OPPORTUNITIES IN THAILAND’S HEALTHCARE SECTOR

BUSINESS SWEDEN

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Business Sweden in Thailand
THAILAND REPRESENTS ONE OF SOUTH EAST ASIA'S LARGEST HEALTHCARE MARKETS, AND ONE OF THE LARGEST MEDICAL TOURISM MARKETS WORLDWIDE. THIS BRINGS MANY OPPORTUNITIES TO SWEDISH HEALTHCARE COMPANIES
THAI HEALTHCARE EXPENDITURE IS EXPECTED TO EXHIBIT A STEADY GROWTH OVER THE NEXT 5 YEARS

GROWTH OF THAI HEALTHCARE MARKET USD BILLION

2010: 12.4
2015: 19
2020: 28.5

COMMENTS:
- Thailand is the second largest healthcare market in Southeast Asia after Indonesia making up roughly 20% of the region’s expenditure.
- Over the 10 year period 2010-2020 the market is expected to exhibit a CAGR of 8.7% and grow from 12.4 to 28.5 billion USD.
- Drivers of growth include increases in government funding, private participation, medical tourism, increased income levels and an ageing population.
- Thailand is one of the largest medical tourism markets worldwide. Revenue increased with 194% between 2007-2013 from 1.5 billion USD to 4.7 billion USD.
- The percentage of population aged over 65 is currently 10% the elderly part of the population is expected to increase to 17.2% or about 17 million people in the next 10 years.

THAILAND REPRESENTS ONE OF SOUTH EAST ASIA'S LARGEST HEALTHCARE MARKETS

SOURCE: AM CAPITAL MGMT, BMI
SPLIT OF HEALTHCARE MARKET BY SEGMENT
TOTAL = USD 20.4 BILLION

- Services: 14.3 billion
- Pharmaceuticals: 4.7 billion
- Medical Devices: 1.4 billion

COMMENTS:
- Healthcare Services currently represents the vast majority of the Thai healthcare market, representing close to 75% of the total market value.
- This is followed by Pharmaceuticals at USD 4.7 billion and Medical Devices at USD 1.4 billion respectively.
- Over 80% of medical devices are imported. Companies from the US, Japan and Germany make up over 60% of the market.
- Within the medical devices segment, product areas such as orthopedics and prosthetics, diagnostics and consumables will exhibit the fastest growth.
- Through medical tourism, Thailand receives millions of foreign patients each year seeking treatments such as cardiology, oncology, ophthalmology, and spinal surgery, driving demand for equipment within these fields.

LARGE IMPORTS OF MEDICAL DEVICES REPRESENT ATTRACTIVE OPPORTUNITIES FOR SWEDISH COMPANIES.
## OVERVIEW OF OPPORTUNITIES IN THAILAND BASED ON SEGMENT

<table>
<thead>
<tr>
<th>PUBLIC SECTOR</th>
<th>PRIVATE SECTOR</th>
<th>CONSUMER SECTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government health expenditure represents 80% of total expenditure on healthcare services</td>
<td>Private sector health expenditure represents 20% of total expenditure on healthcare services</td>
<td>Opportunities for end consumers is focused on pharmaceuticals</td>
</tr>
<tr>
<td>Most services are financed by universal health insurance coverage</td>
<td>Most services are financed to out of pocket and private health insurance</td>
<td>Prescription drug market make up 80% of total sales. Patented drugs make up about 40% of total prescription sales. Most of the population cannot afford patented drugs</td>
</tr>
<tr>
<td>There are 1,043 public hospitals in Thailand. Governmental hospitals has received few major investments lately</td>
<td>Private sector growth have been larger than public sector over the last years. Expansion is driven around construction of large hospitals mainly in Bangkok.</td>
<td>Pharma sales is driven by a continued widening of the basic universal healthcare scheme that increases accessibility and a ageing population</td>
</tr>
<tr>
<td>The Ministry of Public Health is now reviewing the 885 hospitals under their management.</td>
<td>There are 332 private hospitals. 44% are located in Bangkok and 28% in surrounding provinces</td>
<td></td>
</tr>
<tr>
<td>Bangkok Metropolitan Administration has 9 hospitals under their management and plan to construct more hospitals to serve the future demand within the Bangkok area</td>
<td>Bangkok Dusit Medical Services will increase its portfolio of hospitals from 35 to 50 by end 2015. The group just finalized a 180 bed hospital in Chiang Mai at a cost of 53 million USD</td>
<td></td>
</tr>
</tbody>
</table>

