Rent-seeking, price-setting, and market dynamics

ECONOMICS

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UCL

Lecture 11

Objectives

- Role of prices and **economic rents** in markets
- Impact of **shocks** on markets in short and long run

  Exogenous shocks

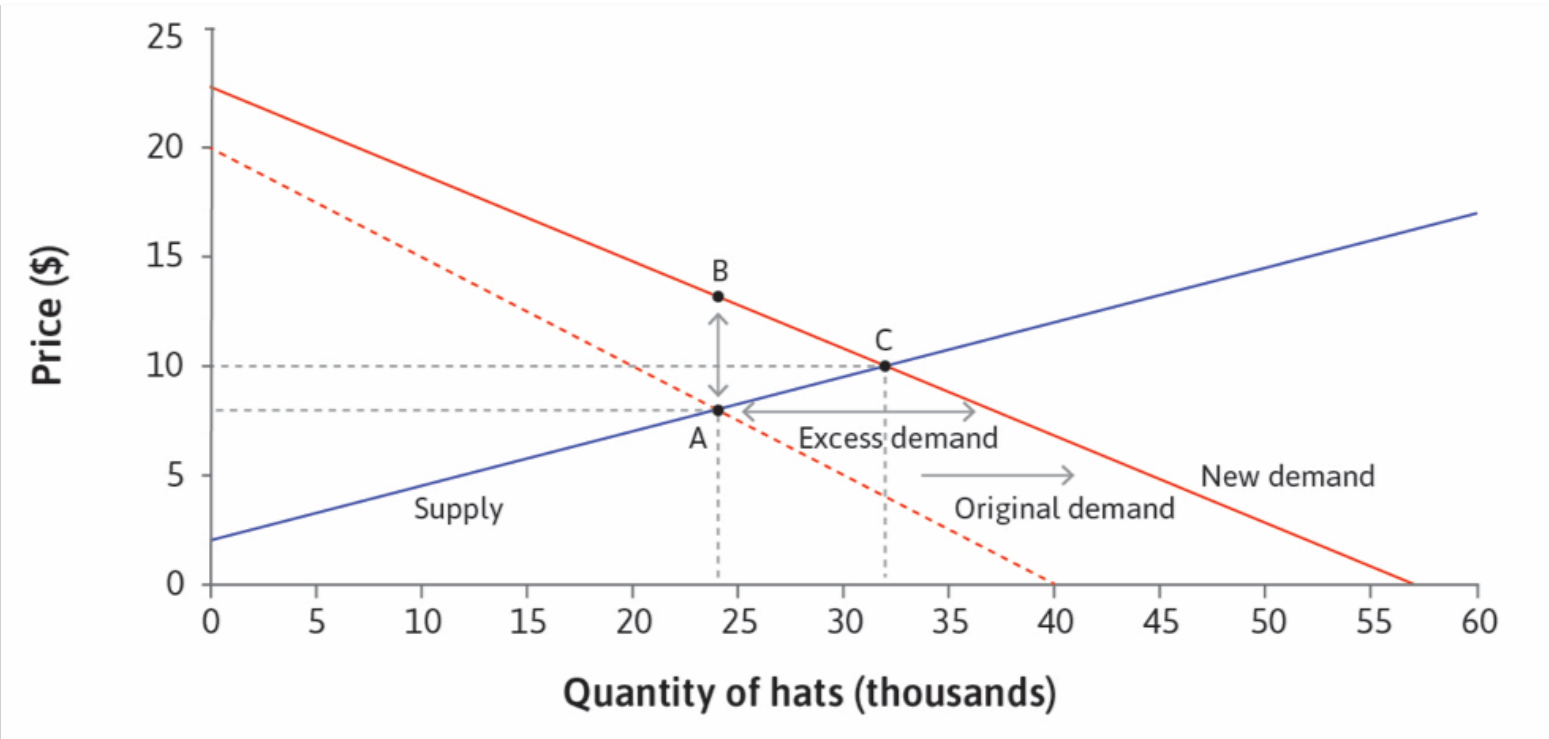
  Endogenous process: Dynamics of firms entry and firm exit in markets
- Source of market **inefficiencies**

  Pareto improving market intervention to eliminate market inefficiencies

Exogenous Demand shock

Increase in demand for hats leads to increase in both the *price* and *quantity* of hats produced in the *short-run*.

Change in price and output depend on the extent of *demand shock* and the *elasticity of the supply*



Markets

Hayek — *Prices are messages* between people who demand and people who supply a certain goods and services

Shocks — *Shocks* leads to *short-run* and *long-run changes*

Short-run — **Exogenous** *shocks* from the demand or supply side of the market leads to *short-run changes* in equilibrium price & output

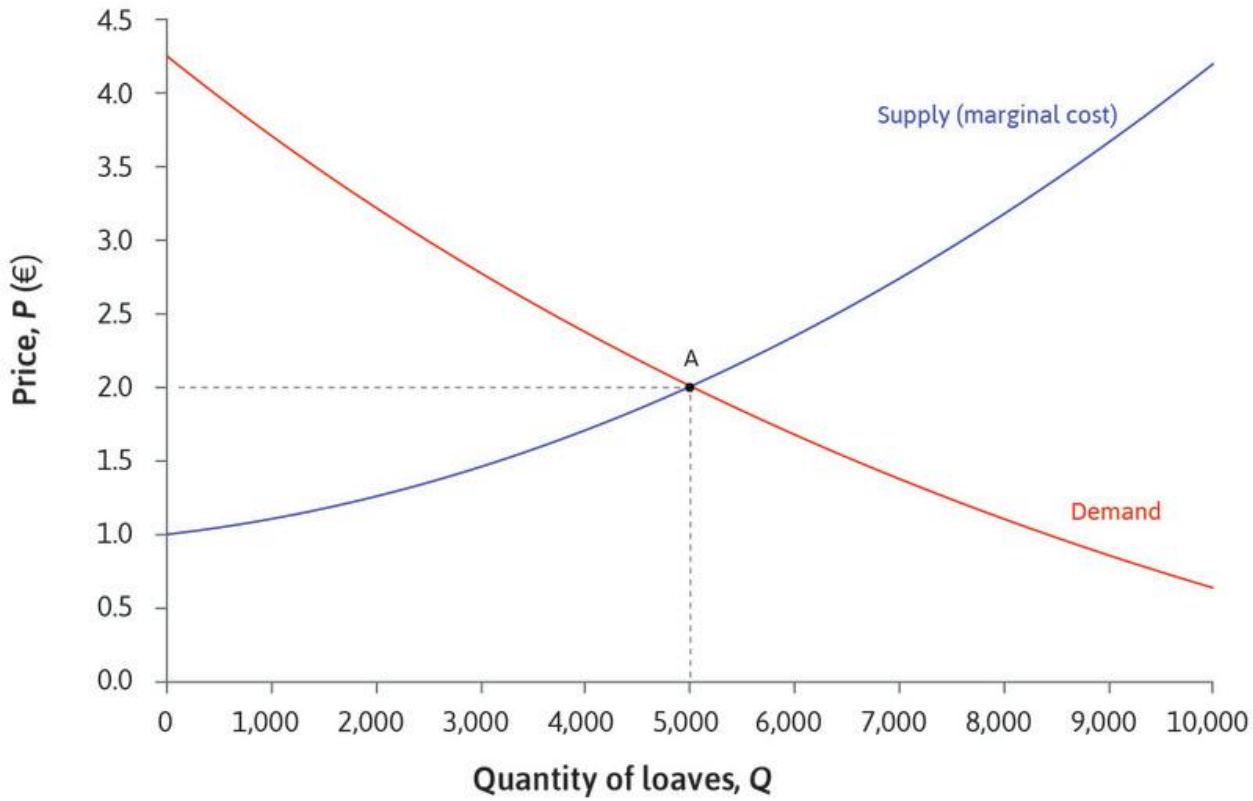
Long-run — Short-run price changes initiate an **endogenous** *dynamic process* which leads to changes to the supply side ... firms *enter* and *exit* the market

Long-run outcome can thus potentially differ significantly from the *short-run outcome*

Supply shock due to Economic Rents

Point A is the *short-run equilibrium* of the bread market.

