Significance
The silk sector in Cambodia is largely informal, small-scale and difficult to typify as a stand-alone industry in its current form. The sector is characterized by small-scale orders for tourist or domestic consumption. The future of the silk sector depends on whether it is promoted as a major export product or kept as a cottage industry. For Cambodia to become a major exporter of silk, the industry would benefit from significant consolidation and mechanization. For Cambodia to differentiate itself from major silk exporters such as Thailand or China, the quality, design and color of the silks produced in Cambodia may need to be more innovative than at present. Finally, industry standards could be agreed and enforced.

The World Bank published a Transport and Trade Facilitation Assessment (TTFA) report in 2013, designed as a snapshot of a country’s trading environment, viewed from the perspective of four key industries, including the silk industry. The report dissects the inputs and outputs of the sector by analyzing how the inputs arrive at the processing plant and are then exported. Each step of the value chain is examined for logistical issues. The analysis and recommendations are designed to provide an overview of logistics issues that affect the private sector, and to assist the government in examining its policy on silk exports.

Background
Cambodia is located between the largest exporter of silk yarn, China, and one of the largest exporters of traditional silk, Thailand. Its role in the global silk trade has, until now, been overshadowed by the largest suppliers in the region. However, the Khmer silk sector generates significant employment for households in rural areas. There are about 20,000 weavers in Cambodia, with the industry structured around village-level production using handlooms.

Trade and Markets
The silk industry has not developed a uniform supply structure due to its diffuse, cottage-industry level of development. The variety of product flows is shown in Figure 1. Yarn is obtained from Vietnam for the production of silk fabric for export and the domestic market. Silk fabric is imported from China for domestic consumption. Domestically produced yarn is used in the production of fabrics for export but accounts for only 2 percent of total yarn consumed. The reliance on imported yarn is due to two factors. First, the returns to farmers are too low, as the land needed to grow mulberry bushes can be better used for other crops that produce higher yields. Second, Vietnam and China can produce yarn at lower cost.

Figure 1: Material Flow for Silk Trade
Silk yarn from Vietnam is usually purchased through informal channels because of the relatively small volumes. The yarn is variable in quality, affecting its appearance and its ability to absorb dyes.

Only a small portion of the domestic production of silk goods is exported. Gross revenues are estimated at about US$3.5 million. This sum is less than the cost of the yarn imported from Vietnam or silk fabric imported from China, indicating that most silk is absorbed by the domestic market or sold in low volumes to tourists.

The informality of the current arrangements for importing yarn can complicate the process of obtaining Certificates of Origin. This is not a major issue at present since these certificates are only required for shipments to the EU or the US over €6,000.

**Potential Growth**

There is little growth potential for the domestic production of yarn, given the competition from crops that produce higher yields and the fact that farmers cannot compete on cost with Chinese producers. More potential for growth lies in the production of silk fabrics using imported yarn, since weaving does not compete directly with other agricultural activities, and yields higher returns than the production of cocoons. Domestic demand for fabric is expected to increase as the population grows and disposable incomes rise. Assuming a continued preference for locally woven fabric, domestic producers will be able to compete with Chinese manufacturers even without access to large-scale silk production using power looms as seen in Chinese factories. Cambodia will also be able to compete in the export market since Cambodia’s silk is marketed as handicraft, which requires the use of handlooms.

Growth in exports will depend on the ability to identify new markets and improve both the quality and availability of finished products. Currently, the larger silk producers are constrained by demand, while the smaller ones are constrained by cost and availability of high quality yarn. Until these constraints are overcome, the sector will fail to attract the attention of business and commercial banks. The decentralized nature of the industry also constrains investment.

**Supply Chain Issues**

The silk supply chain includes a number of productive activities such as sericulture, processing, external sourcing and marketing. The first three are conducted at the village level, either by individuals or cooperatives.

The principal participants in the silk supply chain are importers and suppliers of silk yarn, weavers, intermediaries (both pre- and post-weaving), organizations that coordinate production, firms that produce finished goods, local retailers and local buyers for export markets.

The Cambodian domestic market is dominated by four wholesalers in Phnom Penh. The challenge for these manufacturers is to produce designs that highlight the uniqueness of the Golden Khmer silk yarn, while at the same time offering styles that appeal to foreign buyers. Marketing is challenging, because Cambodia produces insufficient volume to be of interest to large foreign retailers and distributors. Also, it does not have the brand recognition to compete as a boutique product internationally.

The supply chain is highly fragmented. The exchange of intermediate goods between the participants is managed by traders. In many villages, cooperatives or NGOs have integrated these activities and eliminated intermediaries. However, a provincial trader is often involved in distributing finished goods to domestic retail outlets.

Small weaving enterprises sell their output through the commercial village-marketing system to medium-sized factories in the urban-marketing system. They purchase raw silk from suppliers on credit and often resell woven fabric to wholesalers/traders for cash. Larger reeling and weaving factories are located in urban areas and use modern equipment.

