(933-1871)	407(298-534)	161(115-231)
Latvia	4366(3200-6118)	529(393-682)	2689(1971-3768)

Lithuania	6285(4556-8934)	468(344-615)	2685(1946-3816)
Luxembourg	7181(5505-9774)	408(330-499)	9846(7549-13402)
Montenegro	522(373-758)	368(267-493)	852(609-1239)
Netherlands	99823(74888-138077)	492(384-621)	5738(4304-7936)
North Macedonia	1000(733-1402)	331(250-427)	505(370-708)
Norway	62886(48421-85043)	468(383-578)	10209(7861-13806)
Poland	48564(37360-65369)	315(248-384)	1363(1049-1835)
Portugal	29435(21846-41105)	581(439-744)	3058(2270-4270)
Republic of Moldova	2402(1745-3382)	498(367-649)	650(472-916)
Romania	18880(13917-26446)	283(213-362)	1076(793-1507)
Russian Federation	236918(182235-317655)	484(385-594)	1689(1299-2265)
Serbia	7139(5182-10065)	392(291-507)	913(663-1288)
Slovakia	9285(6692-13240)	369(270-487)	1768(1274-2521)
Slovenia	6061(4396-8592)	482(354-629)	3008(2182-4264)
Spain	178301(140182-232278)	619(512-732)	3929(3089-5119)
Sweden	74339(57862-98564)	577(479-690)	6814(5304-9034)
Switzerland	101078(77832-134986)	585(470-710)	10709(8246-14302)
Tajikistan	811(570-1187)	243(174-319)	61(43-89)
Turkey	80828(59552-114134)	354(269-458)	873(643-1233)
Ukraine	19748(14589-27243)	500(377-635)	510(377-703)
United Kingdom	413009(318133-558184)	593(478-727)	5743(4424-7762)
Uzbekistan	8694(6247-12394)	392(288-505)	219(158-312)
Latin America and Caribbean			
Argentina	37347(28870-49906)	249(206-303)	727(562-972)
Bahamas	1177(832-1685)	387(280-508)	2659(1881-3808)
Barbados	670(475-951)	503(362-662)	2343(1662-3324)
Belize	339(243-487)	407(298-530)	667(478-957)
Bolivia (Plurinational State of)	4855(3391-7124)	421(304-566)	340(238-500)
Brazil	198644(152984-265622)	442(353-528)	876(675-1171)
Chile	24257(17980-33906)	361(286-463)	1218(903-1703)
Colombia	23823(17474-33267)	296(226-379)	436(320-609)
Costa Rica	7716(5510-11005)	440(323-580)	1376(982-1962)
Dominican Republic	15986(11150-23398)	519(369-695)	1310(914-1917)
Ecuador	9736(6937-13971)	325(241-425)	459(327-659)
El Salvador	3407(2463-4810)	420(314-547)	496(359-701)

Guatemala	8645(6009-12770)	299(214-404)	369(256-545)
Haiti	2061(1448-2969)	420(303-557)	152(107-219)
Honduras	3476(2381-5229)	390(270-537)	280(192-422)
Jamaica	1602(1137-2286)	389(282-514)	529(375-755)
Mexico	116258(88856-157167)	310(246-377)	791(605-1070)
Nicaragua	1652(1178-2371)	402(295-527)	210(150-302)
Panama	6244(4532-8904)	280(213-360)	1179(856-1682)
Paraguay	4655(3399-6586)	384(288-494)	553(404-783)
Peru	9332(6789-13169)	158(120-201)	247(180-348)
Suriname	451(331-635)	559(421-721)	691(506-973)
Uruguay	5556(4203-7698)	325(259-409)	1542(1167-2136)
Venezuela (Bolivarian Republic of)	15486(11262-21979)	397(295-519)	442(321-627)
Middle East and North Africa			
Algeria	25362(18349-36554)	487(359-636)	467(338-673)
Bahrain	3881(2899-5416)	298(230-376)	1816(1357-2534)
Djibouti	537(377-786)	527(383-710)	452(317-662)
Egypt	42202(30933-59817)	297(226-378)	311(228-441)
Iran (Islamic Republic of)	51780(38140-72752)	603(456-778)	535(394-751)
Iraq	18964(14134-26378)	258(201-325)	327(244-455)
Israel	70305(52370-98664)	525(407-663)	6390(4760-8968)
Jordan	4186(3100-5913)	366(280-470)	362(268-511)
Kuwait	9552(7272-12994)	251(200-314)	1901(1448-2587)
Lebanon	2985(2155-4286)	513(376-680)	470(340-675)
Malta	1455(1088-2035)	398(312-501)	3298(2467-4613)
Morocco	18687(13557-26655)	505(378-656)	434(315-619)
Oman	17453(12734-25096)	524(393-682)	2771(2022-3985)
Qatar	12071(9119-16585)	194(154-243)	3413(2578-4689)
Saudi Arabia	75849(57100-104030)	287(224-361)	1828(1376-2508)
Syrian Arab Republic	3415(2458-4896)	463(340-607)	118(85-168)
Tunisia	6040(4396-8638)	534(398-695)	459(334-656)
North America			
Canada	218257(161355-300639)	450(348-567)	5108(3776-7035)
United States of America	3565500(2749756-4699126)	600(494-716)	9860(7604-12995)
South Asia			

Bangladesh	72356(50078-106589)	560(393-752)	391(271-576)
Bhutan	416(281-624)	514(354-707)	479(323-717)
India	391615(287770-542488)	365(278-458)	251(184-347)
Maldives	694(488-1008)	349(257-469)	1267(891-1840)
Nepal	7135(4740-10673)	607(418-855)	208(138-311)
Pakistan	51150(34960-75732)	451(315-611)	175(120-260)
Sri Lanka	6140(4462-8659)	366(273-471)	278(202-393)
Sub-Saharan Africa			
Angola	31588(22016-46604)	724(521-960)	558(389-824)
Benin	3231(2197-4870)	523(369-715)	172(117-259)
Botswana	1700(1233-2426)	293(222-374)	556(403-793)
Burkina Faso	3451(2368-5135)	509(364-687)	104(71-154)
Burundi	846(579-1260)	566(406-769)	44(30-65)
Côte d'Ivoire	9434(6612-13844)	375(276-501)	235(165-345)
Cabo Verde	413(293-591)	629(461-822)	646(459-925)
Cameroon	7212(4978-10717)	463(332-627)	180(125-268)
Central African Republic	169(122-242)	248(189-317)	25(18-35)
Chad	2674(1802-4068)	578(406-801)	102(69-155)
Comoros	199(139-289)	485(353-648)	163(115-238)
Congo	3474(2492-5031)	719(528-944)	415(298-601)
Democratic Republic of the Congo	16273(11555-23744)	694(507-920)	110(78-161)
Eswatini	847(596-1240)	574(420-762)	582(409-852)
Ethiopia	25484(17948-37006)	538(393-721)	152(107-221)
Gabon	2309(1689-3273)	361(273-463)	735(538-1043)
Gambia	440(291-678)	574(395-818)	116(77-178)
Ghana	10552(7260-15757)	516(365-702)	245(168-365)
Guinea	3843(2642-5715)	501(357-679)	189(130-281)
Guinea-Bissau	294(202-439)	511(364-695)	102(70-153)
Kenya	17852(13043-25233)	423(322-547)	235(171-332)
Lesotho	497(351-721)	771(557-1014)	202(143-293)
Madagascar	2679(1806-4055)	525(364-747)	63(43-96)
Mali	2873(1958-4278)	382(270-516)	87(59-129)
Mauritania	1267(885-1855)	331(241-444)	179(125-262)
Mauritius	1079(788-1507)	349(263-448)	866(632-1209)

Mozambique	3446(2317-5216)	427(299-594)	69(46-104)
Namibia	1626(1169-2340)	420(314-544)	482(346-693)
Niger	2313(1577-3458)	360(256-486)	50(34-75)
Nigeria	62940(45285-89851)	390(293-506)	201(144-286)
Rwanda	3805(2578-5732)	746(525-1038)	202(137-305)
Senegal	3606(2510-5300)	328(238-439)	140(97-205)
Sierra Leone	560(391-819)	462(336-619)	51(36-75)
South Africa	53675(41210-72140)	541(434-653)	769(591-1034)
Sudan	5537(3957-8052)	541(399-713)	85(61-124)
Togo	2056(1412-3066)	741(529-1008)	168(115-250)
Uganda	15169(10271-23097)	761(537-1057)	214(145-327)
United Republic of Tanzania	15638(10655-23609)	523(365-720)	161(109-242)
Zambia	5631(3916-8306)	518(376-696)	189(132-279)
Zimbabwe	3207(2173-4796)	360(250-499)	160(108-239)

Table S6. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ with an upper bound and lower bound, variation in all input parameters.

	Economic costs, 2024 U.S.\$ billion	Proportion of total GDP ($\times 10^{-5}$), 2025– 2050	Per capita cost, 2024 U.S.\$
By region			
East Asia and Pacific	2702(1910-3798)	353(250-497)	1123(794-1578)
Europe and Central Asia	2715(2070-3697)	502(382-683)	2939(2241-4001)
Latin America and Caribbean	503(380-688)	353(266-482)	707(533-966)
Middle East and North Africa	365(270-511)	374(277-524)	703(521-986)
North America	3784(2911-5000)	589(453-778)	9358(7199-12365)
South Asia	530(383-746)	393(284-553)	252(183-356)
Sub-Saharan Africa	330(235-476)	496(354-716)	201(143-290)
By income group			
Low income	95(66-141)	570(396-843)	118(82-175)
Lower middle income	1071(772-1518)	378(273-536)	266(192-377)
Upper middle income	2853(2022-4006)	374(265-525)	1083(768-1521)
High income	6894(5287-9228)	521(399-697)	5721(4388-7658)
Total	10928(8159-14916)	457(341-624)	1256(938-1714)

Discounted estimates

Tables S7 and **Table S8** show the total economic burden of depression in 2025–2050 for each country using discount rates of 0% and 3%. **Table S9** and **Table S10** show the aggregated results by World Bank region, and by World Bank income group using discount rates of 0% and 3%.

Table S7. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ with lower and upper bound, discounting at 0%.

	Economic cost, 2024 U.S.\$ million	Proportion of total GDP ($\times 10^{-3}$), 2025– 2050	Per capita cost, 2024 U.S.\$
East Asia and Pacific			
Australia	337807(271328-420009)	572(459-711)	11282(9062-14028)
Brunei Darussalam	1040(800-1342)	194(149-250)	2160(1661-2786)
Cambodia	5077(3980-6445)	363(284-461)	254(199-322)
China	2691486(2277605-3168020)	369(313-435)	1860(1574-2190)
Fiji	558(438-708)	292(229-370)	554(434-702)
Indonesia	138121(114123-166285)	247(204-297)	442(365-532)
Japan	355063(303565-413911)	293(251-342)	3084(2636-3595)
Lao People's Democratic Republic	2328(1793-2997)	334(257-430)	266(205-343)
Malaysia	66298(52443-83347)	399(315-501)	1748(1383-2198)
Mongolia	2939(2346-3671)	399(318-498)	736(587-919)
Myanmar	8584(6575-11132)	276(212-358)	143(109-185)
New Zealand	36432(30210-43850)	464(385-559)	6808(5645-8194)
Philippines	42526(35569-50713)	239(200-284)	322(269-384)
Republic of Korea	122327(101656-146929)	241(200-289)	2455(2040-2948)
Singapore	28562(23491-34665)	183(150-222)	4493(3695-5453)
Thailand	40023(31785-50228)	259(206-326)	580(461-728)
Viet Nam	56179(43611-71930)	321(249-411)	527(409-675)
Europe and Central Asia			
Albania	1953(1526-2484)	315(246-401)	734(573-933)
Armenia	3306(2625-4151)	418(332-525)	1134(900-1424)
Austria	57585(46672-70886)	416(337-512)	6273(5084-7722)
Azerbaijan	9932(7754-12651)	368(287-468)	909(710-1158)
Belarus	12768(10133-16012)	535(424-671)	1416(1123-1775)
Belgium	98689(79467-122106)	539(434-666)	8193(6597-10137)
Bosnia and Herzegovina	2706(2118-3440)	357(279-454)	912(714-1159)
Bulgaria	10079(8105-12501)	354(285-439)	1675(1347-2077)
Croatia	9952(7867-12515)	454(359-571)	2698(2133-3393)
Cyprus	4191(3299-5314)	339(267-430)	3203(2522-4062)
Czechia	33928(27247-42132)	372(299-462)	3183(2556-3953)
Denmark	66149(52509-83064)	525(417-660)	10844(8608-13616)
Estonia	5942(4718-7452)	521(414-654)	4815(3824-6039)
Finland	50965(41759-61994)	577(473-702)	9181(7523-11168)
France	502276(400472-627645)	588(469-735)	7475(5960-9340)
Georgia	4321(3408-5447)	463(365-583)	1159(914-1461)
Germany	602344(485013-746341)	503(405-623)	7333(5904-9086)
Greece	33473(25305-44058)	552(417-726)	3486(2635-4588)
Hungary	22750(18019-28576)	412(326-517)	2525(2000-3171)
Iceland	4120(3245-5200)	486(383-613)	11214(8831-14154)

Ireland	83217(68820-100493)	471(389-569)	15354(12698-18542)
Italy	254720(207878-310862)	442(361-539)	4431(3617-5408)
Kazakhstan	28244(22716-34981)	320(257-396)	1288(1036-1595)
Kyrgyzstan	1932(1532-2422)	410(325-514)	239(189-300)
Latvia	6262(5041-7741)	533(429-658)	3856(3104-4768)
Lithuania	9014(7176-11297)	472(376-592)	3851(3065-4826)
Luxembourg	10657(8677-13033)	413(337-506)	14614(11898-17871)
Montenegro	749(588-950)	369(289-467)	1224(961-1551)
Netherlands	147250(117064-184825)	501(398-629)	8463(6729-10623)
North Macedonia	1442(1132-1829)	335(263-425)	728(571-923)
Norway	92971(76338-112969)	476(391-578)	15093(12393-18340)
Poland	70516(58603-84448)	318(264-381)	1979(1645-2371)
Portugal	42689(33267-54524)	587(458-750)	4435(3456-5664)
Republic of Moldova	3419(2708-4295)	503(398-632)	926(733-1163)
Romania	27269(21764-34060)	286(229-358)	1554(1240-1941)
Russian Federation	342575(281131-415284)	487(400-590)	2442(2004-2961)
Serbia	10302(8202-12881)	396(315-495)	1318(1049-1648)
Slovakia	13419(10620-16883)	374(296-470)	2555(2022-3215)
Slovenia	8703(6927-10876)	483(384-604)	4319(3437-5397)
Spain	256431(218098-300588)	623(530-731)	5651(4806-6624)
Sweden	110594(92799-131488)	586(491-696)	10137(8506-12052)
Switzerland	148727(122943-179376)	594(491-716)	15757(13026-19004)
Tajikistan	1231(967-1559)	247(194-312)	93(73-117)
Turkey	120730(93944-154544)	362(281-463)	1304(1015-1669)
Ukraine	27997(22522-34577)	501(403-619)	723(581-893)
United Kingdom	613688(501823-747798)	602(493-734)	8534(6979-10399)
Uzbekistan	12821(10115-16166)	393(310-495)	323(255-408)
Latin America and Caribbean			
Argentina	55802(46428-66912)	254(211-305)	1086(904-1303)
Bahamas	1709(1322-2198)	390(302-501)	3861(2988-4968)
Barbados	962(741-1240)	505(389-651)	3364(2590-4336)
Belize	507(396-646)	410(320-522)	996(777-1269)
Bolivia (Plurinational State of)	7153(5603-9094)	421(330-535)	502(393-638)
Brazil	290350(246493-340859)	444(377-522)	1281(1087-1503)
Chile	36041(28677-45288)	369(294-464)	1810(1440-2275)
Colombia	34677(27932-42832)	297(240-367)	635(511-784)
Costa Rica	11286(8769-14460)	443(344-568)	2012(1563-2578)
Dominican Republic	23443(17886-30522)	518(395-675)	1921(1465-2501)
Ecuador	14414(11373-18235)	326(258-413)	680(536-860)
El Salvador	4975(3878-6355)	422(329-540)	725(565-926)
Guatemala	12896(10059-16519)	300(234-385)	550(429-705)
Haiti	3032(2316-3940)	420(321-546)	223(171-290)
Honduras	5169(3972-6696)	390(299-505)	417(320-540)
Jamaica	2312(1778-2990)	391(301-505)	763(587-987)
Mexico	171787(143163-205598)	313(261-375)	1169(975-1400)
Nicaragua	2429(1893-3104)	404(315-517)	309(241-395)
Panama	9364(7511-11704)	285(229-356)	1769(1419-2211)