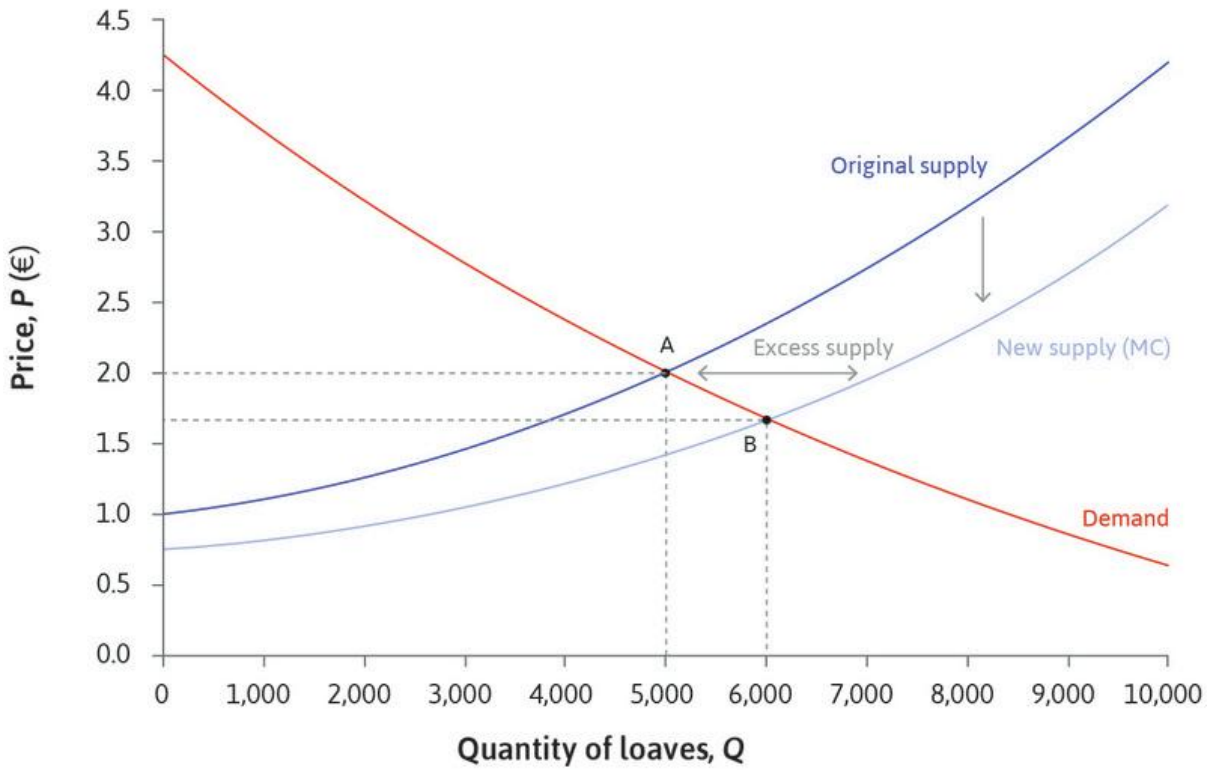
If incumbent firms are earning positive *economic rents* at *A*, it should attract new entrants in to the market.



Supply shock due to Economic Rents

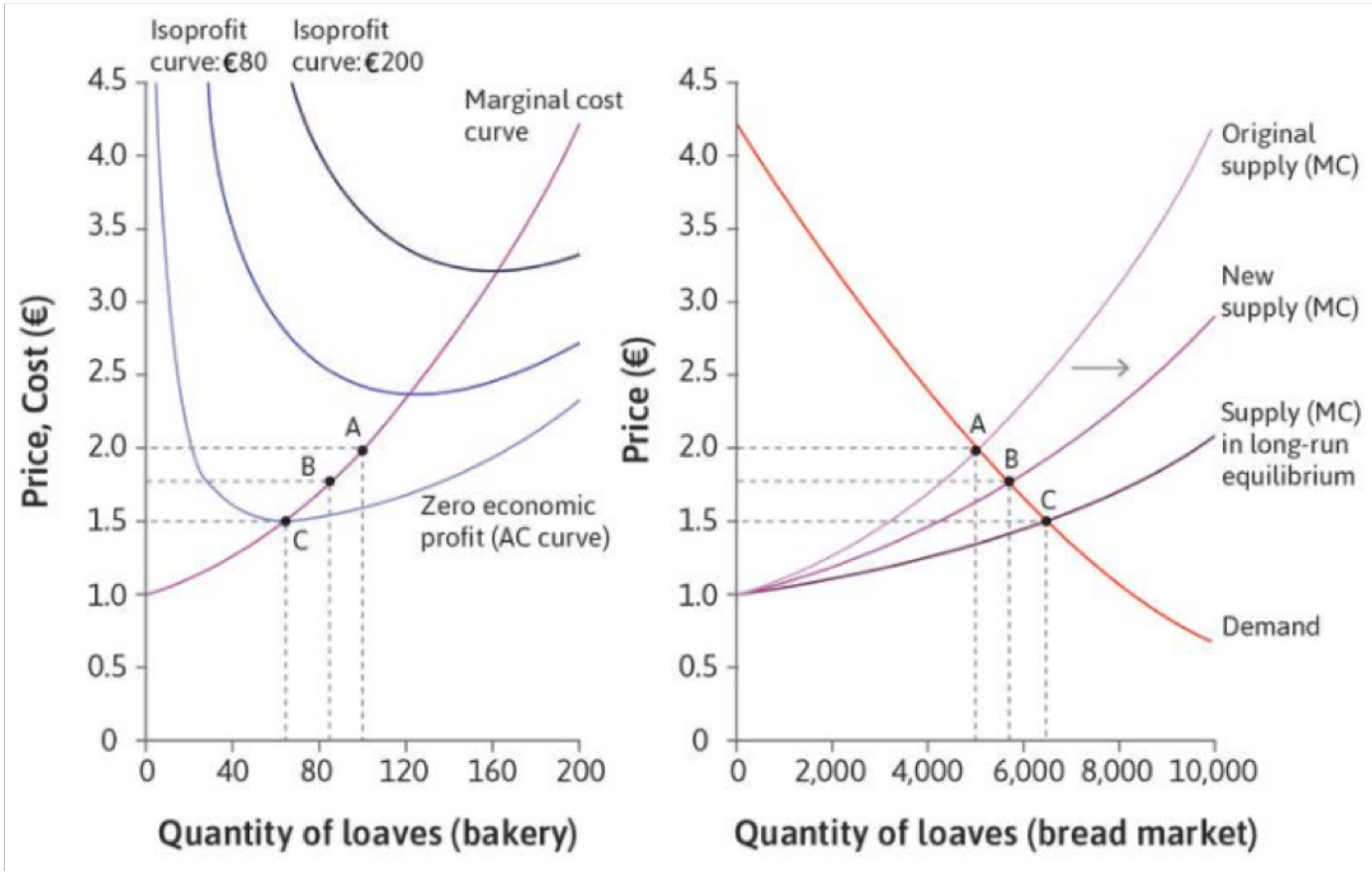
Economic rents attracts *new entrants* into the market leading to a rightward shift of supply.

Output increases and *price drops* as the equilibrium moves to *point B*.



Supply shock due to Economic Rents

As more firms enter market, economic rents decrease and *equilibrium* move from *A* to *B* to *C*. The *long-run equilibrium* is *point C* is where the *price equals marginal and average cost* and firms get *zero rent*.



Market Equilibration

Demand shock

People increased their demand for *hats* for some unexplained reason *(exogenous shock)*.

Increasing production lead to higher marginal costs of production.

Equilibrium prices rose to reflect both a *greater demand* for hats and *higher cost of production* given each firm's installed capacity.

Market Equilibration

Supply shock

Bakeries producing bread were retaining economic rents, which attracted new firms to enter the market.

This increased the supply and drove down the prices. Firms continue to enter till *economic rents are driven down to zero.*

The lower prices reflect the *firm entry* (and exit) as an *additional mechanism for market equilibration.*

. . .

important to understand the *source* of incumbent's *market power* that may or may not prevent new firms from entering the market

Number of firms in the market

Short-run

In the short-run, *number of firms as given*. The *price* equilibrates the demand and supply in the market.

If *average cost* is *higher* than the *marginal cost* of production, these firms make *positive economic rents* in this market

Long-run

If firms make *positive economic rents*, it makes is attractive for *new firms to enter*

firms enter and supply curve shifts rightwards driving down the price till the *economic rents are driven down to zero*

In the long-run, *number of firms are such* that each is making *zero economic profits*

