

(Textile Cycle)

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(marcket share) ,

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. (Fig . Phase)

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가 (Fig Phase)

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(Fig. Phase)

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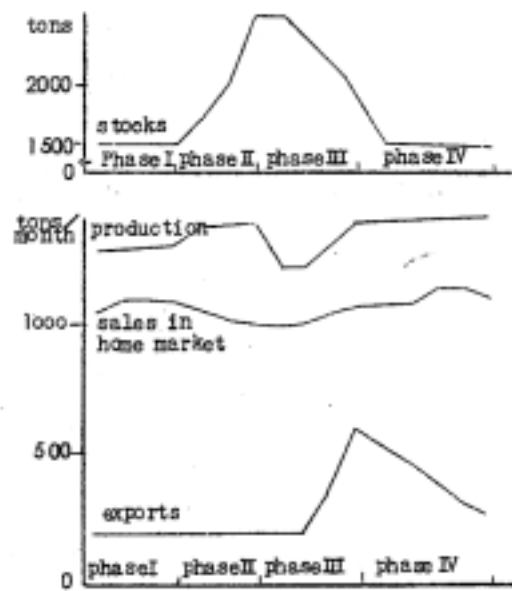


Fig.1 Representation of a policy which fails to take account of the textile cycle

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(Fig 2)

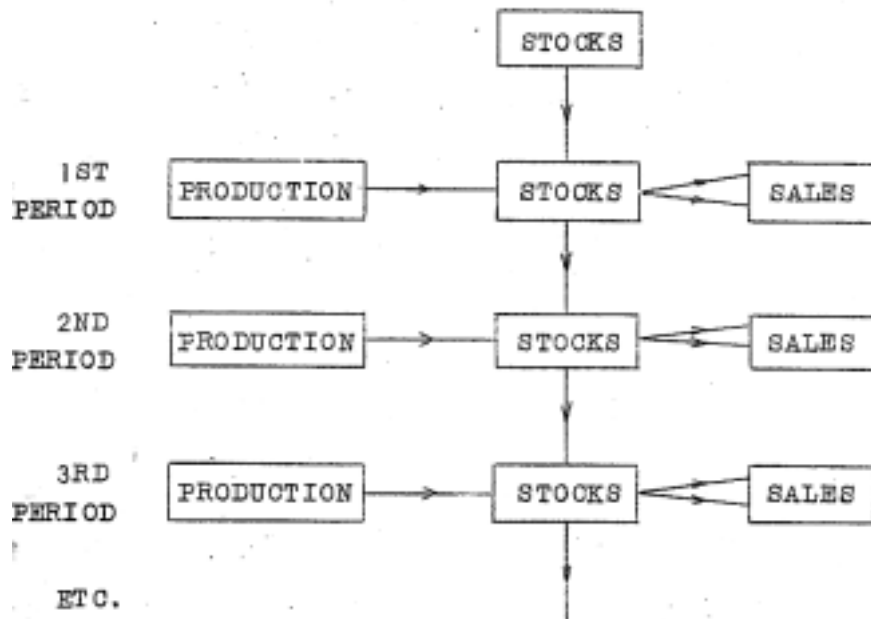


Fig. 2 Schematic survey, by periods, of production, stock and sales requirements.

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(Constraints)

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(Integral model)

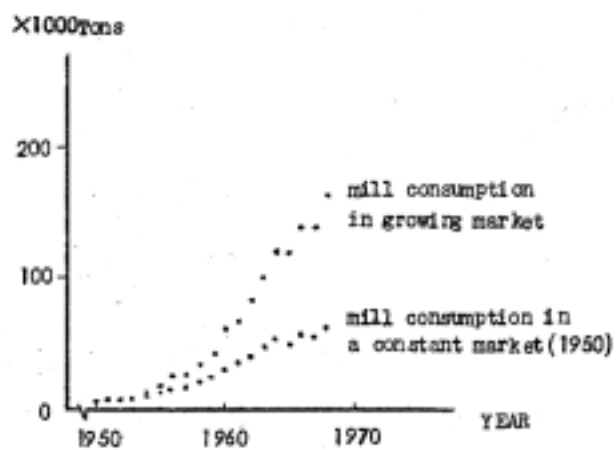


Fig. 3 Penetration of polyamide filament yarn
in the EEC 1950-1968, for a constant market(1950)

