# Technical Annex

*Operationalizing the BBAMC*

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OHE

PATH

# Calculating Ability to Pay

*From arbitrary price-setting to a realistic value-based price grounded in country budgets*


| | |
|---|---|
| Cost-Benefit Analysis | Extrapolated VSL within a cost benefit framework. |
| Healthcare Budget | Empirically derived based on budgetary allocation to health current and projected. |
| Fiscal Space Analysis | Budget neutral based on health system savings, economic growth and resulting fiscal space. |
| Revealed Willingness to Pay | Benchmarked against past national technology adoption decisions. |

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# Using HTA to Define the Commitment: Potential Entry Points

**Ex ante HTA (pre-launch)**

- Inform the terms of contracts by defining the HTA model structure and assumptions,* and generating price and volume and price per unit of health gain

★ BBAMC contracts are signed

**At-launch HTA***

- Confirm/refine value and reward

★ BBAMC is triggered and first vaccine is licensed and launched

**Ex post HTA (post-launch)**

- Verify health and cost impact

★ Post-launch assessment of vaccine based on further evidence collection (two years later)

*Model assumptions which might change from pre-launch to at-launch HTA are:

(i) Technical (related to new vaccine efficacy): the extent to which the new vaccine meets the TPP elements

(ii) Environmental: technology comparator/s (the standard of care) and its price (particularly if efffective therapies are discovered and introduced); the way COVID-19 is managed in a specific country; COVID-19 incidence.

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# A "Commitment Pool" Tied to Product Efficacy

- One or more countries would need to take a leadership role as "first movers"—for example, UK, Norway, Thailand, India and South Africa. Ex-ante HTA for those countries would give several important pieces of information:
    - The total value-based market: HTA would provide an upper bound for value-based commitments.
    - Relative value by country: HTA would show how the total value proposition of a vaccine varies across countries.
    - Relative value by product profile: HTA would show how the total value proposition of a vaccine varies vis-à-vis specific product characteristics.

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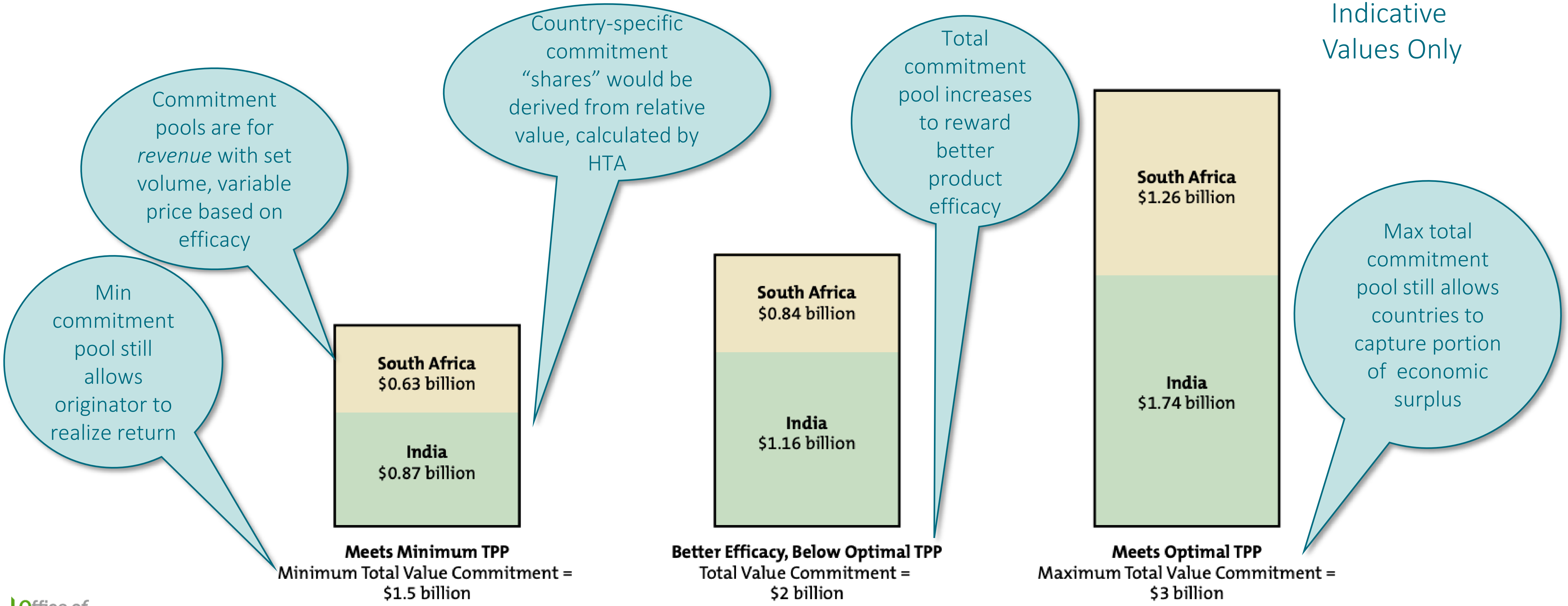
# Indicative Schematic for Defining and Dividing a Value-Based Commitment