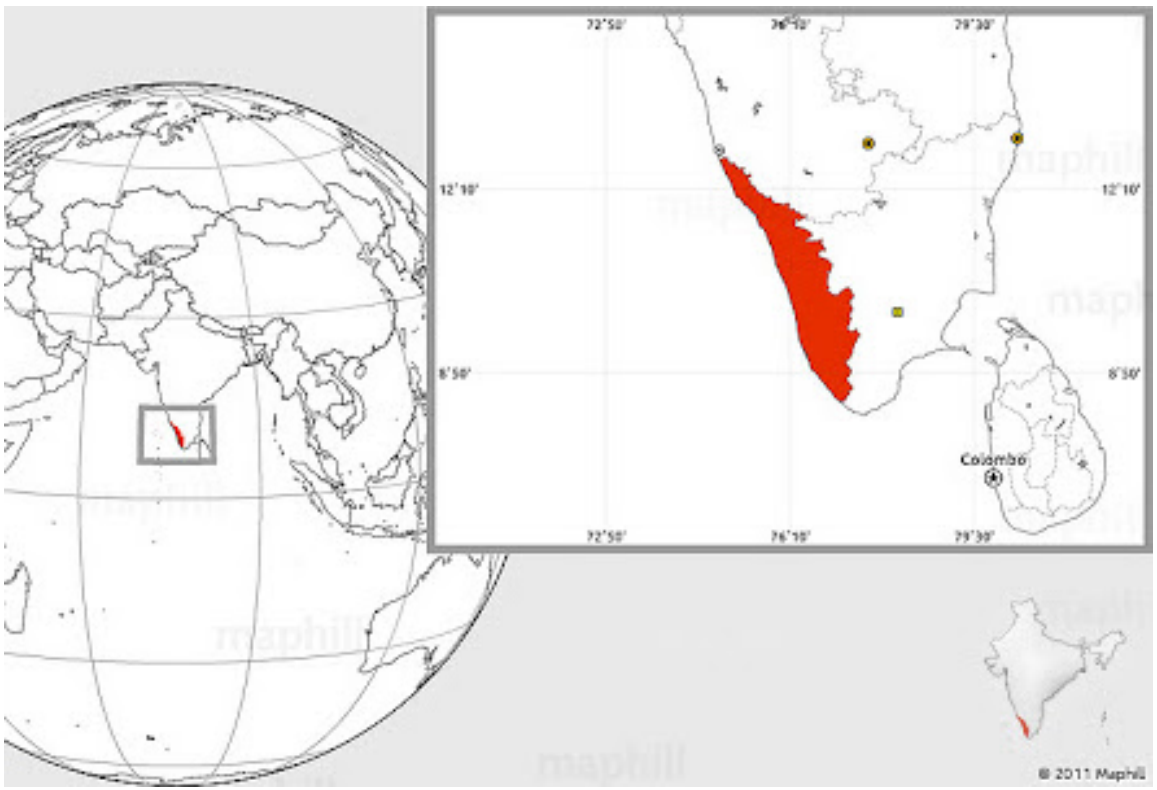
Coastal Fish Market in Kerala

Fish is the staple diet in Kerala, India

Kerala has a long coastline with fish markets dotted along the coast

Fisherman have a choice of which markets they want to land their fish in

They did not know the *price of fish* in each market on a particular day.



Kerala Fish Market

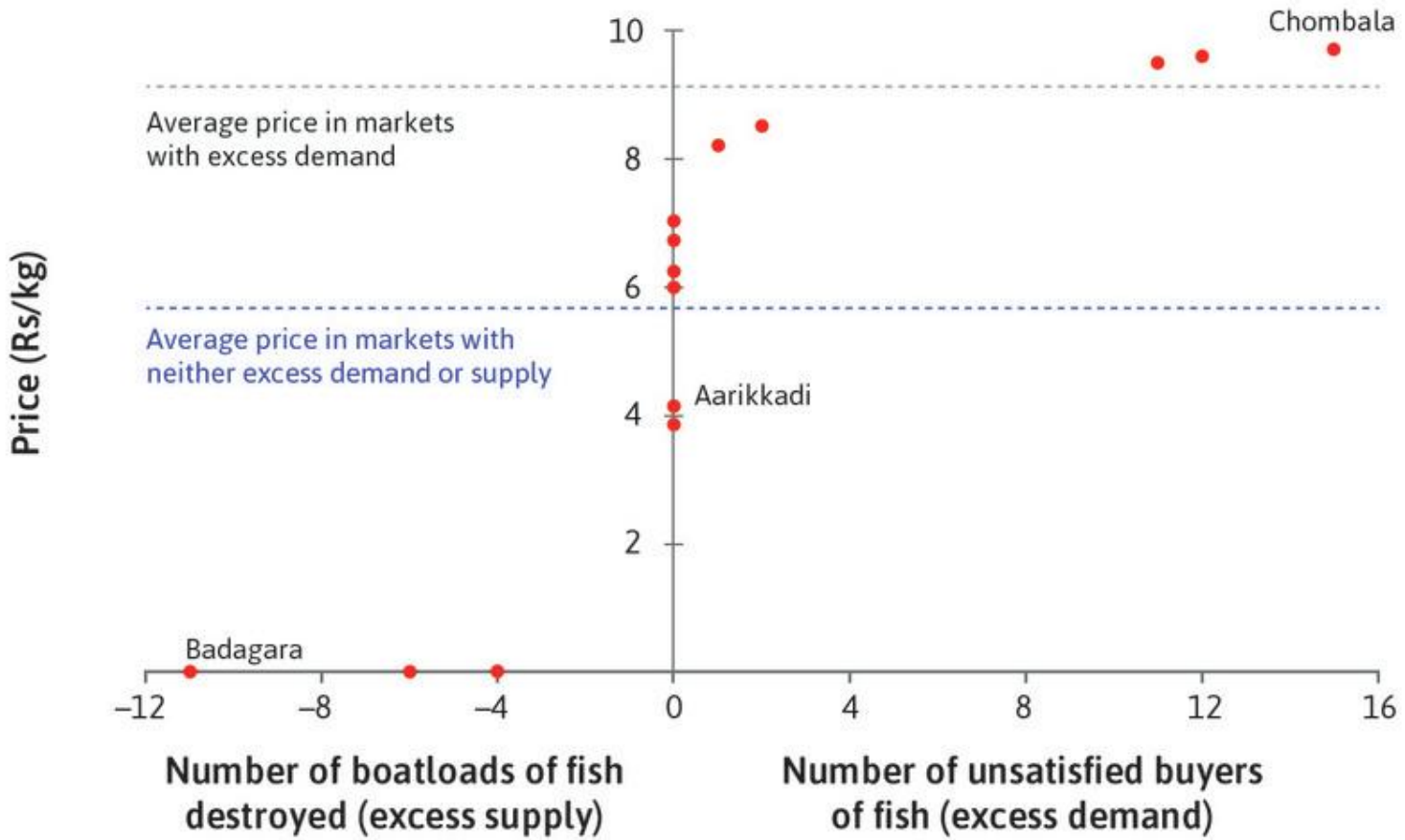
Jenson 2007[1] studied of 15 fish markets along the 225 km Northern coast of Kerala to understand whether the market was working

- Fisherman had to *choose* the port/market where they would get the best price for their catch
- Fish merchants bought the fish from the fisherman and sold it to the consumers
- If fish merchants already had enough fish on the port they landed, the fisherman would just *jettison* their catch

Fish *prices were high* and fisherman's *profits low* due to **wastage** and **bargaining power** of fish merchants who bought from the fisherman and sold to the consumers

[1] Jensen, Robert (2007). The digital provide: Information, market performance, and welfare in the South Indian fisheries sector." Quarterly journal of economics.

