

The cost of delivering C19 vaccines: evidence from 6 bottom-up costing studies

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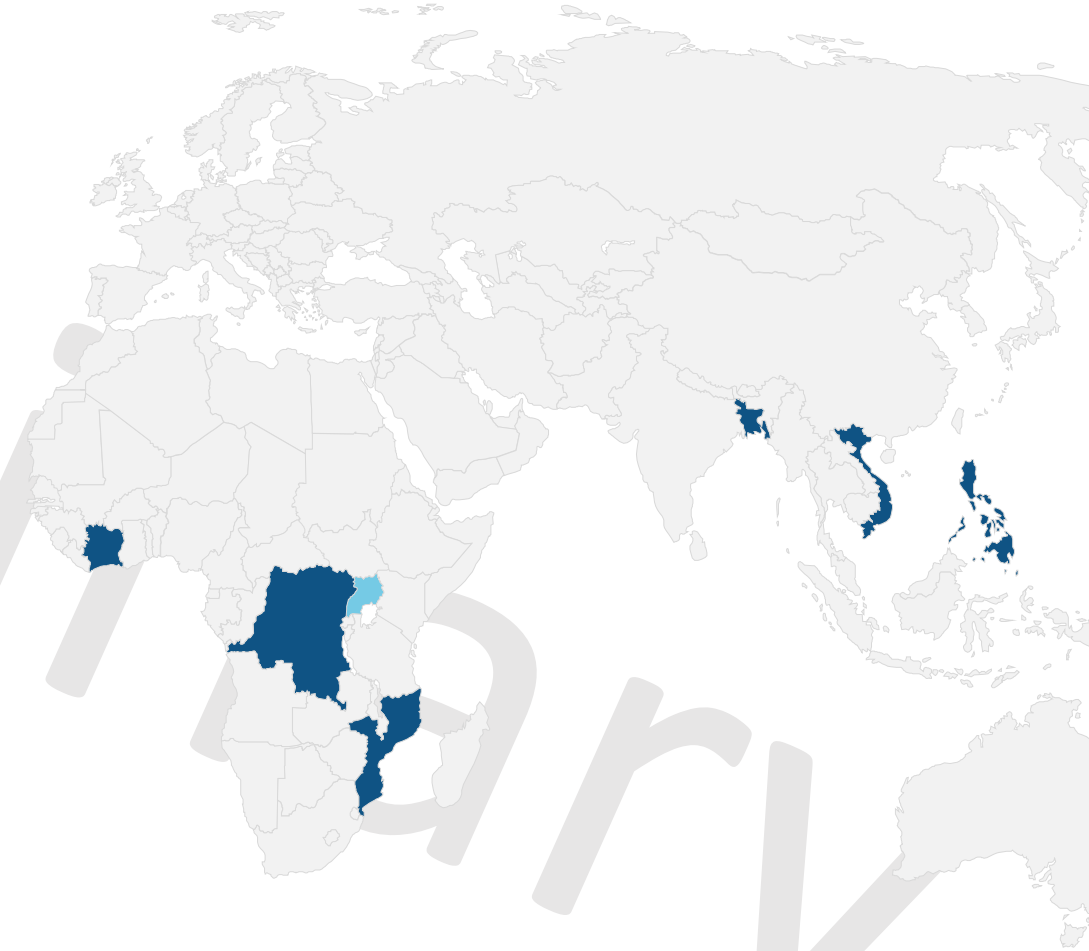
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Standardized methods

- Ingredient-based, bottom-up **costing studies** in 7 countries, today showing preliminary results for 6 of them
 - Payer perspective (MOH, partners, private sector if relevant)
 - In each country, retrospective, primary data collected at **26-38 purposively sampled immunization sites**, intermediary levels, MOH, and partners
 - In country delivery cost per dose, disaggregated by **activity** and **resource type**. Where possible: **delivery strategy, implementation period**
 - Bangladesh: **costs incurred by beneficiaries** through exit interviews (excluded today)
- **Qualitative interviews** to understand operational challenges and funding flows



