

Mining boom and economic growth:

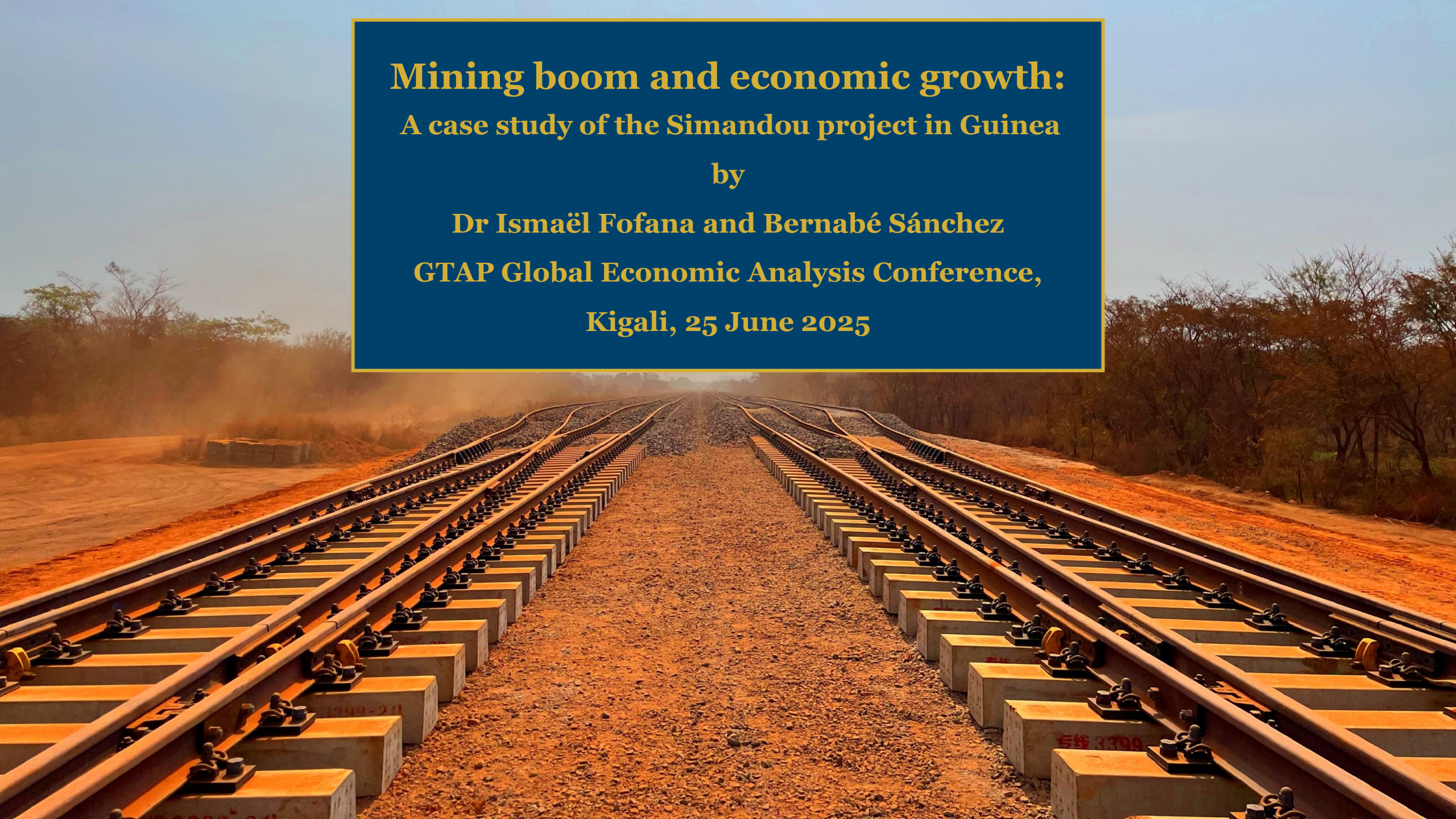
A case study of the Simandou project in Guinea

by

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Mining boom and economic growth: A case study of the Simandou project in Guinea