Market Conditions on 14th January 1997 in Fish Markets in Kerala

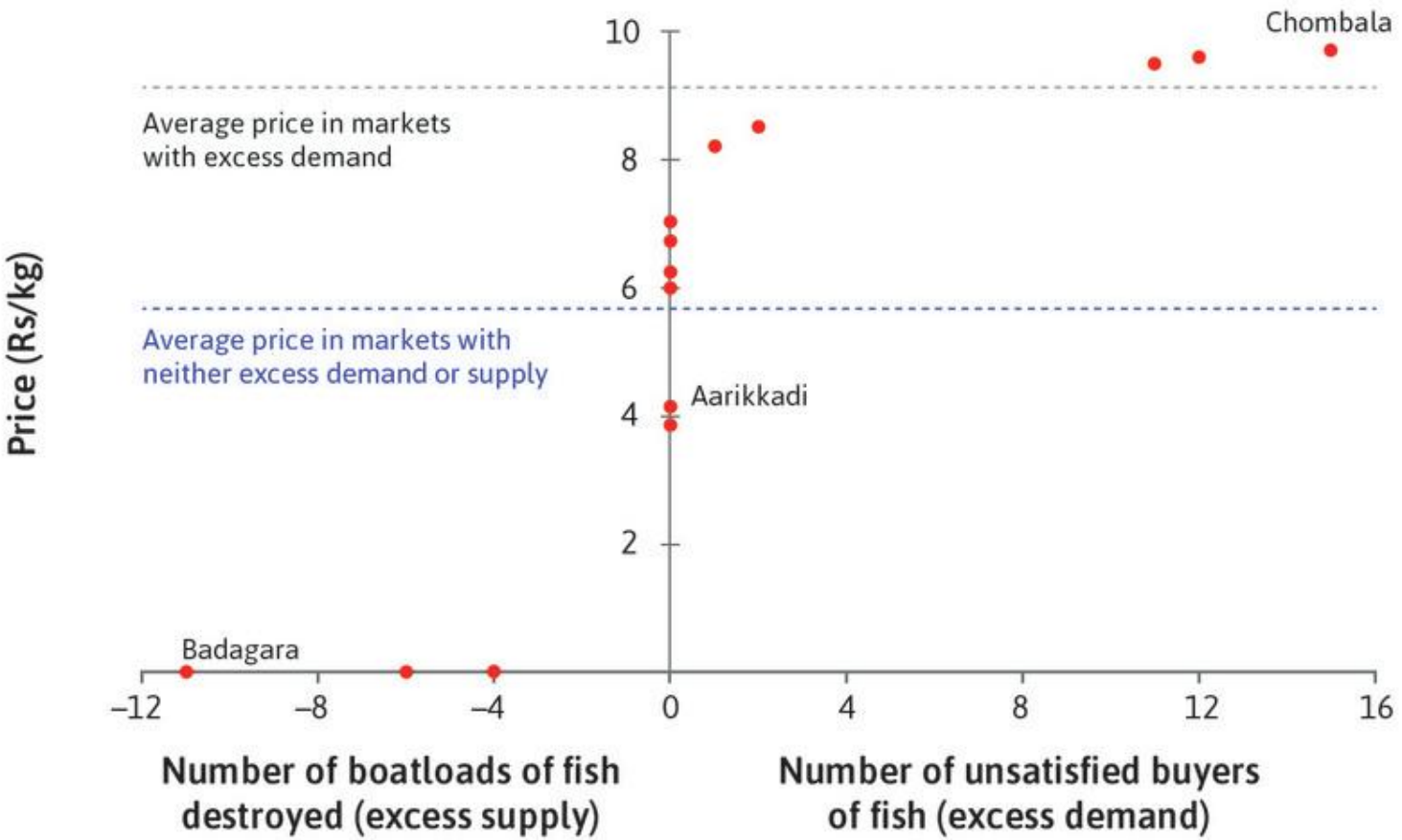


Badagara: 11 boats jettisoned their catch due to excess supply

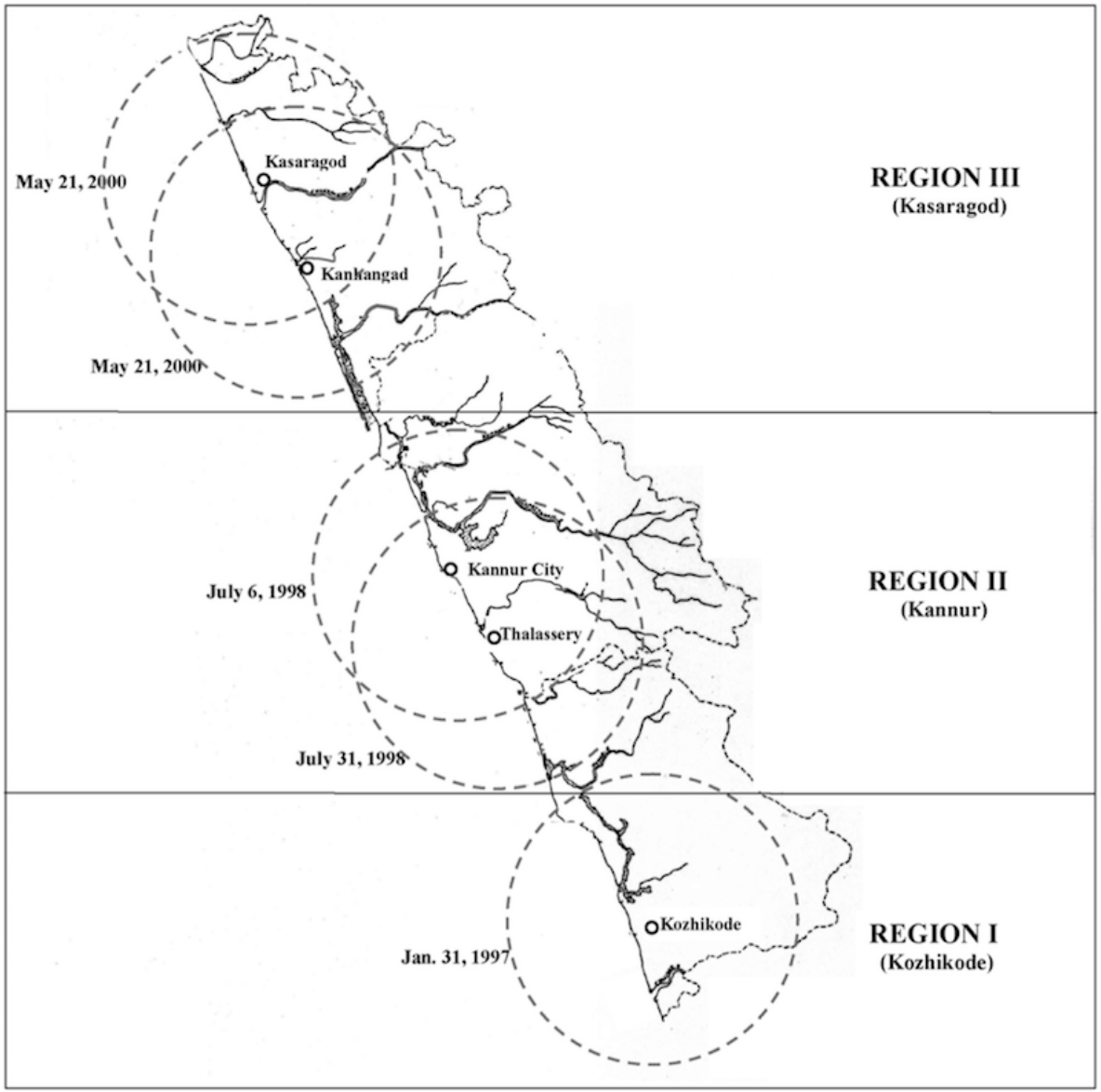
Chombala: 15 buyers left unable to purchase fish at any price

Average market price in rupees per kilogram across markets

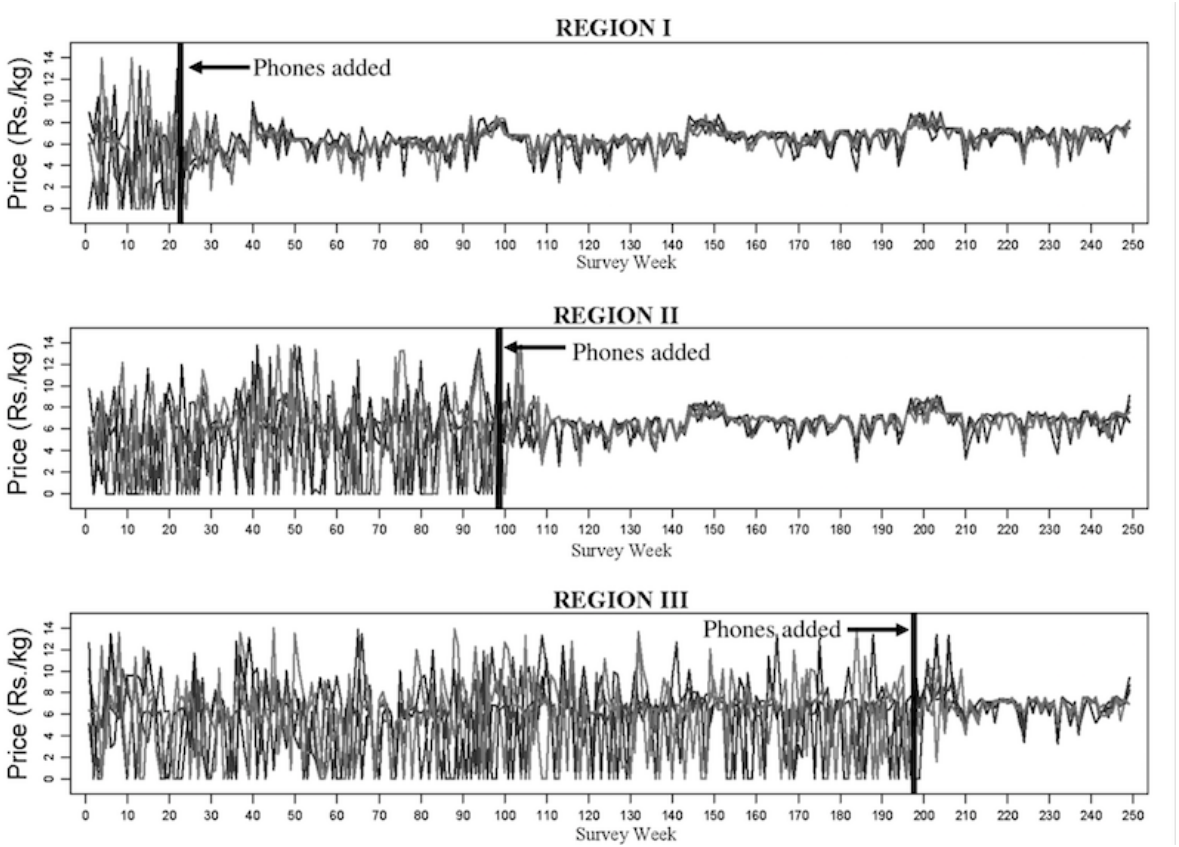
Excess supply	Market Clearing	*Excess demand*
Rs. 0	Rs. 5.9	Rs. 9.3