Overview of C19 vaccination programs



Vietnam



Bangladesh



Philippines



Mozambique



Côte d'Ivoire



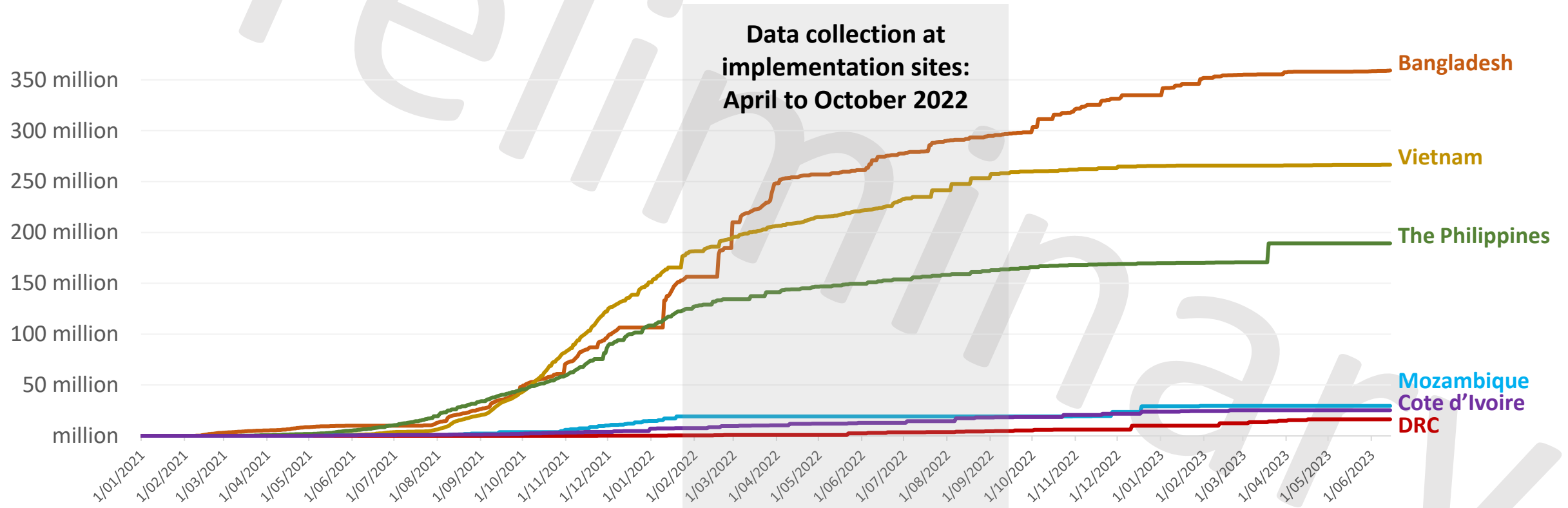
DRC

	Vietnam	Bangladesh	Philippines	Mozambique	Côte d'Ivoire	DRC
Implementation modality	Continuous (100+ rounds)	✓	✓	✓	✓	✓
	Campaign-style	✗	✓ (campaigns)	✓ (NVDs)	✗	✓ (monthly intensification)
Delivery strategies	Facility-based	✓	✓	✓	✓	✓
	Temporary sites	✓	✓	✓	✓	✓
	Mobile or Outreach	✗	✓	✓	✓	✓
Doses delivered *	213 M	319 M	162 M	19 M	17 M	4 M
Average monthly volume *	13 M	14 M	8 M	1 M	0.8 M	0.2 M

* As of start date of data collection (approx. April to September 2022)