Paraguay	6949(5451-8832)	387(304-492)	826(648-1050)
Peru	13851(11147-17207)	160(129-199)	367(295-455)
Suriname	663(517-844)	563(440-717)	1015(792-1292)
Uruguay	8258(6616-10291)	332(266-413)	2292(1836-2856)
Venezuela (Bolivarian Republic of)	22346(17221-28836)	397(306-512)	638(492-823)
Middle East and North Africa			
Algeria	37942(28952-49455)	491(375-640)	699(533-911)
Bahrain	5763(4578-7255)	303(241-381)	2697(2142-3395)
Djibouti	784(604-1011)	525(404-676)	660(509-851)
Egypt	64118(50494-81273)	299(235-379)	473(373-600)
Iran (Islamic Republic of)	76718(59636-98172)	612(476-783)	792(616-1014)
Iraq	29234(23491-36455)	263(212-328)	504(405-629)
Israel	105721(83730-133309)	530(420-669)	9609(7610-12116)
Jordan	6280(4908-8010)	372(291-474)	543(424-692)
Kuwait	14161(11531-17483)	259(211-319)	2819(2296-3480)
Lebanon	4354(3268-5747)	516(387-681)	686(515-906)
Malta	2157(1710-2720)	404(320-509)	4890(3876-6167)
Morocco	27706(21528-35511)	506(393-649)	644(500-825)
Oman	26292(20200-34025)	534(410-691)	4175(3208-5403)
Qatar	17944(14448-22335)	198(160-247)	5073(4085-6314)
Saudi Arabia	112322(90411-140018)	293(236-366)	2708(2179-3375)
Syrian Arab Republic	5062(3844-6614)	466(354-609)	174(132-228)
Tunisia	8947(6876-11596)	540(415-700)	679(522-880)
North America			
Canada	325918(266141-397736)	460(376-561)	7627(6228-9308)
United States of America	5301590(4575641-6134258)	616(531-712)	14661(12653-16963)
South Asia			
Bangladesh	107731(83050-138743)	563(434-725)	582(449-750)
Bhutan	617(478-793)	513(397-659)	710(549-911)
India	577966(479846-692696)	364(302-437)	370(307-443)
Maldives	1008(797-1272)	349(275-440)	1840(1454-2321)
Nepal	10474(8222-13268)	605(475-766)	306(240-387)
Pakistan	76550(60344-96439)	448(353-564)	262(207-331)
Sri Lanka	8973(7072-11306)	368(290-464)	407(321-513)
Sub-Saharan Africa			
Angola	48615(36808-63732)	723(548-948)	859(651-1127)
Benin	4884(3749-6312)	520(399-672)	259(199-335)
Botswana	2572(2078-3186)	296(239-367)	840(679-1041)
Burkina Faso	5235(4053-6724)	508(393-653)	157(122-202)
Burundi	1271(980-1639)	561(432-723)	66(51-85)
Côte d'Ivoire	14247(11060-18221)	376(292-481)	355(275-454)
Cabo Verde	610(478-776)	633(495-805)	955(748-1214)
Cameroon	10878(8403-13992)	461(356-593)	272(210-350)
Central African Republic	261(210-327)	255(204-319)	38(30-48)
Chad	4036(3068-5274)	575(437-752)	154(117-201)
Comoros	294(228-377)	483(374-619)	242(188-310)
Congo	5289(4049-6862)	722(552-936)	632(484-820)

Democratic Republic of the Congo	24810(18794-32517)	695(527-911)	168(127-221)
Eswatini	1275(985-1641)	576(445-742)	875(676-1127)
Ethiopia	38267(30586-47567)	535(428-666)	228(182-284)
Gabon	3495(2731-4461)	363(284-464)	1113(870-1421)
Gambia	660(498-869)	569(429-749)	173(131-228)
Ghana	15844(12154-20509)	514(394-665)	367(282-475)
Guinea	5818(4458-7531)	499(382-645)	286(219-370)
Guinea-Bissau	442(342-568)	510(395-656)	154(119-198)
Kenya	26592(22000-31995)	420(348-506)	350(289-421)
Lesotho	741(574-951)	773(599-993)	301(234-387)
Madagascar	3963(3041-5128)	517(397-669)	93(72-121)
Mali	4388(3386-5651)	381(294-491)	133(102-171)
Mauritania	1919(1493-2453)	332(258-424)	271(211-346)
Mauritius	1568(1235-1983)	354(279-447)	1258(991-1591)
Mozambique	5293(4146-6749)	427(334-544)	106(83-135)
Namibia	2443(1924-3089)	422(333-534)	724(570-915)
Niger	3579(2772-4601)	363(281-467)	78(60-100)
Nigeria	94487(76325-116270)	384(310-473)	301(243-371)
Rwanda	5673(4340-7363)	737(564-957)	302(231-392)
Senegal	5470(4272-6975)	329(257-420)	212(165-270)
Sierra Leone	834(647-1068)	462(358-592)	76(59-98)
South Africa	79126(66229-94115)	545(456-648)	1134(949-1349)
Sudan	8542(6450-11215)	545(412-716)	132(99-173)
Togo	3075(2356-3979)	737(565-954)	251(192-324)
Uganda	22824(17449-29671)	754(576-980)	323(247-420)
United Republic of Tanzania	23767(18299-30656)	519(399-669)	244(188-315)
Zambia	8522(6637-10878)	515(402-658)	287(223-366)
Zimbabwe	4725(3608-6129)	356(272-461)	236(180-306)

Table S8. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ with lower and upper bound, discounting at 3%

	Economic cost, 2024 U.S.\$ million	Proportion of total GDP ($\times 10^{-5}$), 2025–2050	Per capita cost, 2024 U.S.\$
East Asia and Pacific			
Australia	229068(183548-285347)	566(454-705)	7650(6130-9530)
Brunei Darussalam	725(557-935)	193(148-249)	1505(1157-1942)
Cambodia	3400(2660-4325)	360(282-458)	170(133-216)
China	1830095(1546784-2156372)	366(310-432)	1265(1069-1490)
Fiji	380(298-483)	291(228-369)	377(295-479)
Indonesia	93495(77170-112657)	245(202-295)	299(247-361)
Japan	248298(212015-289750)	290(248-339)	2156(1841-2516)
Lao People's Democratic Republic	1557(1199-2006)	332(256-428)	178(137-229)
Malaysia	44741(35337-56316)	395(312-497)	1180(932-1485)
Mongolia	1975(1573-2471)	396(315-495)	495(394-619)
Myanmar	5781(4421-7505)	274(210-356)	96(73-125)
New Zealand	24857(20574-29962)	460(381-555)	4645(3845-5599)

Philippines	28563(23841-34123)	236(197-282)	216(180-258)
Republic of Korea	84707(70210-101961)	237(197-286)	1700(1409-2046)
Singapore	19684(16154-23931)	181(149-220)	3097(2541-3765)
Thailand	27762(21993-34911)	257(203-323)	402(319-506)
Viet Nam	38150(29579-48893)	320(248-410)	358(278-459)
Europe and Central Asia			
Albania	1355(1057-1725)	313(244-398)	509(397-648)
Armenia	2274(1801-2860)	415(329-522)	780(618-981)
Austria	39761(32144-49045)	411(333-507)	4331(3502-5343)
Azerbaijan	6814(5313-8688)	365(285-466)	624(487-796)
Belarus	8811(6982-11062)	532(421-667)	977(774-1226)
Belgium	67827(54523-84033)	534(429-662)	5631(4526-6976)
Bosnia and Herzegovina	1874(1464-2387)	353(276-450)	632(493-804)
Bulgaria	7022(5634-8726)	350(281-435)	1167(936-1450)
Croatia	6968(5502-8770)	451(356-567)	1889(1492-2378)
Cyprus	2854(2240-3628)	335(263-426)	2181(1712-2773)
Czechia	23426(18772-29140)	368(295-458)	2198(1761-2734)
Denmark	45514(36061-57237)	521(413-656)	7461(5911-9383)
Estonia	4115(3263-5166)	518(410-650)	3335(2644-4187)
Finland	35091(28701-42748)	572(468-697)	6322(5170-7701)
France	345887(275264-432838)	583(464-729)	5147(4096-6441)
Georgia	2974(2342-3752)	457(360-577)	797(628-1006)
Germany	415580(333798-515954)	498(400-618)	5059(4064-6281)
Greece	23535(17765-31010)	548(413-722)	2451(1850-3229)
Hungary	15800(12500-19862)	409(324-514)	1754(1387-2204)
Iceland	2845(2238-3594)	484(381-611)	7744(6092-9783)
Ireland	57026(47095-68941)	467(386-565)	10522(8690-12720)
Italy	178346(145307-217941)	438(357-535)	3103(2528-3792)
Kazakhstan	19152(15376-23754)	318(255-394)	873(701-1083)
Kyrgyzstan	1300(1029-1631)	406(321-509)	161(127-202)
Latvia	4376(3517-5416)	529(425-655)	2695(2166-3335)
Lithuania	6292(4996-7902)	468(372-588)	2688(2134-3376)
Luxembourg	7297(5933-8932)	410(333-501)	10006(8136-12248)
Montenegro	519(407-659)	366(287-464)	848(665-1076)
Netherlands	101532(80521-127687)	495(393-623)	5836(4628-7339)
North Macedonia	1002(785-1273)	332(260-421)	506(396-642)
Norway	63752(52258-77573)	472(387-575)	10350(8484-12594)
Poland	48979(40663-58705)	316(262-379)	1375(1141-1648)
Portugal	29829(23204-38149)	583(454-746)	3099(2411-3963)
Republic of Moldova	2402(1899-3021)	498(394-626)	650(514-818)
Romania	18992(15124-23765)	284(226-355)	1082(862-1354)
Russian Federation	238549(195592-289375)	485(398-588)	1701(1394-2063)
Serbia	7149(5682-8951)	392(312-491)	915(727-1145)
Slovakia	9293(7342-11708)	370(292-466)	1769(1398-2229)
Slovenia	6056(4815-7573)	480(382-601)	3005(2389-3758)
Spain	178641(151742-209625)	618(525-725)	3937(3344-4620)
Sweden	75307(63072-89671)	580(486-691)	6902(5781-8219)

Switzerland	102648(84722-123953)	589(486-711)	10875(8976-13133)
Tajikistan	813(638-1032)	243(190-308)	61(48-78)
Turkey	82190(63831-105366)	358(278-459)	888(689-1138)
Ukraine	19743(15874-24394)	500(402-618)	510(410-630)
United Kingdom	420710(343392-513406)	597(488-729)	5851(4775-7140)
Uzbekistan	8679(6834-10959)	390(307-493)	219(172-276)
Latin America and Caribbean			
Argentina	37754(31329-45370)	251(208-301)	735(610-883)
Bahamas	1175(908-1514)	387(299-498)	2656(2052-3422)
Barbados	670(516-865)	503(387-649)	2344(1803-3022)
Belize	340(265-434)	407(317-519)	669(521-853)
Bolivia (Plurinational State of)	4801(3753-6114)	417(326-531)	337(263-429)
Brazil	198947(168602-233902)	439(372-516)	877(744-1032)
Chile	24499(19427-30869)	364(289-459)	1230(976-1550)
Colombia	23700(19059-29311)	295(237-365)	434(349-537)
Costa Rica	7707(5977-9888)	439(341-564)	1374(1066-1763)
Dominican Republic	15929(12139-20761)	515(392-671)	1305(995-1701)
Ecuador	9675(7610-12269)	322(253-408)	456(359-579)
El Salvador	3398(2642-4350)	419(326-536)	495(385-634)
Guatemala	8569(6661-11006)	296(230-381)	366(284-470)
Haiti	2055(1568-2672)	418(319-544)	151(115-197)
Honduras	3449(2645-4474)	385(295-499)	278(213-361)
Jamaica	1600(1228-2072)	388(298-503)	528(405-684)
Mexico	116609(96960-139825)	309(257-371)	794(660-952)
Nicaragua	1645(1280-2106)	401(312-513)	210(163-268)
Panama	6238(4984-7822)	280(223-351)	1178(941-1477)
Paraguay	4673(3656-5952)	383(299-488)	555(434-707)
Peru	9340(7489-11639)	158(126-196)	247(198-308)
Suriname	454(354-578)	559(436-713)	695(542-886)
Uruguay	5628(4496-7030)	328(262-409)	1562(1248-1951)
Venezuela (Bolivarian Republic of)	15502(11933-20022)	396(305-511)	443(341-572)
Middle East and North Africa			
Algeria	25578(19498-33360)	487(371-635)	471(359-614)
Bahrain	3931(3112-4963)	298(236-377)	1840(1456-2322)
Djibouti	531(409-685)	522(402-673)	447(344-576)
Egypt	42304(33212-53761)	295(232-375)	312(245-397)
Iran (Islamic Republic of)	52729(40914-67577)	608(472-779)	545(423-698)
Iraq	19255(15416-24085)	260(208-325)	332(266-415)
Israel	71154(56246-89855)	526(416-664)	6467(5112-8167)
Jordan	4249(3312-5431)	368(287-470)	367(286-469)
Kuwait	9705(7873-12018)	253(205-314)	1932(1567-2392)
Lebanon	3020(2266-3988)	516(387-681)	476(357-628)
Malta	1469(1161-1857)	399(315-504)	3329(2631-4209)
Morocco	18709(14501-24028)	503(390-646)	435(337-558)
Oman	17735(13605-22977)	527(405-683)	2816(2160-3649)

