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Background

Well-performing supply chains improve health outcomes by ensuring the availability of essential medicines at health facilities. Reliable information about supply chain operating costs can help stakeholders make sound decisions to—

- strengthen supply chain performance
- support advocacy for supply chain funds
- realign pricing policies.

In 2010, Nigeria's Federal Ministry of Health (FMOH) faced several such decisions. To inform these decisions, the FMOH sought to understand the costs of the contraceptive logistics management system.

Methodology

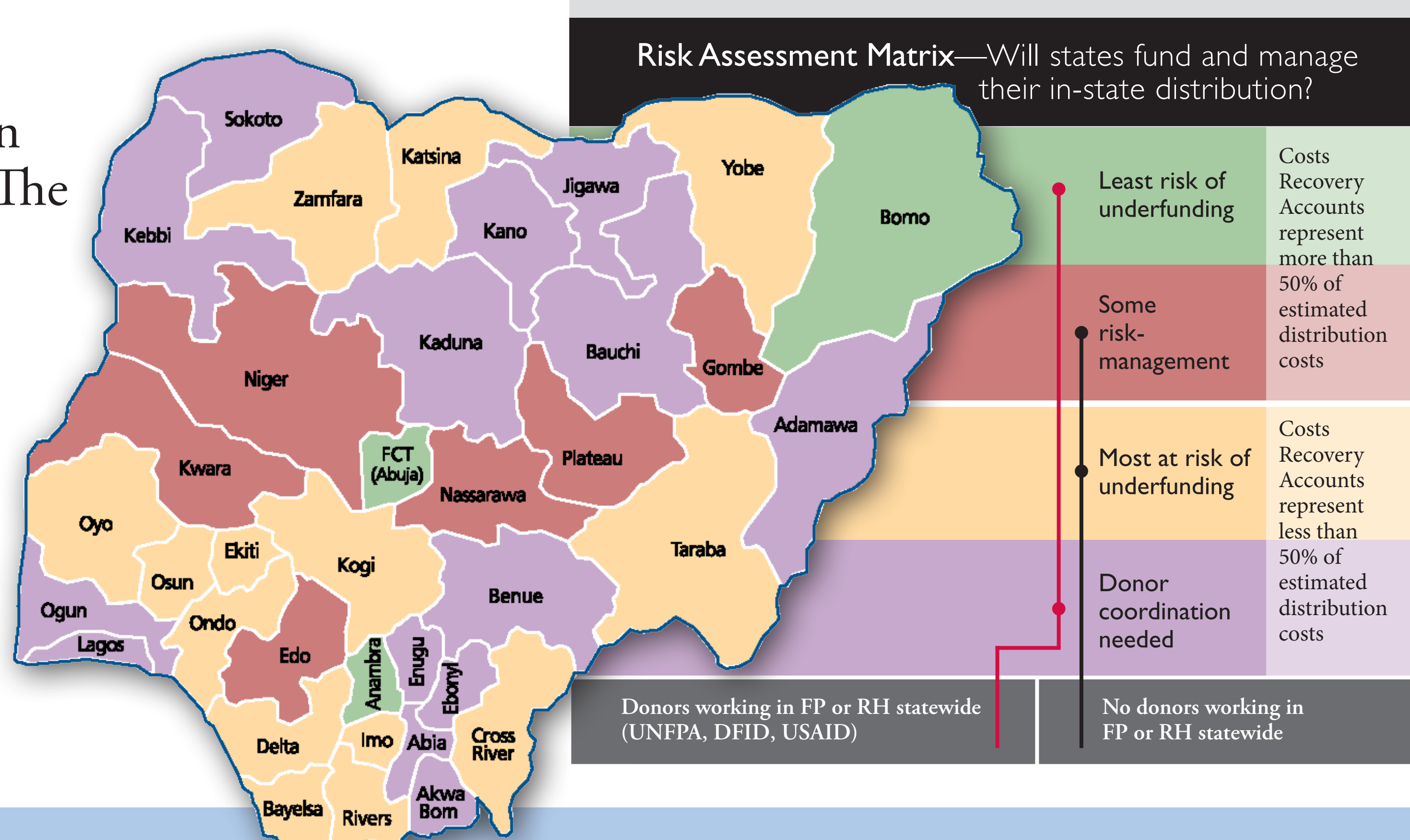
The FMOH completed a supply chain costing study using the Supply Chain Costing Tool (SCCT), an activity-based approach to analyzing costs developed by the USAID | DELIVER PROJECT. The study sampled facilities in six states that offer family planning (FP) commodities, as well as the supply chain functions carried out by the FMOH and its national partners: UNFPA, USAID, and DFID. Study organizers extrapolated sample results to estimate national supply chain costs.