Data collection took place when programs were at very different stages

Figure 1. COVID-19 vaccine doses administered from January 2021 to June 2023

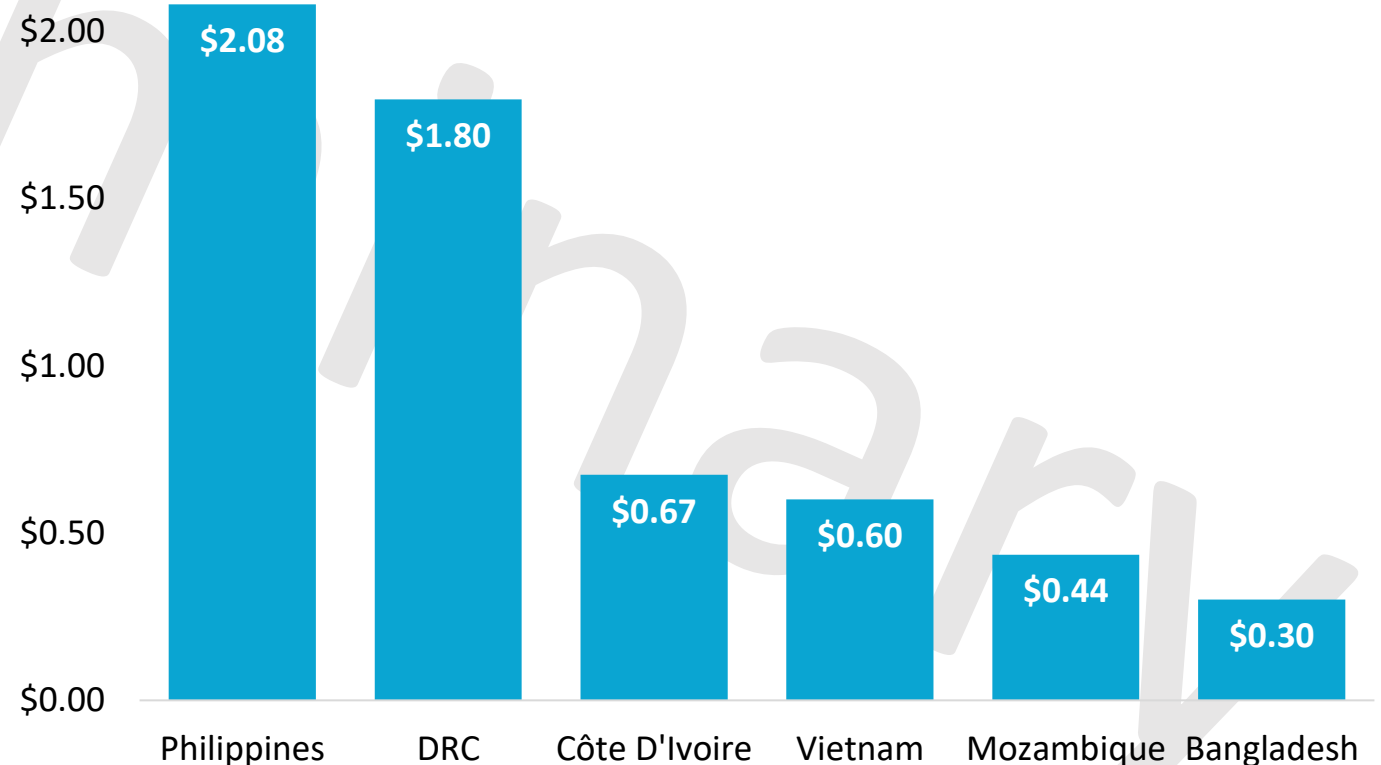


	Vietnam	Bangladesh	Philippines	Mozambique	Côte d'Ivoire	DRC
Study timeframe:	Jan – Dec 2021	Apr-Jun 2022	May-Jul 2022	Dec 2021-Feb 2022	Mar-May 2022	Jun 2022
Continuous modality						

In most countries, financial delivery cost were low

- Low costs are due to:
 - **High volume** delivered
 - Little to **no additional HR** in all countries except the Philippines
 - Little to **no new equipment** in Mozambique, DRC, Côte d'Ivoire
 - Little to **no per diem** / incentives in Mozambique, Côte d'Ivoire
 - Leveraging of **virtual technologies** for trainings and social mobilization
- Higher costs are due to
 - **Philippines** only country with significant additional hiring
 - **DRC** delivered very low volume