Note: Indicative Values Only

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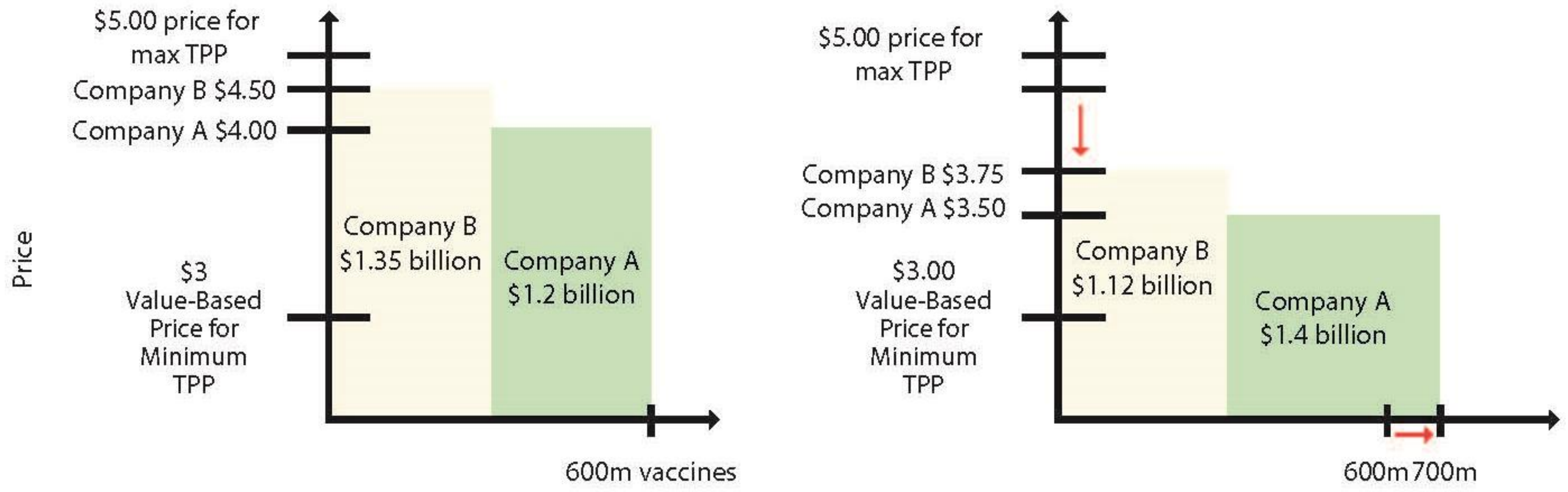
# Multiple Entrant Competition




Note: Indicative Values Only

Company A and B operate in the market and price at maximum value-based level allowed

Volume

Company A and B choose to lower prices below maximum allowed levels but their revenue stays the same because total volumes increase

- Any vaccine meeting minimum TPP can qualify to compete for a portion of the BBAMC commitment
- Pre-agreed value-based price is maximum that company can charge
- Companies can voluntary lower prices below maximum allowed level to compete for larger share of the market
- Countries must fulfill overall revenue commitment but can choose between qualifying vaccines

# Underwriting National Purchase Commitments: A Simplified Strawman

Other potential underwriters could include government bonds, social impact bonds, or national bank reserves

**Country Government**

**Multilateral Development Bank**

### Before the vaccine comes to market

The country signs an ex ante agreement with a multilateral development bank to guarantee the commitment.

The country commits to purchase 1,000 vaccines at $10 each, for a total of $10,000.

The MDB guarantees the country's $10,000 commitment.

### Once the vaccine comes to market

Per the terms of the agreement, the country's commitment converts to a $10,000 liability on the MDB's ledger. The clock starts ticking on a 3-year window to launch the vaccine and make good on the commitment.

The country purchases 900 vaccines at $10 each, for a total of $9,000.

The MDB takes on a $10,000 conditional liability for the country.

### After the end of a three-year window

The remaining balance of the country's commitment converts to sovereign debt to the MDB, subject to pre-agreed repayment terms. The capital (to be repaid by the country) is used to purchase the remaining vaccines for the country. If the country no longer needs the vaccines, they are donated to another country.