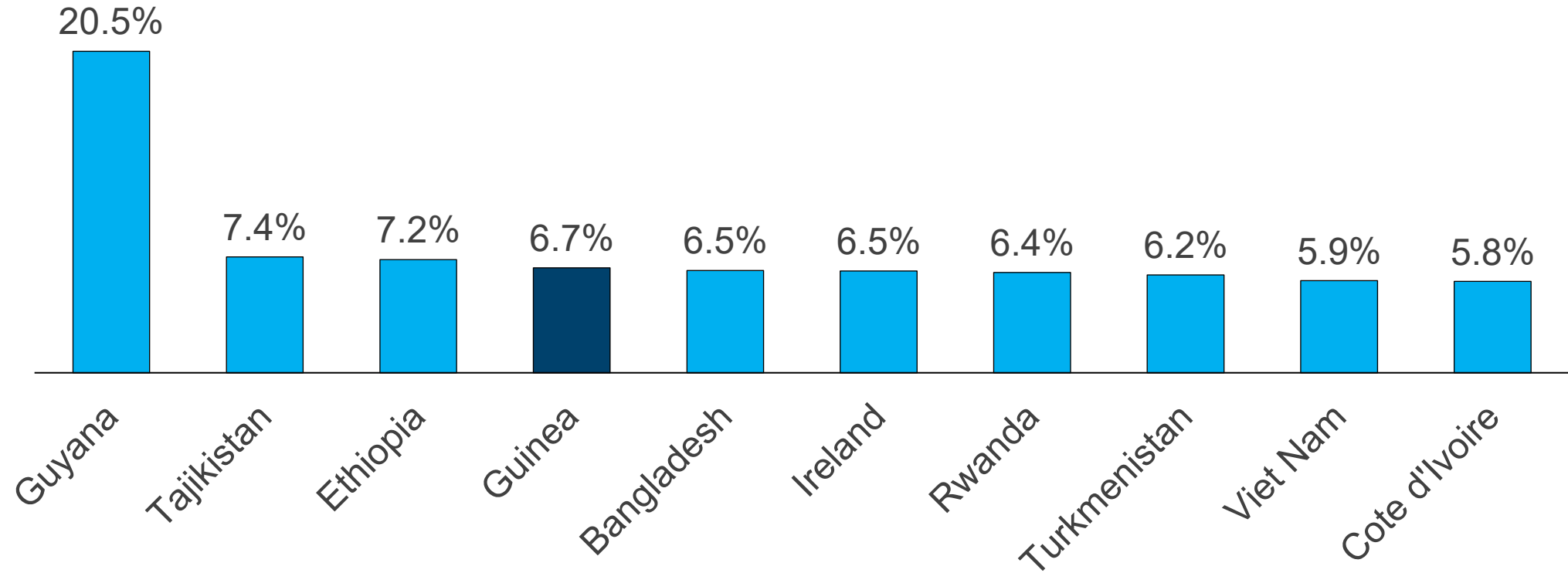
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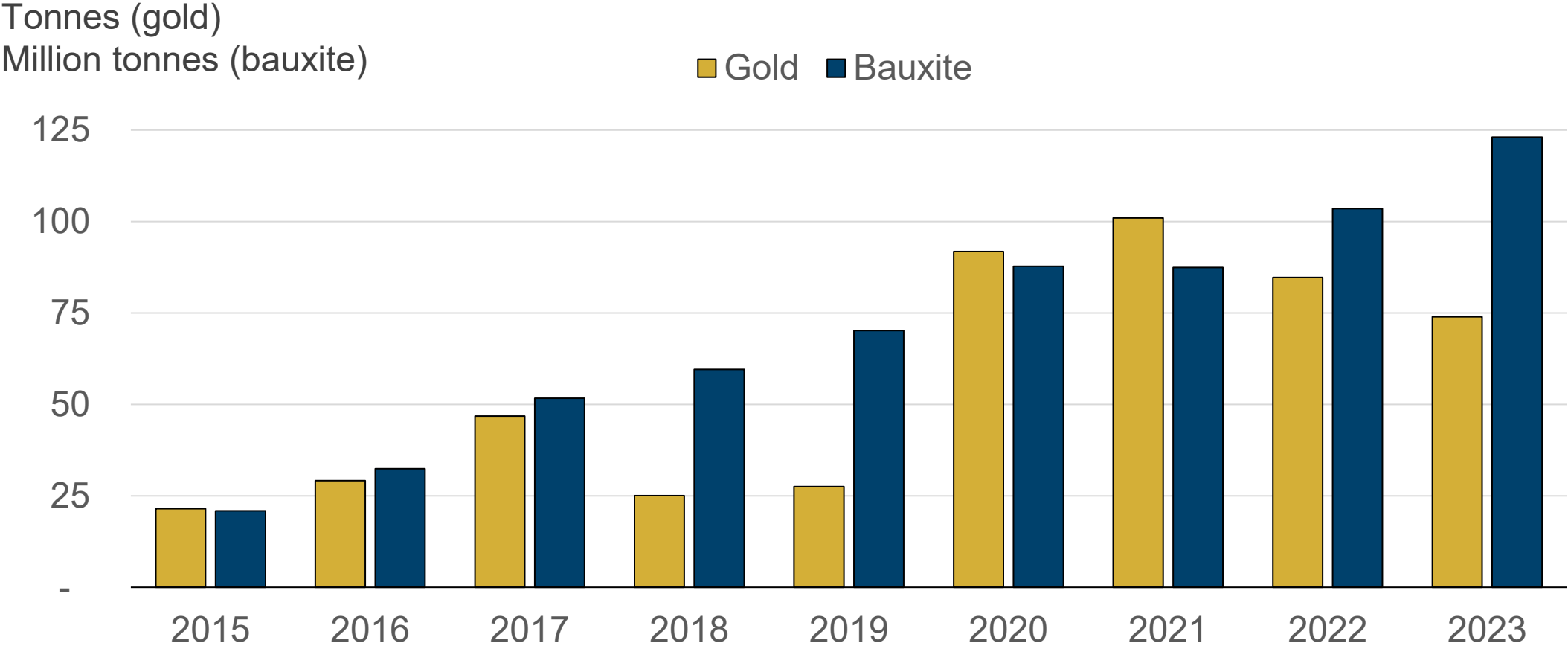
Guinea has been the 4th fastest growing economy globally since 2016 driven by the mining sector

(Average GDP growth
p.a. 2016-23)