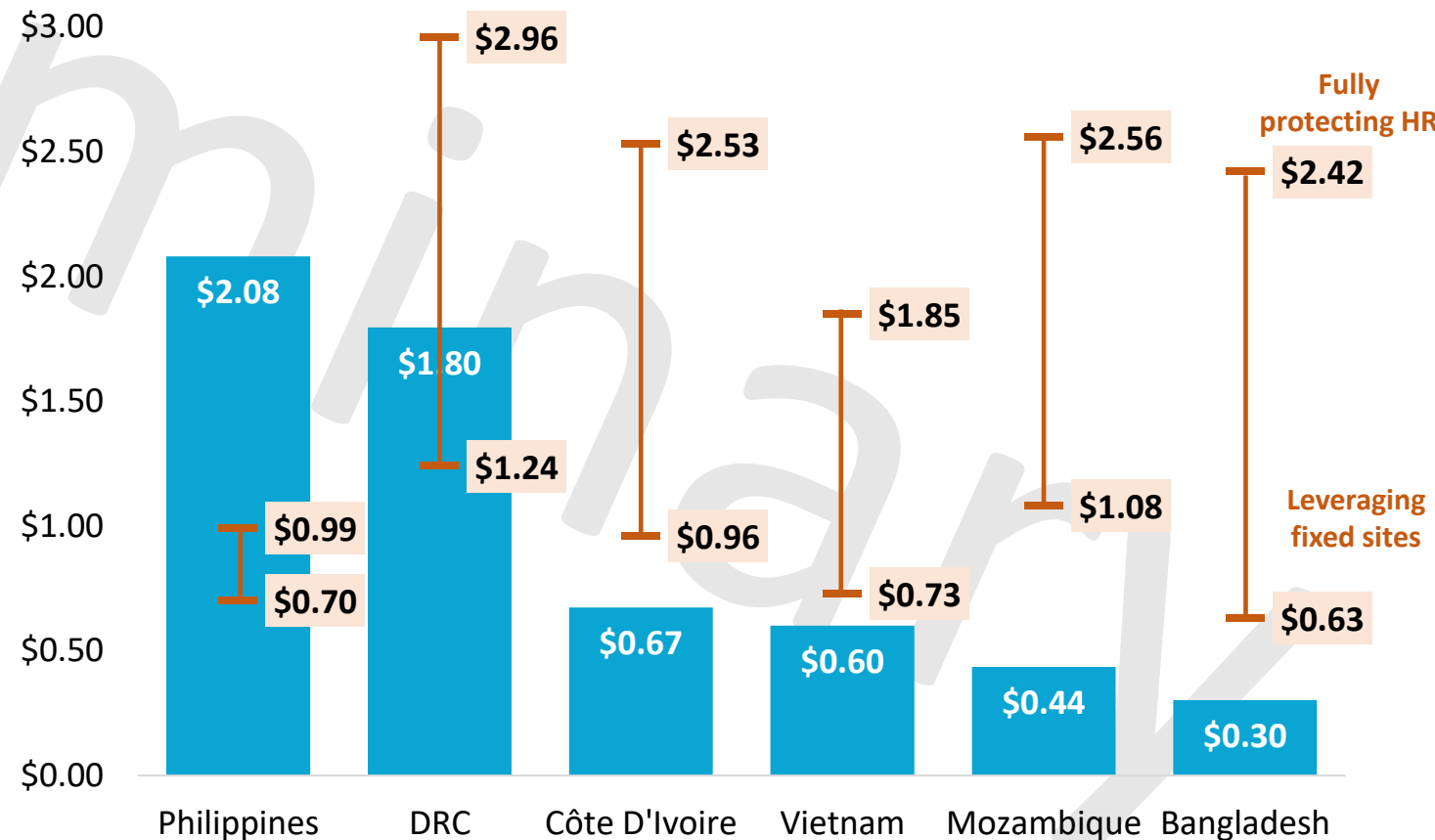
Figure 2. Financial delivery costs for continuous delivery modality (2022 USD)



Financial delivery cost lower than COVAX's conservative estimate in 4/6 countries

- **COVAX excluded syringes** and safety boxes, a key cost driver
- Assumptions differed from reality