Qatar	12281(9852-15332)	195(157-244)	3472(2785-4335)
Saudi Arabia	76635(61436-95845)	288(231-360)	1847(1481-2310)
Syrian Arab Republic	3459(2624-4522)	465(353-608)	119(90-156)
Tunisia	6096(4672-7917)	535(410-695)	463(355-601)
North America			
Canada	222392(181257-271814)	457(372-558)	5204(4242-6361)
United States of America	3612542(3111207-4187610)	608(523-704)	9990(8604-11580)
South Asia			
Bangladesh	72590(55911-93553)	558(430-720)	392(302-505)
Bhutan	415(321-534)	510(393-655)	477(369-614)
India	389433(322914-467246)	362(300-434)	249(207-299)
Maldives	684(539-865)	345(272-436)	1249(984-1579)
Nepal	7027(5507-8913)	599(469-760)	205(161-260)
Pakistan	50842(40040-64105)	446(351-563)	174(137-220)
Sri Lanka	6157(4849-7763)	367(289-462)	279(220-352)
Sub-Saharan Africa			
Angola	31677(23961-41560)	722(546-947)	560(424-735)
Benin	3205(2458-4145)	519(398-671)	170(131-220)
Botswana	1700(1368-2113)	291(234-362)	555(447-690)
Burkina Faso	3402(2630-4376)	503(389-647)	102(79-131)
Burundi	830(639-1072)	557(429-720)	43(33-56)
Côte d'Ivoire	9345(7245-11965)	373(289-477)	233(180-298)
Cabo Verde	410(321-523)	627(490-798)	642(502-818)
Cameroon	7129(5499-9179)	458(353-590)	178(138-230)
Central African Republic	169(135-213)	247(197-312)	25(20-31)
Chad	2638(2003-3452)	572(434-748)	101(76-132)
Comoros	196(152-252)	480(372-616)	161(125-207)
Congo	3499(2677-4543)	719(550-934)	418(320-543)
Democratic Republic of the Congo	16346(12370-21442)	693(524-909)	111(84-145)
Eswatini	844(651-1088)	573(442-738)	580(447-747)
Ethiopia	25117(20055-31251)	532(425-662)	150(120-186)
Gabon	2326(1814-2974)	361(281-461)	741(578-947)
Gambia	433(326-570)	567(427-747)	114(86-150)
Ghana	10494(8041-13597)	512(392-663)	243(186-315)
Guinea	3802(2911-4927)	496(380-643)	187(143-242)
Guinea-Bissau	290(224-374)	506(391-652)	101(78-130)
Kenya	17581(14524-21179)	417(345-502)	231(191-278)
Lesotho	496(383-638)	767(593-986)	202(156-259)
Madagascar	2624(2010-3399)	516(395-668)	62(47-80)
Mali	2858(2203-3684)	380(293-489)	86(67-111)
Mauritania	1256(975-1607)	329(256-421)	177(138-227)
Mauritius	1079(848-1367)	349(274-442)	866(680-1097)
Mozambique	3403(2657-4350)	422(329-539)	68(53-87)
Namibia	1624(1276-2058)	418(329-530)	481(378-610)
Niger	2295(1775-2954)	358(277-460)	50(39-64)
Nigeria	62496(50466-76919)	386(312-475)	199(161-245)
Rwanda	3734(2854-4852)	734(561-953)	199(152-258)

Senegal	3566(2779-4554)	326(254-416)	138(108-176)
Sierra Leone	553(428-709)	458(354-588)	51(39-65)
South Africa	53739(44917-63994)	541(452-644)	770(644-917)
Sudan	5630(4247-7397)	543(410-714)	87(65-114)
Togo	2032(1556-2631)	734(563-951)	166(127-214)
Uganda	14879(11360-19364)	750(572-975)	210(161-274)
United Republic of Tanzania	15477(11903-19984)	517(397-667)	159(122-205)
Zambia	5567(4330-7114)	512(398-654)	187(146-239)
Zimbabwe	3164(2416-4106)	355(271-461)	158(121-205)

Table S9. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ with an upper bound and lower bound, discounting at 0%

	Economic costs, 2024	Proportion of total GDP ($\times 10^{-5}$), 2025–	Per capita cost, 2024
	U.S.\$ billion	2050	U.S.\$
By region			
East Asia and Pacific	3935(3301-4676)	354(297-420)	1636(1372-1944)
Europe and Central Asia	3985(3235-4895)	509(413-625)	4313(3501-5298)
Latin America and Caribbean	740(611-895)	356(294-430)	1040(858-1257)
Middle East and North Africa	546(430-691)	379(299-480)	1051(829-1331)
North America	5628(4842-6532)	604(519-701)	13917(11974-16154)
South Asia	783(640-955)	393(321-478)	374(305-455)
Sub-Saharan Africa	496(393-624)	494(391-621)	303(240-380)
By income group			
Low income	144(111-185)	568(440-730)	179(138-230)
Lower middle income	1590(1279-1967)	379(305-469)	395(318-489)
Upper middle income	4156(3475-4954)	373(312-445)	1578(1320-1881)
High income	10201(8568-12133)	532(447-633)	8466(7111-10069)
Total	16113(13452-19268)	463(386-554)	1852(1546-2214)

Table S10. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ with an upper bound and lower bound, discounting at 3%

	Economic costs, 2024	Proportion of total GDP ($\times 10^{-5}$), 2025–	Per capita cost, 2024
	U.S.\$ billion	2050	U.S.\$
By region			
East Asia and Pacific	2683(2248-3192)	350(293-416)	1115(934-1327)
Europe and Central Asia	2751(2229-3384)	504(409-620)	2978(2413-3662)
Latin America and Caribbean	504(415-611)	352(290-426)	708(584-858)

Middle East and North Africa	369(290-468)	375(295-476)	711(559-902)
North America	3835(3292-4459)	596(512-693)	9484(8143-11029)
South Asia	527(430-643)	390(318-476)	251(205-307)
Sub-Saharan Africa	328(259-412)	492(389-619)	200(158-251)
By income group			
Low income	94(73-122)	565(437-727)	117(91-151)
Lower middle income	1068(858-1323)	376(302-466)	265(213-329)
Upper middle income	2833(2366-3381)	370(309-442)	1076(898-1284)
High income	6986(5856-8325)	526(440-626)	5798(4859-6908)
Total	10997(9164-13169)	458(382-549)	1264(1053-1513)

Sensitivity analyses for GDP input data

Tables S11-S14 show the total economic burden of depression in 2025–2050 for each country incorporating sensitivity analyses based on variations in GDP data from GBD network.²¹ For **Table S11** and **Table S12**, we used the upper bound of GDP data as input to our model. For **Table S13** and **Table S14**, we used the lower bound of GDP data as input to our model.

Table S11. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ with lower and upper bound, discounting at 2%, using the upper bound of GDP data.

	Economic cost, 2024	Proportion of total GDP	Per capita cost,
	U.S.\$ million	($\times 10^{-5}$), 2025 – 2050	2024 U.S.\$
East Asia and Pacific			
Australia	295834(236921-368673)	565(453-704)	9880(7913-12313)
Brunei Darussalam	904(695-1166)	193(149-249)	1877(1443-2421)
Cambodia	4519(3537-5743)	360(282-458)	226(177-287)
China	2383990(2014575-2809342)	366(310-432)	1648(1392-1942)
Fiji	487(381-619)	290(227-368)	483(378-614)
Indonesia	119819(98959-144289)	245(203-296)	383(317-462)
Japan	304123(259685-354905)	291(248-339)	2641(2255-3082)
Lao People's Democratic Republic	2052(1581-2642)	333(257-429)	235(181-302)
Malaysia	57564(45501-72398)	396(313-498)	1518(1200-1909)
Mongolia	2558(2036-3201)	396(315-496)	641(510-802)

Myanmar	8340(6376-10832)	274(210-356)	139(106-180)
New Zealand	31281(25893-37703)	460(381-555)	5845(4839-7045)
Philippines	36697(30633-43834)	236(197-282)	278(232-332)
Republic of Korea	107741(89351-129625)	238(197-286)	2162(1793-2601)
Singapore	25350(20795-30831)	180(148-219)	3988(3271-4850)
Thailand	34972(27711-43970)	257(204-323)	507(402-637)
Viet Nam	49399(38283-63336)	320(248-410)	464(359-595)
Europe and Central Asia			
Albania	1735(1354-2208)	314(245-400)	652(509-830)
Armenia	3018(2390-3797)	414(328-521)	1035(820-1303)
Austria	49622(40135-61185)	412(333-508)	5406(4372-6665)
Azerbaijan	8832(6882-11268)	365(285-466)	809(630-1032)
Belarus	11125(8822-13958)	532(422-668)	1233(978-1547)
Belgium	86168(69310-106692)	535(430-662)	7154(5754-8858)
Bosnia and Herzegovina	2418(1889-3079)	354(276-451)	815(637-1038)
Bulgaria	8771(7035-10903)	351(281-436)	1458(1169-1812)
Croatia	8661(6840-10899)	452(357-569)	2348(1855-2955)
Cyprus	4027(3158-5121)	334(262-425)	3078(2414-3914)
Czechia	29184(23397-36289)	369(296-458)	2738(2195-3405)
Denmark	56790(44983-71436)	521(413-656)	9309(7374-11710)
Estonia	5198(4123-6525)	518(411-650)	4213(3342-5288)
Finland	44313(36252-53970)	573(469-698)	7983(6531-9723)
France	422548(336491-528494)	584(465-730)	6288(5007-7865)
Georgia	3783(2983-4769)	460(363-580)	1014(800-1279)
Germany	520064(417682-645796)	498(400-619)	6331(5085-7862)
Greece	29203(22057-38464)	549(415-723)	3041(2297-4005)
Hungary	19641(15533-24702)	409(324-515)	2180(1724-2742)

Iceland	3570(2808-4509)	484(381-611)	9716(7643-12274)
Ireland	70947(58600-85757)	467(386-565)	13090(10812- 15823)
Italy	218490(178089-266920)	439(358-537)	3801(3098-4644)
Kazakhstan	24784(19891-30749)	317(254-393)	1130(907-1402)
Kyrgyzstan	1673(1324-2100)	407(322-511)	207(164-260)
Latvia	5526(4444-6838)	530(426-656)	3403(2737-4211)
Lithuania	7994(6349-10039)	468(372-588)	3415(2712-4288)
Luxembourg	9083(7385-11118)	410(334-502)	12454(10127- 15245)
Montenegro	663(520-841)	367(288-465)	1083(850-1373)
Netherlands	126280(100234-158679)	496(394-624)	7258(5761-9120)
North Macedonia	1261(988-1601)	333(261-423)	636(499-808)
Norway	79649(65282-96921)	472(387-574)	12931(10598- 15735)
Poland	63147(52443-75659)	316(262-378)	1773(1472-2124)
Portugal	36559(28455-46736)	584(455-747)	3798(2956-4855)
Republic of Moldova	3477(2748-4375)	497(393-626)	941(744-1184)
Romania	24372(19407-30499)	284(226-355)	1389(1106-1738)
Russian Federation	301661(247409-365855)	485(398-588)	2151(1764-2608)
Serbia	9079(7215-11368)	393(312-492)	1162(923-1454)
Slovakia	11638(9196-14659)	371(293-467)	2216(1751-2791)
Slovenia	7548(6000-9441)	481(382-601)	3746(2978-4685)
Spain	218222(185481-255928)	619(526-726)	4809(4088-5640)
Sweden	96302(80636-114701)	580(485-690)	8827(7391-10513)
Switzerland	131075(108105-158391)	589(486-712)	13887(11454- 16781)
Tajikistan	1072(841-1359)	245(192-310)	81(63-102)

Turkey	104662(81333-134112)	359(279-460)	1130(878-1449)
Ukraine	25794(20745-31860)	500(402-618)	666(536-822)
United Kingdom	516074(421495-629455)	598(489-730)	7177(5861-8753)
Uzbekistan	11260(8875-14205)	391(308-493)	284(224-358)
Latin America and Caribbean			
Argentina	49967(41472-60036)	251(208-302)	973(807-1169)
Bahamas	1467(1133-1889)	387(299-499)	3314(2561-4269)
Barbados	827(637-1065)	504(388-649)	2890(2227-3723)
Belize	454(354-580)	407(317-519)	893(696-1139)
Bolivia (Plurinational State of)	6114(4781-7784)	418(327-532)	429(335-546)
Brazil	254439(215768-298975)	441(374-518)	1122(952-1319)
Chile	31251(24813-39330)	365(290-459)	1570(1246-1975)
Colombia	30036(24171-37123)	296(238-365)	550(443-680)
Costa Rica	9761(7572-12520)	440(342-565)	1740(1350-2232)
Dominican Republic	20691(15786-26937)	516(394-672)	1695(1293-2207)
Ecuador	12287(9671-15573)	323(254-409)	579(456-734)
El Salvador	4273(3325-5465)	420(327-537)	622(484-796)
Guatemala	10746(8359-13795)	297(231-381)	459(357-589)
Haiti	2584(1974-3357)	419(320-544)	190(145-247)
Honduras	4451(3416-5771)	387(297-502)	359(276-466)
Jamaica	1983(1523-2566)	389(299-503)	654(503-847)
Mexico	146303(121732-175322)	310(258-372)	996(829-1193)
Nicaragua	2133(1659-2728)	402(313-514)	272(211-347)
Panama	8072(6444-10131)	279(223-351)	1525(1217-1914)
Paraguay	6139(4804-7818)	383(300-488)	730(571-929)
Peru	11982(9612-14925)	158(127-197)	317(254-395)

Suriname	590(460-752)	560(437-714)	903(704-1151)
Uruguay	7114(5680-8889)	328(262-410)	1974(1576-2467)
Venezuela (Bolivarian Republic of)	21321(16391-27565)	394(303-509)	609(468-787)
Middle East and North Africa			
Algeria	31706(24169-41357)	488(372-637)	584(445-762)
Bahrain	5045(3995-6368)	299(237-377)	2361(1869-2980)
Djibouti	710(546-915)	522(402-673)	598(460-770)
Egypt	56068(44014-71243)	295(232-375)	414(325-526)
Iran (Islamic Republic of)	66949(51972-85766)	609(473-781)	691(537-886)
Iraq	26132(20892-32717)	258(206-323)	451(360-564)
Israel	93615(73912-118334)	524(414-662)	8509(6718-10755)
Jordan	5558(4332-7104)	368(287-471)	480(374-614)
Kuwait	12681(10267-15729)	251(203-312)	2524(2044-3131)
Lebanon	4217(3166-5566)	516(387-681)	665(499-877)
Malta	1903(1504-2407)	398(315-504)	4314(3409-5456)
Morocco	24232(18792-31106)	502(390-645)	563(437-723)
Oman	23043(17679-29851)	530(406-686)	3659(2807-4740)
Qatar	15658(12555-19554)	195(156-243)	4427(3549-5528)
Saudi Arabia	100417(80428-125669)	287(230-359)	2421(1939-3029)
Syrian Arab Republic	4787(3634-6255)	465(353-608)	165(125-215)
Tunisia	7729(5934-10023)	536(412-696)	587(450-761)
North America			
Canada	278015(226591-339821)	457(372-558)	6506(5303-7952)
United States of America	4449389(3835081-5153480)	609(524-705)	12304(10605-14251)