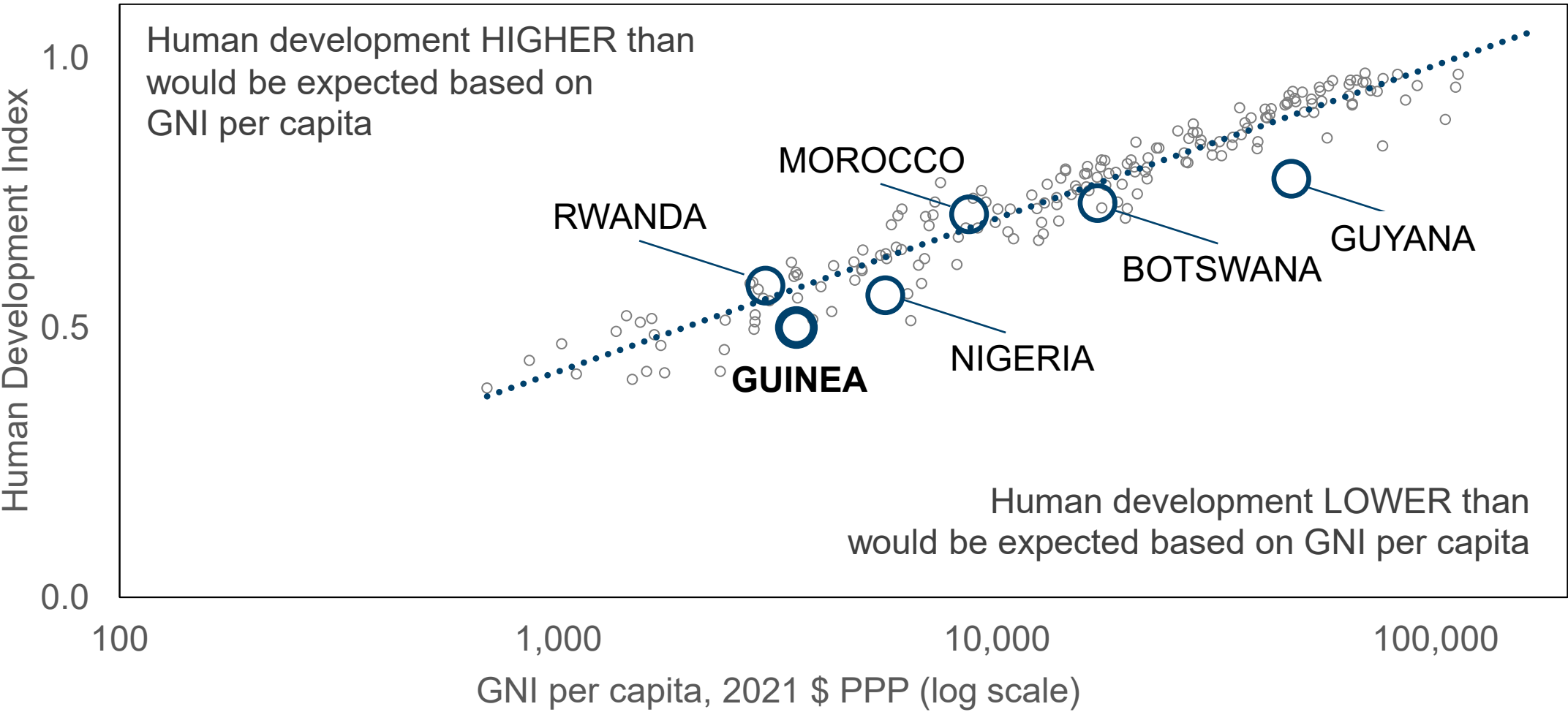
Source: World Development Indicators

Bauxite production continues to break records, while gold's remains high by historical standards



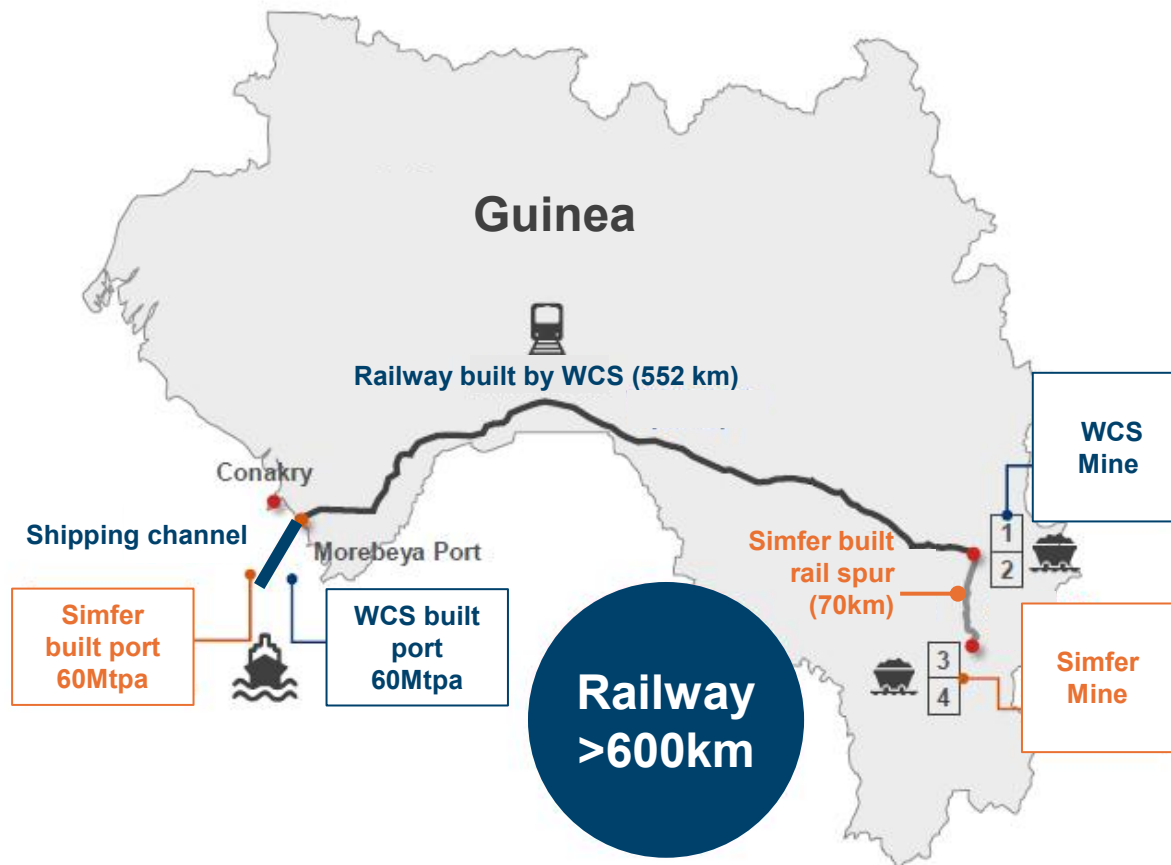
Source: British Geological Survey's World Mineral Statistics

