Developing countries Vaccine manufacturers: Categorization?

Miloud Kaddar
Senior Adviser, Health Economist
WHO, Geneva
DEVELOPING and EMERGING MANUFACTURERS

Brazil
- Panacea Biotec
- Bharat Biotech
- Biological E (BE)
- Serum Inst. of India
- CIGB
- Instituto Finlay
- Bio-Manguinhos
- Butantan Institute
- Biovac
- CNBG
- Chengdu
- Shanghai (SIBP)
- Sinovac
- Shenzhen AVP
- Shenzhen Kangtai

S. Korea
- Berna Green Cross (Berna)
- LG Life Sciences (LG)

Mexico
- Birmex

India
- Biofarma

Indonesia
Developing countries vaccine manufacturers

- Increasing role and contribution at global level
- Increasing number of vaccines and doses, PQ products
- Basic and innovative vaccines
- UN markets but also middle income countries and private market
## DCVM: a diverse group

<table>
<thead>
<tr>
<th>1. Manufacturers with very few products only for domestic market</th>
<th>2. Manufacturers with a large number of products only for domestic market</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Manufacturers with few products targeting both domestic and UN markets</td>
<td>4. Manufacturers with a large number of products targeting domestic, UN and private markets</td>
</tr>
<tr>
<td>5. Manufacturers with a large number of products targeting domestic, UN, private and OECD markets</td>
<td></td>
</tr>
</tbody>
</table>

+ Legal status: public/private with various options
… a very diverse group of producers

First distinction: public or private or PPP

Second: focusing on domestic or global market? Or both?

3rd: only basic vaccines or combo and innovative vaccines or both

4th: engaged in some kind of partnership with MNC and external support or not

Fifth: Focus only on vaccines

6th: R&D investment and effort
Categorization: potential criteria

- Owner
- R&D
- Main market
- Vaccine Portfolio
- Diversification
- Partnership
<table>
<thead>
<tr>
<th>Owner</th>
<th>Vaccine Portfolio</th>
<th>Size of Market</th>
<th>Partnership</th>
<th>Diversification</th>
<th>Invest in R&amp;D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm</td>
<td>Public</td>
<td>Private</td>
<td>PPP</td>
<td>Basic vaccines</td>
<td>Combo and new</td>
</tr>
<tr>
<td>Management and Governance</td>
<td>Demand Trends</td>
<td>Share, trends, income growth</td>
<td>Terms, drivers, outcomes</td>
<td>Innovation Relevance</td>
<td>Complementarity, Financial space</td>
</tr>
</tbody>
</table>
Implications for the manufacturers?

- Capacity to survive, to compete and add value
- Profitability and ability to growth and invest
- Ability to manage risks and take advantage of opportunities
- Capacity to innovate and to penetrate wealthy markets
Implications for the global market?

More homogeneous or heterogeneous DCVM group?

More competition and innovation or more consolidation and monopoly situations?

More choices and affordable products or more constrained supply?