

# LECTURE 2: MODELS IN ECONOMICS

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1. Economists apply the scientific method.
2. Assumptions and models in economics.
3. Two simple models.
4. Micro v. macro.
5. Description v. prescription.
6. Why economists may disagree.

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# THE SCIENTIFIC APPROACH



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**Theory:** government printing money too quickly?

**Test:** observe data on prices and money supply over time in many countries  
→ evidence of theory?

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**Test:** observe data on prices and money supply over time in many countries  
→ evidence of theory?

**Observation:** sales of airconditioners lower than normal

**Theory:** cooler weather the cause?

**Test:** observe patterns of temperature, humidity, and compare with patterns of A/C sales

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- effect on house prices of higher interest rates?
- effect on house prices of the changes in flight patterns at Sydney Airport?

# ASSUMPTIONS



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- **make the world easier to understand**
  - a 1:1 road map would not be of much use!
  
- **an art in making the appropriate assumptions:**
  - what to ignore?
  - over what time period?

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# ECONOMIC MODELS

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- **Models of words**

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or diagrams  
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- **Models are built on assumptions:  
simplifications of reality**



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# MODEL 1: THE CIRCULAR-FLOW DIAGRAM

**Households**

**Firms**

**Households**

**Markets  
for  
Goods & Services**

**Firms**

**Households**

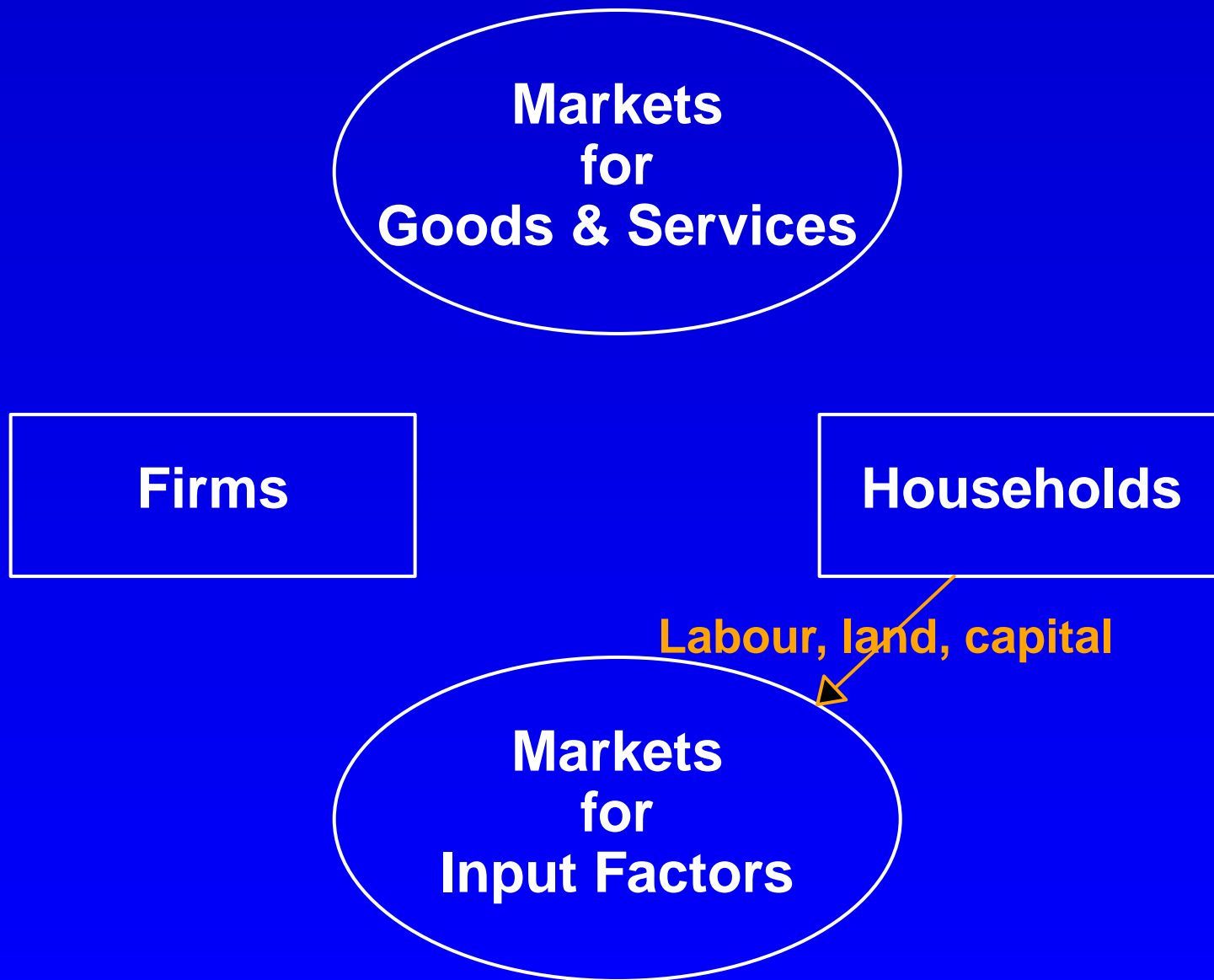
The diagram illustrates the circular flow of income and products in a two-sector economy. At the top, an oval labeled "Markets for Goods & Services" is connected to a box labeled "Firms" on the left and a box labeled "Households" on the right. At the bottom, another oval labeled "Markets for Input Factors" is also connected to the "Firms" and "Households" boxes. This structure shows that firms sell goods and services to households, while households provide input factors to firms.