The challenge has been to translate this economic growth into human development



Source: UNDP Human Development Index, May 2025 update

Simandou's larger scope and geographical footprint mean it can deliver better outcomes



Mines in Beyla (Guinée Forestière) and Kérouane (Haute-Guinée)



600km railway across primarily Haute- and Moyenne-Guinée



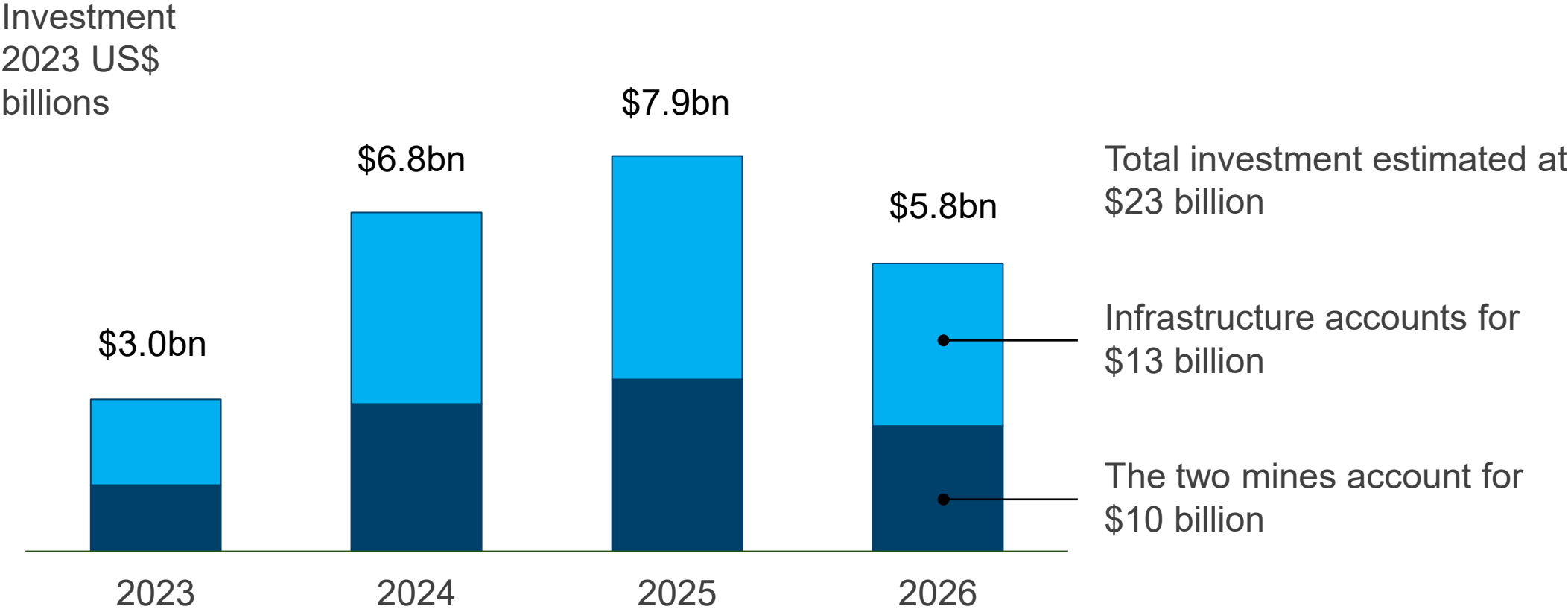
120-million tonne port in Forécariah in Basse-Guinée

Simandou tax settings and costs: summary of publicly available assumptions

	Compagnie du Transguinéen infrastructure	Simfer Rio Tinto mine	Winning Consortium Simandou mine
Royalties (rate over total revenues)	\$0.50/t	3.5%	5%
Local development fund (rate over total revenues)	N/A	0.25%	0.5%
Corporate income tax	15% years 1-17 25% years 18+	15% years 1-8 30% years 9+	0% years 1-10 30% years 11+
Guinea Government equity	15%	15%	15%
Capex	\$13 billion	\$5.1 billion	?
Opex and sustaining capex	\$17/wmt	\$11/wmt	?

