MIT SCALE RESEARCH REPORT

The MIT Global Supply Chain and Logistics Excellence (SCALE) Network is an international alliance of leading-edge research and education centers, dedicated to the development and dissemination of global innovation in supply chain and logistics.

The Global SCALE Network allows faculty, researchers, students, and affiliated companies from all six centers around the world to pool their expertise and collaborate on projects that will create supply chain and logistics innovations with global applications.

This reprint is intended to communicate research results of innovative supply chain research completed by faculty, researchers, and students of the Global SCALE Network, thereby contributing to the greater public knowledge about supply chains.

For more information, contact
MIT Global SCALE Network

Postal Address:
Massachusetts Institute of Technology 77
Massachusetts Avenue, Cambridge, MA 02139 (USA)

Location:
Building E40, Room 267
1 Amherst St.

Access:
Tel: +1 617-253-5320
Fax: +1 617-253-4560

Email: scale@mit.edu
Website: scale.mit.edu

Research Report: ZLC-2010-9
A Comparative Analysis of In-Market Pharmaceutical Distribution Channel Strategies in Sub-Saharan Africa
Gifty Esi Mankartah
For Full Thesis Version Please Contact:
Marta Romero
ZLOG Director
Zaragoza Logistics Center (ZLC) Edificio
Náyade 5, C/Bari 55 – PLAZA 50197
Zaragoza, SPAIN
Email: mromero@zlc.edu.es
Telephone: +34 976 077 605
A Comparative Analysis of In-Market Pharmaceutical Distribution Channel Strategies in Sub-Saharan Africa

By Gifty Esi Mankartah
Thesis Advisor: Prof. Prashant Yadav,

Summary:
The pharmaceutical market in Sub-Saharan Africa is perceived to be small and risky. In recent years, there has been growing interest in this market due to its future business potential. This thesis identifies in-market distribution channel options, assesses key risks, and explores possible strategies for mitigating these risks.

KEY INSIGHTS
1. The key risks identified are operational risks and credit risks.
2. Adequate capital investment in operations and efficient operational systems mitigate operational risks.
3. Credit risks may be mitigated by improving credit management systems and diversification of financial risks.

Introduction
Traditionally, large multi-national pharmaceutical companies perceived Africa as a small risky market. However, in recent years, there has been growing interest in serving markets in sub-Saharan Africa. This renewed interest has appeared for two reasons; namely, the future business potential for these markets is large, and secondly, by so doing, it signals good corporate citizenship for the multi-national pharmaceutical companies.
In spite of the apparent market potential, the limited ability of countries in sub-Saharan Africa to pay, and the inconsistent flow of funds from donor agencies further intensify the perceived riskiness of this market. Further, lack of effective supply chains is considered a key reason for the slow materialization of demand in these markets. This thesis, therefore, attempts to find the appropriate supply chain strategy for a large pharmaceutical company to improve access to its medicines in sub-Saharan Africa for each of the identified customer segments.

Distribution systems in sub-Saharan Africa
The key steps in drug distribution are shown in Figure 1 below.

Figure 1: Drug Distribution Process (Ondari, 2005)
Distribution of pharmaceuticals in Sub-Saharan Africa is predominantly through three principal...
systems, namely: public, faith-based or mission and private sectors. The public distribution system serves the public sector health facilities. Mission serves the public and mission health facilities as well as nongovernmental organizations providing humanitarian health services in the region.

A summary of the current distribution approaches is shown in Figure 2 below.

The private serves all the sectors and is perceived as the most important distribution system now and in the future. It is estimated that the private sector serves 60% of the population and is the first point of call for seeking healthcare.

Research methodology

This was a case study of in-market pharmaceutical distribution channel strategies in Ghana. In order to comprehensively study the pharmaceutical supply chain channel strategies in Ghana and to make valid conclusions, both secondary and primary data were collected.