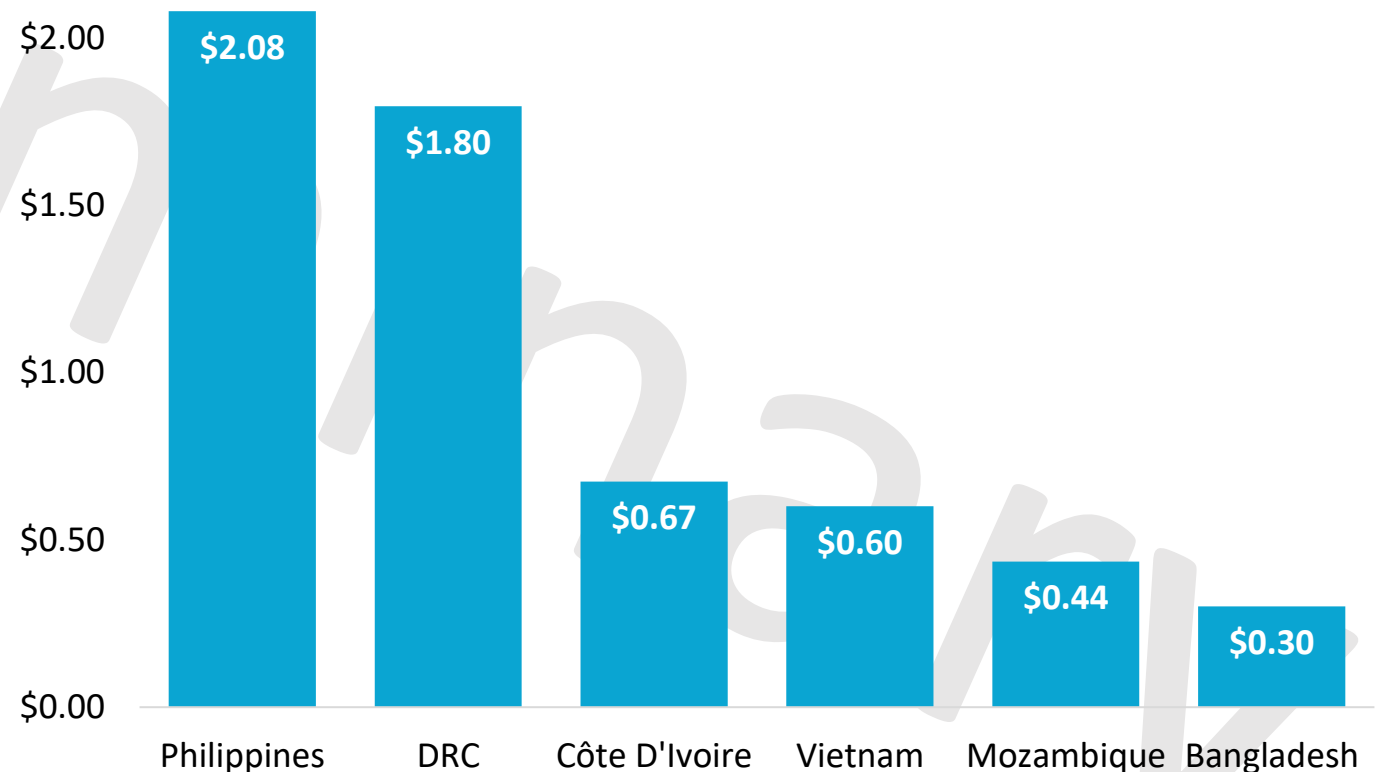
Figure 4. Bottom-up financial cost per dose for continuous delivery modality and COVAX estimate for “leveraging fixed sites” and “fully protecting HR” scenarios (2022 USD)



In 4/6 countries, lower than childhood routine estimates

- For some countries, this is lower than routine childhood immunization in LMICs (\$0.145-1.50)¹
- Closer to estimates for campaigns (\$0.16 to \$0.98)²

Figure 5. Financial delivery costs for continuous delivery modality (2022 USD)