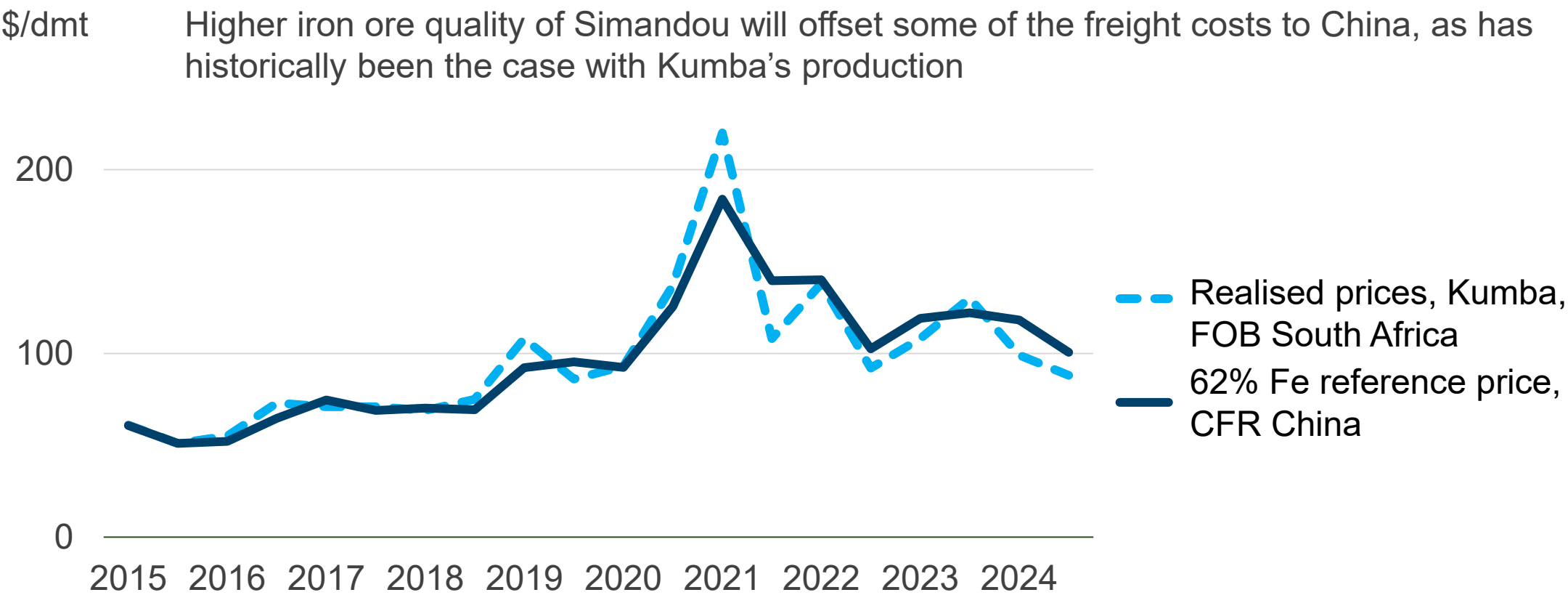
Source: Rio Tinto Investor Seminar December 2023, Convention de Base de WCS Juin 2020

The profile of capital expenditure and its breakdown is available from Rio Tinto's latest annual results



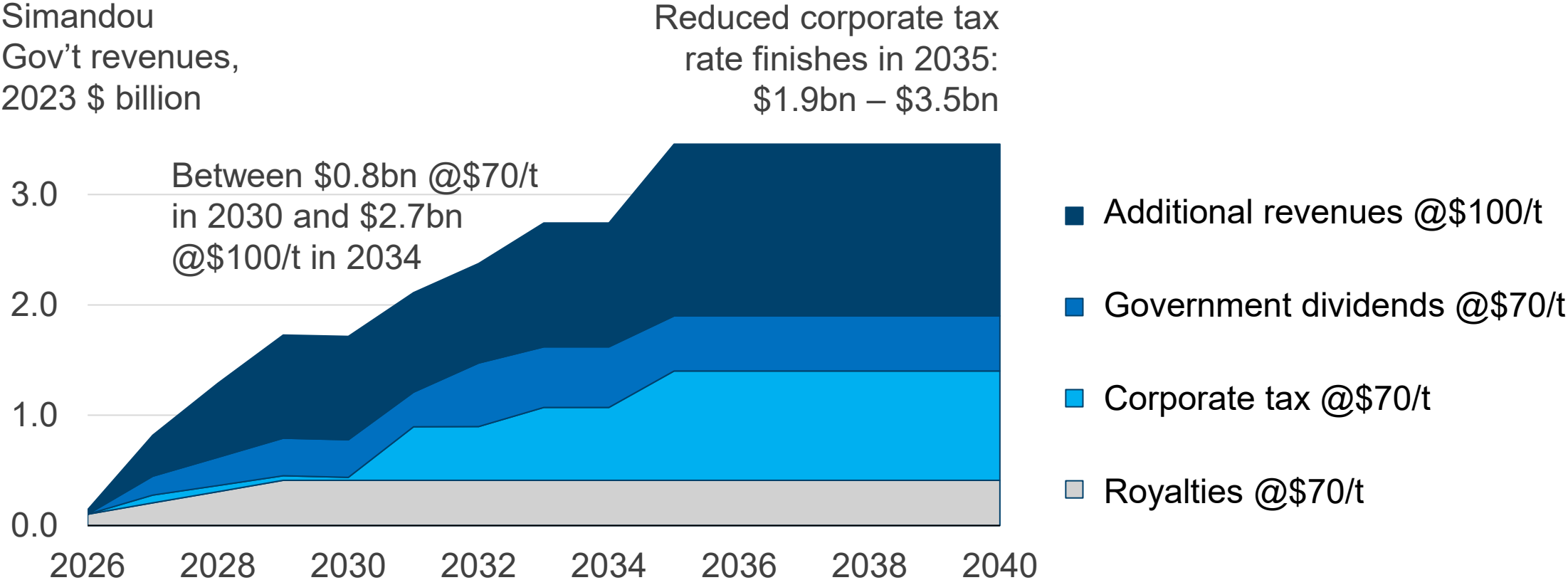
Source: Authors' calculations based on Rio Tinto annual results released in February 2025