The country has an unfulfilled commitment of 100 vaccines at $10 each, for a total of $1,000.

The MDB pays the remaining $1,000 to purchase the vaccines. The country owes the MDB $1,000 in sovereign debt.

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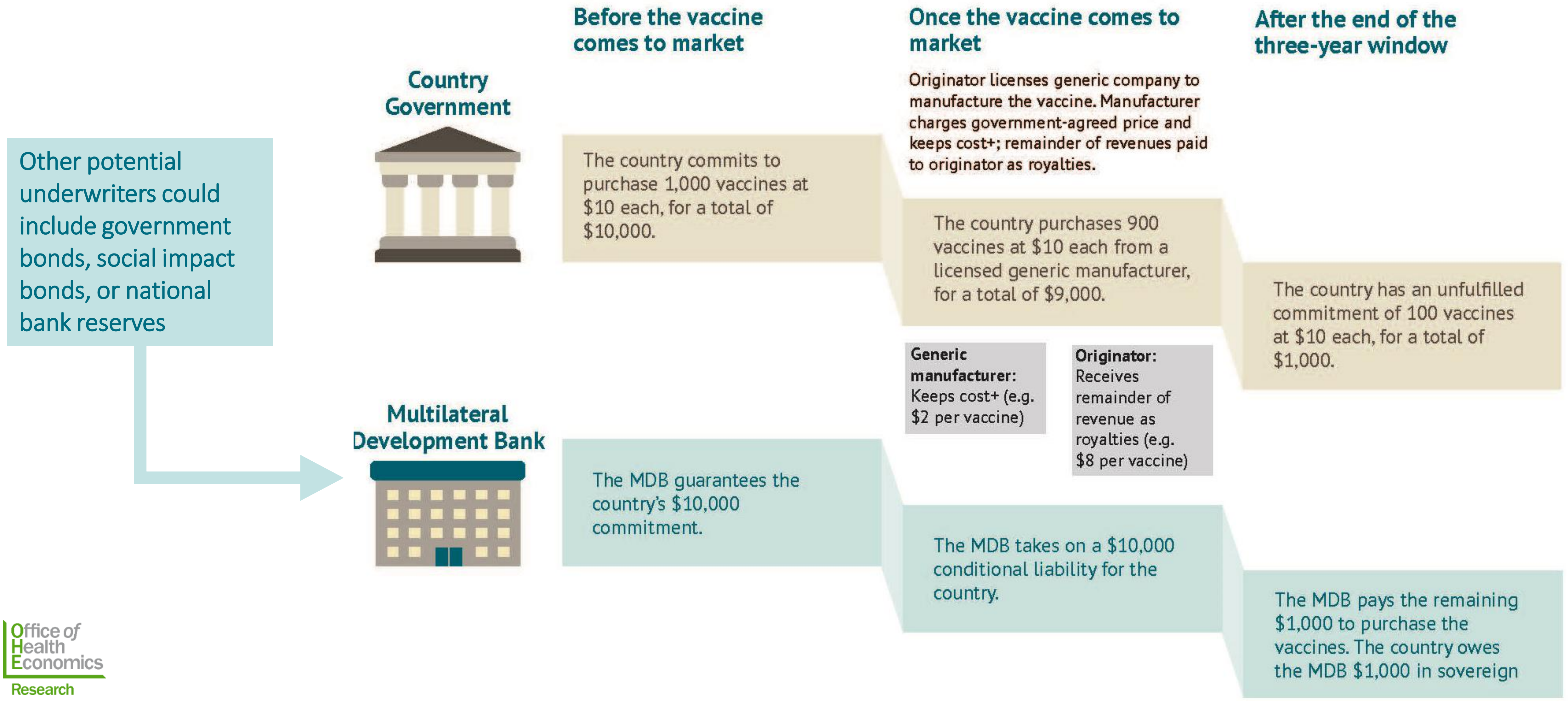
# Underwriting National Purchase Commitments: Additional Steps with Local Licensing