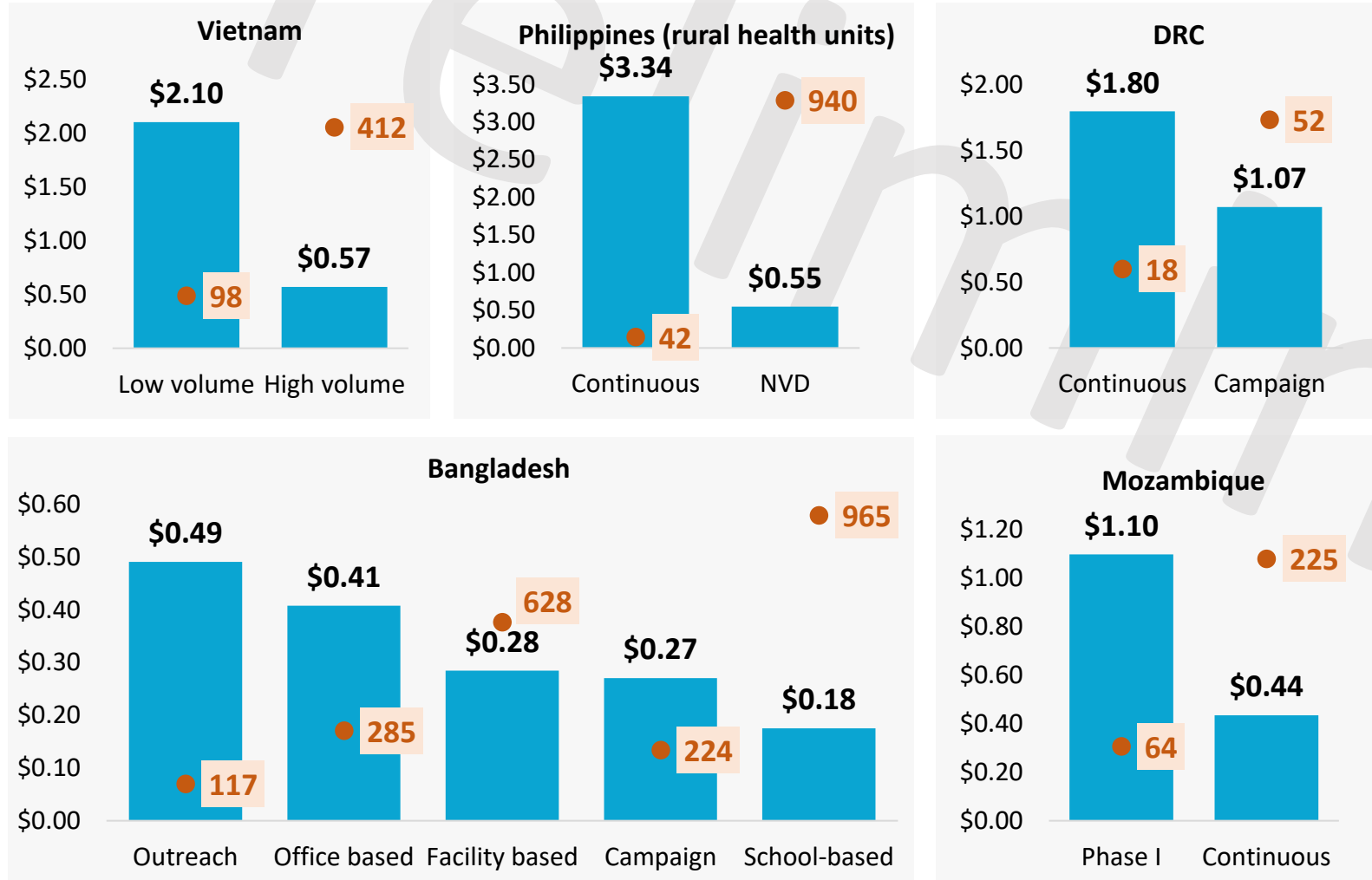


¹ Portnoy, A., Vaughan, K., Clarke-Deelder, E. et al. Producing Standardized Country-Level Immunization Delivery Unit Cost Estimates. (2020).

² Financial cost per dose for campaigns reported in the IDCC and in the ICAN campaign studies (Nigeria, Sierra Leone, India)