Iron ore prices have averaged about \$100/t over the past decade



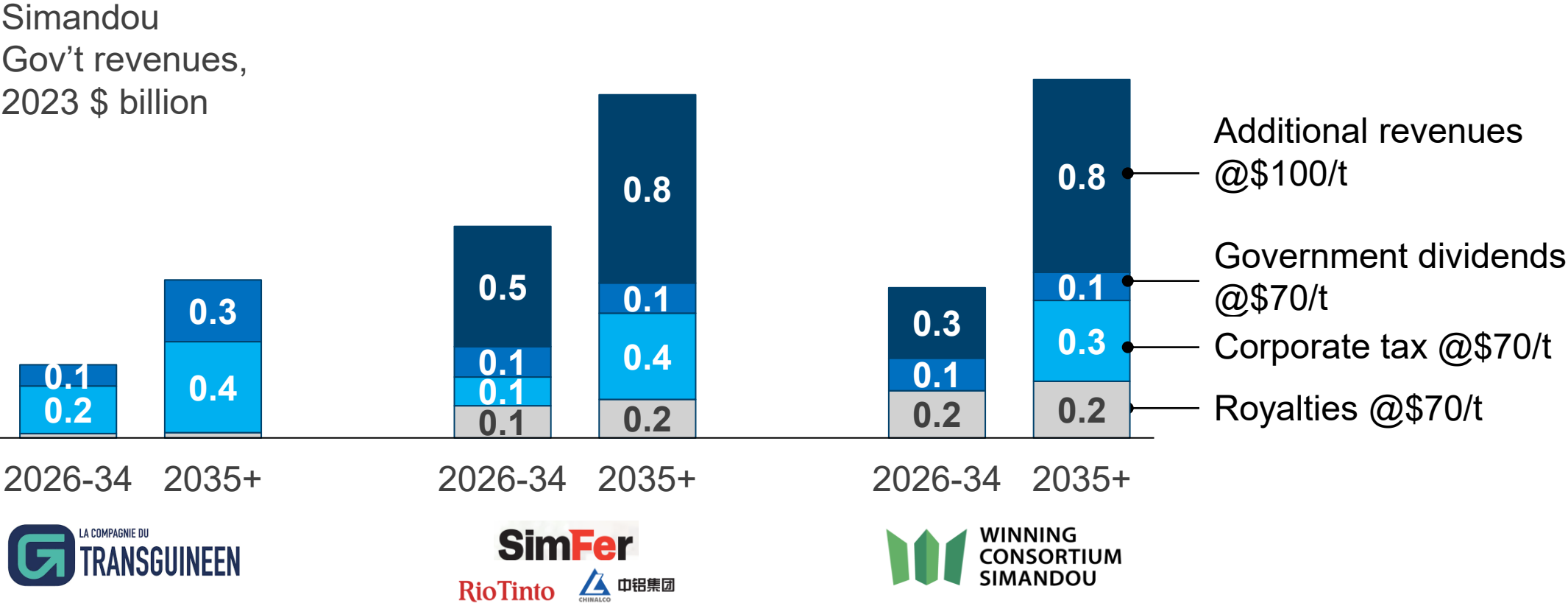
Source: World Bank’s “Pink Sheet”, Kumba Iron Ore financial results

Ramp-up schedule, iron ore prices and corporate tax rate changes drive government revenues