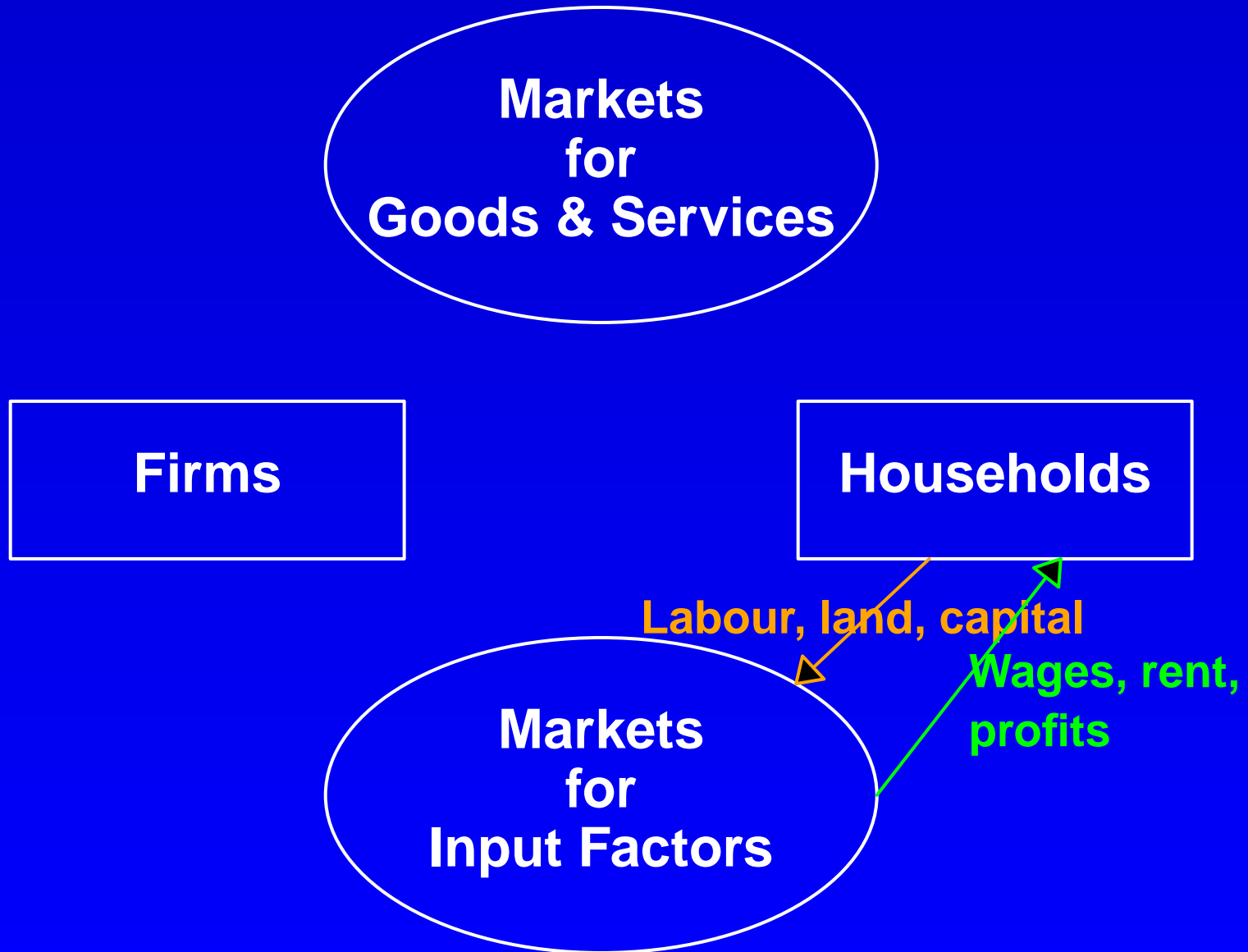
**Markets  
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