At higher delivery volumes, costs went down

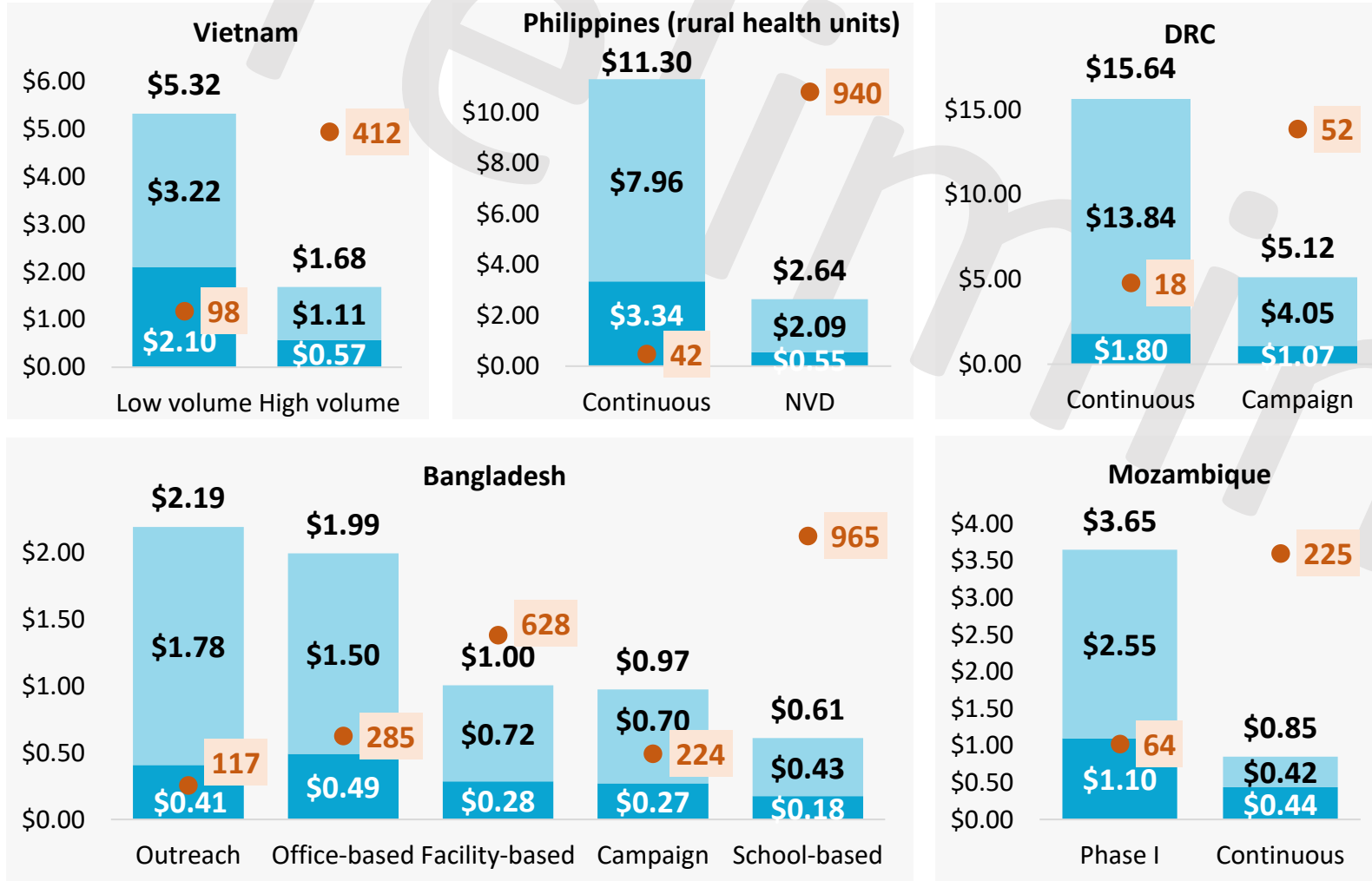
Figure 3. Financial cost per dose for high and low volume period/modality (2022 USD) and doses delivered per site/day



- Higher volume periods/delivery modalities had lower financial costs per dose
- Economies of scale at higher delivery volumes

