سامية محمد مصطفى



شبكة المعلومات الحامعية

# بسم الله الرحمن الرحيم



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سامية محمد مصطفي



شبكة العلومات الحامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





سامية محمد مصطفى

شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

## قسو

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



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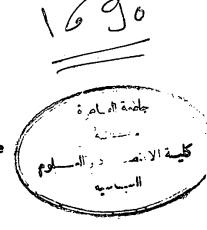


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#### CAIRO UNIVERSITY

Faculty of Economics & Political Science
Department of Statistics



## METHODS OF ESTIMATION OF SIMULTANEOUS EQUATIONS SYSTEM WITH APPLICATION

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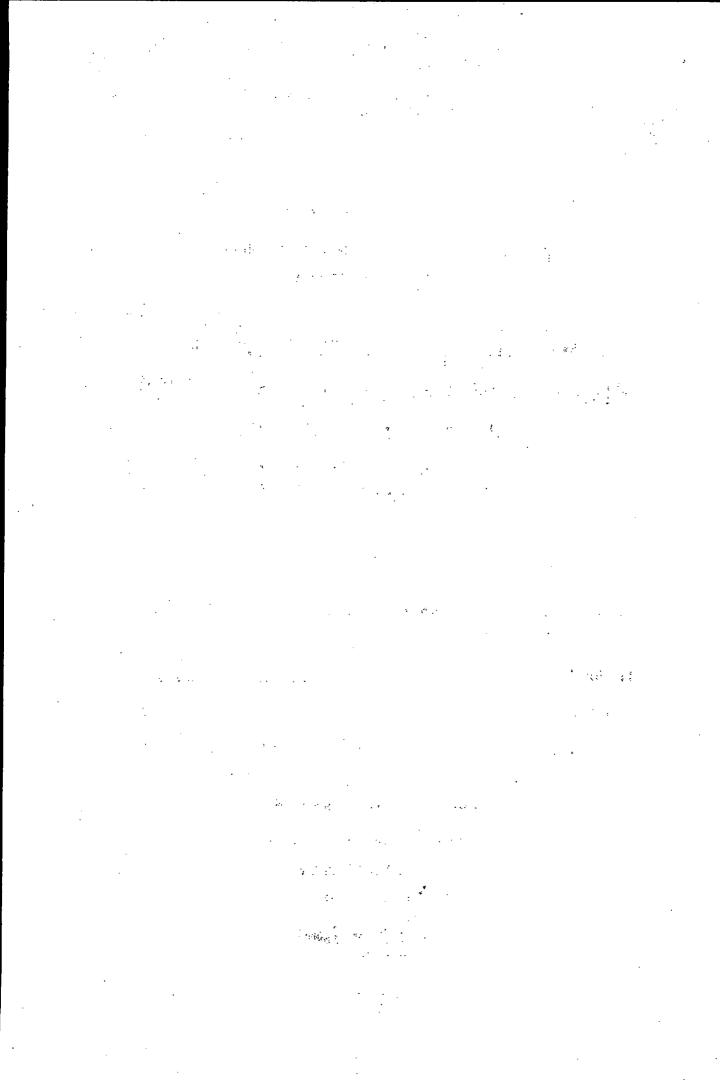
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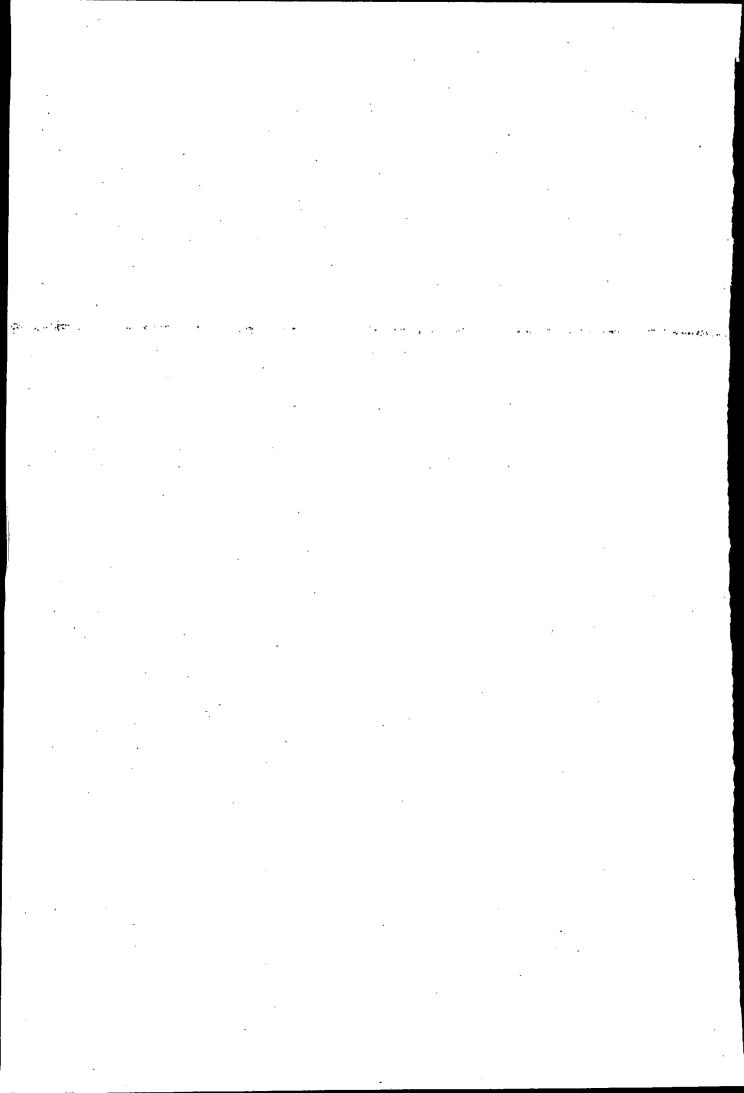
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#### **ABBREVIATIONS**