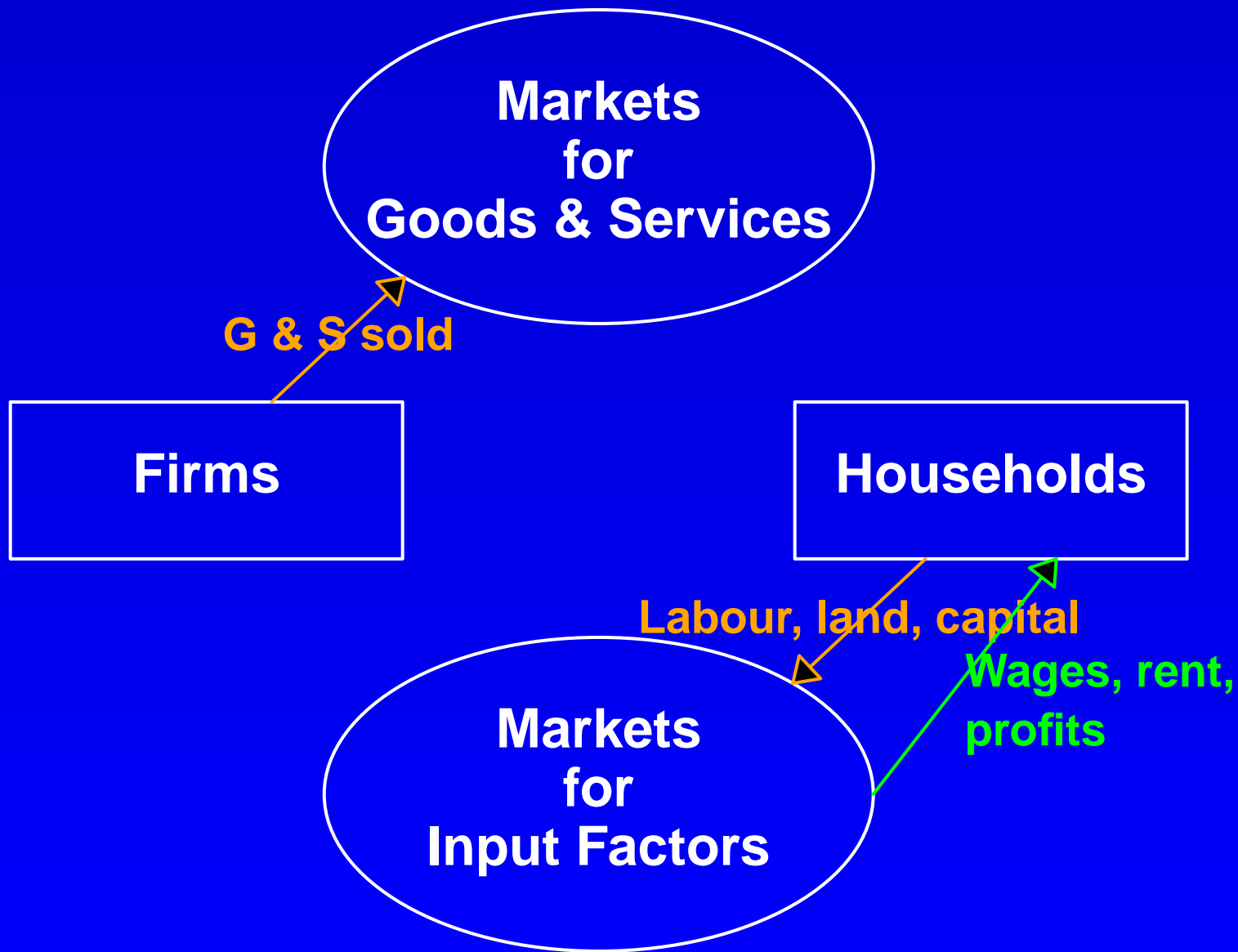