Sequential roll out of mobile phone coverage



Introduction of Mobile Phones



Sharp decrease in *price* volatility

Reduced *waste* & elimination

Fisherman's *profits* went up by 8%

Consumer *prices* decreased by 4%

Pareto improvement

Introduction of mobile phones led efficiency

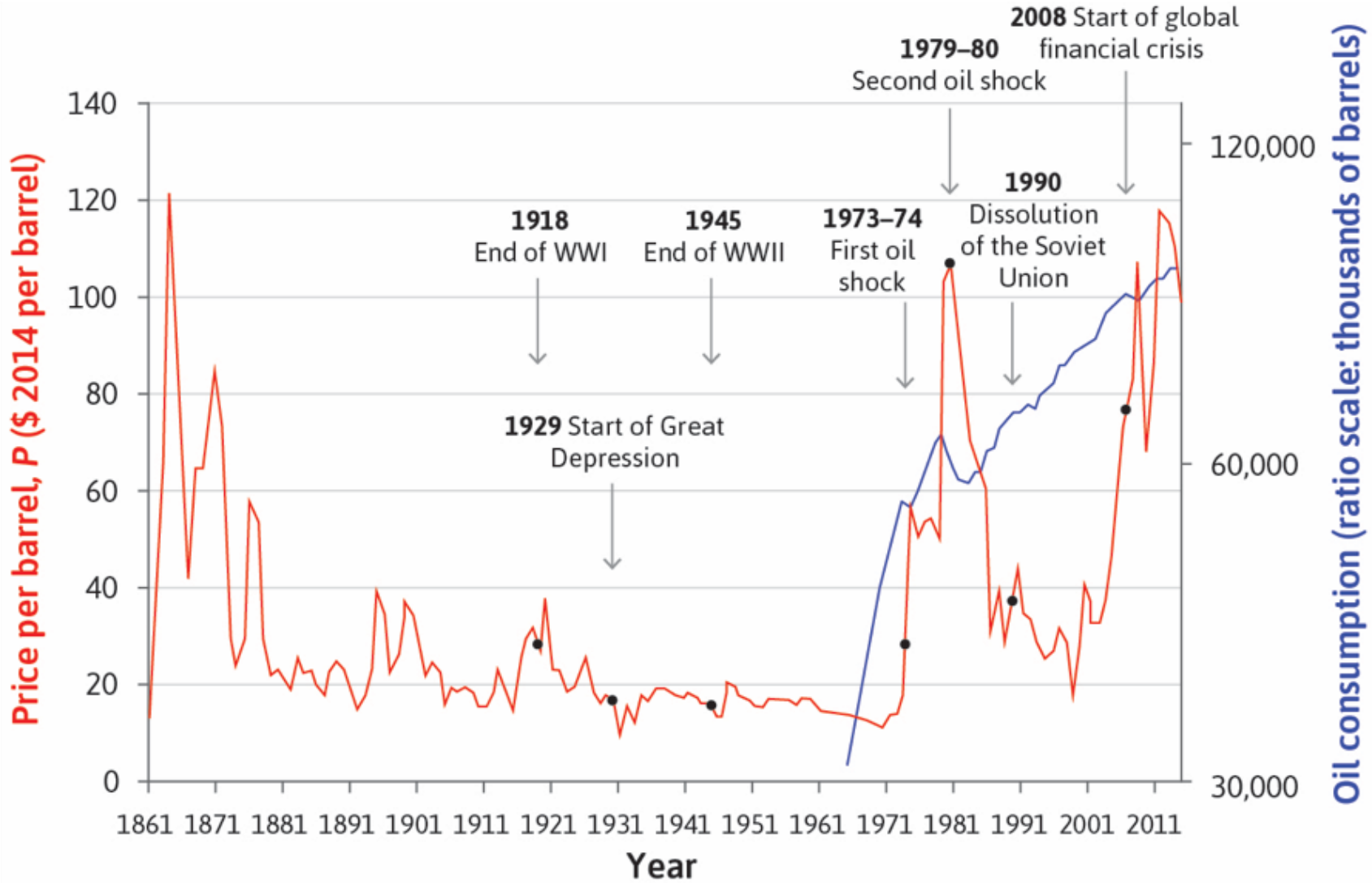
i.e., a Pareto improvement

- Reduced *waste* & elimination
- Sharp decrease in *price* volatility
- Fisherman's *profits* went up by 8%
- Consumer *prices* decreased by 4%

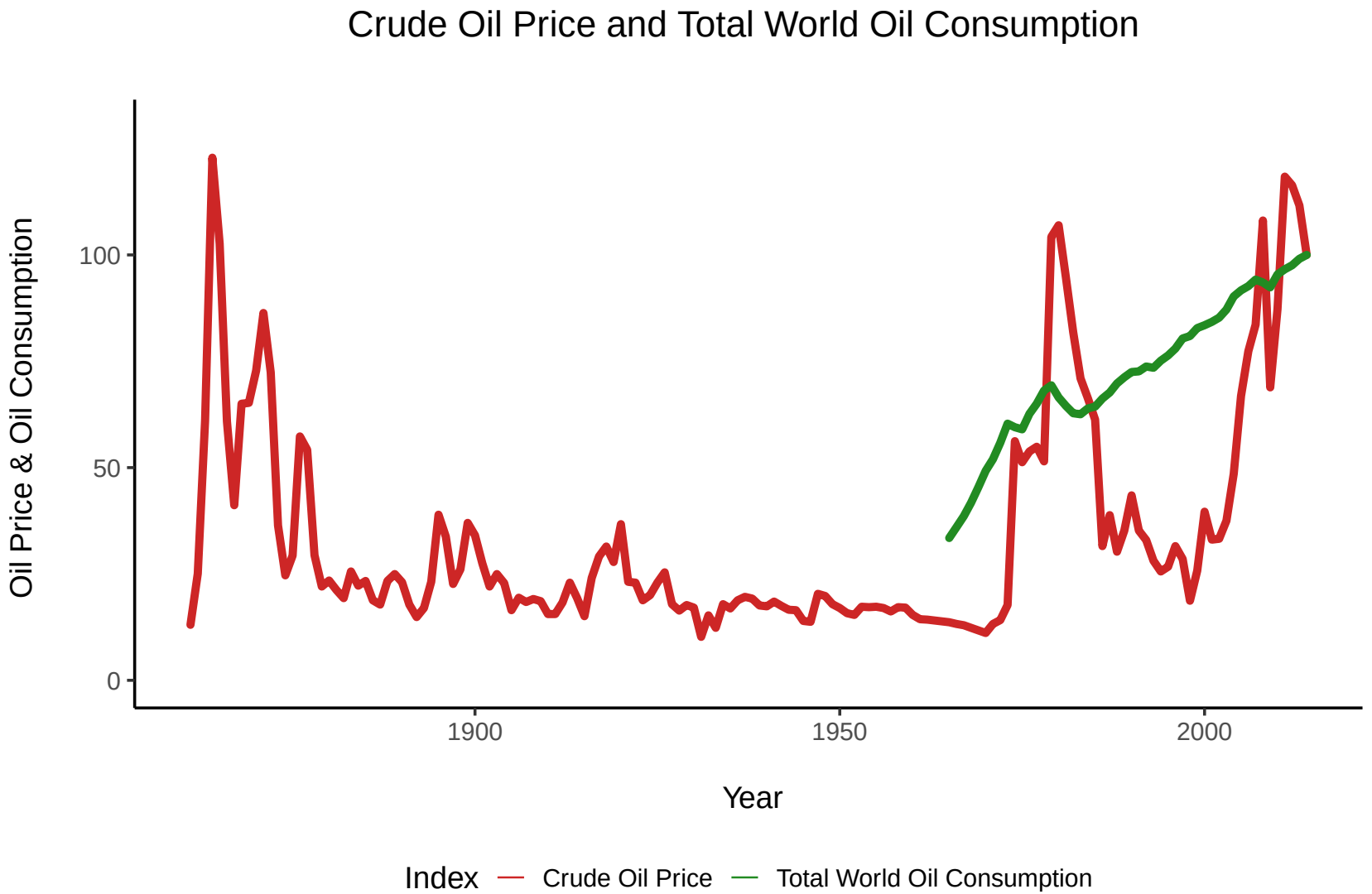
Source of Inefficiency eliminated

No Storage	due to high cost of storage (refrigeration) and strong consumer preference for fresh fish
No arbitrage	little *arbitrage* on land due to poor road quality and high transportation costs
	Further, fishermen can typically visit only one market per day because of high transportation costs and the limited duration of the market
Inelastic supply	the quantity supplied to a particular market is determined almost entirely by the amount of fish caught near that market.
Information Problems	a significant limitation to fish marketing is that while at sea, fishermen are unable to observe prices at any of the numerous markets spread out along the coast