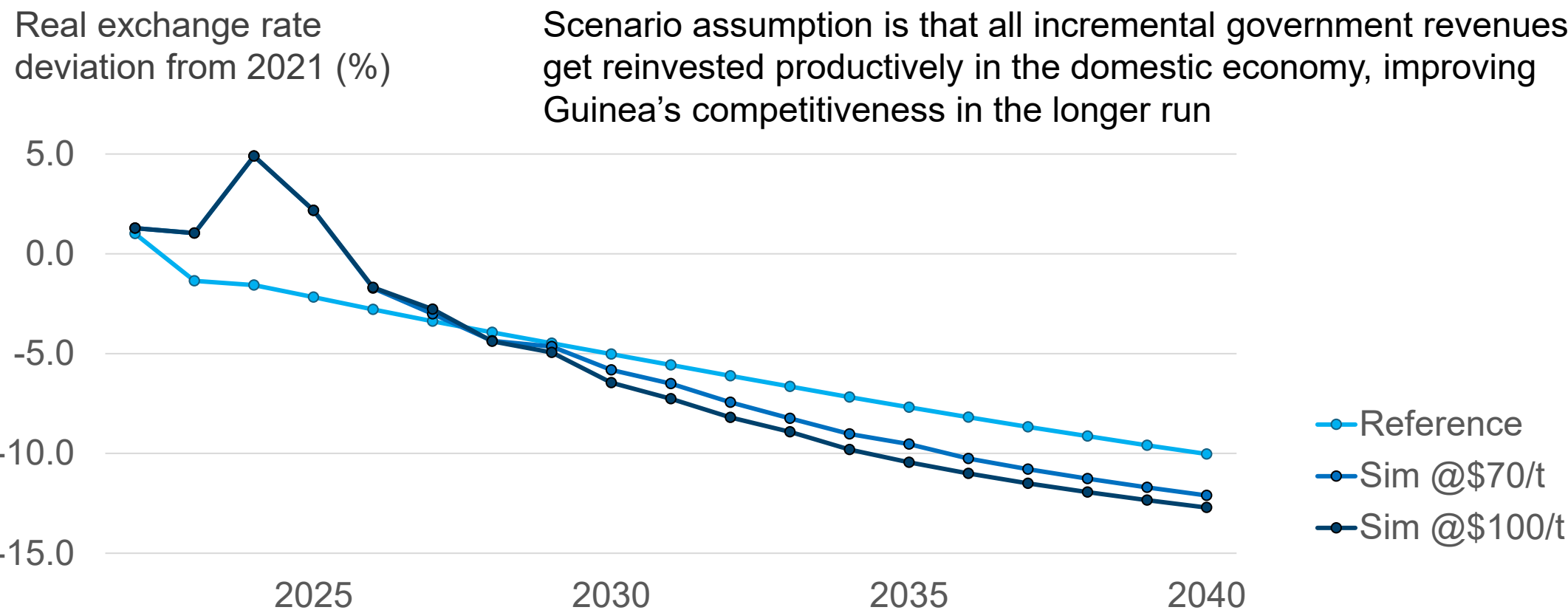
Source: Authors' calculations based on IMF's FARI model

Breakdown of government revenues by type of contribution and paying company



Source: Authors' calculations based on IMF's FARI model

Strong real exchange appreciation during the Simandou investment period (2023-26)

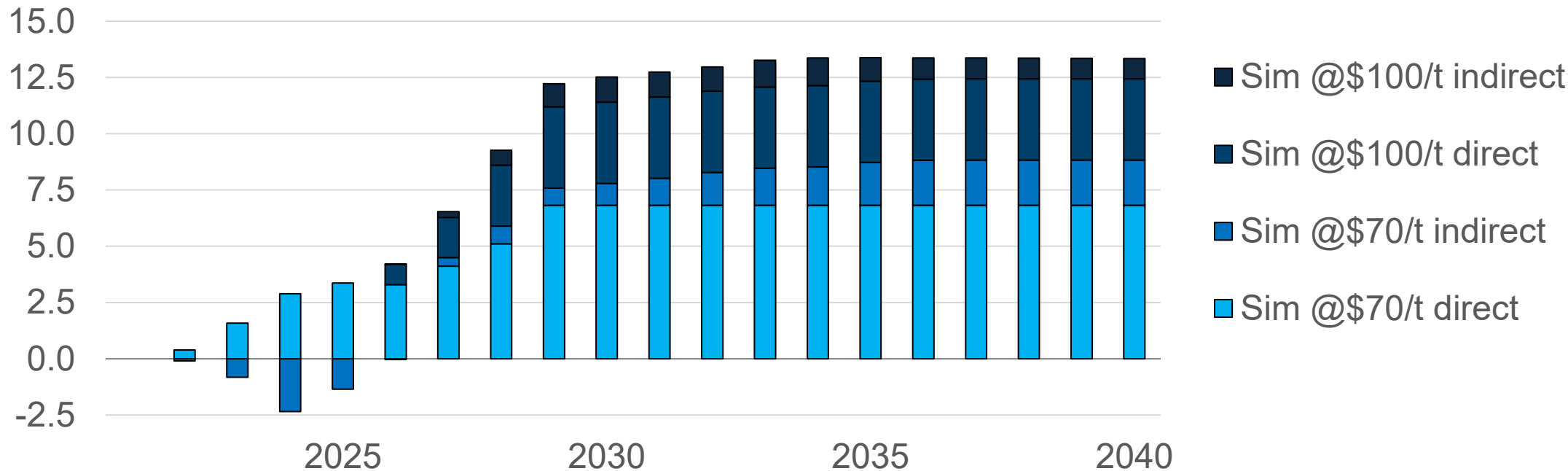


Source: Authors' calculations based on new Guinea-Simandou CGE model

After 2030 Simandou adds between \$8 billion and \$13 billion annually to Guinea's economy