South Asia			
Bangladesh	97299(74970-125345)	559(431-720)	526(405-677)
Bhutan	540(417-692)	511(395-656)	620(480-796)
India	502121(416782-601864)	362(301-434)	321(267-385)
Maldives	959(756-1213)	344(271-435)	1751(1379-2213)
Nepal	9085(7123-11521)	601(471-762)	265(208-336)
Pakistan	67189(52939-84679)	447(352-563)	230(181-290)
Sri Lanka	7855(6187-9902)	367(289-463)	356(281-449)
Sub-Saharan Africa			
Angola	43148(32653-56585)	722(546-947)	763(577-1000)
Benin	4016(3081-5193)	519(398-672)	213(164-276)
Botswana	2178(1754-2705)	292(235-362)	712(573-884)
Burkina Faso	4384(3388-5639)	505(390-649)	132(102-169)
Burundi	1169(900-1509)	558(429-720)	61(47-78)
Côte d'Ivoire	12226(9482-15650)	374(290-479)	305(236-390)
Cabo Verde	521(408-663)	628(491-799)	816(638-1038)
Cameroon	8991(6938-11572)	459(354-590)	225(174-290)
Central African Republic	222(177-280)	248(198-313)	32(26-41)
Chad	4206(3191-5501)	570(432-745)	160(122-210)
Comoros	285(221-365)	480(372-615)	234(182-300)
Congo	4874(3726-6331)	718(549-932)	582(445-756)
Democratic Republic of the Congo	22226(16819-29151)	693(524-909)	151(114-198)
Eswatini	1099(848-1415)	573(442-738)	755(582-972)
Ethiopia	35371(28225-44029)	532(425-662)	211(168-262)
Gabon	3101(2417-3964)	359(280-459)	988(770-1263)
Gambia	569(429-750)	567(428-747)	149(113-197)

Ghana	15154(11610-19634)	512(392-663)	351(269-455)
Guinea	4932(3780-6382)	497(381-643)	243(186-314)
Guinea-Bissau	412(319-531)	506(391-651)	144(111-185)
Kenya	23337(19284-28107)	417(345-503)	307(253-369)
Lesotho	663(513-853)	769(594-989)	270(209-347)
Madagascar	3317(2543-4294)	516(396-668)	78(60-101)
Mali	4296(3307-5543)	379(291-488)	130(100-168)
Mauritania	1690(1312-2164)	329(255-421)	238(185-305)
Mauritius	1344(1058-1701)	351(276-444)	1079(849-1365)
Mozambique	4522(3533-5776)	422(330-539)	90(71-115)
Namibia	2118(1666-2682)	419(329-530)	627(494-794)
Niger	3134(2422-4036)	359(278-463)	68(53-88)
Nigeria	83539(67460-102811)	384(310-472)	266(215-328)
Rwanda	4907(3751-6373)	734(561-954)	261(200-339)
Senegal	4573(3565-5839)	326(254-416)	177(138-226)
Sierra Leone	733(568-940)	459(356-589)	67(52-86)
South Africa	67851(56734-80774)	542(453-645)	972(813-1157)
Sudan	8222(6205-10799)	544(410-714)	127(96-166)
Togo	2596(1989-3361)	735(563-952)	212(162-274)
Uganda	19801(15113-25775)	750(573-977)	280(214-364)
United Republic of Tanzania	20795(15999-26837)	516(397-666)	214(164-276)
Zambia	7371(5727-9429)	512(398-655)	248(193-317)
Zimbabwe	4079(3115-5291)	355(271-461)	204(156-264)

Table S12. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ with an upper bound and lower bound using the upper bound of GDP data.

	Economic costs, 2024	Proportion of total GDP ($\times 10^{-5}$),	Per capita cost,
	U.S.\$ billion	2025 – 2050	2024 U.S.\$
By region			
East Asia and Pacific	3466(2903-4123)	351(294-417)	1440(1207-1714)
Europe and Central Asia	3427(2778-4214)	504(408-620)	3709(3007-4562)
Latin America and Caribbean	645(532-781)	353(291-427)	906(747-1097)
Middle East and North Africa	480(378-610)	373(293-473)	926(728-1175)
North America	4727(4062-5493)	597(513-694)	11691(10045-13586)
South Asia	685(559-835)	391(319-477)	327(267-398)
Sub-Saharan Africa	438(346-551)	492(389-620)	267(211-336)
By income group			
Low income	130(100-167)	564(436-725)	161(124-207)
Lower middle income	1391(1118-1722)	377(303-467)	346(278-428)
Upper middle income	3663(3059-4371)	370(309-442)	1391(1162-1659)
High income	8663(7263-10321)	525(440-626)	7189(6027-8565)
Total	13868(11557-16608)	457(381-547)	1594(1328-1908)

Table S13. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ with lower and upper bound, discounting at 2% using the lower bound of GDP data.

	Economic cost, 2024	Proportion of total GDP	Per capita cost,
	U.S.\$ million	($\times 10^{-5}$), 2025 – 2050	2024 U.S.\$
East Asia and Pacific			
Australia	227566(182829-282841)	571(459-710)	7600(6106-9446)
Brunei Darussalam	727(559-937)	193(149-249)	1509(1160-1946)

Cambodia	3358(2631-4266)	362(283-459)	168(131-213)
China	1805432(1528061- 2124648)	368(311-433)	1248(1056-1469)
Fiji	384(301-488)	292(229-370)	381(299-484)
Indonesia	94887(78351-114293)	245(202-295)	304(251-366)
Japan	254519(217338-297018)	291(249-340)	2210(1888-2580)
Lao People's Democratic Republic	1505(1157-1940)	332(256-429)	172(132-222)
Malaysia	44908(35525-56448)	396(314-498)	1184(937-1489)
Mongolia	1968(1568-2460)	398(317-497)	493(393-616)
Myanmar	5113(3917-6631)	275(211-357)	85(65-110)
New Zealand	25100(20777-30260)	463(383-558)	4690(3882-5654)
Philippines	28485(23816-33979)	238(199-284)	216(180-257)
Republic of Korea	85165(70698-102384)	239(198-287)	1709(1419-2054)
Singapore	19464(16002-23630)	183(150-222)	3062(2517-3717)
Thailand	27778(22026-34906)	257(204-323)	403(319-506)
Viet Nam	38316(29729-49080)	321(249-411)	360(279-461)
Europe and Central Asia			
Albania	1349(1053-1718)	313(244-398)	507(396-645)
Armenia	2156(1711-2709)	418(332-525)	740(587-929)
Austria	40523(32811-49919)	413(334-509)	4414(3574-5438)
Azerbaijan	6685(5219-8515)	367(286-467)	612(478-780)
Belarus	8768(6952-11003)	533(422-669)	972(771-1220)
Belgium	68223(54887-84468)	536(431-663)	5664(4557-7012)
Bosnia and Herzegovina	1834(1434-2334)	354(277-451)	618(483-787)
Bulgaria	7090(5693-8805)	352(283-437)	1178(946-1463)
Croatia	7014(5541-8825)	451(357-568)	1902(1502-2393)

Cyprus	2321(1830-2940)	340(268-431)	1774(1399-2247)
Czechia	23610(18922-29370)	369(296-460)	2215(1775-2756)
Denmark	45949(36434-57752)	523(415-657)	7532(5972-9467)
Estonia	4163(3303-5224)	519(412-651)	3374(2677-4234)
Finland	35388(28971-43076)	574(470-699)	6375(5219-7760)
France	356433(283854-445819)	584(465-731)	5304(4224-6634)
Georgia	2998(2364-3780)	458(361-577)	804(634-1014)
Germany	419307(336996-520408)	500(402-620)	5104(4102-6335)
Greece	23980(18089-31625)	548(413-723)	2497(1884-3293)
Hungary	16109(12748-20249)	410(324-515)	1788(1415-2247)
Iceland	2865(2254-3620)	485(382-613)	7799(6135-9853)
Ireland	58970(48731-71260)	469(388-567)	10880(8991-13148)
Italy	184917(150779-225817)	439(358-536)	3217(2623-3929)
Kazakhstan	19073(15329-23637)	319(257-396)	870(699-1078)
Kyrgyzstan	1302(1032-1634)	407(322-510)	161(128-202)
Latvia	4404(3542-5448)	530(426-656)	2712(2182-3356)
Lithuania	6200(4928-7781)	470(374-590)	2648(2105-3324)
Luxembourg	7483(6089-9154)	411(335-503)	10261(8350-12552)
Montenegro	520(407-659)	366(287-464)	849(665-1076)
Netherlands	102372(81290-128609)	498(395-625)	5884(4672-7392)
North Macedonia	1022(801-1298)	332(261-422)	516(404-655)
Norway	65917(54057-80190)	475(389-578)	10701(8776-13019)
Poland	47683(39626-57103)	317(264-380)	1338(1112-1603)
Portugal	30864(24027-39449)	584(455-747)	3206(2496-4098)
Republic of Moldova	1910(1514-2399)	503(399-632)	517(410-649)
Romania	18724(14918-23424)	285(227-357)	1067(850-1335)
Russian Federation	238248(195491-288822)	486(399-589)	1699(1394-2059)
Serbia	7072(5624-8852)	393(313-492)	905(720-1133)

Slovakia	9431(7453-11880)	371(294-468)	1796(1419-2262)
Slovenia	6036(4799-7549)	481(383-602)	2995(2382-3746)
Spain	185297(157487-217328)	620(527-727)	4083(3471-4789)
Sweden	75199(63037-89482)	583(489-694)	6893(5778-8202)
Switzerland	103626(85617-125029)	591(489-713)	10979(9071-13247)
Tajikistan	811(636-1029)	243(190-308)	61(48-77)
Turkey	82821(64400-106060)	359(279-459)	895(696-1146)
Ukraine	19110(15370-23603)	500(402-618)	493(397-609)
United Kingdom	438158(357968-534288)	599(490-731)	6093(4978-7430)
Uzbekistan	8721(6868-11013)	391(308-494)	220(173-278)
Latin America and Caribbean			
Argentina	37137(30869-44564)	252(210-303)	723(601-868)
Bahamas	1207(934-1554)	388(300-499)	2728(2110-3511)
Barbados	678(522-874)	503(388-649)	2369(1824-3054)
Belize	330(258-421)	409(319-521)	648(506-826)
Bolivia (Plurinational State of)	4874(3813-6203)	419(327-533)	342(267-435)
Brazil	200915(170392-236074)	441(374-518)	886(751-1041)
Chile	24648(19589-30997)	367(291-461)	1238(984-1557)
Colombia	23804(19156-29424)	295(238-365)	436(351-539)
Costa Rica	7856(6096-10074)	441(342-565)	1401(1087-1796)
Dominican Republic	15690(11959-20448)	516(393-672)	1286(980-1675)
Ecuador	9916(7814-12557)	324(255-410)	468(368-592)
El Salvador	3436(2674-4393)	420(327-537)	500(390-640)
Guatemala	8842(6890-11333)	298(233-382)	377(294-484)
Haiti	2082(1589-2706)	419(320-544)	153(117-199)
Honduras	3526(2708-4569)	386(296-500)	284(218-369)

Jamaica	1640(1259-2124)	389(298-503)	541(416-701)
Mexico	121184(100857-145205)	311(259-373)	825(687-988)
Nicaragua	1646(1282-2104)	402(313-514)	210(163-268)
Panama	6229(4989-7797)	283(226-354)	1177(942-1473)
Paraguay	4571(3582-5816)	386(302-491)	543(426-691)
Peru	9413(7567-11702)	159(128-198)	249(200-310)
Suriname	450(351-572)	561(438-714)	688(538-876)
Uruguay	5724(4579-7140)	330(264-411)	1589(1271-1982)
Venezuela (Bolivarian Republic of)	13497(10416-17398)	399(308-514)	385(297-497)
Middle East and North Africa			
Algeria	26762(20411-34895)	488(372-636)	493(376-643)
Bahrain	3872(3075-4875)	301(239-379)	1812(1439-2281)
Djibouti	502(387-646)	524(404-674)	423(326-544)
Egypt	41839(32930-53060)	298(234-378)	309(243-391)
Iran (Islamic Republic of)	53127(41208-68120)	609(472-781)	549(426-704)
Iraq	18454(14831-23012)	264(212-329)	318(256-397)
Israel	71185(56360-89788)	530(419-668)	6470(5123-8161)
Jordan	4252(3320-5425)	370(289-472)	367(287-469)
Kuwait	9174(7487-11303)	260(212-320)	1826(1490-2250)
Lebanon	2629(1973-3471)	516(387-681)	414(311-547)
Malta	1433(1136-1808)	403(319-508)	3249(2574-4100)
Morocco	18640(14456-23931)	505(391-648)	433(336-556)
Oman	17038(13092-22045)	530(407-686)	2705(2079-3501)
Qatar	12221(9837-15214)	198(159-246)	3455(2781-4301)
Saudi Arabia	74197(59728-92480)	292(235-365)	1789(1440-2229)

Syrian Arab Republic	3177(2412-4151)	465(353-608)	109(83-143)
Tunisia	6161(4733-7986)	537(412-696)	468(359-606)
North America			
Canada	228920(186720-279627)	459(374-560)	5357(4370-6544)
United States of America	3685819(3176437-4270579)	612(527-709)	10193(8784-11810)
South Asia			
Bangladesh	67998(52426-87568)	560(432-722)	367(283-473)
Bhutan	416(322-535)	510(394-655)	479(370-615)
India	391179(324448-469251)	363(301-435)	250(208-300)
Maldives	650(513-819)	348(275-439)	1186(937-1495)
Nepal	7119(5584-9024)	601(471-761)	208(163-263)
Pakistan	50231(39588-63296)	447(352-563)	172(136-217)
Sri Lanka	6205(4889-7820)	367(289-462)	281(222-355)
Sub-Saharan Africa			
Angola	30870(23370-40471)	723(548-948)	546(413-715)
Benin	3356(2576-4336)	520(399-671)	178(137-230)
Botswana	1723(1391-2135)	294(237-364)	563(454-697)
Burkina Faso	3449(2670-4431)	505(391-649)	104(80-133)
Burundi	807(621-1040)	560(431-722)	42(32-54)
Côte d'Ivoire	9452(7332-12096)	374(290-478)	235(183-301)
Cabo Verde	416(325-529)	629(492-800)	651(509-828)
Cameroon	7459(5761-9593)	459(355-590)	187(144-240)
Central African Republic	167(134-210)	251(201-316)	24(19-31)
Chad	2266(1724-2960)	576(438-752)	86(66-113)
Comoros	168(131-216)	482(374-618)	138(107-177)
Congo	3335(2555-4323)	722(553-936)	398(305-516)

Democratic Republic of the Congo	15664(11868-20525)	694(526-910)	106(80-139)
Eswatini	838(647-1079)	574(443-739)	575(444-741)
Ethiopia	23322(18645-28989)	535(427-665)	139(111-173)
Gabon	2256(1764-2876)	364(285-464)	719(562-916)
Gambia	436(329-575)	568(428-749)	115(86-151)
Ghana	8857(6791-11470)	514(394-666)	205(157-266)
Guinea	3868(2964-5008)	497(381-643)	190(146-246)
Guinea-Bissau	275(213-354)	510(394-655)	96(74-123)
Kenya	17379(14377-20910)	419(346-504)	228(189-275)
Lesotho	482(373-620)	770(595-989)	196(152-252)
Madagascar	2705(2073-3504)	516(396-669)	64(49-83)
Mali	2554(1973-3284)	382(295-491)	77(60-99)
Mauritania	1211(942-1548)	331(258-423)	171(133-218)
Mauritius	1094(860-1385)	350(275-443)	878(690-1111)
Mozambique	3390(2653-4326)	425(332-542)	68(53-86)
Namibia	1610(1266-2040)	420(330-533)	477(375-604)
Niger	2254(1746-2897)	360(279-463)	49(38-63)
Nigeria	61259(49517-75328)	387(313-476)	195(158-240)
Rwanda	3740(2858-4860)	735(562-955)	199(152-259)
Senegal	3681(2873-4695)	327(256-418)	143(111-182)
Sierra Leone	547(423-702)	459(355-589)	50(39-64)
South Africa	54451(45530-64821)	542(453-645)	780(652-929)
Sudan	5029(3795-6608)	544(411-715)	78(58-102)
Togo	2075(1590-2685)	735(563-951)	169(130-219)
Uganda	14752(11274-19184)	752(575-978)	209(159-271)
United Republic of Tanzania	15285(11772-19711)	518(399-669)	157(121-202)

Zambia	5514(4294-7039)	514(400-656)	185(144-237)
Zimbabwe	3190(2437-4137)	355(271-461)	159(122-207)

Table S14. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ with an upper bound and lower bound, using the lower bound of GDP data.