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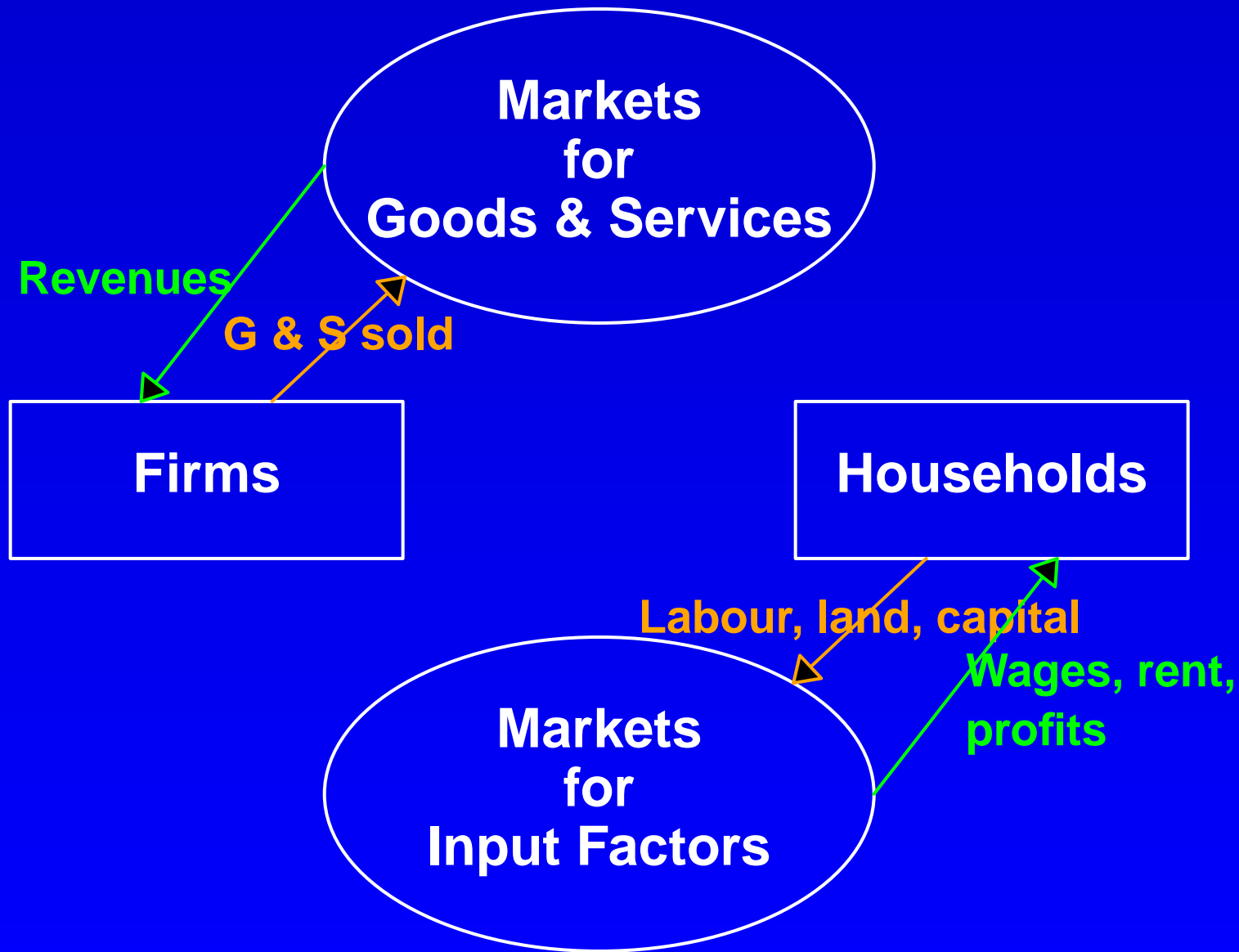
