



## Economic Profitability, Comperative Advantage and International Competitiveness of Gum Arabic in Sudan

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### INTRODUCTION

**Definition:** (Gum Arabic) Gum *Hashab*, (high quality) Gum *talh* (inferior quality)



**Contribution:** 12 % of GDP, 15.3% of producer per capita income & 60 % of international trade

**Applications:** Confectionaries  
Beverages, Pharmaceuticals



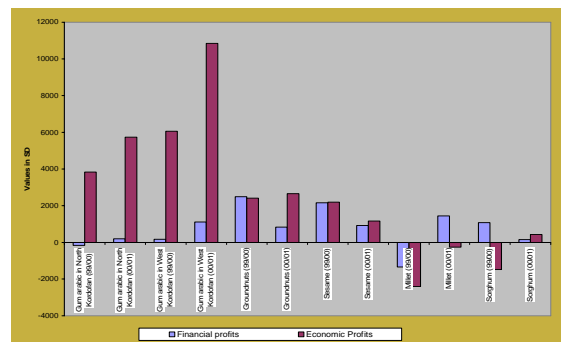
### PROBLEM STATEMENT

Gum Producers get lower prices or supplies lower in value compared to their gum harvest. Export earnings do not tricked down to producers level. The commodity is subjected to government interventions and market failure effects (unstable producer floor price, fluctuating export earnings, High taxes, overvalued exchange rate), which influence profitability, comparative advantage and international competitiveness.

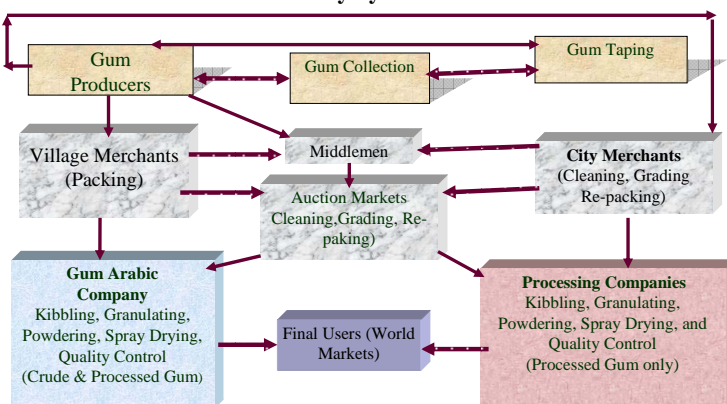
### RESULTS

- Concession (rather monopsony) of Gum Arabic Company (GAC) pushes down producer's income to levels much less than what should prevail if producer price was set freely to world market
- In spite of lower profitability of gum production, it provides cash to farmers outside the growing season for cash crops
- Gum production is subjected to higher taxation on output level compared to gum processing and gum export
- In spite of policy distortion and market failure effects, gum production reflects reasonable comparative advantages & high international competitiveness

### Profitability of Gum Arabic & Field Crops (99-01)



### Gum Arabic Vertical Commodity System.



### OBJECTIVES

1. Measuring the level of price distortions that affect financial and economic profitability of gum producers.
2. Assessing international competitiveness and comparative advantages for gum arabic and its main rotated crops (groundnut, millet, sesame and sorghum) in the area.

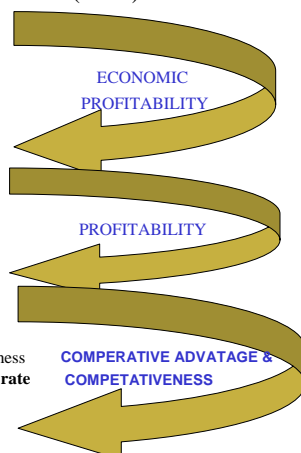
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### EMPIRICAL FRAMEWORK

Application of Policy Analysis Matrix (PAM)

#### PAM Coefficients:

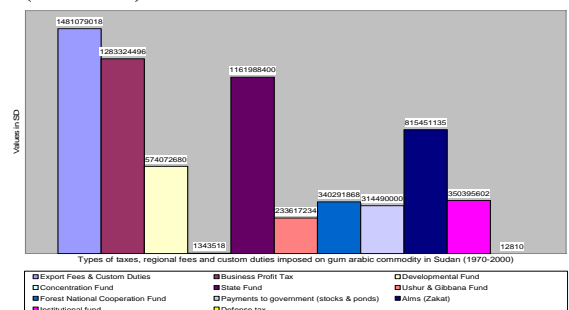
1. Financial Profitability
2. Economic Profitability
3. Nominal Protection Coefficient  
 $\diamond NPC = A / E$
5. Effective Protection Coefficient  
 $\diamond EPC = (A-B) / (E-F)$
6. Profitability Coefficient  
 $\diamond PC = (A-B-C) / (E-F-G)$
7. Domestic Resource Costs  
 $\diamond DRC = G / (E-F)$
8. Coefficient of International Competitiveness  
 $\diamond CIC = G / (E-F) / \text{Shadow exchange rate}$



### Comparative Advantage & Competitiveness (99-01)

Activity (Average 99/00 & 00/01)	DRC	CIC (SD)
Gum Production	0.52	118,63
Gum L. Marketing	0.28	71,71
Gum Processing	0.34	87,35
Gum Export	0.32	82,14
Cash Crops	0.71	185,23
Food Crops	1.40	362,72

### Contribution of gum arabic to government revenue (1970-2000)



### REMARKS

- If GAC's monopoly/monopsony power continues, the producer price should be calculated on the light of world price
- Then, if globalization is inevitable, a more rational and gradual movement towards gum arabic trade liberalization can be suggested.
- The taxation system should be adjusted towards more balance tax rates, calculated on basis of relative profitability of each activity within the system