Group	Economic costs, 2024 U.S.\$ billion	Proportion of total GDP ($\times 10^{-5}$), 2025 – 2050	Per capita cost, 2024 U.S.\$
By region			
East Asia and Pacific	2665(2235-3166)	351(294-417)	1108(929-1316)
Europe and Central Asia	2803(2273-3445)	507(411-623)	3034(2460-3729)
Latin America and Caribbean	509(420-616)	353(292-427)	715(590-865)
Middle East and North Africa	365(287-462)	380(300-482)	703(554-891)
North America	3915(3363-4550)	600(515-697)	9682(8317-11253)
South Asia	524(428-638)	390(318-475)	250(204-304)
Sub-Saharan Africa	321(254-403)	493(391-620)	196(155-246)
By income group			
Low income	90(70-116)	569(440-731)	112(87-144)
Lower middle income	1062(855-1315)	376(303-466)	264(213-327)
Upper middle income	2814(2352-3354)	372(311-443)	1068(893-1274)
High income	7121(5974-8479)	529(444-630)	5910(4957-7036)
Total	11101(9261-13281)	462(385-552)	1276(1064-1526)

Sensitivity analyses for treatment costs input data

Tables S15-S18 show the total economic burden of depression in 2025–2050 for each country incorporating sensitivity analyses based on the upper bound and lower bound of treatment costs data. The upper bound is set as ten times of baseline treatment cost and lower bound is set as half of baseline treatment cost.

Table S15. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ with lower and upper bound, discounting at 2%. The treatment costs input is ten times of baseline treatment cost data.

	Economic cost, 2024	Proportion of total GDP	Per capita cost,
	U.S.\$ million	($\times 10^{-5}$), 2025 – 2050	2024 U.S.\$
East Asia and Pacific			
Australia	499138(447483-562998)	1093(980-1232)	16670(14945-18803)
Brunei Darussalam	945(757-1181)	224(180-280)	1962(1571-2452)
Cambodia	5873(5030-6925)	548(469-646)	293(251-346)
China	3305826(2985720-3674326)	586(529-651)	2285(2064-2540)
Fiji	660(567-776)	447(384-525)	655(562-769)
Indonesia	143527(125090-165153)	332(289-382)	459(400-529)
Japan	478526(437913-524917)	500(458-549)	4156(3803-4559)
Lao People's Democratic Republic	1954(1547-2463)	367(291-463)	224(177-282)
Malaysia	71355(60673-84506)	557(474-660)	1882(1600-2229)
Mongolia	3758(3303-4320)	665(584-764)	941(827-1082)
Myanmar	8762(7219-10718)	367(302-449)	146(120-178)
New Zealand	51581(46735-57357)	847(768-942)	9639(8733-10718)
Philippines	60761(55415-67050)	443(404-489)	460(420-508)
Republic of Korea	195463(179190-214832)	489(448-538)	3922(3596-4311)
Singapore	45109(41140-49884)	369(337-408)	7096(6472-7848)
Thailand	54078(47588-62124)	446(392-512)	784(690-900)
Viet Nam	60783(51087-72930)	451(379-541)	571(480-685)
Europe and Central Asia			

Albania	1995(1660-2412)	411(342-496)	750(624-906)
Armenia	4393(3859-5055)	713(626-821)	1507(1324-1734)
Austria	84137(75570-94579)	776(697-872)	9166(8232-10303)
Azerbaijan	10860(9167-12973)	517(436-617)	994(839-1188)
Belarus	14488(12432-17018)	777(667-913)	1606(1378-1887)
Belgium	124978(109948-143290)	875(770-1003)	10376(9128-11896)
Bosnia and Herzegovina	3260(2799-3837)	548(470-645)	1099(943-1293)
Bulgaria	14359(12799-16274)	640(571-725)	2386(2127-2704)
Croatia	10651(9001-12681)	616(521-734)	2888(2441-3439)
Cyprus	5918(5225-6790)	617(545-708)	4523(3994-5190)
Czechia	47891(42647-54331)	671(597-761)	4493(4001-5097)
Denmark	84315(73644-97553)	859(750-994)	13821(12072- 15991)
Estonia	7131(6170-8316)	799(691-932)	5779(5001-6740)
Finland	66046(58837-74681)	958(854-1083)	11898(10599- 13454)
France	633084(553732-730691)	949(830-1095)	9421(8240-10874)
Georgia	4474(3765-5349)	613(515-732)	1200(1010-1435)
Germany	863615(771463-976717)	921(823-1042)	10513(9391-11890)
Greece	35540(29069-43935)	740(606-915)	3701(3027-4575)
Hungary	25723(22016-30286)	594(508-699)	2855(2444-3361)
Iceland	4177(3492-5021)	632(528-759)	11368(9506-13667)
Ireland	112581(101356-126051)	819(737-917)	20772(18701- 23257)
Italy	309277(272219-353685)	680(598-777)	5381(4736-6153)
Kazakhstan	35295(31023-40500)	518(455-594)	1609(1415-1847)
Kyrgyzstan	1965(1657-2341)	542(457-646)	243(205-290)
Latvia	7202(6240-8369)	778(674-904)	4436(3843-5154)

Lithuania	12467(11007-14283)	829(732-950)	5325(4702-6101)
Luxembourg	12541(11002-14387)	625(548-717)	17197(15086- 19728)
Montenegro	828(702-986)	520(441-619)	1353(1147-1610)
Netherlands	207887(184201-237377)	904(801-1032)	11949(10587- 13644)
North Macedonia	1742(1498-2047)	515(443-605)	879(756-1033)
Norway	130446(117440-146086)	858(773-961)	21177(19066- 23717)
Poland	81325(71985-92246)	468(414-530)	2283(2021-2589)
Portugal	48047(40603-57403)	839(709-1003)	4992(4218-5963)
Republic of Moldova	3839(3277-4531)	713(609-842)	1039(887-1227)
Romania	37727(33388-43081)	503(445-575)	2150(1903-2455)
Russian Federation	359164(311054-416051)	651(564-754)	2561(2218-2966)
Serbia	12225(10575-14253)	598(518-698)	1564(1353-1824)
Slovakia	16533(14339-19249)	587(509-683)	3148(2730-3665)
Slovenia	9618(8221-11327)	680(582-801)	4773(4080-5621)
Spain	318596(288409-353350)	984(891-1091)	7021(6356-7787)
Sweden	161623(147765-177895)	1104(1009-1215)	14814(13544- 16306)
Switzerland	205987(185762-230023)	1052(949-1175)	21824(19681- 24370)
Tajikistan	1382(1181-1632)	363(310-428)	104(89-123)
Turkey	140393(119648-166579)	542(462-643)	1516(1292-1799)
Ukraine	25164(20834-30370)	570(472-688)	650(538-784)
United Kingdom	755140(667644-860082)	952(842-1085)	10501(9285-11961)
Uzbekistan	13613(11524-16196)	541(458-644)	343(291-408)

Latin America and			
Caribbean			
Argentina	84898(77623-93523)	499(457-550)	1653(1511-1821)
Bahamas	1940(1638-2323)	567(479-679)	4384(3702-5249)
Barbados	845(672-1063)	566(450-712)	2955(2348-3717)
Belize	547(462-654)	576(486-689)	1075(907-1285)
Bolivia (Plurinational	8400(7212-9889)	644(553-758)	589(506-694)
State of)			
Brazil	363995(329736-403465)	714(647-792)	1605(1454-1779)
Chile	55177(49440-62383)	728(652-823)	2771(2483-3133)
Colombia	39090(33853-45421)	431(374-501)	716(620-832)
Costa Rica	12931(10973-15402)	654(555-779)	2305(1956-2746)
Dominican Republic	22131(17851-27582)	633(511-789)	1813(1463-2260)
Ecuador	20107(17771-23040)	591(523-678)	948(838-1086)
El Salvador	5879(5024-6954)	643(549-760)	856(732-1013)
Guatemala	18339(16171-21105)	558(492-643)	783(690-901)
Haiti	2709(2158-3408)	487(388-613)	199(159-251)
Honduras	5706(4790-6875)	561(471-676)	460(386-555)
Jamaica	2374(1957-2904)	513(423-627)	784(646-958)
Mexico	239436(217264-265623)	563(511-625)	1630(1479-1808)
Nicaragua	2843(2429-3363)	613(523-725)	362(309-428)
Panama	17382(15956-19183)	688(631-759)	3283(3014-3623)
Paraguay	9018(7862-10473)	653(569-758)	1072(934-1245)
Peru	22858(20763-25461)	342(310-381)	605(549-674)
Suriname	702(589-843)	768(644-922)	1075(902-1291)
Uruguay	12051(10776-13628)	623(557-705)	3345(2991-3782)
Venezuela (Bolivarian	24153(20138-29237)	549(457-664)	689(575-835)
Republic of)			

Middle East and North			
Africa			
Algeria	40459(33553-49300)	680(564-829)	745(618-908)
Bahrain	9184(8260-10346)	620(557-698)	4297(3865-4841)
Djibouti	737(599-911)	640(520-791)	621(504-767)
Egypt	87354(76987-100410)	535(472-615)	644(568-741)
Iran (Islamic Republic of)	77854(64538-94582)	798(661-969)	804(667-977)
Iraq	53508(49139-58997)	634(582-699)	923(847-1017)
Israel	149085(132126-170357)	972(862-1111)	13550(12009-15484)
Jordan	7851(6790-9187)	602(520-704)	679(587-794)
Kuwait	31679(29610-34292)	737(689-798)	6306(5894-6827)
Lebanon	3397(2549-4485)	516(387-681)	535(402-707)
Malta	3362(3014-3800)	810(726-915)	7621(6834-8613)
Morocco	33125(28350-39161)	786(673-929)	770(659-910)
Oman	26575(21894-32514)	699(576-855)	4220(3477-5163)
Qatar	33651(30921-37075)	476(438-525)	9514(8742-10482)
Saudi Arabia	223910(206736-245621)	749(691-821)	5397(4983-5921)
Syrian Arab Republic	4337(3395-5538)	516(404-659)	149(117-191)
Tunisia	10486(8878-12541)	816(691-976)	796(674-952)
North America			
Canada	427679(381137-483608)	778(694-880)	10008(8919-11317)
United States of America	8977826(8410050-9628859)	1340(1256-1438)	24827(23257-26627)
South Asia			
Bangladesh	98518(79600-122282)	669(541-830)	532(430-661)
Bhutan	549(441-683)	594(478-740)	631(507-785)

India	596548(521268-684539)	489(427-561)	382(334-438)
Maldives	1284(1120-1487)	573(500-664)	2343(2044-2715)
Nepal	10966(9239-13110)	824(695-986)	320(270-382)
Pakistan	67623(55315-82729)	521(426-637)	232(190-284)
Sri Lanka	8567(7091-10378)	453(375-548)	389(322-471)
Sub-Saharan Africa			
Angola	42066(33207-53405)	835(659-1060)	744(587-944)
Benin	4169(3316-5243)	590(469-741)	221(176-278)
Botswana	4507(4128-4978)	679(622-750)	1472(1349-1626)
Burkina Faso	5427(4540-6544)	700(586-845)	163(136-197)
Burundi	1270(1051-1547)	745(616-907)	66(55-80)
Côte d'Ivoire	13503(11105-16492)	471(388-576)	336(277-411)
Cabo Verde	674(572-801)	909(772-1080)	1055(896-1254)
Cameroon	10679(8815-13023)	600(495-731)	267(221-326)
Central African Republic	542(503-593)	696(645-761)	79(73-86)
Chad	3905(3175-4838)	739(601-915)	149(121-184)
Comoros	286(235-349)	615(506-751)	235(193-287)
Congo	5024(4084-6217)	905(735-1119)	600(488-743)
Democratic Republic of the Congo	22851(18305-28671)	847(679-1063)	155(124-194)
Eswatini	1317(1097-1595)	784(653-949)	905(753-1096)
Ethiopia	35349(29551-42369)	655(548-785)	211(176-253)
Gabon	4579(3995-5316)	624(545-725)	1458(1273-1693)
Gambia	590(468-748)	675(535-856)	155(123-196)
Ghana	14657(11849-18208)	627(507-778)	340(275-422)
Guinea	4890(3868-6179)	557(440-704)	240(190-304)
Guinea-Bissau	469(393-564)	716(600-862)	163(137-197)

Kenya	28828(25341-32931)	600(527-685)	379(333-433)
Lesotho	777(649-938)	1058(884-1278)	316(264-382)
Madagascar	3574(2875-4456)	615(495-767)	84(68-105)
Mali	4264(3513-5211)	494(407-603)	129(106-158)
Mauritania	2084(1763-2488)	478(404-570)	294(249-351)
Mauritius	1960(1699-2284)	565(490-658)	1572(1363-1833)
Mozambique	7371(6512-8459)	795(702-912)	147(130-169)
Namibia	3063(2667-3559)	694(604-806)	907(790-1054)
Niger	4145(3544-4907)	562(481-665)	90(77-107)
Nigeria	90903(77147-107396)	490(416-579)	290(246-342)
Rwanda	5206(4197-6484)	895(721-1115)	277(223-345)
Senegal	6514(5613-7646)	520(448-610)	252(217-296)
Sierra Leone	866(724-1045)	631(527-760)	79(66-96)
South Africa	87362(77401-98933)	778(689-881)	1252(1109-1418)
Sudan	7132(5553-9150)	602(469-773)	110(86-141)
Togo	2497(1954-3180)	790(619-1006)	203(159-259)
Uganda	22481(18439-27631)	988(810-1214)	318(261-391)
United Republic of Tanzania	22195(18095-27360)	646(526-796)	228(186-281)
Zambia	8855(7437-10627)	711(597-853)	298(250-357)
Zimbabwe	3601(2750-4672)	355(271-461)	180(137-233)

Table S16. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ with an upper bound and lower bound. The treatment costs input is ten times of baseline treatment cost data.