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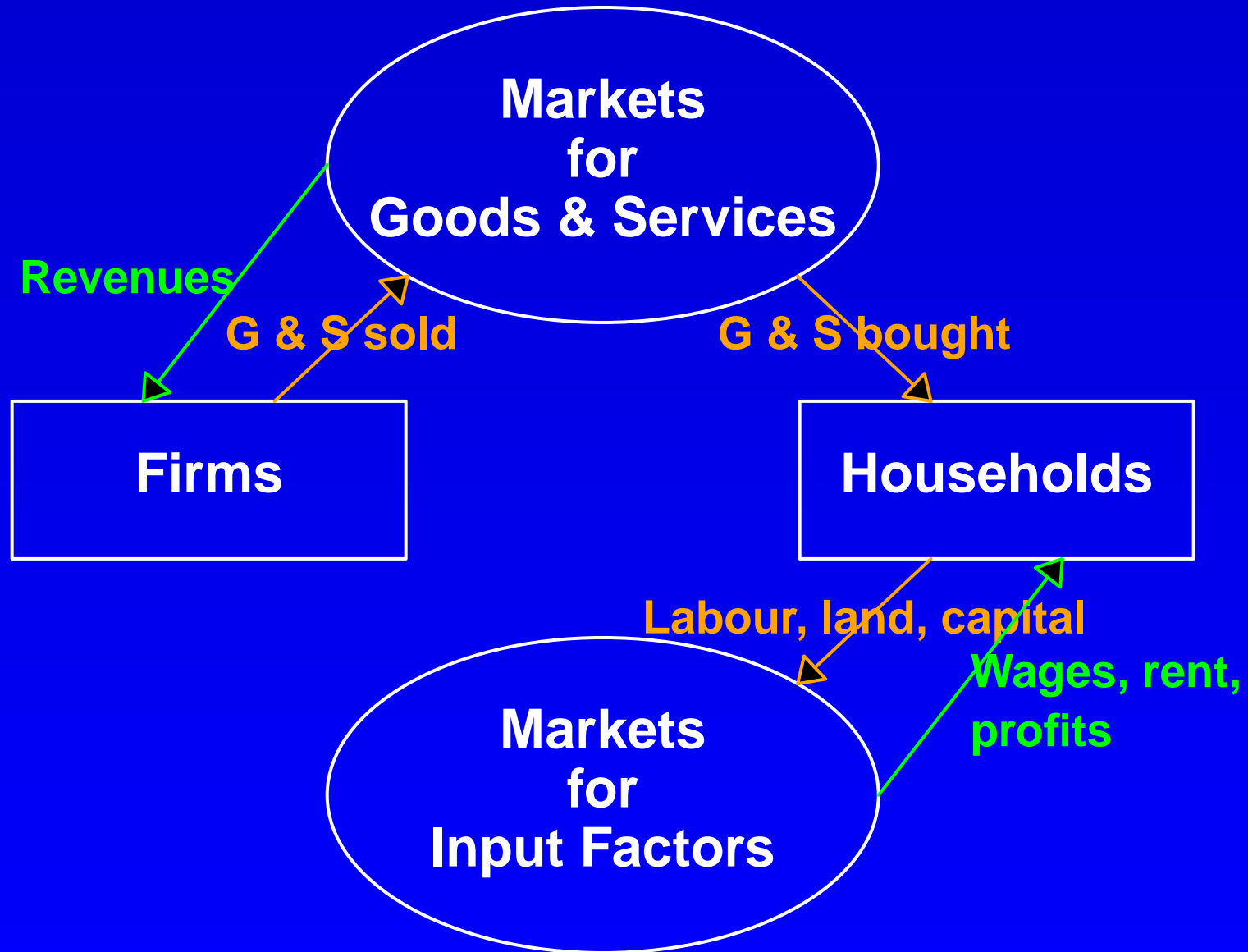


