Comparative analysis of Gum Arabic performance before and after removal of Gum Arabic Company concession

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Abstract

Sudan is the world’s largest producer of gum Arabic. Which is a natural forest product; produced from Acacia senegal and Acacia seyal trees.

Sudan is considered as a key supplier of raw gum Arabic in the world as it used to provide more than 80% of high quality gum Arabic in the world market. The product is used primarily in the food industry but has medicinal and technical uses as well.

Gum Arabic Company (GAC) had a monopoly on the export of raw Gum Arabic from the Sudan during 1969-June 2009, when the Gum Arabic Board (GAB) was established.

This study aimed to measure the concentration of gum Arabic export by company before and after (GAC) concession. It also tended to measure concentration of Sudanese gum imported by countries.

The study used secondary data obtained from relevant official sources. It carried out the percentage to calculate the concentration of gum Arabic by countries and companies during 2000 – 2013.

The results of the study illustrated that the majority of gum Arabic was exported to France and Germany, and the total exports of the country reached 42 thousand metric tons.

1. Introduction:

Sudan is a vast country in Africa with an area of 1.9 million square kilometers. Its total population in 2008 was about 33.4 million people (Sudan Central Bureau of Statistics, 2009). Figure (1) shows the Sudan location.
Forestry in Sudan includes wood products in form of firewood, charcoal and timber and non-wood products in form of wild fruits and gum products, particularly gum Arabic. Forestry also provides protection of watershed, fodder for domestic animals and wildlife. Gum Arabic in Sudan produced in gum Arabic belt, which stretches from the western border with Chad to the eastern border with Ethiopia. The gum Arabic belt covers an area of about 500 thousand square km. The Belt is home to roughly one fifth of the population of Sudan. Figure (2) demonstrate Gum Arabic belt in Sudan.
Gum Arabic is the dried exudate produced from the trunk and branches of the *Acacia senegal* tree, known as hashab, and the *Acacia seyal* tree, known as talha (FAO, 1999 and Yasseen, 2001).

The acacia trees also contribute to the provision of energy and construction needs of the households supplying them with firewood, timber for building and furniture making up. The acacia tree cycles ranges between 20-25 years when it becomes fully mature. The tree starts producing the gum at 5 years after planting. Gum Arabic is obtained from the sap of acacia trees.

The beginning of gum Arabic production season starts after the end of rains. By that time, the tree growth stops and loses its leaves and becomes dormant. The gum producer taps the tree using an axe or hook (sunki) tool which makes a scar on the bark of the branches and creates a wound thus facilitating the flow of the gummy sap over the following weeks (Yasseen, 2001).

The production of gum occurs as a physiological process in response to a wound made, and a gum sap exudes out to protect the branches of the tree against external factors and infection (Awouda, 1974 and Yasseen, 2001). Then, the producers come and collect crude gum in lumps. There are two tapping seasons, the first one in October/November and the second is in March/April. The first collection is made after 3 to 6 weeks from tapping, followed at intervals of 10 to 15 days. About 4 to 8 collections can be made in the season (Awouda, 1974 and Yasseen, 2001).

Annual yield of gum varies widely among trees due variation in the level of husbandry practice and age of the tree.

Gum Arabic is used in various industries such as food, beverages, medicine, soft drinks and chewing gums.

Sudan is considered as a key supplier of raw gum Arabic in the world as it used to provide more than 80% of high quality gum Arabic in the world market (Larson, 1991 Macrae, 2002 and FAO, 2005).

The marketing of gum Arabic in Sudan is conducted under a regulated government control since 1969 when the Gum Arabic Company (GAC) was established to control the export marketing of gum. The GAC was authorized to announce an export price at the beginning of the gum season and also to supervise a minimum floor price at the local auction markets.

Sudan gum Arabic exports through these decades fluctuated due to many factors such as, unstable production and unstable policies of the Gum Arabic Company and competition from other countries as well as from synthetics. As a result of the poor performance of the exports of this strategic commodity in the world market and the need for improving it in the future, the Government of Sudan undertook positive steps towards deregulation of the Gum Arabic Company (GAC) concession rights in 2009 to provide incentives to producers to reactivate their production in favor of increased exports. The government established the Gum Arabic Board (GAB) for free gum Arabic trade in domestic and export markets, when many companies with free competition in gum Arabic exports.