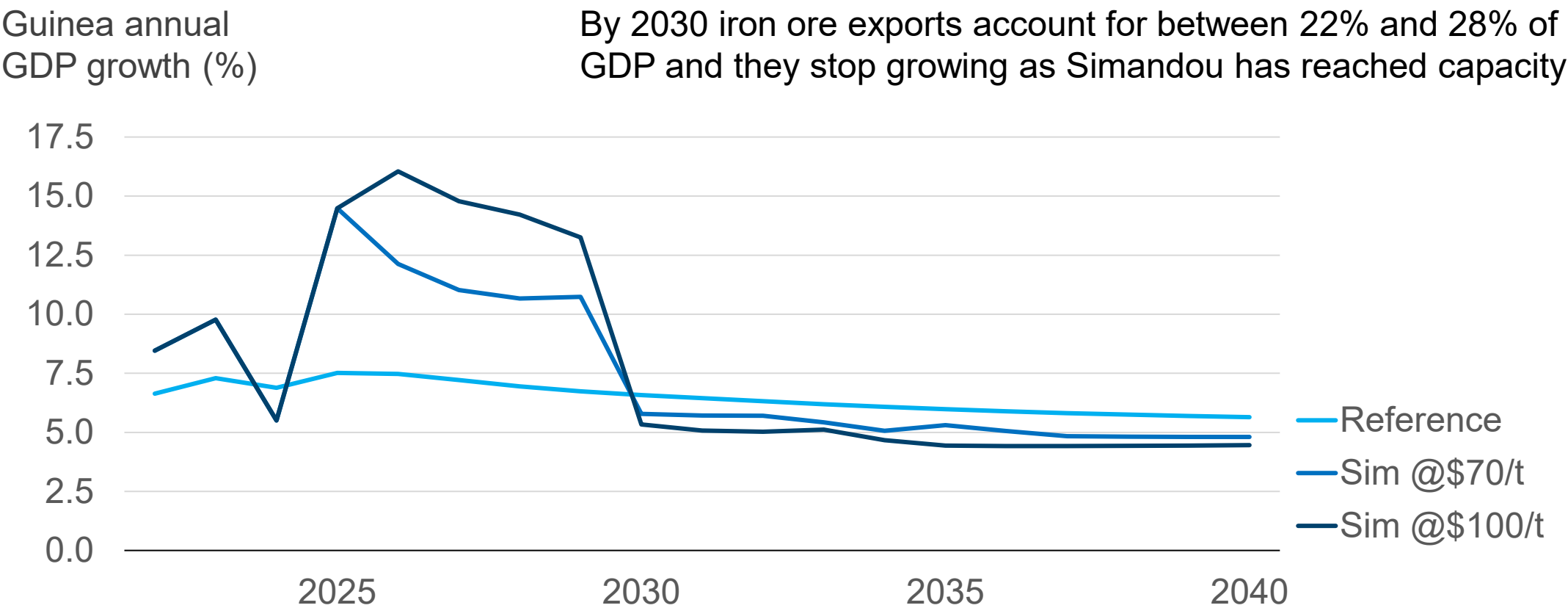
Simandou GDP impacts,
2021 \$ billion

Direct impact dominates, but indirect impacts still account for about \$15% of the total (they are negative during the investment period but turn positive from 2027)



Source: Authors' calculations based on new Guinea-Simandou CGE model

Growth of over 10% annually to 2030, but without structural transformation rates fall below trend after



Source: Authors' calculations based on new Guinea-Simandou CGE model

Annex table: direct and indirect Simandou macroeconomic impact breakdown

2021 US\$ billion	At \$70/t iron ore price			At \$100/t iron ore price	
	2025	2030	2040	2030	2040
Investment project (Direct)	5.9	0.0	0.0	0.0	0.0
Exports project (Direct)	0.0	8.4	8.4	12.0	12.0
Imports project (Direct)	-2.6	-1.6	-1.6	-1.6	-1.6
Total Effect (Direct)	3.4	6.8	6.8	10.4	10.4
Final consumption (Indirect)	0.9	1.5	1.8	2.0	2.3
<i>Reference</i>	17.8	24.0	40.1	24.0	40.1
<i>Simulation</i>	18.7	25.5	41.9	26.0	42.4
Investment (Indirect)	1.2	2.6	4.5	4.1	5.8
<i>Reference</i>	4.0	6.2	13.3	6.2	13.3
<i>Simulation</i>	5.1	8.8	17.8	10.3	19.1
Exports (Indirect)	-2.1	-1.1	-1.5	-1.1	-1.6
<i>Reference</i>	8.3	11.9	21.7	11.9	21.7
<i>Simulation</i>	6.2	10.8	20.3	10.8	20.2
Imports (Indirect)	-1.4	-2.0	-2.9	-3.0	-3.6
<i>Reference</i>	-8.5	-12.0	-21.4	-12.0	-21.4
<i>Simulation</i>	-9.9	-14.0	-24.3	-15.0	-25.1
Total Effect (Indirect)	-1.4	1.0	2.0	2.1	2.9
Total Effect (Direct and Indirect)	2.0	7.8	8.8	12.5	13.3
Total GDP Reference	21	30	54	30	54
Total GDP Simulation	23	38	62	43	67

Source: Authors' calculations based on new Guinea-Simandou CGE model



Comments and suggestions?