Data were analyzed using conceptual content analysis. This method was selected because the data were primarily qualitative in nature. The information obtained from the interviews conducted by phone and other secondary sources was grouped in themes and categories (concepts) that defined the distribution channel strategies, associated risks, and recommendations for risk mitigation. The results of the analysis were used to draw conclusions.

Results and Discussion

Comparison of the distribution channel options according to general criteria in business demonstrates the advantages of each channel (see Figure 3). Distribution channel options likely to be important in the future will be the most profitable, efficient, and provide quality service with the least risk. Distribution channel options of Agent/Distributor> Wholesaler>Pharmacy/Health Service Provider and Subsidiary/Distributor>Van Sales>Pharmacy/Health Service Provider are likely to give the highest revenue, lower operational costs, and quality service with minimal risk. Operational cost remains high in channels providing mobile distribution services. Outsourcing of this service to third party logistics providers may be an option to reduce costs.

Key risks in pharmaceutical distribution

<table>
<thead>
<tr>
<th>Distribution Channel</th>
<th>Key Risks</th>
</tr>
</thead>
</table>
| Agent/Distributor-Pharmacy/Health Service Provider | • Competing Products at wholesale  
• Narrower range of products marketed  
• Poor diversification of risks among few buyers |
| Agent/Distributor-Pharmacy/health service provider | • Low patronage  
• Lower product availability in market  
• Limited sales to selected customers |
| Agent/Distributor-van sales-pharmacy/health service provider | • High operational cost of vans  
• Security risks to products  
• Poor road infrastructure |
| Agent/wholesaler-SubWholesaler-Pharmacy/health service provider | • Poor storage conditions  
• Increased product damage  
• Less price control |
| Subsidiary/Distributor-wholesale-pharmacy/health service provider | • Global perspective, poor local strategy  
• Misunderstanding of market |
<p>| Subsidiary-Distributor-Van | • Less commitment to achieve targets |</p>
<table>
<thead>
<tr>
<th>Distribution Channel</th>
<th>Key Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales-pharmacy/health service provider</td>
<td>• Low profitability</td>
</tr>
</tbody>
</table>
| Subsidiary/ Distributor-pharmacy/ health service provider | • Ineffective penetration of product  
• Limited sales to large customer base |

According to the opinion of the stakeholders interviewed, risk mitigation should focus with equal emphasis on two main areas, credit risks and operational risks. Credit management is a challenge, as support from the banking and insurance sectors are minimal or inaccessible to distributors. Risk sharing with financial institutions, improvement of credit control management systems, and enforcement of laws governing credit systems can mitigate these risks. Operational risks are exacerbated by limited budgets for capital investments in operations, low qualification levels of operational staff, and low technical expertise in managing operations efficiently. An increase in financing of capital investments for operations is required to improve the quality of service delivered. Outsourcing to third party logistics providers can be used to diversify operational risks. Addressing these risks is crucial to improve distribution systems in Sub Saharan Africa. A possible channel to consider is the manufacturer establishing a commercial subsidiary and supplying through a set of distributors. The subsidiary will be able to improve risk management by collection of better information from distributors, pharmacies and health service providers to reduce uncertainty in demand. This model may reduce financial risk by the subsidiary supporting the distributor with training in sound credit management practices to improve cash flow. The distributor benefits from the subsidiary in technical support to improve operational procedures. Better distribution practices will reduce operational risks. The model will shrink the buildup of price margins thereby increasing affordability, and boost demand as the end user price is lowered.

Conclusion

The private sector plays a significant role in the distribution of medicines. This trend is likely to increase as it is viewed as a channel that can be used to increase access to essential medicines. The sector, however, faces significant challenges such as credit risks and operational risks that hinder its ability to expand access to medicines.

Approaches to improve credit management and operational efficiency should be explored to equip and prepare the sector to undertake its increasing role as a major distribution channel for improving access to essential medicines in Sub Saharan Africa.

The most suitable model for this market is the manufacturer establishing its in-country subsidiary and supplying through a set of distributors. This model will boost the private sector in its role as the most important distribution channel for improving access to essential medicines in Sub-Saharan Africa.

Cited sources