Group	Economic costs, 2024	Proportion of total GDP ($\times 10^{-5}$),	Per capita cost,
	U.S.\$ billion	2025 – 2050	2024 U.S.\$
By region			
East Asia and Pacific	4988(4496-5562)	577(520-644)	2073(1869-2312)

Europe and Central Asia	5070(4482-5782)	827(731-944)	5488(4851-6259)
Latin America and Caribbean	974(873-1094)	602(540-677)	1367(1226-1536)
Middle East and North Africa	797(707-909)	716(636-818)	1535(1363-1752)
North America	9406(8791-10112)	1298(1213-1395)	23261(21742-25009)
South Asia	784(674-915)	512(440-597)	374(321-436)
Sub-Saharan Africa	490(412-587)	645(542-772)	299(251-358)
By income group			
Low income	137(113-168)	717(589-879)	170(140-209)
Lower middle income	1643(1405-1931)	510(436-600)	408(349-480)
Upper middle income	5098(4570-5716)	591(529-662)	1936(1735-2170)
High income	15606(14329-17118)	1044(958-1145)	12951(11891-14205)
Total	22508(20436-24962)	832(756-923)	2586(2348-2868)

Table S17. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ with lower and upper bound, discounting at 2%. The treatment costs input is half of baseline treatment cost data.

	Economic cost, 2024	Proportion of total GDP	Per capita cost,
	U.S.\$ million	($\times 10^{-5}$), 2025 – 2050	2024 U.S.\$
East Asia and Pacific			
Australia	246142(194779-309636)	539(426-678)	8221(6505-10341)
Brunei Darussalam	806(618-1042)	191(147-247)	1674(1284-2163)
Cambodia	3758(2920-4804)	351(272-448)	188(146-240)

China	2002323(1682646- 2370435)	355(298-420)	1384(1163-1638)
Fiji	417(324-533)	282(219-361)	414(322-529)
Indonesia	103917(85437-125611)	240(198-291)	333(273-402)
Japan	267244(226711-313549)	279(237-328)	2321(1969-2723)
Lao People's Democratic Republic	1762(1354-2273)	331(254-427)	202(155-260)
Malaysia	49625(38998-62692)	387(304-489)	1309(1028-1653)
Mongolia	2160(1705-2721)	382(302-481)	541(427-681)
Myanmar	6441(4898-8399)	270(205-352)	107(81-139)
New Zealand	26803(21976-32555)	440(361-535)	5008(4107-6083)
Philippines	30897(25548-37194)	225(186-271)	234(193-282)
Republic of Korea	89723(73470-109074)	225(184-273)	1800(1474-2189)
Singapore	20908(16941-25684)	171(139-210)	3289(2665-4041)
Thailand	29943(23474-37957)	247(194-313)	434(340-550)
Viet Nam	42237(32542-54386)	313(241-403)	397(306-511)
Europe and Central Asia			
Albania	1497(1163-1912)	308(239-393)	562(437-718)
Armenia	2461(1929-3122)	399(313-507)	844(662-1071)
Austria	42570(34028-52981)	393(314-489)	4637(3707-5772)
Azerbaijan	7518(5827-9629)	358(277-458)	688(534-882)
Belarus	9664(7612-12189)	519(409-654)	1071(844-1351)
Belgium	73805(58837-92037)	517(412-644)	6127(4885-7641)
Bosnia and Herzegovina	2043(1582-2620)	343(266-440)	688(533-883)
Bulgaria	7520(5964-9430)	335(266-420)	1250(991-1567)
Croatia	7650(6009-9667)	443(348-559)	2074(1629-2621)
Cyprus	3078(2386-3948)	321(249-411)	2352(1824-3018)

Czechia	25186(19962-31599)	353(279-442)	2363(1873-2965)
Denmark	49465(38843-62637)	504(396-638)	8109(6367-10268)
Estonia	4489(3533-5669)	503(396-635)	3638(2863-4594)
Finland	38069(30908-46642)	552(448-677)	6858(5568-8403)
France	376229(296716-474188)	564(445-711)	5599(4416-7057)
Georgia	3289(2580-4164)	450(353-570)	882(692-1117)
Germany	446061(354309-558676)	476(378-596)	5430(4313-6801)
Greece	25827(19379-34184)	538(404-712)	2689(2018-3560)
Hungary	17310(13591-21895)	400(314-505)	1921(1508-2430)
Iceland	3149(2466-3990)	476(373-604)	8570(6713-10861)
Ireland	61701(50537-75090)	449(368-546)	11384(9324-13855)
Italy	193825(156732-238331)	426(344-524)	3372(2727-4146)
Kazakhstan	20952(16683-26154)	307(245-384)	955(761-1193)
Kyrgyzstan	1449(1142-1824)	399(315-503)	179(141-226)
Latvia	4778(3817-5944)	516(412-642)	2943(2351-3661)
Lithuania	6754(5304-8557)	449(353-569)	2885(2266-3655)
Luxembourg	7998(6460-9842)	399(322-491)	10967(8859-13495)
Montenegro	570(444-727)	358(279-457)	931(725-1187)
Netherlands	109152(85491-138627)	474(372-603)	6274(4914-7968)
North Macedonia	1091(847-1395)	322(250-412)	550(428-704)
Norway	68670(55739-84220)	452(367-554)	11148(9049-13673)
Poland	53584(44276-64462)	308(255-371)	1504(1243-1809)
Portugal	32630(25201-41968)	570(440-733)	3390(2618-4360)
Republic of Moldova	2625(2063-3317)	488(383-616)	711(559-898)
Romania	20402(16082-25727)	272(215-343)	1163(917-1466)
Russian Federation	262758(214626-319700)	476(389-580)	1873(1530-2279)
Serbia	7801(6155-9823)	382(301-481)	998(787-1257)
Slovakia	10114(7916-12837)	359(281-456)	1926(1507-2444)

Slovenia	6642(5250-8345)	470(371-590)	3296(2605-4141)
Spain	193891(163696-228682)	599(506-706)	4273(3607-5040)
Sweden	80921(67136-97104)	553(458-663)	7417(6154-8900)
Switzerland	110576(90430-134522)	565(462-687)	11715(9581-14252)
Tajikistan	904(704-1153)	237(185-302)	68(53-87)
Turkey	90355(69670-116454)	349(269-449)	976(752-1258)
Ukraine	21904(17576-27106)	496(398-614)	565(454-700)
United Kingdom	459280(372102-563847)	579(469-711)	6387(5175-7841)
Uzbekistan	9632(7548-12206)	383(300-485)	243(190-308)
Latin America and Caribbean			
Argentina	40467(33234-49036)	238(195-288)	788(647-955)
Bahamas	1291(990-1672)	378(290-489)	2918(2238-3778)
Barbados	747(574-966)	500(384-646)	2612(2005-3375)
Belize	378(293-485)	398(309-511)	743(576-953)
Bolivia (Plurinational State of)	5296(4109-6782)	406(315-520)	371(288-476)
Brazil	216814(182706-256099)	426(359-503)	956(806-1129)
Chile	26191(20476-33369)	346(270-440)	1315(1028-1676)
Colombia	26085(20871-32384)	288(230-357)	478(382-593)
Costa Rica	8474(6527-10926)	429(330-553)	1511(1164-1948)
Dominican Republic	17802(13525-23249)	509(387-665)	1459(1108-1905)
Ecuador	10491(8157-13423)	309(240-395)	495(385-633)
El Salvador	3727(2875-4799)	408(314-525)	543(419-699)
Guatemala	9302(7135-12068)	283(217-367)	397(305-515)
Haiti	2308(1757-3007)	415(316-541)	170(129-221)
Honduras	3831(2916-4998)	377(287-491)	309(235-403)
Jamaica	1767(1350-2297)	382(292-496)	583(445-758)

Mexico	126165(103983-152373)	297(245-358)	859(708-1037)
Nicaragua	1811(1397-2332)	390(301-502)	231(178-297)
Panama	6537(5116-8332)	259(202-330)	1235(966-1574)
Paraguay	5104(3952-6551)	369(286-474)	606(470-778)
Peru	9916(7832-12501)	148(117-187)	262(207-331)
Suriname	502(390-642)	549(426-702)	768(596-983)
Uruguay	6050(4771-7634)	313(247-395)	1679(1324-2119)
Venezuela (Bolivarian Republic of)	17061(13053-22137)	388(296-503)	487(373-632)
Middle East and North Africa			
Algeria	28392(21529-37164)	477(362-625)	523(396-684)
Bahrain	4184(3263-5344)	282(220-360)	1958(1527-2500)
Djibouti	594(456-768)	516(396-667)	500(384-647)
Egypt	46200(35862-59219)	283(220-363)	341(265-437)
Iran (Islamic Republic of)	58399(45126-75070)	598(462-769)	603(466-775)
Iraq	20293(15931-25774)	240(189-305)	350(275-444)
Israel	77013(60191-98094)	502(393-640)	7000(5471-8916)
Jordan	4651(3595-5982)	357(276-458)	402(311-517)
Kuwait	9806(7749-12405)	228(180-289)	1952(1543-2469)
Lebanon	3395(2548-4482)	516(387-681)	535(401-706)
Malta	1567(1220-2003)	377(294-483)	3552(2766-4541)
Morocco	20561(15803-26574)	488(375-631)	478(367-618)
Oman	19772(15089-25718)	520(397-677)	3140(2396-4084)
Qatar	12774(10046-16202)	181(142-229)	3612(2840-4581)
Saudi Arabia	79026(61970-100577)	264(207-336)	1905(1494-2424)
Syrian Arab Republic	3884(2945-5079)	462(350-604)	134(101-175)

Tunisia	6697(5091-8751)	521(396-681)	508(386-664)
North America			
Canada	241578(195204-297289)	440(355-541)	5653(4568-6957)
United States of America	3812126(3247649-4459665)	569(485-666)	10542(8981-12333)
South Asia			
Bangladesh	81538(62640-105280)	554(425-715)	441(338-569)
Bhutan	467(360-602)	506(390-652)	537(414-692)
India	433561(358264-521610)	356(294-428)	277(229-334)
Maldives	747(583-951)	334(261-425)	1363(1065-1735)
Nepal	7823(6101-9961)	588(459-749)	228(178-291)
Pakistan	57485(45209-72543)	443(348-559)	197(155-249)
Sri Lanka	6857(5385-8661)	362(284-458)	311(244-393)
Sub-Saharan Africa			
Angola	36080(27256-47367)	716(541-941)	638(482-837)
Benin	3645(2790-4721)	515(394-668)	194(148-251)
Botswana	1801(1424-2269)	271(215-342)	588(465-741)
Burkina Faso	3828(2941-4945)	494(380-638)	115(88-149)
Burundi	935(717-1211)	548(420-710)	49(37-63)
Côte d'Ivoire	10553(8156-13543)	368(285-473)	263(203-337)
Cabo Verde	455(353-582)	613(476-785)	712(552-911)
Cameroon	8035(6168-10383)	451(346-583)	201(154-260)
Central African Republic	175(136-226)	225(175-290)	25(20-33)
Chad	2979(2251-3910)	564(426-740)	114(86-149)
Comoros	220(170-283)	473(365-608)	181(140-233)
Congo	3942(3004-5133)	710(541-924)	471(359-613)

Democratic Republic of the Congo	18481(13949-24281)	685(517-900)	125(95-165)
Eswatini	944(724-1222)	562(431-727)	649(497-839)
Ethiopia	28408(22623-35415)	526(419-656)	169(135-211)
Gabon	2546(1963-3281)	347(268-447)	811(625-1045)
Gambia	491(369-648)	562(422-742)	129(97-170)
Ghana	11838(9042-15372)	506(387-657)	274(210-356)
Guinea	4336(3315-5624)	494(377-640)	213(163-277)
Guinea-Bissau	325(250-420)	496(381-642)	113(87-146)
Kenya	19611(16129-23708)	408(336-493)	258(212-312)
Lesotho	553(425-714)	753(579-973)	225(173-290)
Madagascar	2964(2264-3847)	510(390-662)	70(53-91)
Mali	3228(2479-4170)	374(287-483)	98(75-126)
Mauritania	1405(1085-1806)	322(249-414)	198(153-255)
Mauritius	1175(915-1500)	339(264-432)	943(734-1203)
Mozambique	3737(2879-4824)	403(310-520)	75(58-96)
Namibia	1785(1390-2278)	404(315-516)	529(412-675)
Niger	2568(1968-3328)	348(267-451)	56(43-73)
Nigeria	70338(56597-86814)	380(305-468)	224(180-277)
Rwanda	4223(3220-5494)	726(553-944)	225(171-292)
Senegal	3962(3063-5092)	316(244-406)	153(119-197)
Sierra Leone	618(476-797)	450(346-580)	57(44-73)
South Africa	59393(49420-70987)	529(440-632)	851(708-1017)
Sudan	6403(4825-8418)	541(407-711)	99(74-130)
Togo	2314(1771-2998)	732(560-949)	189(144-244)
Uganda	16785(12765-21899)	738(561-963)	237(180-310)
United Republic of Tanzania	17543(13446-22707)	510(391-661)	180(138-233)

Zambia	6254(4838-8025)	502(389-644)	210(163-270)
Zimbabwe	3601(2750-4672)	355(271-461)	180(137-233)

Table S18. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ with an upper bound and lower bound. The treatment costs input is half of baseline treatment cost data.

Group	Economic costs, 2024 U.S.\$ billion	Proportion of total GDP ($\times 10^{-5}$), 2025 – 2050	Per capita cost, 2024 U.S.\$
By region			
East Asia and Pacific	2925(2434-3499)	338(282-405)	1216(1012-1454)
Europe and Central Asia	2988(2401-3699)	488(392-604)	3234(2599-4004)
Latin America and Caribbean	548(448-668)	339(277-413)	770(629-938)
Middle East and North Africa	397(308-509)	357(277-458)	765(594-981)
North America	4054(3443-4757)	559(475-656)	10025(8515-11764)
South Asia	588(479-720)	384(312-470)	281(228-343)
Sub-Saharan Africa	368(290-465)	484(382-611)	225(177-283)
By income group			
Low income	107(82-138)	558(430-719)	132(102-171)
Lower middle income	1190(953-1478)	370(296-459)	296(237-368)
Upper middle income	3098(2571-3715)	359(298-430)	1176(976-1411)
High income	7457(6185-8963)	499(414-600)	6188(5132-7438)
Total	11869(9804-14316)	439(363-530)	1364(1127-1645)

Economic burden accounting for suicide-related deaths

Tables S19–S22 show the total economic burden of depression in 2025–2050 for each country incorporating sensitivity analyses accounting for suicide-related deaths. For **Tables S19–S20**, we present the worst-case scenario, assuming that 60% of individuals who die by suicide do so as a result of depression. In contrast, for **Tables S21–S22**, we show a more optimistic scenario, assuming that 16% of suicide deaths are attributable to depression.

Table S19. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ accounting for 60% of suicide-related deaths with lower and upper bound, discounting at 2%.