**THE PRIVATE SECTOR REPRESENTS LOW HANGING FRUIT FOR FOREIGN COMPANIES**

SOURCE: BMI, MOPH, BUS INTERVIEWS, AM CAPITAL
SUBSIDIARY OR AGENT IS THE PREFERRED SALES MODEL FOR MEDICAL EQUIPMENT IN THAILAND

OVERVIEW OF SALES CHANNELS FOR MEDICAL EQUIPMENT PRODUCTS IN THAILAND

- The two main sales channels are through government procurement or selling directly to hospitals.
- Local presence through agent/distributor or subsidiary is the most common sales model in Thailand.

LOCAL PRESENCE IS THE KEY TO SALES OF MEDICAL EQUIPMENT IN THAILAND

SOURCE: BUS INTERVIEWS, BMI
MEDICAL DEVICES NEED TO BE REGISTERED WITH THE FOOD AND DRUG ADMINISTRATION

OVERVIEW OF THE REGULATORY SCENARIO FOR MEDICAL DEVICES IN THAILAND

**FDA**
- The Thai Food and Drug Administration (FDA) under the Thai Ministry of Public Health (MOPH) regulates medical devices in Thailand.
- Medical devices need to be classified, registered, and approved by the FDA prior to import to Thailand (see Classification of the medical devices on next slide).

**Rules**
- Only new medical devices are allowed to be imported into Thailand.
- Product registration is valid for 2 years and issued to the importer of the product in Thailand. If a company plans to only export their products without setting up a company in Thailand, their Importer/Distributor will own the product registration right.

**Costs**
- All cost related to the FDA process would normally be absorbed by the Importer/Distributor, not the Exporter.

REGISTRATION COSTS ARE USUALLY BORNE BY THE IMPORTER

SOURCE: MINISTRY OF PUBLIC HEALTH, THAI FOOD AND DRUG ADMINISTRATION, BUS INTERVIEW
MEDICAL DEVICES ARE CLASSIFIED INTO THREE RISK TYPES WITH VARYING REGULATORY PROCESSES

OVERVIEW OF MEDICAL DEVICE CLASSIFICATION IN THAILAND

<table>
<thead>
<tr>
<th>Medical Device Class</th>
<th>Class I</th>
<th>Class II</th>
<th>Class III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Medical device to be licensed</td>
<td>Medical device to be notified</td>
<td>General medical devices</td>
</tr>
<tr>
<td>Product example</td>
<td>Condom, examination glove, surgical glove, disposable hypodermic hygienic syringe, disposable insulin syringe, HIV test for diagnosis &amp; screening and contact</td>
<td>HIV test for research and study, medical equipment for physical therapy, alcohol detector test equipment, silicon breast implant, etc.</td>
<td>All other medical devices, (about 90% of all equipment applications)</td>
</tr>
<tr>
<td>Risk level</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Time*</td>
<td>10-16 months</td>
<td>6-10 months</td>
<td>2-4 weeks</td>
</tr>
</tbody>
</table>

* Complex products in each category may take longer to register

- Once approval has been granted by MOPH, under the classification system above, an import license needs to be granted. This usually takes 3-5 months
- The FDA accepts medical devices that meet the following requirements: US FDA, EU CE mark, Japan Pharmaceuticals Affairs Bureau, Australia Therapeutic Good Administration and China State Drug Administration. All medical devices sold in Thailand need to have labeling and instructions in Thai
OVERVIEW OF THE REGULATORY SCENARIO FOR PHARMACEUTICALS IN THAILAND

FDA

- The Thai Food and Drug Administration (FDA) under the Thai Ministry of Public Health (MOPH) regulates pharmaceutical registration and grant import licenses.
- Registration is valid for 5 years (see Classification of pharmaceuticals on next slide).

Rules

- The Drugs Act of 1967 is the basis of drug regulation. Under the legislation, Thailand does not have an over-the-counter (OTC) classification. Drugs are classified as ready-pack, household and non-dangerous, all of which can be purchased without prescription.