Oil Consumption and Price



The price of oil has been **relatively stable** from 1880s to early 1970s



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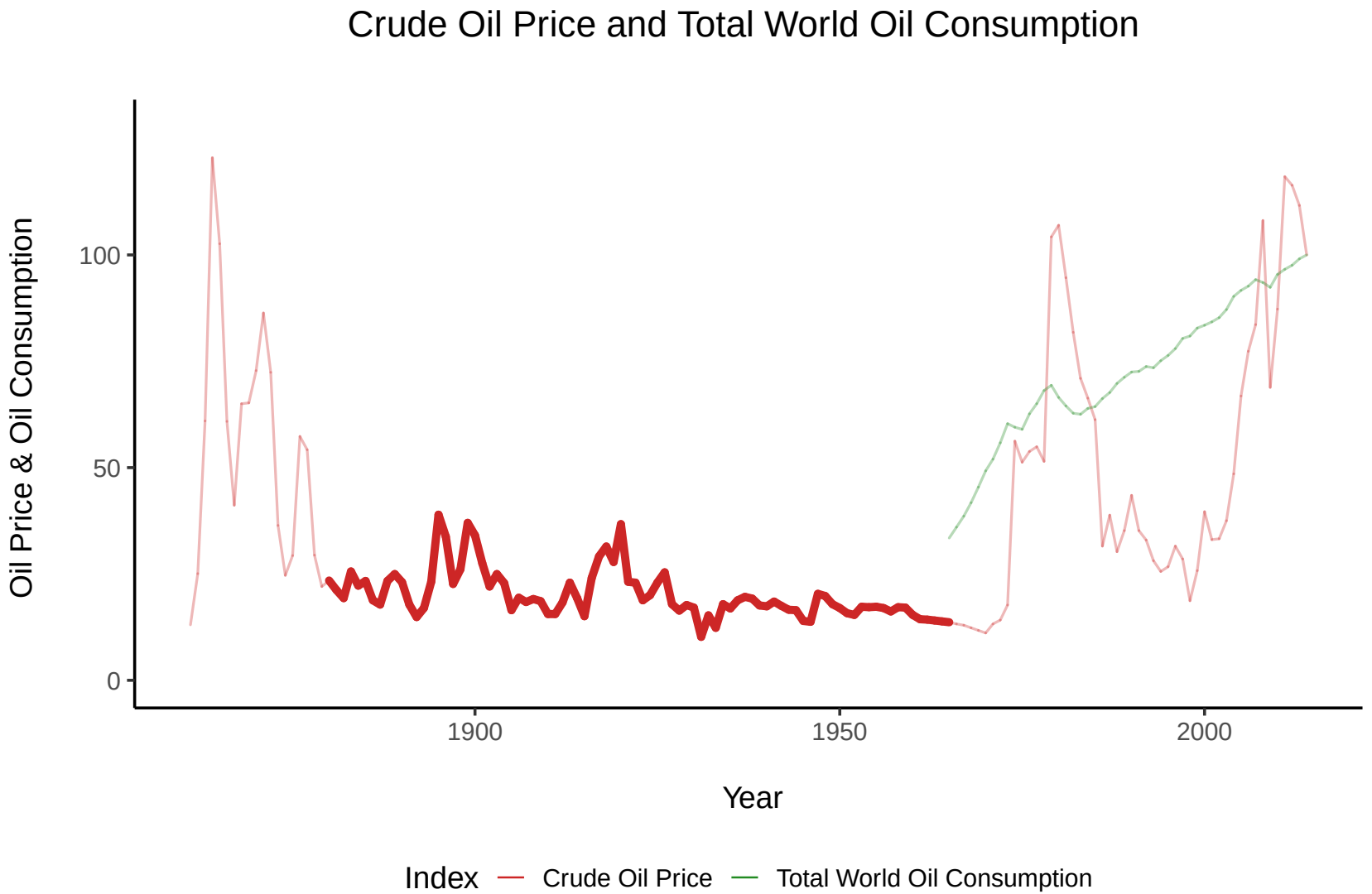

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Demand for Oil

Demand for oil is relatively *inelastic* in the short-run

i.e., demand curve is steep

- Oil consumers have very few alternative *(no substitution effect)*
- Demand for oil also increases with income as people use more cars etc. *(strong income effect)*

OPEC

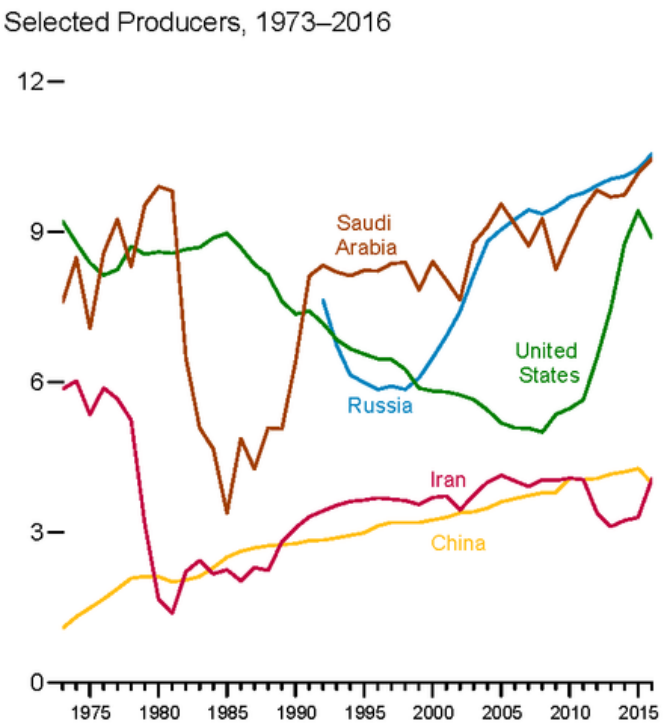
Organization of the Petroleum Exporting Countries *(OPEC)* is an organisation representing oil producing countries

OPEC countries voluntarily commit to *production quotas*.

These *production quotas* makes their collective supply of oil inelastic.

OPEC acts as a *cartel* and *restrict the supply of oil to maximise their economic rents*

> *OPEC account for 73% of the proven oil reserves.*



OPEC: Saudi Arabi, Iran

Non OPEC: USA, Russia, China

Supply of Oil

Supply for oil is *elastic* till production capacity is reached. After production capacity is reached, the supply is *inelastic* in the short-run

> *i.e., supply curve is flat and becomes extremely steep as maximum production capacity is reached*

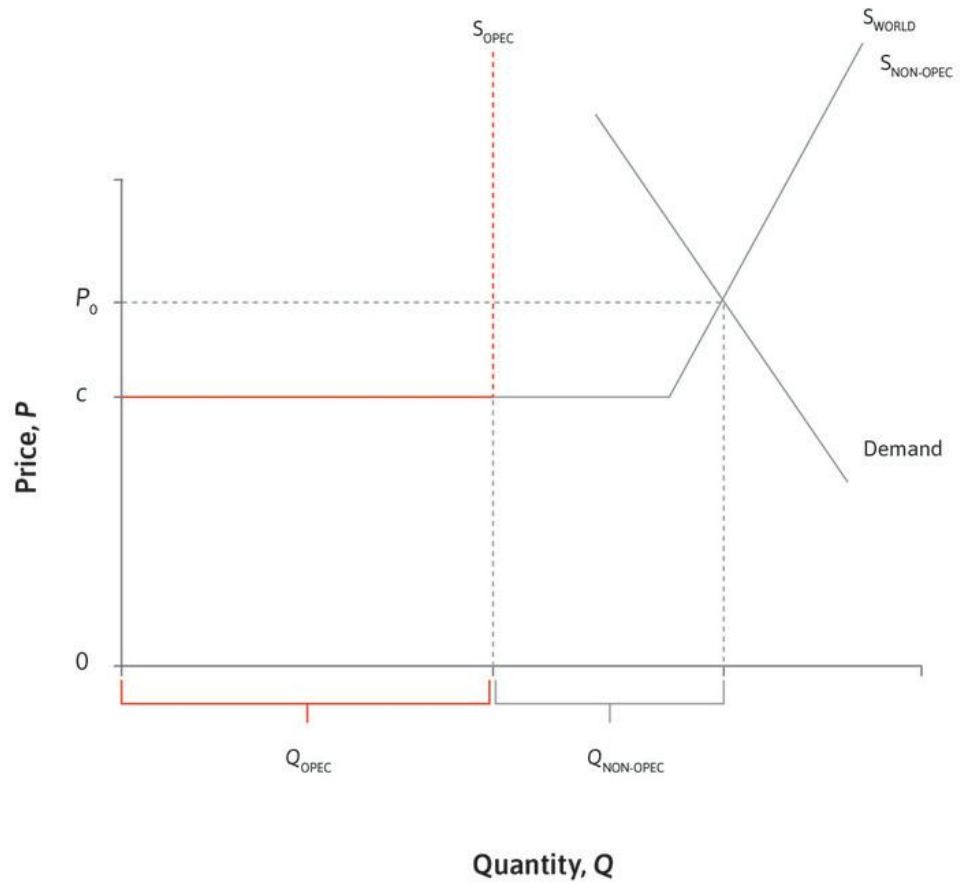
- OPEC & Non-OPEC countries produce at *constant marginal cost* c till their **capacity** is reached.
- Once non-OPEC countries reach their capacity, *marginal cost increases* of increasing output rises sharply.

Each episode of *price rise* leads to increase in **capacity** to produce oil in these countries through