	Economic cost, 2024	Proportion of total GDP	Per capita cost,
	U.S.\$ million	($\times 10^{-5}$), 2025 – 2050	2024 U.S.\$
East Asia and Pacific			
Australia	289339(229681-364068)	633(503-797)	9663(7671-12159)
Brunei Darussalam	899(677-1189)	213(161-282)	1867(1406-2469)
Cambodia	4145(3177-5424)	387(296-506)	207(159-271)
China	2214512(1851416- 2643152)	393(328-469)	1531(1280-1827)
Fiji	507(381-677)	343(258-458)	503(378-672)
Indonesia	108458(88981-131804)	251(206-305)	347(285-422)
Japan	347743(289126-418142)	364(302-437)	3020(2511-3632)
Lao People's Democratic Republic	1935(1452-2581)	364(273-485)	221(166-295)
Malaysia	53789(41933-68833)	420(327-537)	1419(1106-1815)
Mongolia	2702(2060-3569)	478(364-631)	677(516-894)
Myanmar	7133(5344-9512)	299(224-398)	118(89-158)
New Zealand	31532(25732-38619)	518(423-634)	5892(4808-7216)
Philippines	34714(28618-42102)	253(209-307)	263(217-319)
Republic of Korea	126318(98862-162745)	316(247-407)	2535(1984-3266)
Singapore	24679(19996-30437)	202(164-249)	3882(3146-4788)
Thailand	36574(28059-47776)	302(231-394)	530(407-692)
Viet Nam	48734(36631-64983)	361(272-482)	458(344-610)
Europe and Central Asia			
Albania	1603(1233-2081)	330(254-428)	602(463-782)

Armenia	2710(2125-3455)	440(345-561)	930(729-1185)
Austria	49305(39567-61303)	455(365-565)	5371(4310-6678)
Azerbaijan	7923(6129-10215)	377(292-486)	726(561-935)
Belarus	11684(8955-15277)	627(481-820)	1295(993-1694)
Belgium	86970(69135-109060)	609(484-763)	7220(5740-9054)
Bosnia and Herzegovina	2336(1779-3075)	392(299-517)	787(600-1036)
Bulgaria	8875(6969-11313)	396(311-504)	1475(1158-1880)
Croatia	8531(6638-10928)	494(384-632)	2313(1800-2963)
Cyprus	3343(2608-4283)	348(272-446)	2555(1993-3274)
Czechia	29450(23182-37407)	412(325-524)	2763(2175-3510)
Denmark	54904(43299-69393)	559(441-707)	9000(7098-11375)
Estonia	5104(3977-6545)	572(446-733)	4137(3223-5304)
Finland	43764(35416-53946)	635(514-783)	7884(6380-9718)
France	424962(335864-535780)	637(503-803)	6324(4998-7973)
Georgia	3619(2816-4632)	495(386-634)	970(755-1242)
Germany	509071(406120-636658)	543(433-679)	6197(4944-7750)
Greece	27083(20421-35733)	564(425-744)	2820(2126-3721)
Hungary	20118(15565-25977)	464(359-600)	2233(1727-2883)
Iceland	3666(2854-4683)	554(432-708)	9978(7769-12745)
Ireland	68784(56304-83990)	500(410-611)	12691(10389-15497)
Italy	208793(169608-256003)	459(373-563)	3632(2951-4454)
Kazakhstan	26847(20719-34920)	394(304-512)	1224(945-1592)
Kyrgyzstan	1714(1316-2233)	473(363-616)	212(163-276)
Latvia	5631(4414-7183)	608(477-776)	3468(2719-4424)
Lithuania	8460(6512-11023)	563(433-733)	3614(2782-4709)
Luxembourg	8713(7034-10753)	434(351-536)	11947(9646-14745)
Montenegro	677(514-893)	425(323-561)	1106(840-1458)

Netherlands	124705(98205-158026)	542(427-687)	7168(5645-9083)
North Macedonia	1215(933-1583)	359(276-468)	613(471-799)
Norway	79186(64378-97215)	521(424-640)	12856(10451- 15783)
Poland	67346(53731-84732)	387(309-487)	1890(1508-2378)
Portugal	35065(27181-45021)	612(475-786)	3643(2824-4677)
Republic of Moldova	3059(2352-3988)	568(437-741)	828(637-1080)
Romania	23914(18604-30798)	319(248-411)	1363(1060-1755)
Russian Federation	341795(267460-438548)	620(485-795)	2437(1907-3127)
Serbia	9049(7010-11692)	443(343-572)	1158(897-1496)
Slovakia	11821(9092-15392)	420(323-546)	2251(1731-2931)
Slovenia	7464(5838-9520)	528(413-673)	3704(2897-4724)
Spain	208360(176055-246008)	644(544-760)	4592(3880-5421)
Sweden	92628(76650-111838)	632(523-764)	8490(7026-10251)
Switzerland	123058(100916-149669)	628(515-764)	13038(10692- 15857)
Tajikistan	975(753-1267)	256(198-332)	73(57-95)
Turkey	97027(74845-125384)	374(289-484)	1048(808-1354)
Ukraine	27259(20627-36489)	618(467-827)	704(532-942)
United Kingdom	513252(416374-630601)	647(525-795)	7137(5790-8769)
Uzbekistan	11268(8573-14875)	448(341-591)	284(216-375)
Latin America and Caribbean			
Argentina	49571(40333-60904)	292(237-358)	965(785-1186)
Bahamas	1373(1053-1786)	402(308-522)	3103(2379-4035)
Barbados	785(599-1024)	526(401-685)	2745(2094-3580)
Belize	421(323-547)	443(340-576)	827(635-1074)

Bolivia (Plurinational State of)	5834(4465-7656)	447(342-587)	409(313-537)
Brazil	244027(204849-290095)	479(402-569)	1076(903-1279)
Chile	30822(24237-39182)	407(320-517)	1548(1217-1968)
Colombia	29942(23603-37930)	331(261-419)	548(432-695)
Costa Rica	9993(7602-13106)	506(385-663)	1782(1355-2337)
Dominican Republic	19107(14322-25466)	547(410-729)	1565(1173-2086)
Ecuador	12228(9410-15931)	360(277-468)	577(444-751)
El Salvador	4359(3273-5844)	477(358-639)	635(477-851)
Guatemala	10649(8165-13902)	324(249-423)	454(348-593)
Haiti	2561(1890-3500)	461(340-629)	189(139-258)
Honduras	4139(3119-5508)	407(307-542)	334(252-444)
Jamaica	1831(1401-2383)	396(303-515)	604(462-786)
Mexico	145539(118809-178469)	342(280-420)	991(809-1215)
Nicaragua	2026(1543-2665)	437(332-574)	258(196-339)
Panama	7624(6005-9731)	302(238-385)	1440(1134-1838)
Paraguay	5752(4402-7548)	416(319-546)	684(523-897)
Peru	11144(8809-14171)	167(132-212)	295(233-375)
Suriname	639(472-869)	699(517-951)	978(723-1331)
Uruguay	7940(6213-10133)	410(321-524)	2204(1724-2812)
Venezuela (Bolivarian Republic of)	20544(15241-27773)	467(346-631)	586(435-793)
Middle East and North Africa			
Algeria	30063(22711-39687)	505(382-667)	554(418-731)
Bahrain	4611(3627-5868)	311(245-396)	2158(1697-2746)
Djibouti	629(476-836)	547(413-726)	530(400-704)
Egypt	49239(38531-62862)	302(236-385)	363(284-464)

Iran (Islamic Republic of)	62427(48263-80325)	639(494-823)	645(498-830)
Iraq	23442(18421-30089)	278(218-356)	404(318-519)
Israel	84146(66301-106637)	549(432-695)	7648(6026-9692)
Jordan	4902(3809-6292)	376(292-482)	424(329-544)
Kuwait	11161(9034-13860)	260(210-322)	2222(1798-2759)
Lebanon	3430(2568-4541)	521(390-690)	540(405-716)
Malta	1741(1371-2211)	420(330-533)	3948(3108-5012)
Morocco	21938(16833-28591)	521(399-678)	510(391-664)
Oman	20341(15570-26438)	535(410-696)	3230(2472-4198)
Qatar	14315(11410-18023)	203(161-255)	4047(3226-5095)
Saudi Arabia	93945(73645-121029)	314(246-405)	2265(1775-2917)
Syrian Arab Republic	3962(2996-5204)	471(356-619)	136(103-179)
Tunisia	7130(5419-9368)	555(422-729)	541(411-711)
North America			
Canada	291999(234691-362356)	531(427-660)	6833(5492-8480)
United States of America	4638755(3977387-5402291)	693(594-807)	12828(10999-14939)
South Asia			
Bangladesh	85487(65092-112055)	581(442-761)	462(352-605)
Bhutan	499(378-659)	540(409-713)	573(435-757)
India	533873(431060-660629)	438(353-542)	342(276-423)
Maldives	798(625-1017)	356(279-454)	1456(1140-1856)
Nepal	8986(6796-11974)	676(511-900)	262(198-349)
Pakistan	64304(48819-85592)	495(376-659)	220(167-293)
Sri Lanka	8624(6459-11568)	456(341-611)	391(293-525)
Sub-Saharan Africa			
Angola	38396(28652-51272)	762(569-1018)	679(507-906)

Benin	3914(2945-5198)	553(416-735)	208(156-276)
Botswana	2098(1647-2703)	316(248-407)	685(538-883)
Burkina Faso	4146(3157-5438)	535(407-702)	125(95-163)
Burundi	1014(766-1342)	594(449-786)	53(40-70)
Côte d'Ivoire	11531(8758-15184)	403(306-530)	287(218-378)
Cabo Verde	510(389-668)	687(525-901)	798(609-1045)
Cameroon	8795(6640-11664)	494(373-655)	220(166-292)
Central African Republic	207(162-268)	266(208-344)	30(24-39)
Chad	3206(2390-4303)	607(452-814)	122(91-164)
Comoros	235(179-311)	506(384-669)	193(147-256)
Congo	4264(3204-5669)	768(577-1021)	509(383-677)
Democratic Republic of the Congo	19893(14770-26791)	737(548-993)	135(100-182)
Eswatini	1150(843-1586)	685(502-944)	790(579-1089)
Ethiopia	30375(24009-38258)	563(445-709)	181(143-228)
Gabon	2820(2159-3697)	384(294-504)	898(688-1178)
Gambia	521(386-705)	596(441-807)	137(101-185)
Ghana	12761(9632-16851)	546(412-720)	296(223-391)
Guinea	4585(3450-6094)	522(393-694)	226(170-300)
Guinea-Bissau	367(275-491)	560(420-750)	128(96-171)
Kenya	21146(17263-25863)	440(359-538)	278(227-340)
Lesotho	656(487-892)	894(663-1215)	267(198-363)
Madagascar	3190(2402-4228)	549(414-728)	75(57-100)
Mali	3459(2617-4585)	400(303-531)	105(79-139)
Mauritania	1508(1152-1982)	346(264-454)	213(162-279)
Mauritius	1359(1056-1744)	392(304-503)	1091(847-1400)
Mozambique	4313(3279-5712)	465(354-616)	86(66-114)

Namibia	2107(1589-2829)	477(360-641)	624(471-838)
Niger	2760(2101-3641)	374(285-494)	60(46-79)
Nigeria	75302(59971-94396)	406(324-509)	240(191-301)
Rwanda	4506(3392-5975)	774(583-1027)	240(181-318)
Senegal	4416(3378-5779)	352(270-461)	171(131-224)
Sierra Leone	661(503-872)	481(366-635)	61(46-80)
South Africa	70595(57620-86410)	629(513-770)	1012(826-1238)
Sudan	6858(5071-9276)	579(428-783)	106(78-143)
Togo	2531(1893-3380)	801(599-1070)	206(154-275)
Uganda	17895(13516-23611)	787(594-1038)	253(191-334)
United Republic of Tanzania	18904(14319-24889)	550(417-724)	194(147-256)
Zambia	7018(5324-9266)	564(428-744)	236(179-312)
Zimbabwe	4617(3284-6578)	455(324-649)	230(164-328)

Table S20. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ accounting for 60% of suicide-related deaths with an upper bound and lower bound.

	Economic costs, 2024	Proportion of total GDP ($\times 10^{-5}$),	Per capita cost,
	U.S.\$ billion	2025 – 2050	2024 U.S.\$
By region			
East Asia and Pacific	3334(2752-4036)	386(318-467)	1386(1144-1677)
Europe and Central Asia	3413(2731-4261)	557(446-695)	3694(2956-4613)
Latin America and Caribbean	629(510-776)	389(316-480)	883(717-1090)
Middle East and North Africa	437(341-562)	393(307-505)	843(657-1083)

North America	4931(4212-5765)	680(581-795)	12194(10417-14257)
South Asia	703(559-883)	459(365-577)	335(267-421)
Sub-Saharan Africa	405(315-520)	532(414-684)	247(192-317)
By income group			
Low income	114(87-150)	599(456-785)	142(108-186)
Lower middle income	1357(1069-1723)	421(332-535)	337(266-428)
Upper middle income	3507(2882-4268)	406(334-494)	1332(1094-1621)
High income	8852(7366-10635)	592(493-711)	7346(6113-8825)
Total	13851(11420-16804)	512(422-622)	1592(1312-1931)

Table S21. Total macroeconomic cost, economic cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression, by country and World Bank region in 2024 U.S. \$ accounting for 16% of suicide-related deaths with lower and upper bound, discounting at 2%.