The level at which the export price is set is decided as a result of market intelligence gained through network of overseas agents, which enables estimates to be made of likely demand for Gum Arabic, and the anticipated availability of gum from other supply sources. Through its ability to determine both producer floor price in domestic markets and the export price.
At the country level gum producers sell their gum to middlemen/merchants at the village or nearby city market, those can sell their gum in the auction markets organized by the government, whereby the product is sold to specialized merchants who are responsible for cleaning, grading and packaging. Then the companies can buy from the traders in the auction markets. Figure (3) demonstrates gum Arabic production channels.

**Problem statement:**

From the 1960's to the early 1990's, Sudanese gum accounted about 80 percent of the global gum trade; over the last 15 years, it has declined below 50 percent. From 50,000 tons per annum in the 50's and 60's, Sudan's gum exports declined to around 25,000 tons in the late 90's. Since then, Sudanese exports have been at an average of 25,000 tons (Bank of Sudan and GAC).

**Fig. (3): Production and Marketing Channels of gum Arabic in Sudan**
In 2006, Sudanese exports accounted for 21,000 metric tons. It is evident that despite many years of operations, the GAC has not been able to provide the benefits anticipated when its concession as the sole exporter of raw gum.

Figure (4) demonstrate the improvement trend in gum Arabic export from Sudan after the removal of GAC concession.

3. Objectives:
- To estimate the effects of GAC in gum Arabic trade.
- To estimate the concentration ratio of exports by many companies through GAB in Sudan.

4. Methodology:
The study depended on secondary data covered the period (2000-2013) and was obtained from official sources.
The data divided into three groups A, B and C.
(A) represents the percentage share of the first four companies which exported higher quantities from the total export quantity.
(B) represents the percentage share of the second four group of companies that followed group (A) in exported quantities.
(C) represents the percentage share of rest of the companies which exported the lowest quantities from the total export quantity.

5. Results:
- Before 2009, Sudan’s gum Arabic trading through the Gum Arabic Company.
- During the short period (2009-2013), traders and companies competing in bought gum Arabic from auction markets, domestic demand was high and producers received a high share of export prices.
- In 2009 AFRITIC ANGEREEDENETS FACTORY Company exported about 57% of Sudan’s total exports, BESAF FOR TRADING@INVESTMENT CO.LTD exported 52% of the country export in 2010.
- AFRITIC ANGEREEDENETS FACTORY exported only 19% in 2012, while the rest of the companies exported about 81% of Sudan’s gum Arabic exports there is a tradable in gum
Arabic exports between the competitive companies, Table (1) shows the concentration ratio of Sudan’s gum Arabic exporting companies through GAB period.

**Table (1): The concentration ratio of Sudan's gum Arabic exporting companies through GAB period**

<table>
<thead>
<tr>
<th>Year</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Remarks for A</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>78%</td>
<td>17%</td>
<td>5%</td>
<td>AFRITIC ANGEREEDENETS FACTORY 57%</td>
</tr>
<tr>
<td>2010</td>
<td>82%</td>
<td>10%</td>
<td>8%</td>
<td>BESAF FOR TRADING@INVESTMENT CO.LTD 52%</td>
</tr>
<tr>
<td>2011</td>
<td>65%</td>
<td>27%</td>
<td>18%</td>
<td>Al anan trading &amp; import and export 20%</td>
</tr>
<tr>
<td>2012</td>
<td>47%</td>
<td>22%</td>
<td>31%</td>
<td>AFRITIC ANGEREEDENETS FACTORY 19%</td>
</tr>
<tr>
<td>2013</td>
<td>60%</td>
<td>18%</td>
<td>22%</td>
<td>AFRITIC ANGEREEDENETS FACTORY 26%</td>
</tr>
</tbody>
</table>

Sudanese customs, 2013.

- The market for gum Arabic is dominated by few countries in terms of exports, re-exports and imports. The European Union is the biggest importer of gum Arabic (over 80 percent) and within the EU, France, UK and Germany are the major re-exporters of processed gum. The India is the second major importer. Figure (5) shows gum Arabic average imports by different countries over the period 2000-2013.

![Fig. (5) Average percentage share of the countries importing Sudanese gum Arabic (2000-2013)](image)

Changes in rules governing marketing and export of gum Arabic could improve the livelihoods of the small-scale gum Arabic producers, the quality of the environment and Sudan’s export trade balance. Such changes should aim to achieve higher producer prices to stimulate production and boost producer incomes and increase the level of domestic value-added through processing.
References: