7. Economic costs

A. Macroeconomic costs: GDP lost due to child marriage

Table 6 shows the percentage of GDP lost due to child marriage across the 13 Arab countries included in this study. In 2021, Algeria lost the highest percentage of GDP (5.1 per cent), while Qatar lost the lowest percentage of GDP (0.1 per cent). Ten countries lost over 2 per cent of their GDP, with the State of Palestine, the Sudan and Tunisia losing over 4 per cent (4.3 per cent, 4.9 per cent and 4.3 per cent, respectively). The remaining three countries had lower than 2 per cent of their GDP lost due to child marriage, with only Qatar and the Syrian Arab Republic below 0.5 per cent (0.1 per cent and 0.3 per cent, respectively).

It is important to note that the economic cost of child marriage not only depends on the rates of child marriage but also on the differences in demographic and socioeconomic outcomes between females married below 18 years of age and those married at 18 years and above. Therefore, Algeria, Jordan and Tunisia will incur greater economic costs attributable to child marriage because they have greater fertility and educational differences across females married below 18 years of age than those married at 18 years and above. While, for countries like Iraq and Mauritania, despite having higher child marriage prevalence rates, the relative differences in fertility rates and education levels between those married below 18 years of age and those married at 18 years and above are not as high as those in Algeria, Jordan and Tunisia, thus incurring lesser economic costs that are attributable to child marriage.

Given the model used in this costing exercise, the trends remain more or less the same in the projected years. In 2050, the Sudan is projected to lose the highest percentage of its GDP (5.1 per cent), while Qatar is projected to lose the lowest at 0.1 per cent. Eight countries are projected to lose over 2 per cent of their GDP due to child marriage, with the average being 4.06 per cent. The remaining five countries – Iraq, Mauritania, Qatar, Somalia and the Syrian Arab Republic – are forecasted to lose less than 2 per cent of their respective GDP, implying that good socioeconomic and health resources could help avoid the high economic costs of child marriage.

The estimated economic cost of child marriage for the Arab region stood at 3.2 per cent in 2021 and will be 3 per cent in 2050.

Table 6. Economic costs: Percentage of GDP lost due to child marriage in Arab countries

Countries	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046	2050
Algeria				6.0	5.1	4.5	4.1	4.1	4.4	4.6	4.8
Egypt				3.7	3.4	3.1	2.9	2.8	2.9	3.0	3.2
Iraq					1.3	1.3	1.2	1.1	1.1	1.1	1.2
Jordan		4.3	3.6	3.2	3.3	3.5	3.6	3.7	3.8	4.0	4.1
Mauritania					3.5	3.0	2.6	2.3	2.2	2.0	2.0
Morocco		4.0	3.7	3.3	3.2	3.2	3.3	3.5	3.6	3.7	3.9
Qatar				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Somalia			2.6	2.4	2.1	1.9	1.8	1.8	1.9	1.9	1.8
State of Palestine			5.1	4.7	4.3	3.9	3.8	3.8	3.9	4.1	4.2
Sudan			5.7	5.2	4.9	4.7	4.5	4.5	4.7	4.9	5.1
Syrian Arab Republic			0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3
Tunisia				4.4	4.3	4.0	3.7	3.7	4.0	4.3	4.6
Yemen				3.7	3.2	2.8	2.6	2.5	2.5	2.6	2.6
Arab region					3.2						3.0

Source: Authors' estimation using the spectrum-based simulation approach.

In absolute terms (table 7), child marriage had an economic impact of $40.7 billion in 2021, and this figure is expected to increase to a cumulative total of $3 trillion by 2050. Among the countries analysed, Egypt had the highest economic cost in 2021, reaching $91.3 billion, while Mauritania had the lowest cost at $0.6 billion. Looking ahead to 2050, the Sudan is projected to have the highest cumulative economic cost due to child marriage, estimated at $18,784 billion, whereas Mauritania is expected to maintain its position with the lowest cumulative economic cost at $66.6 billion.

The prevalence of child marriage has greater economic relevance for countries with high rates of child marriage and fertility, and poor health-care services, such as Algeria, Jordan, the State of Palestine, Somalia, the Sudan and Yemen. Across the 13 Arab countries, the total GDP estimates presented in this study align with the World Bank estimates for the respective countries.[51]

Table 7. Economic costs: Absolute difference in GDP for child marriage and non-child marriage scenarios, 2001–2050 (Billions of dollars)

Countries	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046	2050
Algeria				41.8	70.1	198.3	513.4	1,334.1	3,491.2	8,770.4	1,7758.5
Egypt				25.9	91.3	241.4	554.5	1,250.7	2,931.4	7,037.3	14,235.7
Iraq					9.0	41.1	117.2	292.3	709.5	1,732.5	3,547.1
Jordan		2.9	10.4	19.9	30.8	49.9	83.8	149.9	289.6	605.3	1,150.4
Mauritania					0.6	2.2	4.6	8.7	17.3	35.8	66.6
Morocco		12.7	34.9	51.6	74.0	193.1	493.8	1,226.8	2,975.2	7,069.1	13,953.2
Qatar			0.6	4.7	8.7	24.7	64.5	166.0	420.9	1,035.9	2,079.7
Somalia				0.8	1.5	6.5	24.0	79.0	237.9	654.7	1,379.7
State of Palestine		0.0	0.5	1.3	2.3	3.7	6.2	11.3	22.4	46.3	85.3
Sudan			5.3	34.0	18.6	82.5	310.0	1,051.9	3,232.5	8,932.5	18,784.0
Syrian Arab Republic		0.0	4.0	0.7	1.7	6.8	27.0	99.7	326.1	933.2	1,967.1
Tunisia			0.0	10.4	19.2	43.7	92.6	204.5	485.0	1,183.2	2,414.6
Yemen				5.4	5.5	13.9	31.8	73.6	171.6	400.5	789.1
Arab region					40.7						2,920.5

Source: Authors' estimation using the spectrum-based simulation approach.