Exported finished products include plain silk fabric, scarves, handbags and cushions. The main destinations are the US, EU, Switzerland, Singapore, and Australia. Distribution channels include local retail, internet sales and exports to individual retailers. Domestic retail is a mix of higher-value goods sold through hotels and local boutiques and lower-value goods produced for the domestic market but purchased by tourists. Internet sales are business-to-consumer (B2C) with products sent directly to consumers.
**Business Models**

The business models used in Cambodia are differentiated by their sourcing of silk yarn and the extent of integration of their supply chains. The first model is the village weaver that produces fabric exclusively from local yarn. The second is the handicraft manufacturer that produces finished products using fabric produced in the village from a mix of local and imported yarn. The third model is the commercial manufacturer that produces finished products from fabric produced by weaving factories that use imported yarn but may also incorporate yarn from village manufacturers.

**Supply Chain Performance**

The producers surveyed make silk garments from a combination of local or imported yarn and dyes. The finished goods are sold through local outlets and also shipped directly to Europe, North America and East Asia.

Imported yarn costs about US$50/kg and is purchased from local wholesalers who deliver the yarn within a few days and are paid in cash. Locally produced yarn is purchased directly from the producers. The delivery time, which includes dyeing the yarn, is up to 15 days. Payment is on a cash basis paid at time of delivery.

**Objectives and Strategies**

The silk industry has a small share of Cambodia's economic activity and trade, and lacks the inputs, scale and organization to be a major contributor to the domestic economy or export mix. However, as a small-scale, village-based activity, it provides significant rural employment, especially for women and the infirm. A strategy to increase the volume of production at the village level may therefore be welfare enhancing for local communities. Policy options for expanding the industry include introducing modern management of productive technology, perhaps through the introduction of cooperatives in each province that can form a management structure, and provide a framework through which to target reforms. The production of silk products for export continues to be a handicraft industry based on village-level craftsmen, which hampers economies of scale. While production can expand or contract to meet demand, it is impossible to introduce modern management or production technology in the current structure. Handlooms allow the industry to fill small orders with short delivery schedules, but the outdated equipment makes it difficult to control costs and quality. If the industry is to grow, but continue to generate rural employment, then a new mechanism must be developed for organizing this activity.

Cambodia faces significant competition from China for manufactured silk products and from Thailand in traditional hand-woven products. This competition extends to Cambodia's domestic market. Since Cambodia lacks the scale to compete, it must focus on niche markets. Final products are marketed based on the quality of the fabric and the cachet of being produced in Cambodia using traditional means, rather than on style. The high-end products use "Golden Khmer silk yarn" but the supply relies on small weaving operations, creating problems with the reliability and consistency of the yarn.

A diversified set of distribution channels is used, including local sales to tourists, internet sales and supply contracts with boutique outlets. In order to grow the Cambodian silk industry in the long run, it should develop new products, supported by new distribution channels. These need to be high-value products, since Cambodia cannot compete on cost or scale. One possibility is to refocus on the production of fabric and expand village-level production; and emphasize color and quality through the formation of cooperatives.

**Implementation**

Efforts to expand production and develop new distribution channels will require cooperation between the public and private sector. In order to make the transition from manufacturing handicrafts to supplying fashion accessories, it will be necessary to increase the scale of production. This can be achieved through consolidation of production based on cooperatives, mergers, or marketing arrangements. Because of the significant involvement of NGOs in exporting silk products, this effort will require collaboration with the Government and the private sector.

The consolidation of production would be complemented by adjustments to the inbound and outbound supply chains. By increasing the size of orders for yarn, dyes and other inputs, the industry can develop a direct relationship with suppliers and customize their orders. Individual producers can develop joint marketing efforts with individual brands treated as separate product lines. There are also opportunities for reducing costs within the supply chain, especially through tighter integration of the inbound supply chains, and consolidation of shipments on the outbound supply chains. The main focus could be to increase the value of the fabric itself. Since silk fabric is a standard product, it requires differentiation in the quality of weaving, dyeing and product design. One option is to produce higher-quality fabric. This would be sold to high-end producers of fashion accessories and household furnishings, and take advantage of the flexibility of the village-based system, while introducing tighter
quality control. It would transfer responsibility for design and marketing to those more familiar with the market. An example of the success of this strategy is the case of the Jim Thompson Thai silk company, which revived the Thai silk industry.

The Government may wish to focus on developing a more efficient connection between Vietnamese suppliers of yarn and domestic buyers by simplifying border-crossing procedures. This may encourage buyers to formalize their imports and cut out intermediaries. The weaving factories could import yarn directly from producers, and establish a relationship to ensure consistency and quality of the yarn. The Government can work with the private sector to encourage a joint purchasing effort. It can support marketing to complement private sector efforts. Finally, it can coordinate with the private sector to develop and enforce standards for a Cambodian Silk Quality Assurance Label and to provide training to factories on Standards, Metrology, Testing, and Quality (SMTQ).

**Recommendations**

1. Implement policies to encourage the formation of cooperatives in order to increase the scale of production and rationalize the supply of yarn.

2. Encourage the production of higher quality fabric through cooperatives or marketing associations, still using the village-based approach, but emulating the Jim Thompson model.

3. Use the cooperative structure to make formal business relationships with Vietnamese suppliers, in order to establish a regular supply chain and bargain for better input prices.

4. Initiate a joint purchasing effort on behalf of the cooperatives or marketing associations.

5. Empower appropriate agencies (such as the Institute of Standards Cambodia) to develop and enforce relevant standards to promote exports.

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