After the study, the FMOH held two national workshops for FP coordinators and the directors of primary healthcare. Participants updated their commodity forecasts, then used data from the costing study and budgeting tools to—

- determine the volume of commodities they would need to distribute
- identify the costs associated with various distribution system scenarios
- estimate distribution costs relative to the value of the commodities distributed
- compare distribution systems.

Each state drafted an operational plan that became its main advocacy tool. The plans included—

- forecast volumes
- a proposed distribution model
- key assumptions
- annual distribution cost estimates
- clear next steps and follow-up actions to ensure funding.



Program Intervention/Activity

To improve efficiency and harmonize elements of its existing parallel supply chains, the FMOH began to evaluate possible structural changes to the contraceptive supply chain. This supply chain had been funded through a cost recovery model based on user fees charged to clients. At the same time, the Government of Nigeria announced that it would eliminate the user fee, which it considered a cost barrier to users. This plan would eliminate the source of funds for contraceptive distribution. The forthcoming changes would require that all 36 states and the Federal Capital Territory (FCT) in Nigeria—

- prioritize supply chain improvements
- decide how to reorganize and refinance contraceptive distribution
- determine how to accommodate a potentially significant increase in client demand because the cost barriers were eliminated.

The states used the results of a supply chain costing study to estimate the cost impact of distribution designs and budget decisions.