At higher delivery volumes, costs went down

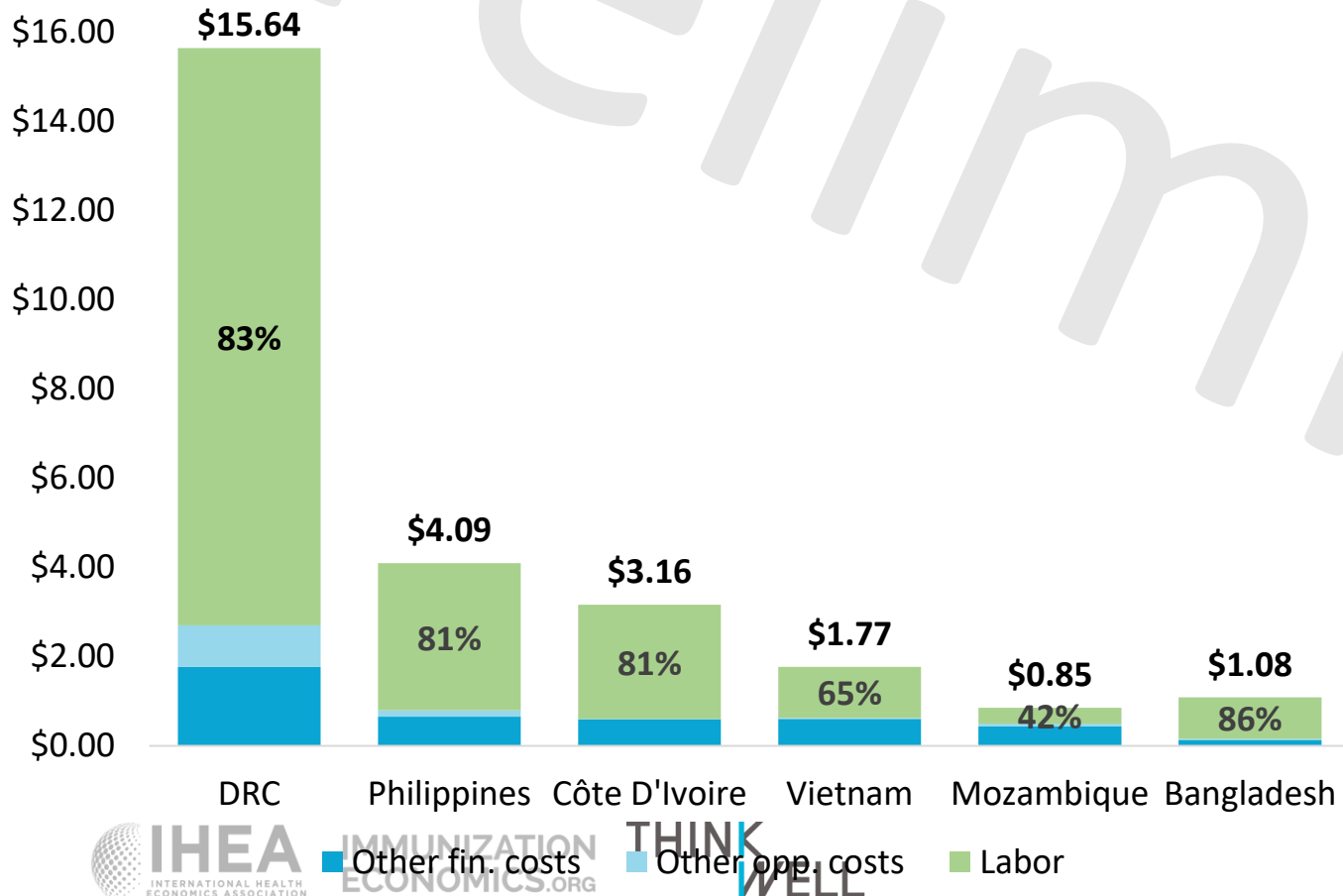
Figure 4. Economic cost per dose for high and low volume period/modality (2022 USD) and doses delivered per site/day



- When including opportunity costs, we continue to see lower costs per dose at higher delivery volumes across all countries
- Confirms that economies of scale were achieved

Economic costs show heavy reliance on existing resources

Figure 7. Labor, other financial and other opportunity delivery costs for continuous delivery modality (2022 USD)



- Labor represents a much larger share of the cost per dose than in routine immunization (~14%)¹
- Newly recruited health workers are a small share of economic costs
 - **35%** in the Philippines
 - **1.2% to 0%** in other countries
- Heavy reliance on existing health workers

¹ Portnoy, A., Vaughan, K., Clarke-Deelder, E. et al. Producing Standardized Country-Level Immunization Delivery Unit Cost Estimates. (2020).

Preliminary learnings and next steps

- Analysis still ongoing in some countries, you can find posters for Vietnam, the Philippines, DRC and Côte d'Ivoire
- Cross-country learnings coming soon (~Sept 2023)
- Costs determined by a combination of high/low volume and high/low investments
- Low financial costs likely indicate insufficient or delayed funding
- Heavy reliance on existing resources potentially caused disruptions to other health services

Thank you

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