Page	abbheviations	meaning
5	2 S L S	Two Stage Least Squares
	LIML	Limited Information Maximum
		Likelihood.
	3 S L S	Three Stage Least Squares
	FIML	Full Information Maximum Likeli-
		hood.
8	OLS	Ordinary Least Squares.
16	LF	Likelihood Function.
28	SSE	Sum of the Squared residuals
33	GLS	Generalized Least Squares.
55	MAPE	Mean Absolute Percentage: Error
56	GRY	Annual Growth Rate of Y
	GRŶ	Annual Growth Rate of $\widehat{Y}$

#### INTRODUCTION

Paper was known to ancient Egyptians, they used it for recording their sciences and different branches of knowledge, as far as 4300 B.C. **An**cient Egyptians made their paper from papyrus. It was in the recent revolutioary epoch, however, that a new idustry for making writing and printing papers was started. Being poor in forestry-Egypt had to use the residuary farm plants in paper industry.

The importance of initiations of this industry appears in saving the hard currency which the country had to pay for paper import from the foreign markets. From the very first years of the recent revolutionary era the state gave due consideration to the manufacture of writing and printing papers. After an extensive study and research of the technical and economic aspects of the scheme, it was decided to establish the general Co. For the manufacture of paper "Rakta "with the object of producing writing and printing papers from local raw materials.

Rekta is able to meet the full requirements of local consumption.

The mills are making special efforts and conducting extensive researches and studies to cover local requirements of some particular qualities which are now imported and for which hard currency is paid; thus realizing an annual saving of £4 million that had to be paid for the import of this commodity.

## Structure of Capacity (\*):

In Egypt, there are at present 11 companies in the paper industry who own 13 mills.

The industry is dominated by three state-owned companies (National paper company, Rekta and Simo) who account for 82 per cent of the total capacity.(Table A-1)

Four of the mills which account for 78 per cent of the total capacity are located in Alexandria, while the rest are distributed in the Cairo area (Bahtim, Mostorod, Khanka, Tourah Asmant, and El-Giza).

(\*): Source: Markkus simula "The state And Development of the Pulp And paper Industry in the Arab Rrpublic of Egypt" United Nations Economic commission for Africa. E CA/FAO Forest Industry Advisory group for Africa. February 1975.