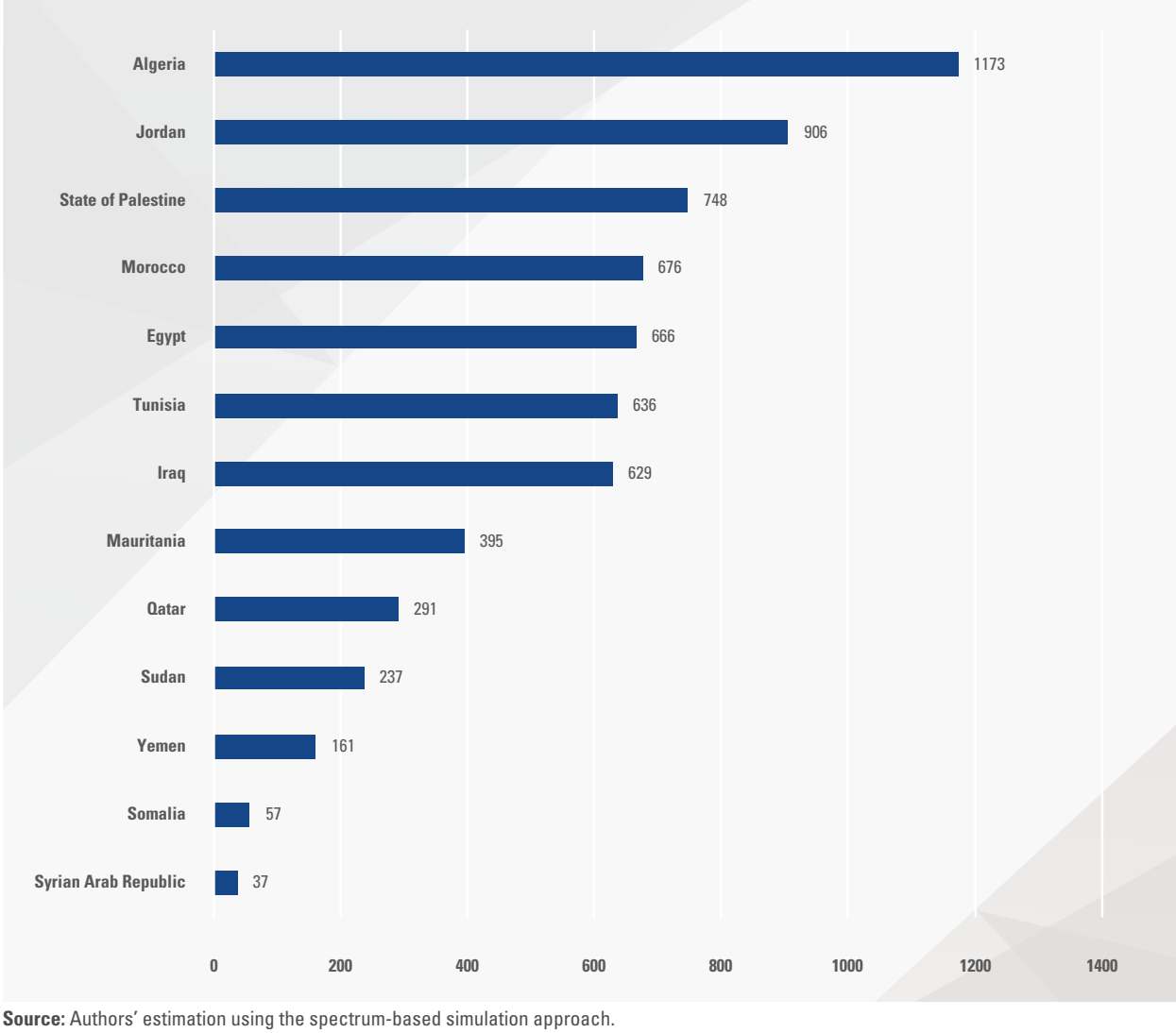
B. Household economic and health-care costs of child marriage

As explained through the conceptual framework of this study, a part of the economic cost of child marriage for countries influences the household as well. Households with a woman married as a child experience greater income loss both through wages as well as excess health-care expenditures. Earlier, Wodon and others (2017), as well as Wodon and Yedan (2017b), demonstrated that the economic participation and wage earnings for females married at early ages are significantly less compared to their

counterparts married at higher ages. Wages have a significant bearing on household earnings.

This section provides an analysis of the average annual economic costs borne by households[52] and the private health-care costs[53] associated with child marriage. The findings presented in figure 5 indicate that households in most Arab countries face significant average annual economic costs. For example, seven Arab countries (Algeria, Egypt, Iraq, Jordan, Morocco, the State of Palestine and Tunisia) show average economic costs exceeding $600 per household, with Algeria having the highest cost at $1,173 and the Syrian Arab Republic having the lowest at $37.

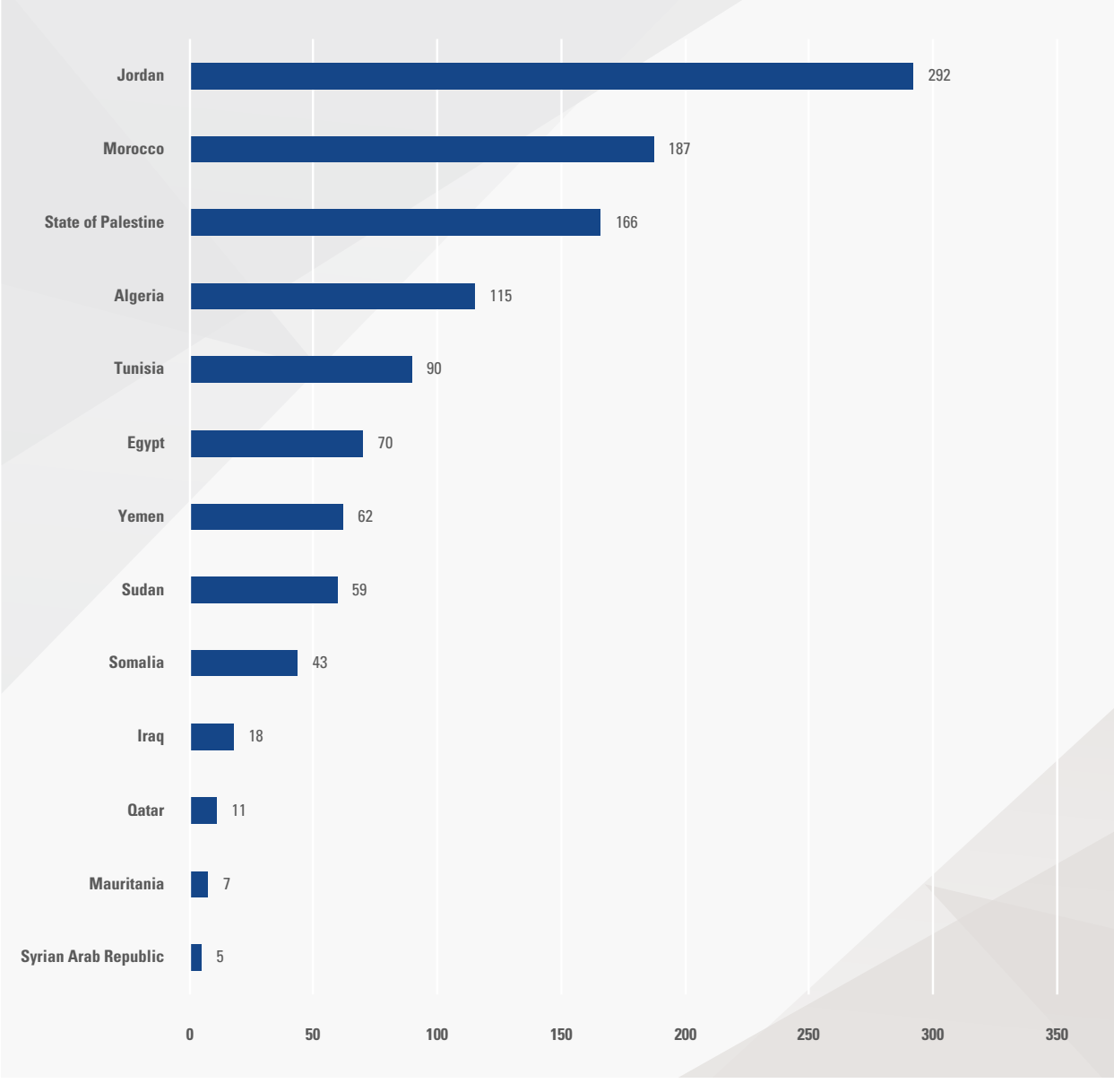
Figure 5. Average annual economic cost per household attributable to child marriage, 2021 (Dollars)



Source: Authors' estimation using the spectrum-based simulation approach.
Note: The absolute economic cost due to child marriage not only depends on the level of its prevalence but also on the economies of scale and socioeconomic, demographic and health policies of the country. Usually, larger economies tend to have a greater elasticity of costs due to prevalence of child marriage. Thus, the association between prevalence of child marriage and absolute GDP cost due to child marriage may not be strong.

The estimated average annual health-care costs for households also show considerable variation among the countries. The range spans from $292 in Jordan to a mere $5 in the Syrian Arab Republic. Additionally, only four countries (Algeria, Jordan, Morocco, and the State of Palestine) have household health-care expenditures exceeding $100 per year (figure 6).

Figure 6. Average annual health cost per household attributable to child marriage, 2021 (Dollars)



Source: Authors' estimation using the spectrum-based simulation approach.
Note: The absolute health cost due to child marriage not only depends on the level of its prevalence but also on the economies of scale and the cost of health-care services in the country.