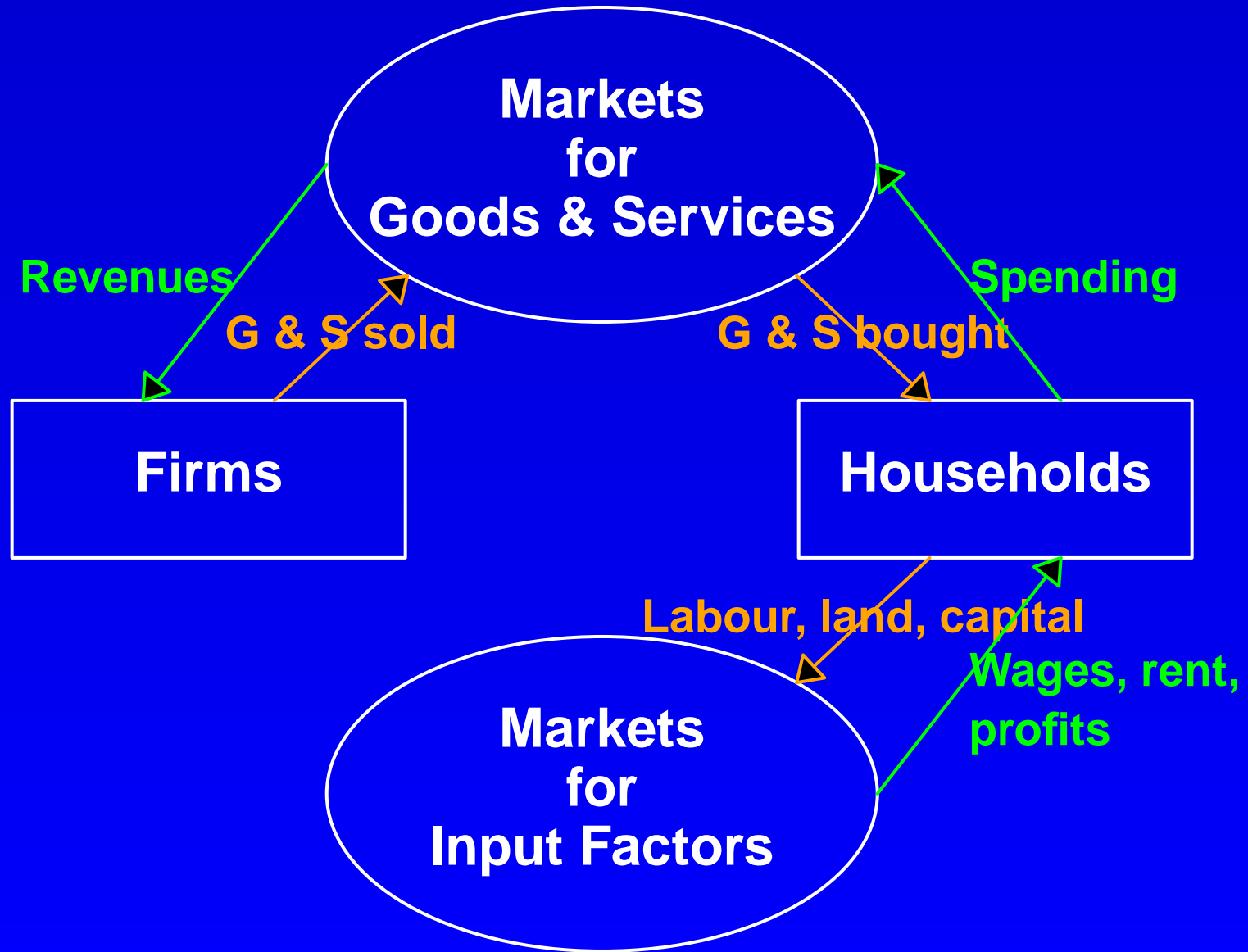


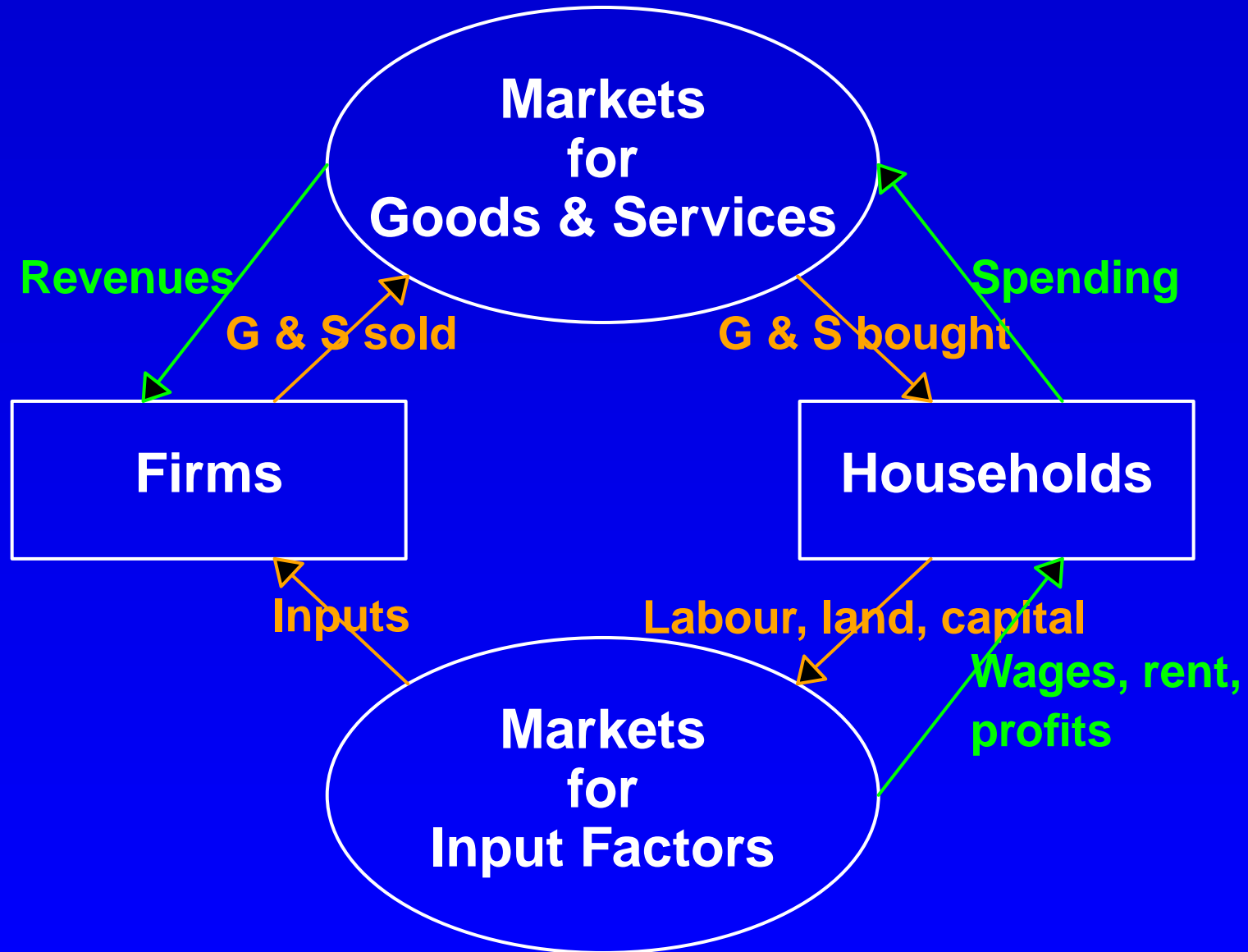


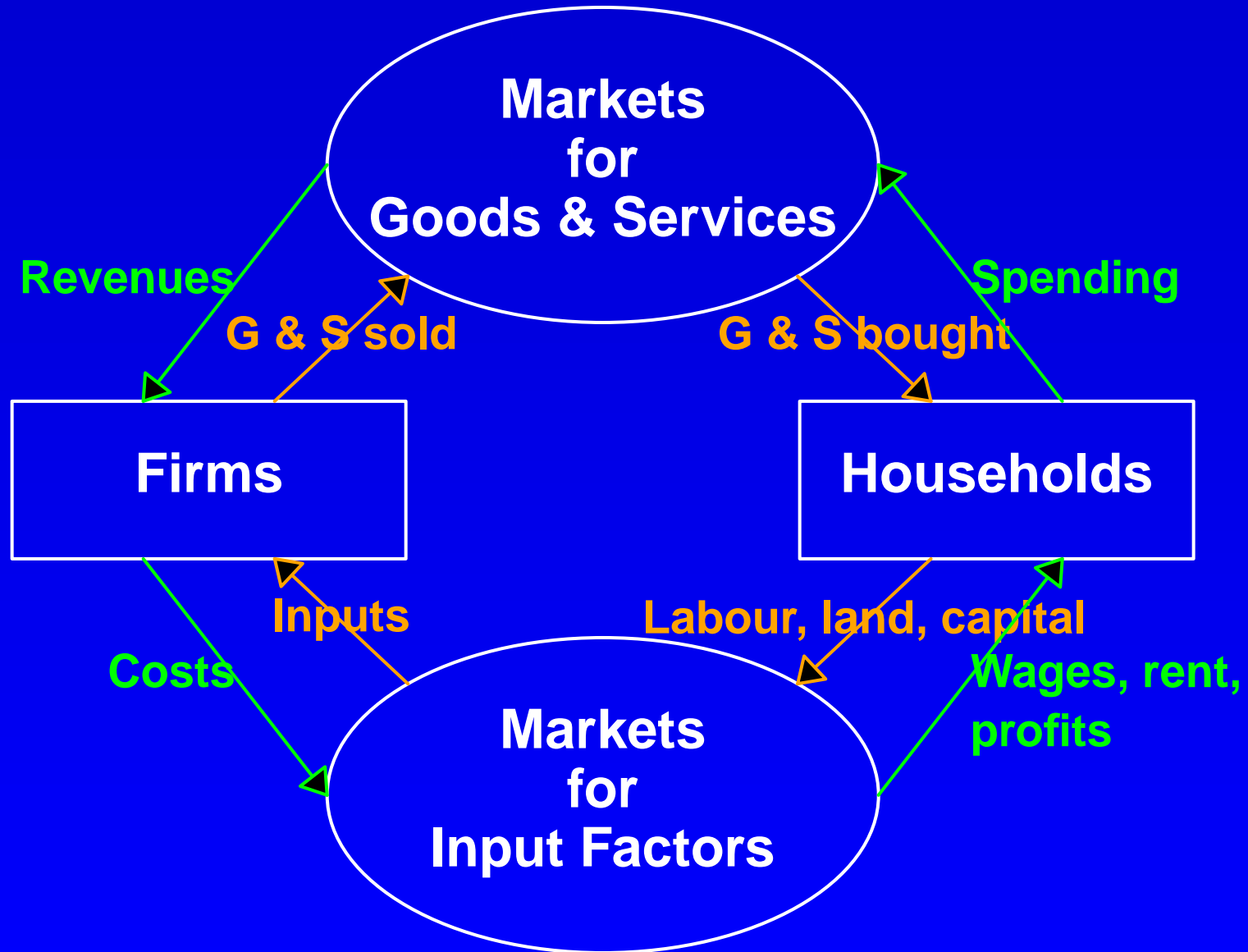












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- **International trade**