	Economic cost, 2024	Proportion of total GDP	Per capita cost,
	U.S.\$ million	($\times 10^{-5}$), 2025 – 2050	2024 U.S.\$
East Asia and Pacific			
Australia	267516(213906-334056)	586(468-731)	8935(7144-11157)
Brunei Darussalam	837(639-1087)	199(152-258)	1737(1328-2257)
Cambodia	3943(3069-5053)	368(286-471)	197(153-252)
China	2110067(1778547-2494634)	374(315-442)	1458(1229-1724)
Fiji	451(349-581)	305(236-393)	447(346-576)
Indonesia	106665(87920-128798)	247(203-298)	341(281-412)
Japan	296947(251552-349724)	310(263-366)	2579(2185-3037)
Lao People's Democratic Republic	1816(1388-2363)	341(261-444)	208(159-270)
Malaysia	51587(40613-65214)	403(317-509)	1360(1071-1720)

Mongolia	2367(1861-3010)	418(329-532)	593(466-754)
Myanmar	6717(5110-8785)	281(214-368)	112(85-146)
New Zealand	29022(23935-35133)	477(393-577)	5423(4473-6565)
Philippines	33072(27523-39660)	241(201-289)	250(208-300)
Republic of Korea	103583(84352-127468)	259(211-319)	2079(1693-2558)
Singapore	22851(18694-27886)	187(153-228)	3595(2941-4387)
Thailand	32648(25635-41510)	269(211-342)	473(371-601)
Viet Nam	44686(34349-57928)	331(255-429)	420(323-544)
Europe and Central Asia			
Albania	1545(1201-1977)	318(247-407)	580(451-743)
Armenia	2603(2057-3286)	423(334-533)	893(706-1127)
Austria	45988(37123-56827)	424(342-524)	5010(4044-6190)
Azerbaijan	7754(6035-9914)	369(287-472)	710(553-908)
Belarus	10395(8159-13208)	558(438-709)	1152(905-1464)
Belgium	79300(63565-98564)	555(445-690)	6583(5277-8183)
Bosnia and Herzegovina	2169(1683-2788)	364(283-468)	731(567-940)
Bulgaria	8150(6502-10198)	363(290-455)	1354(1080-1695)
Croatia	8004(6295-10122)	463(364-586)	2170(1707-2745)
Cyprus	3260(2556-4150)	340(266-432)	2491(1954-3172)
Czechia	27204(21700-34032)	381(304-476)	2552(2036-3193)
Denmark	52277(41384-65811)	532(421-670)	8570(6784-10788)
Estonia	4757(3754-6007)	533(421-673)	3855(3043-4868)
Finland	40682(33188-49710)	590(481-721)	7329(5979-8955)
France	399265(317268-500523)	598(475-750)	5942(4721-7449)
Georgia	3424(2689-4337)	469(368-594)	918(721-1163)
Germany	479079(384297-595736)	511(410-635)	5832(4678-7252)
Greece	26544(20038-34979)	553(417-729)	2764(2087-3642)

Hungary	18390(14459-23297)	424(334-538)	2041(1605-2586)
Iceland	3327(2610-4216)	503(395-638)	9057(7105-11476)
Ireland	65567(54034-79467)	477(393-578)	12098(9970-14662)
Italy	202301(164755-247364)	445(362-544)	3519(2866-4303)
Kazakhstan	23074(18311-29040)	338(269-426)	1052(835-1324)
Kyrgyzstan	1540(1209-1954)	425(333-539)	190(150-242)
Latvia	5101(4072-6369)	551(440-688)	3142(2508-3922)
Lithuania	7434(5851-9437)	494(389-628)	3175(2499-4031)
Luxembourg	8367(6793-10263)	417(339-512)	11474(9314-14073)
Montenegro	609(473-781)	382(297-491)	995(772-1276)
Netherlands	117152(92779-147581)	509(403-641)	6734(5333-8483)
North Macedonia	1150(896-1471)	340(265-435)	580(452-742)
Norway	73897(60457-90117)	486(398-593)	11997(9815-14630)
Poland	58336(47862-70973)	335(275-408)	1638(1344-1992)
Portugal	33890(26349-43376)	592(460-758)	3521(2737-4506)
Republic of Moldova	2789(2188-3544)	518(406-658)	755(592-959)
Romania	22019(17427-27774)	294(233-371)	1255(993-1583)
Russian Federation	287610(232468-355184)	521(421-644)	2050(1657-2532)
Serbia	8308(6558-10495)	407(321-514)	1063(839-1343)
Slovakia	10821(8487-13761)	384(301-489)	2060(1616-2620)
Slovenia	6979(5525-8776)	494(391-621)	3463(2742-4355)
Spain	202681(171967-238175)	626(531-736)	4467(3790-5249)
Sweden	87194(72814-104198)	595(497-711)	7992(6674-9551)
Switzerland	117611(96935-142264)	601(495-727)	12461(10270-15073)
Tajikistan	942(736-1202)	247(193-315)	71(55-90)
Turkey	94089(72971-120842)	363(282-466)	1016(788-1305)
Ukraine	23462(18523-29732)	532(420-674)	606(478-767)

United Kingdom	485190(395519-593016)	612(499-748)	6747(5500-8247)
Uzbekistan	10221(7973-13074)	406(317-520)	258(201-330)
Latin America and Caribbean			
Argentina	44619(36835-53947)	262(217-317)	869(717-1050)
Bahamas	1338(1032-1728)	391(302-505)	3024(2332-3905)
Barbados	761(585-985)	510(391-659)	2662(2044-3443)
Belize	396(308-508)	417(324-535)	778(604-998)
Bolivia (Plurinational State of)	5559(4322-7137)	426(331-547)	390(303-501)
Brazil	229826(194332-270960)	451(381-532)	1014(857-1195)
Chile	28562(22613-36056)	377(298-476)	1435(1136-1811)
Colombia	27628(22100-34398)	305(244-380)	506(405-630)
Costa Rica	9055(6986-11689)	458(353-591)	1614(1245-2084)
Dominican Republic	18324(13904-24026)	524(398-687)	1501(1139-1968)
Ecuador	11329(8862-14471)	333(261-426)	534(418-682)
El Salvador	3980(3065-5162)	435(335-565)	580(447-752)
Guatemala	10010(7758-12909)	305(236-393)	427(331-551)
Haiti	2391(1808-3154)	430(325-567)	176(133-232)
Honduras	3986(3043-5206)	392(299-512)	322(246-420)
Jamaica	1809(1388-2345)	391(300-507)	597(458-774)
Mexico	135685(112296-163678)	319(264-385)	924(764-1114)
Nicaragua	1908(1476-2460)	411(318-530)	243(188-313)
Panama	7249(5774-9128)	287(228-361)	1369(1091-1724)
Paraguay	5428(4223-6969)	393(306-504)	645(502-828)
Peru	10749(8593-13460)	161(128-201)	284(227-356)
Suriname	546(419-711)	597(459-777)	836(642-1088)
Uruguay	6787(5390-8529)	351(279-441)	1884(1496-2367)

Venezuela (Bolivarian Republic of)	18263(13910-23913)	415(316-543)	521(397-683)
Middle East and North Africa			
Algeria	29315(22298-38356)	493(375-645)	540(411-706)
Bahrain	4491(3552-5677)	303(240-383)	2101(1662-2656)
Djibouti	609(467-792)	529(405-688)	513(393-667)
Egypt	48616(38163-61818)	298(234-379)	359(282-456)
Iran (Islamic Republic of)	60272(46741-77300)	617(479-792)	623(483-798)
Iraq	22413(17869-28218)	265(212-334)	386(308-487)
Israel	81722(64574-103263)	533(421-673)	7428(5869-9386)
Jordan	4841(3773-6191)	371(289-475)	418(326-535)
Kuwait	11014(8938-13639)	256(208-317)	2193(1779-2715)
Lebanon	3405(2554-4499)	517(388-684)	537(402-709)
Malta	1683(1330-2129)	405(320-513)	3816(3015-4827)
Morocco	21420(16567-27607)	508(393-655)	498(385-642)
Oman	20190(15486-26174)	531(407-689)	3206(2459-4156)
Qatar	13993(11216-17497)	198(159-248)	3956(3171-4947)
Saudi Arabia	88618(70669-111684)	296(236-373)	2136(1703-2692)
Syrian Arab Republic	3924(2975-5136)	467(354-611)	135(102-177)
Tunisia	6959(5325-9062)	542(415-705)	528(404-688)
North America			
Canada	262283(212989-321906)	477(388-586)	6138(4984-7533)
United States of America	4234172(3643781-4912682)	632(544-734)	11709(10076-13585)
South Asia			
Bangladesh	83254(63938-107780)	565(434-732)	450(345-582)

Bhutan	479(368-620)	519(399-671)	551(423-713)
India	466699(384002-565153)	383(315-463)	299(246-362)
Maldives	781(615-989)	349(275-442)	1426(1122-1805)
Nepal	8257(6408-10623)	621(482-799)	241(187-310)
Pakistan	59698(46539-76457)	460(358-589)	205(160-262)
Sri Lanka	7396(5737-9508)	391(303-502)	335(260-431)
Sub-Saharan Africa			
Angola	36923(27831-48672)	733(553-966)	653(492-860)
Benin	3737(2852-4868)	528(403-688)	198(151-259)
Botswana	1985(1588-2490)	299(239-375)	648(519-814)
Burkina Faso	3974(3060-5138)	513(395-663)	119(92-154)
Burundi	969(742-1260)	568(435-738)	50(39-65)
Côte d'Ivoire	10929(8427-14101)	382(294-492)	272(210-351)
Cabo Verde	478(371-614)	644(501-827)	748(581-960)
Cameroon	8339(6396-10825)	468(359-608)	209(160-271)
Central African Republic	198(157-251)	254(202-323)	29(23-37)
Chad	3075(2323-4050)	582(440-766)	117(89-154)
Comoros	227(175-293)	488(376-631)	186(144-241)
Congo	4070(3098-5318)	733(558-958)	486(370-635)
Democratic Republic of the Congo	19023(14323-25133)	705(531-932)	129(97-170)
Eswatini	1014(770-1334)	603(459-794)	696(529-916)
Ethiopia	29205(23260-36453)	541(431-675)	174(139-217)
Gabon	2698(2094-3471)	368(285-473)	859(667-1106)
Gambia	503(377-667)	575(431-763)	132(99-175)
Ghana	12194(9307-15880)	521(398-679)	283(216-368)
Guinea	4422(3370-5769)	504(384-657)	217(166-284)

Guinea-Bissau	342(262-445)	522(400-679)	119(91-155)
Kenya	20376(16784-24643)	424(349-513)	268(221-324)
Lesotho	589(450-770)	803(613-1049)	240(183-313)
Madagascar	3049(2326-3974)	525(400-684)	72(55-94)
Mali	3330(2554-4325)	386(296-501)	101(77-131)
Mauritania	1458(1128-1880)	334(258-431)	206(159-265)
Mauritius	1255(983-1595)	362(283-460)	1007(789-1280)
Mozambique	4030(3125-5201)	435(337-561)	81(62-104)
Namibia	1920(1492-2475)	435(338-561)	569(442-733)
Niger	2680(2064-3472)	363(280-471)	58(45-76)
Nigeria	72456(58291-89630)	391(315-484)	231(186-286)
Rwanda	4336(3301-5665)	745(567-974)	231(176-301)
Senegal	4181(3243-5375)	334(259-429)	162(126-208)
Sierra Leone	639(493-826)	465(358-601)	59(45-76)
South Africa	63460(52691-76172)	565(469-679)	909(755-1091)
Sudan	6553(4917-8679)	553(415-733)	101(76-134)
Togo	2378(1810-3106)	753(573-983)	194(147-253)
Uganda	17304(13177-22599)	761(579-993)	245(186-320)
United Republic of Tanzania	18081(13851-23468)	526(403-683)	186(142-241)
Zambia	6557(5066-8456)	527(407-679)	220(170-284)
Zimbabwe	3872(2892-5180)	382(285-511)	193(144-259)

Table S22. Total economic cost, cost as a percentage of GDP in 2025–2050, and per capita cost attributable to depression morbidity, by World Bank region and World Bank income group, and globally in billions of 2024 U.S.\$ accounting for 16% of suicide-related deaths with an upper bound and lower bound.

Economic costs, 2024	Proportion of total GDP ($\times 10^{-5}$),	Per capita cost,
U.S.\$ billion	2025 – 2050	2024 U.S.\$

By region			
East Asia and Pacific	3115(2599-3723)	360(301-431)	1295(1080-1547)
Europe and Central Asia	3182(2570-3930)	519(420-641)	3445(2782-4254)
Latin America and Caribbean	586(481-714)	363(298-442)	823(676-1002)
Middle East and North Africa	423(332-539)	381(299-485)	816(641-1039)
North America	4496(3857-5235)	620(532-722)	11120(9538-12946)
South Asia	627(508-771)	409(331-503)	299(242-368)
Sub-Saharan Africa	383(301-485)	503(396-637)	233(184-295)
By income group			
Low income	110(85-142)	575(443-743)	136(105-176)
Lower middle income	1252(1001-1562)	389(311-485)	311(249-388)
Upper middle income	3285(2732-3942)	381(317-457)	1247(1037-1497)
High income	8147(6818-9726)	545(456-651)	6761(5658-8072)
Total	12813(10649-15396)	474(394-569)	1472(1224-1769)

E: Strengths and limitations

Table S23. Comparison of per-patient economic burden estimates for depression across different methodological approaches.

Study (Year)	Country	Method	Per-patient cost (2024 USD)		Estimate in our study*
Ding et al. ³⁶ (2013–2016)	China	COI: direct medical cost	RMB 2,706.92	438 ↓	1,321
Greenberg et al. ³⁷ (2005, 2010)	USA	COI: incremental cost	\$5,707 in 2005, \$5,988 in 2010	8,211 –8,614	8,716
Greenberg et al. ³⁸ (2019)	USA	Human capital: missed workdays	\$16,854	20,680 ↑	8,716

Iordache et al. ³⁹ (2015–2021)	Romania	COI: direct cost + morbidity cost (sick) + productivity loss (death)	EUR 5,553: 143 + 273 + 5,137	7,345 ↑	1,756
Tomonaga et al. ⁴⁰ (2009)	Switzerland	Direct costs+ Indirect costs (disability insurance + workdays lost)	EUR: 23,557: 10,468 + 13,089	35,931↑	8,171

*Comparable estimate in this study was derived by converting macroeconomic losses into per-patient terms using country-specific prevalence rates. These estimates reflect broader economic impacts and are not directly comparable with cost-of-illness measures. ↓ indicates that the cost reported in the previous study was lower than our estimate, where as ↑ indicates that the cost reported in the previous study was higher than our estimate.

Table S23 compares per-patient economic burden estimates from selected studies using different methodological approaches. “Per-patient cost (2024 USD)” refers to estimates reported in the original studies, converted to 2024 USD using World Bank exchange rates and inflation adjustments for comparability. “Estimate in our study” represents the average annual per-patient economic burden over 2025–2050, derived by allocating macroeconomic losses to individuals based on country-specific prevalence rates.

It should be noted that different studies varied substantially in the disease definitions applied and the populations included. Comparisons with the estimates from our study should be interpreted with caution. Ding et al.³⁶ identified patients with depression using ICD-10 diagnostic codes (F32.0–F32.3, F32.8, F32.9, F33.0–F33.3, F33.8, and F33.9), but their study population was limited to 26,123 urban insured patients with depression in China. Greenberg et al.^{37,38} focused primarily on adult major depression, with the study population restricted to U.S. adults aged 18–64 years. Similarly, Iordache et al.³⁹ identified depression cases based on ICD-10 diagnostic codes (F32.0, F32.1, F32.2, F32.3, F32.8, F32.9, F33.4, F33.8, and F33.9), and their analysis focused on 2,504,792 adults diagnosed with depression and covered by the public health insurance system. While Tomonaga et al.⁴⁰ screened patients with depression according to the WHO ICD-10 criteria, and only included 566 outpatients diagnosed with depression. Our estimates capture broader economy-wide impacts and are not directly comparable with conventional cost-of-illness measures. Building on these comparisons, we summarize the key strengths and limitations of our approach relative to existing methods.

Strengths

- Our calculations draw on recently developed methods and integrate the most comprehensive global datasets, including the updated GBD Study 2023, the Barro–Lee education database, the World Bank, and the International Labour Organization.
- Our study represents the first effort to assess the morbidity-driven impact of depression on economic growth across 154 countries and territories.
- Our analytical framework distinguishes productivity losses by education and experience levels, thereby addressing a major limitation in previous work.
- Our model incorporates sex- and age-specific human-capital profiles to reflect how differences in education among cohorts influence productivity losses caused by depression.
- Our approach constructs causal links from depression to GDP by using a simulated production function, which eliminates concerns about reverse causality inherent in observational estimates.
- Our Appendix provides a detailed, step-by-step description of each method, data source, and parameter used in our analysis.

- Our sensitivity analyses adjust morbidity inputs using the upper and lower bounds from GBD data to capture the effect of parameter uncertainty.

Limitations

- We relied on imputations based on U.S. data to estimate health expenditures for depression, which may misestimate actual treatment costs in other countries.
- We applied an average duration for depression across all severity levels and diagnostic categories, which may bias our estimates because recovery times differ by disorder severity and subtype.

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