Timeframe

- Time for drug registration varies between 1-2 years although some categories such as anti-HIV and anti-cancer pharmaceuticals is often administered faster.
# THE PHARMACEUTICAL REGISTRATION PROCESS VARIES DEPENDING ON DRUG CLASS

## OVERVIEW OF THE PHARMACEUTICAL REGULATORY LANDSCAPE IN THAILAND

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>General medicines</th>
<th>New medicines*</th>
<th>New generics</th>
<th>Thai traditional medicines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Pharmaceutical products with the same active ingredients and the same dosage forms as those of the original products, but manufactured by different manufacturers</td>
<td>Include products of new chemicals, new indications, new combinations or new delivery systems and new dosage forms</td>
<td>Medicines with the same active ingredients, doses and dosage forms as those of the new compounds registered after 1992</td>
<td>Include medicines with herbal ingredient with raw material from Thailand or imported</td>
</tr>
<tr>
<td><strong>Registration requirements</strong></td>
<td>Require only dossiers on product manufacturing and quality control along with product information</td>
<td>Require a complete set of product dossiers. (After approval it can only be used in hospitals or clinics for at least 2 years. Then safety reports must be submitted for consideration as to whether general marketing should be allowed)</td>
<td>Require dossiers of bioequivalence studies in addition to the required dossiers for generics submission</td>
<td>Require dossiers on product manufacturing and tests from reputable labs</td>
</tr>
<tr>
<td><strong>Time frame</strong></td>
<td>5-7 months</td>
<td>7-10 months (+2 years for commercial)</td>
<td>4-5 months</td>
<td>6-8 months</td>
</tr>
</tbody>
</table>

THE REGISTRATION OF NEW MEDICINES CAN BE TIME CONSUMING
SWEDISH LIFESCIENCE EXPORTS TO THAILAND ACCOUNT FOR LESS THAN 10% OF TOTAL EXPORTS

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Swedish Exports to Thailand (MSEK)</th>
<th>Total Swedish Lifescience Exports to Thailand (MSEK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>3,593</td>
<td>255</td>
</tr>
<tr>
<td>2011</td>
<td>8,757</td>
<td>287</td>
</tr>
<tr>
<td>2012</td>
<td>5,537</td>
<td>266</td>
</tr>
<tr>
<td>2013</td>
<td>6,718</td>
<td>195</td>
</tr>
<tr>
<td>2014</td>
<td>3,897</td>
<td>120</td>
</tr>
</tbody>
</table>

Ex. Swedish healthcare & life science companies doing business in Thailand include SCA, Nobel Biocare, Mölnlycke, Radi Medical Sys., Elekta and Getinge

LIFESCIENCE IS NOT A MAJOR SWEDISH EXPORT TO THAILAND

SOURCE: SCB
KEEP THE FOLLOWING SUCCESS FACTORS IN MIND WHILE DOING BUSINESS IN THAILAND

**OVERVIEW OF KEY SUCCESS FACTORS FOR DOING BUSINESS IN THAILAND**

<table>
<thead>
<tr>
<th>Do your homework</th>
<th>Thailand is a country full of customers, competitors and colleagues. Apply a fact based approach and develop a strategy for your entry and growth in Thailand.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take a long term view</td>
<td>Thailand is a long term market. Plan establishment in phases and bring patience and perseverance. Expect red tape, bureaucracy and lengthy procedures.</td>
</tr>
<tr>
<td>Hire the best people</td>
<td>Doing business in Thailand can be tougher than most markets – send you best man/woman for the job. Hire carefully and go for competence and attitude – not low cost!</td>
</tr>
<tr>
<td>Have a strategy for price/cost</td>
<td>Thailand can be very profitable, if you have a strategy for price and cost.</td>
</tr>
<tr>
<td>Be objective oriented</td>
<td>Focus on business objectives – Expect things not to go according to your plan Study negotiation techniques – They will come handy both in business and privately</td>
</tr>
<tr>
<td>Be careful when partnering</td>
<td>The right partner can make it – the wrong partner may break it! Be thorough in screening of local partners and choose carefully. Be very careful before entering a Joint Venture.</td>
</tr>
</tbody>
</table>
WITH 5 OFFICES IN SOUTH EAST ASIA WE ARE AT HOME ON YOUR FOREIGN MARKETS

BUSINESS SWEDEN’S PRESENCE IN ASEAN

- VIETNAM
- THAILAND
- MALAYSIA
- SINGAPORE
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MYANMAR, LAOS, CAMBODIA, BRUNEI AND THE PHILIPPINES ARE COVERED BY THE ABOVE OFFICES

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Business Sweden makes it easier for Swedish companies to grow internationally

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- CHOOSE STRATEGY
- ESTABLISH PRESENCE
- GROW BUSINESS
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