Results/Key Findings

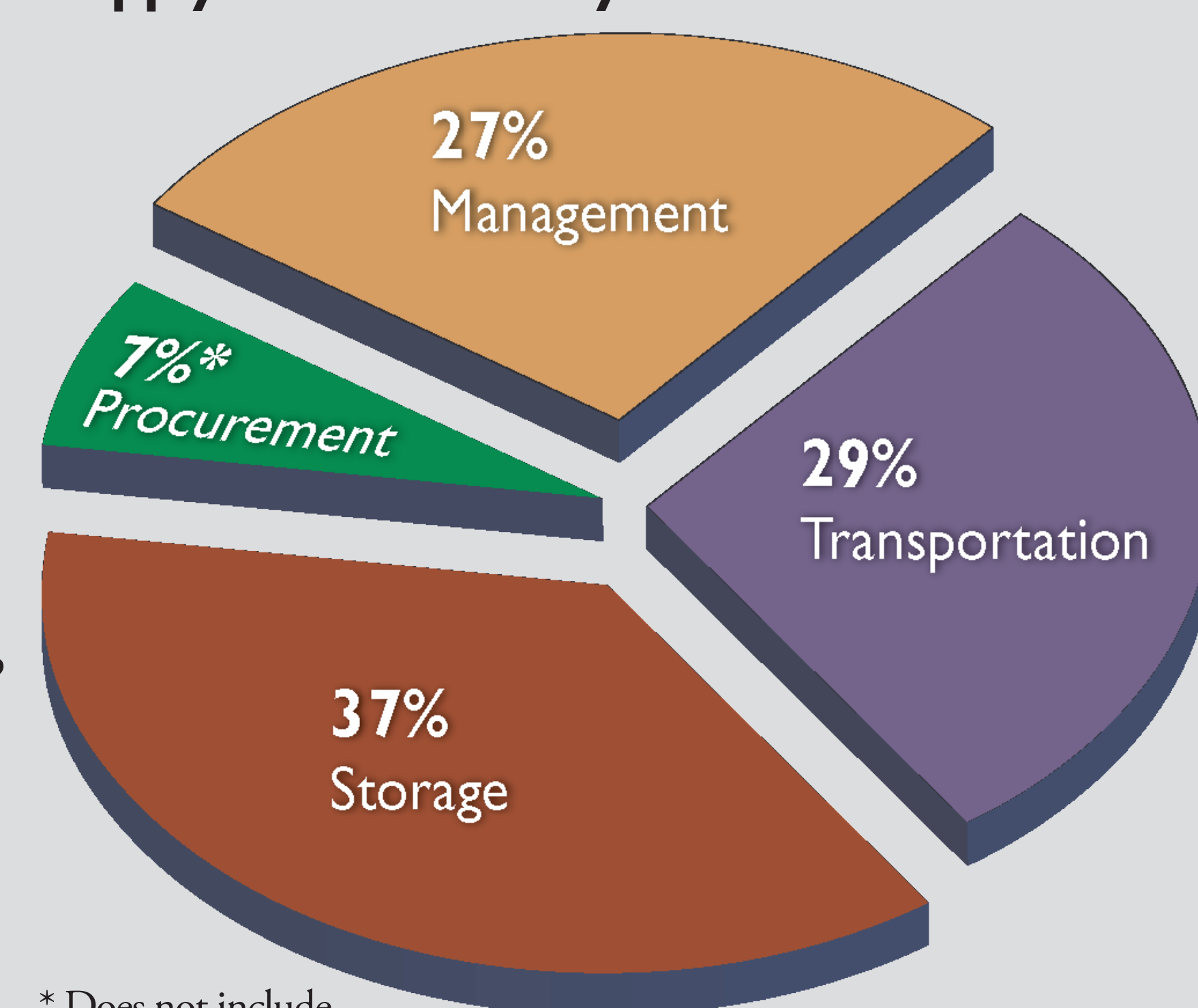
Study results showed—

- high fixed costs and low contraceptive commodity volume throughput at all levels
- given the system throughput, labor and warehousing were arbitrarily allocated and underutilized
- transportation at lower levels was not optimal, with exclusive transport of contraceptives resulting in underuse of cargo space.

These findings indicated that an increase in throughput may be possible without significantly increasing costs.

Updated forecasts showed that most of the states handle relatively small volumes of contraceptives; lower-level distribution volumes were less than the capacity of a small passenger vehicle. Annual costs for the proposed distribution models were estimated at less than N4 million (\$26,000), each, for 26 of 37 states; and N127 million (\$0.85 million) for all states.

Estimated National Contraceptive Supply Chain Costs by Function



* Does not include the cost to procure commodities.

Costing Study Results

Distribution cost per \$1 of commodity value: \$0.88



Distribution cost per \$1 of commodity value with new forecasts and distribution models: \$0.12*



* Value and volume of commodities increased significantly without a rise in costs, creating better cost per dollar of supply chain performance

Program Implications/Lessons

- Knowing the actual costs of getting commodities to health facilities is essential for program planning, budgeting, and advocacy. For Nigeria, costing was critical for making decisions about the supply chain design and fund requirements at the state level.
- Supply chain cost information can help estimate the impact of changes to a supply chain. Using cost scenarios and cost comparisons, Nigeria's states selected the most cost-effective distribution models that supported the rational use of resources.
- Costing data can highlight risks in the supply chain. By comparing balances in the cost recovery accounts to the estimated costs of distribution, the states estimated the number of months they could fund commodity distribution before funds were depleted. This also showed which states were most at risk for distribution disruptions because of insufficient funds.