Fig 3 1950 1968 EEC

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1950

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.(Fig 3)

$$y = \frac{1}{a + br^t}$$

S

t :

y :

a, b, r : $(0 < r < 1)$

1950

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.(Fig 4)

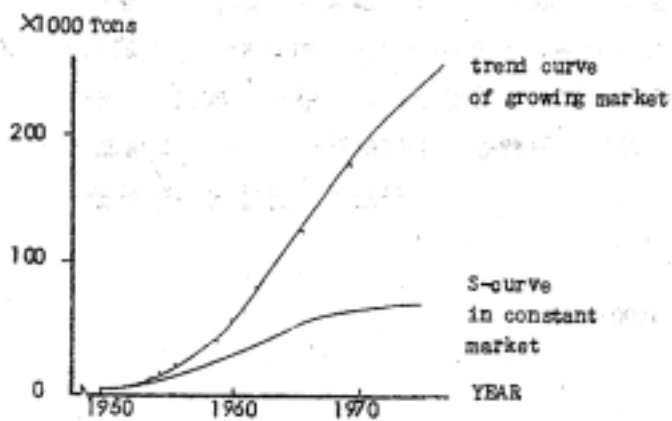


Fig. 4 Trend curve of polyamide filament yarn
in the EEC for a growing market(1950-1975)

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(Textile Cycle)

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(20 가 가 15

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EEC

Fig 5 '69, '70, '71, '72

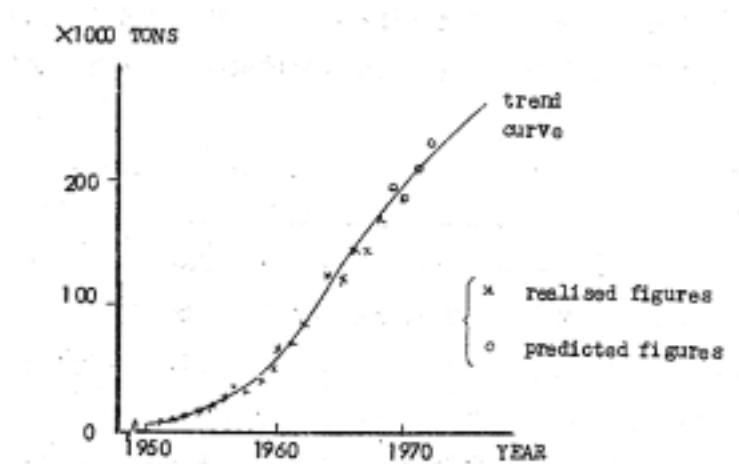


Fig. 5 Prediction of mill consumption of polyamide filament yarn in the EEC.

(description)

.(Table)

Table . Further Subdivision

Subject	Kind of Subdivision	Reason
Time	Periods	Time-dependence of problem
Market	Geographic	Difference in profit
	Branches	To permit better prediction of demand for different products
	End-Uses	
Capacity	Departments	Difference in capacity
	Labour etc.	
Product } Stocks }	Yarn Count	Difference in production rates
	Make Up	

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(Make-up)

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System

(Operation research man)

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(team)

System

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Computer

Table Persons and Departments Involved in Setup of System

Kind of Person	Function
User(Product Manager)	To ensure applicability of system
From Mathematical Dept(Operational Research)	To create a scientifically justified system(model)
From Computer Dept.	To run problem on a computer

Collection of Data

Department	Kind of Data
Market Research Dept; Sales Dept.	Prediction of demand and prices
Production Dept	Capacity
	Production rates
Economic Dept	Investments
	Stock costs
	Economic objective