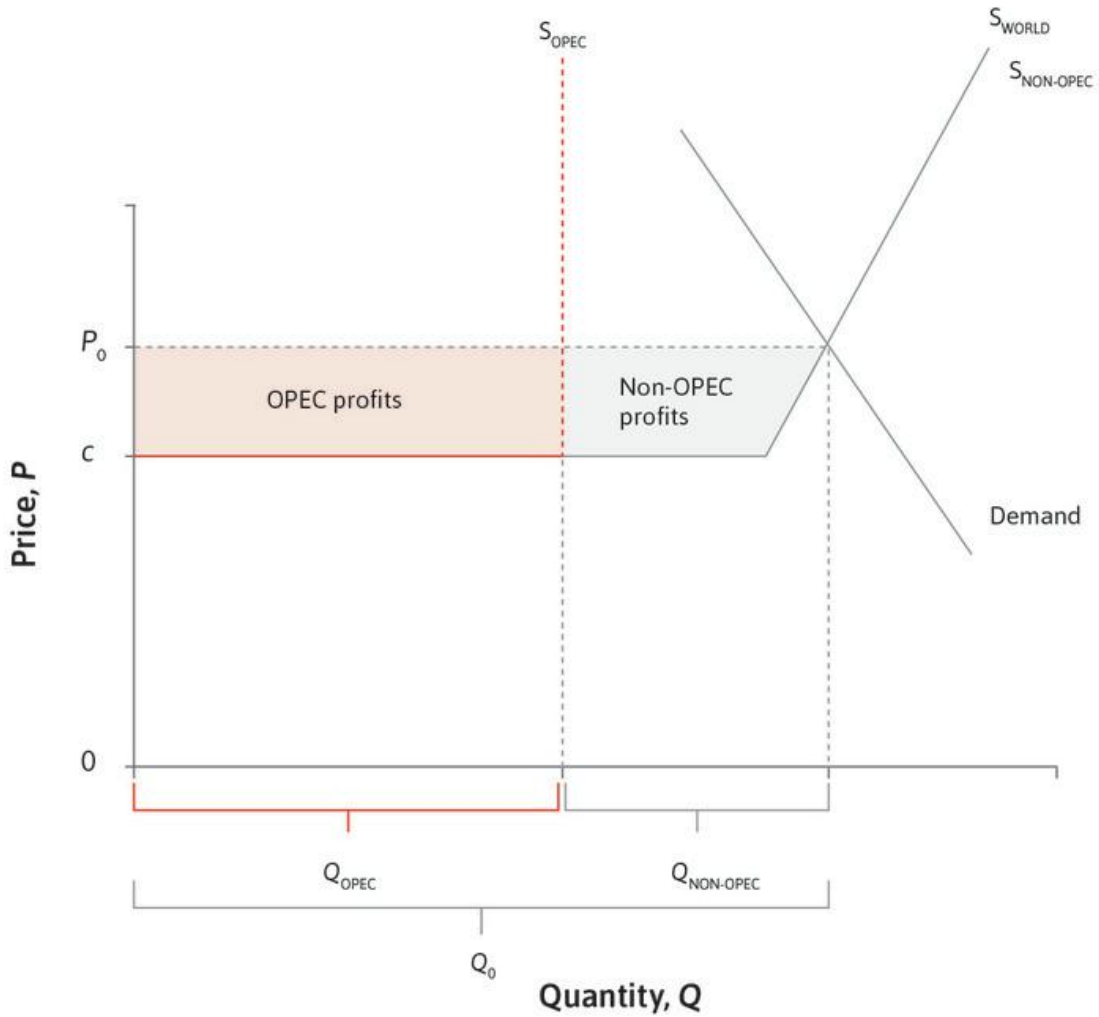
exploration of *new oil fields* and

development of *alternative energy sources*.

Oil producers produce at *constant marginal cost* c till their capacity is reached. Once capacity is reached, *marginal cost* of producing oil *increases sharply*



In 1970s, OPEC countries *restricted supply of oil* (through a system of quotas), which dramatically *increased the economic rents* or profits earnt by oil producing countries.



Shocks in the oil market

1973-74 *First oil shock:* OPEC countries imposed a partial *oil embargo* in response to the war in the middle east.

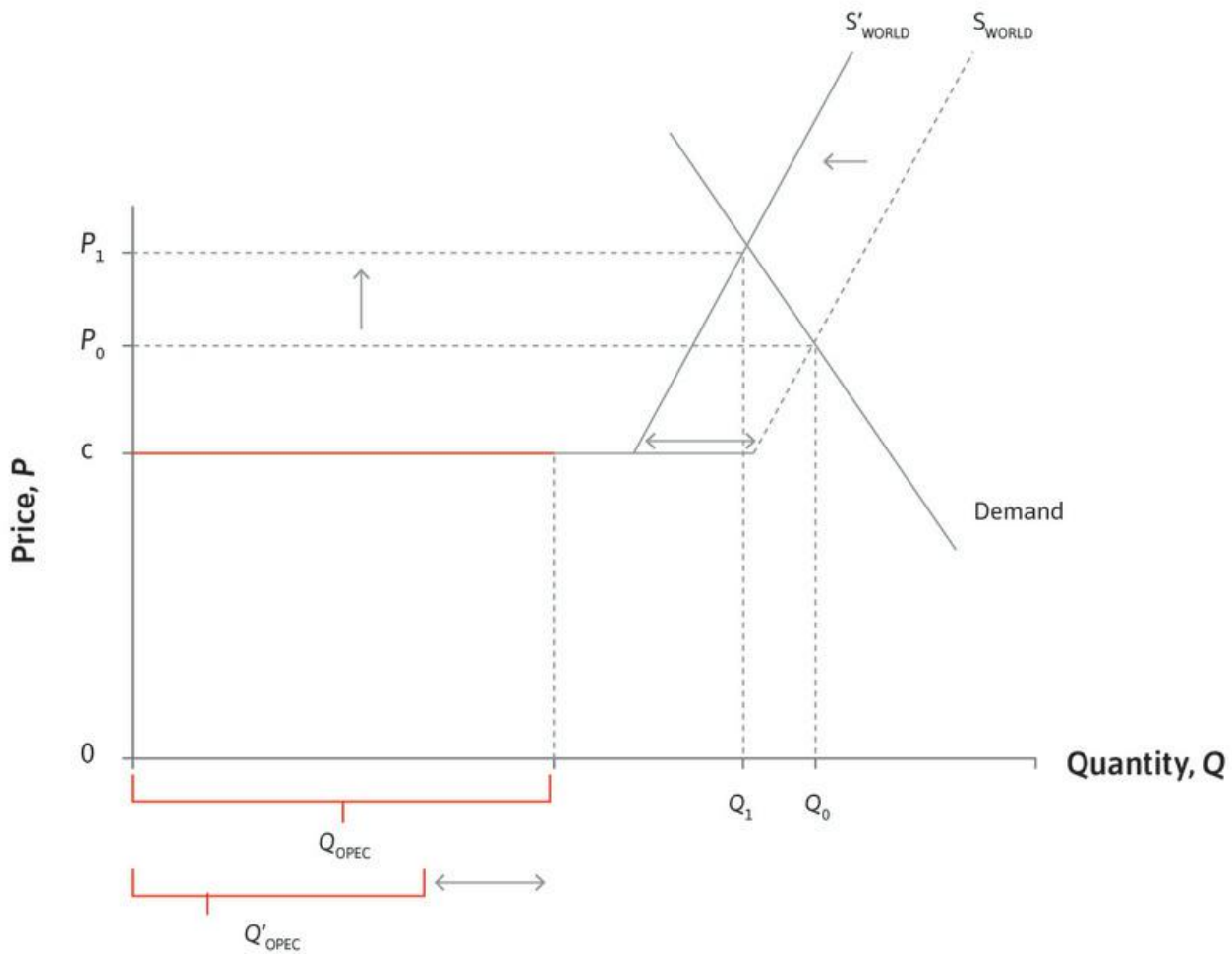
1979-80 *Second oil shock:* *Iranian Revolution* and the outbreak of the *Iran–Iraq war*.

2000-08 *Demand shock due increased demand from rapidly industrialising countries like India and China. Income effect due increasing incomes in China and India.*

2008-09 *Financial Crisis lead to a small drop in demand for oil.*

Negative supply shock for oil: 1973-74 and 1979-80.

Inelastic demand curve for oil *implies* small drop in output and large increase in *price*



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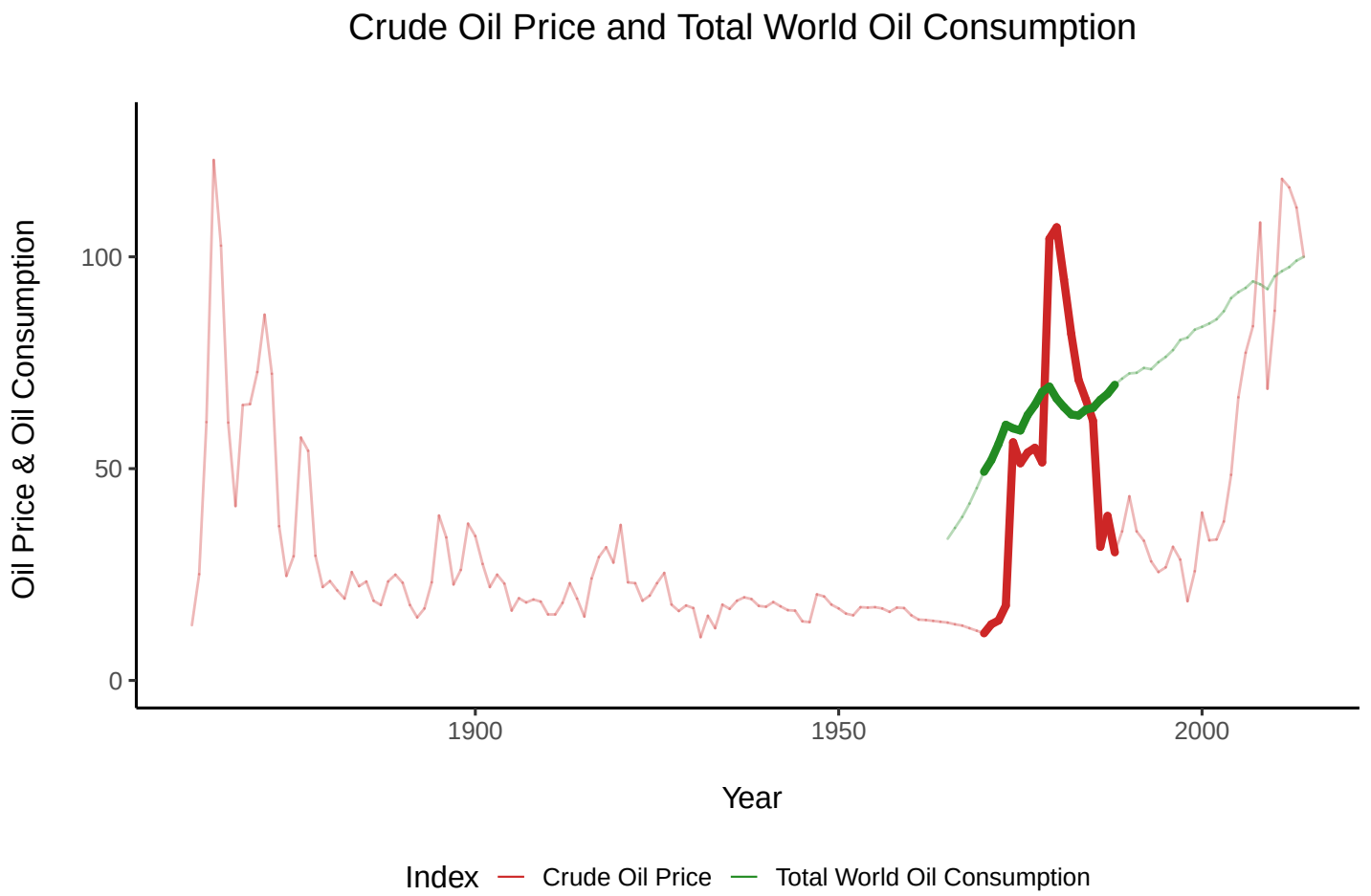

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New positive demand shock for oil: 2000-2008.