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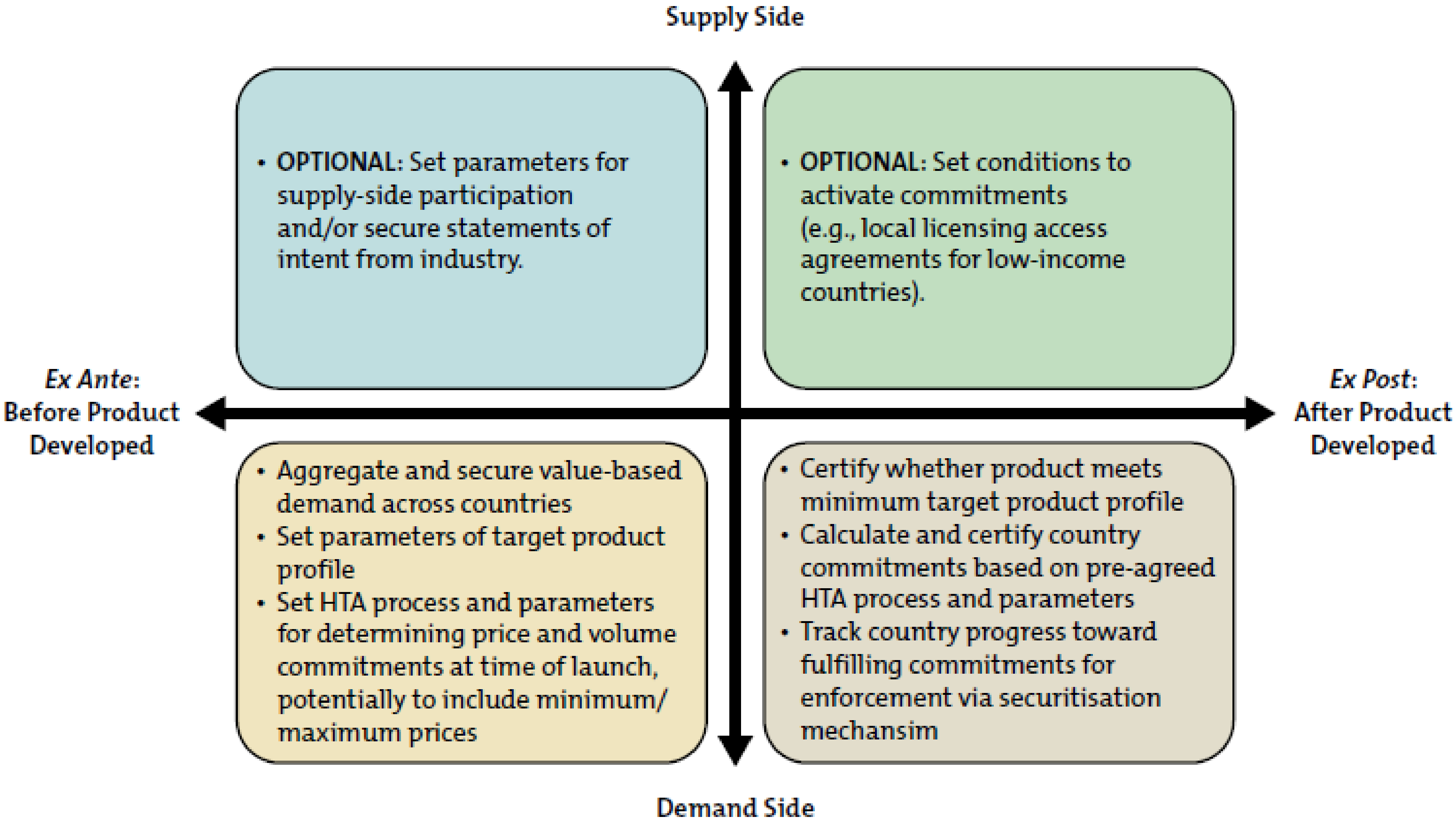
# Benefit Based Price and Volume: Axes of Uncertainty

# Mapping Essential and Supplementary Governance Functions for the BBAMC



# BBAMC Proposes a Moderate Level of Collaborative Purchasing

### Minimal Collaboration

- Countries make political commitment to use predefined HTA process at launch to determine price and volume.
- Commitments are unsecured; reputational commitment only.
- HTA process implemented by country governments.
- No secretariat, or skeleton secretariat to track commitments only.

### BBAMC

- Countries make coordinated, secured purchase commitments via a financial intermediary.
- Central coordination unit sets TPP (and minimum TPP), sets and enforces common approach to alue assessment, tracks commitment fulfillment, and negotiates directly with R&D actors.
- HTA process to define price and volume commitments implemented by country governments with oversight by central coordination unit.
- Each country pays country-specific value-based price for vaccine.
- Each country manages own purchasing to draw down against commitment.

### Joint Purchasing

- Countries make coordinated, secured purchase commitments; all countries pay the same price.
- All purchasing is done directly through a joint (centralised) purchasing unit; countries must make financial contributions to the central unit to cover their purchases.

Less Collaborative ⟵ ⟶ More Collaborative