?(Fig 6) Fig 6

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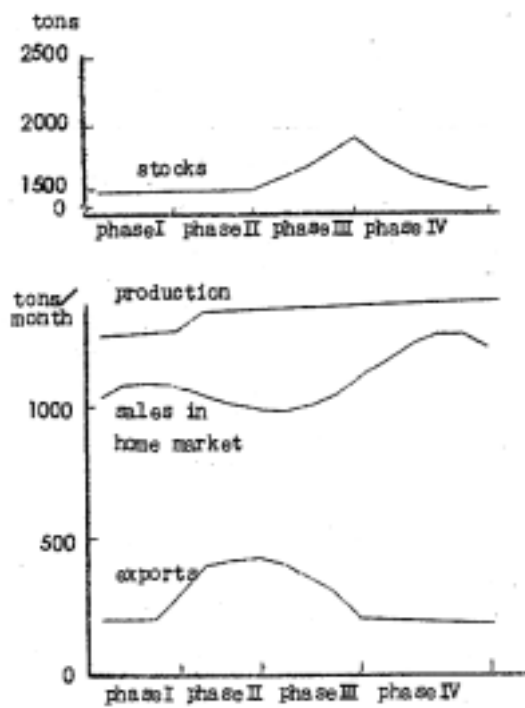


Fig. 6 Results of calculating an optimum solution

.(Fig 7)

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(position)

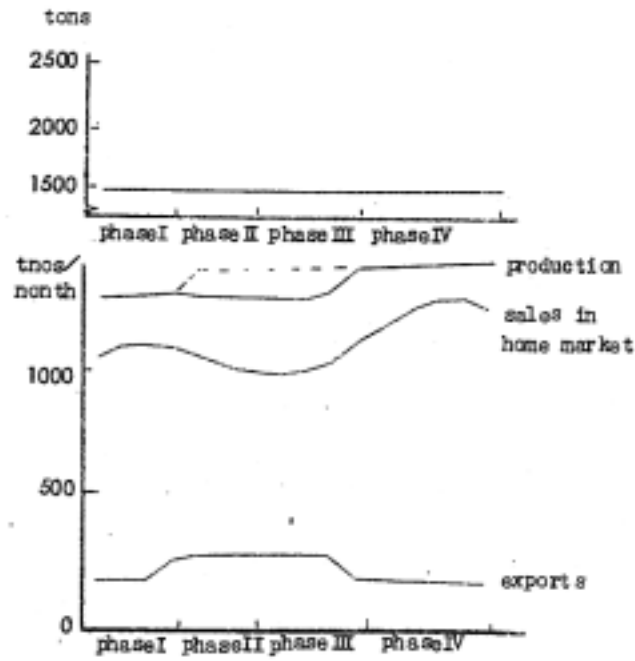


Fig. 7 Result of calculation if exports are limited and capacity is increased later.

Fig 6 Fig 7

Table

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(cash flow),

(constraints)

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Table . Material Results

Sales	Development of sales and exports For each product in each branch in each market
Stocks	Development of stock of each product
Capacity	Amount of production Load level Required manpower

Economic Results	
Sales	Total turnover and profit Profit in each period Profit in each market Extra profit if market were increased
Stocks	Total stock costs
Capacity	Total production costs Extra profit if production means were increased

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가 (Table
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Table . Use of Model by Simulation

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1. Must policy be changed, and how?
 - if real demand differs from predicted demand
 - if developments of market prices differ from predicted prices
 - if capacity and increase of parts of capacity are changed
 - if limitation on stocks are changed
 - if limitation on exports are changed
 - if there are other promotion activities
 2. What changes are allowed without involving a change in policy?
 3. To create the best policy, predictions need not be fulfilled exactly; good estimates are sufficient.
 4. If reality differs from prediction, a new calculation is easily made.
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1,200 350
Computer 8
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(Fig 6)
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(Simulation)

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