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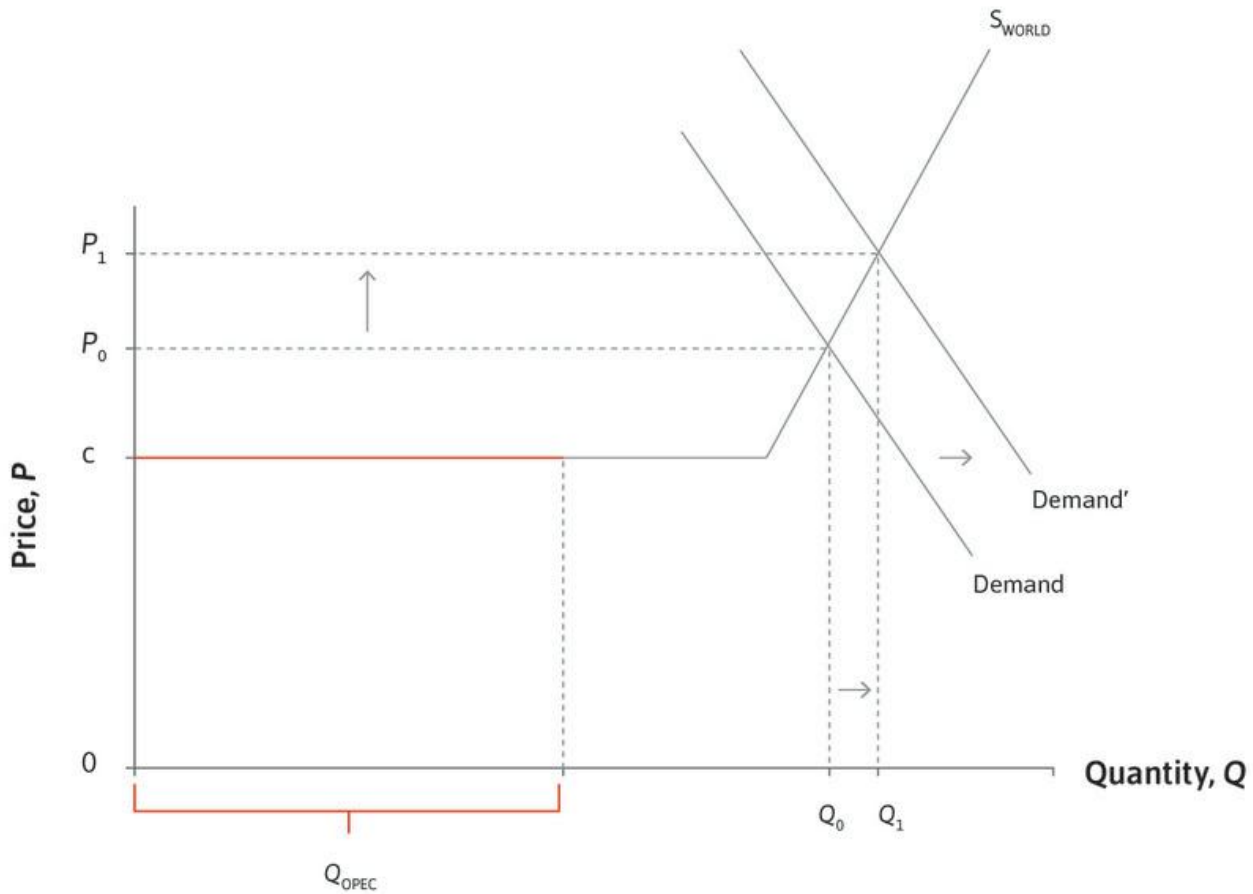

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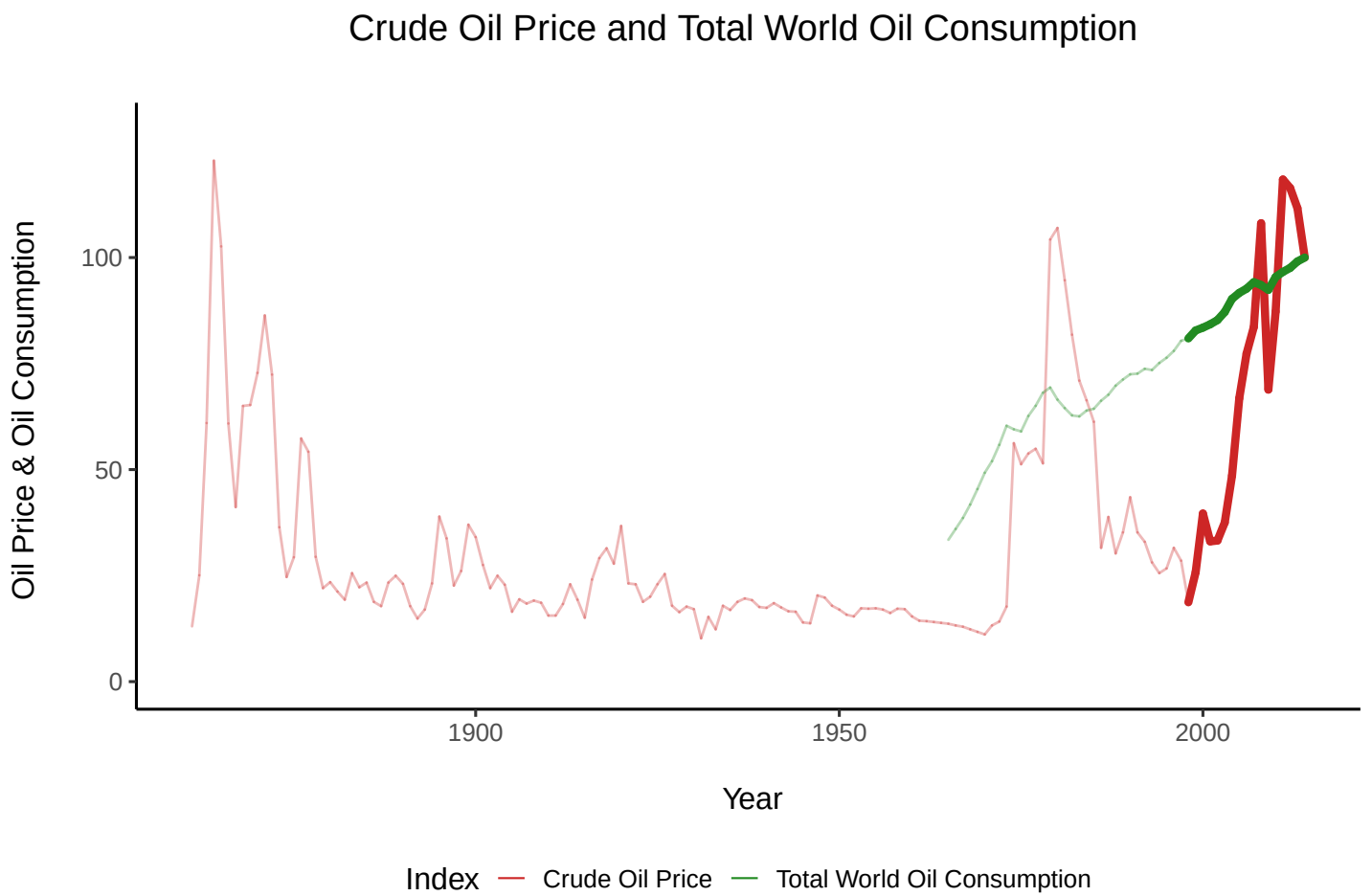

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Reflections

Prices	*equilibrate markets* in the short run
	prices are also *messages that convey information* from people who demand and people who supply
Disruption	*disruption* of markets *creates economic rents*
Entry & exit	Economic rents create *incentive for firms to enter and exit*. This entry and exit is the *long-run market equilibration mechanism.*
Exceptions	sometimes markets mechanisms are *disrupted for other social goals*, i.e., *fairness*, *long-term sustainability*, *climate change*, *land acquisition for critical infrastructure projects*.