- **Finance markets**
- **Others?**



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**Want to plot the economy's *Production Possibilities Frontier* (PPF): the various combinations of output the economy can produce, given available input factors and production technologies.**

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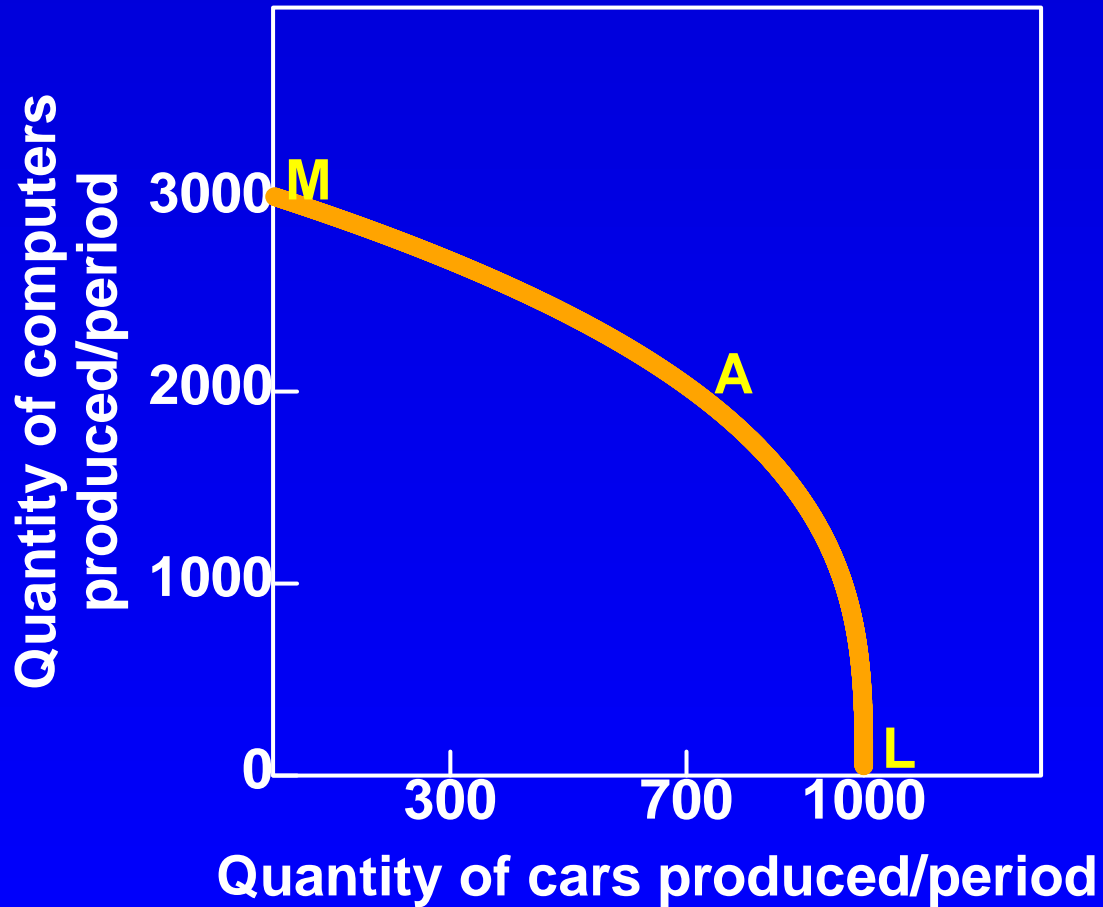
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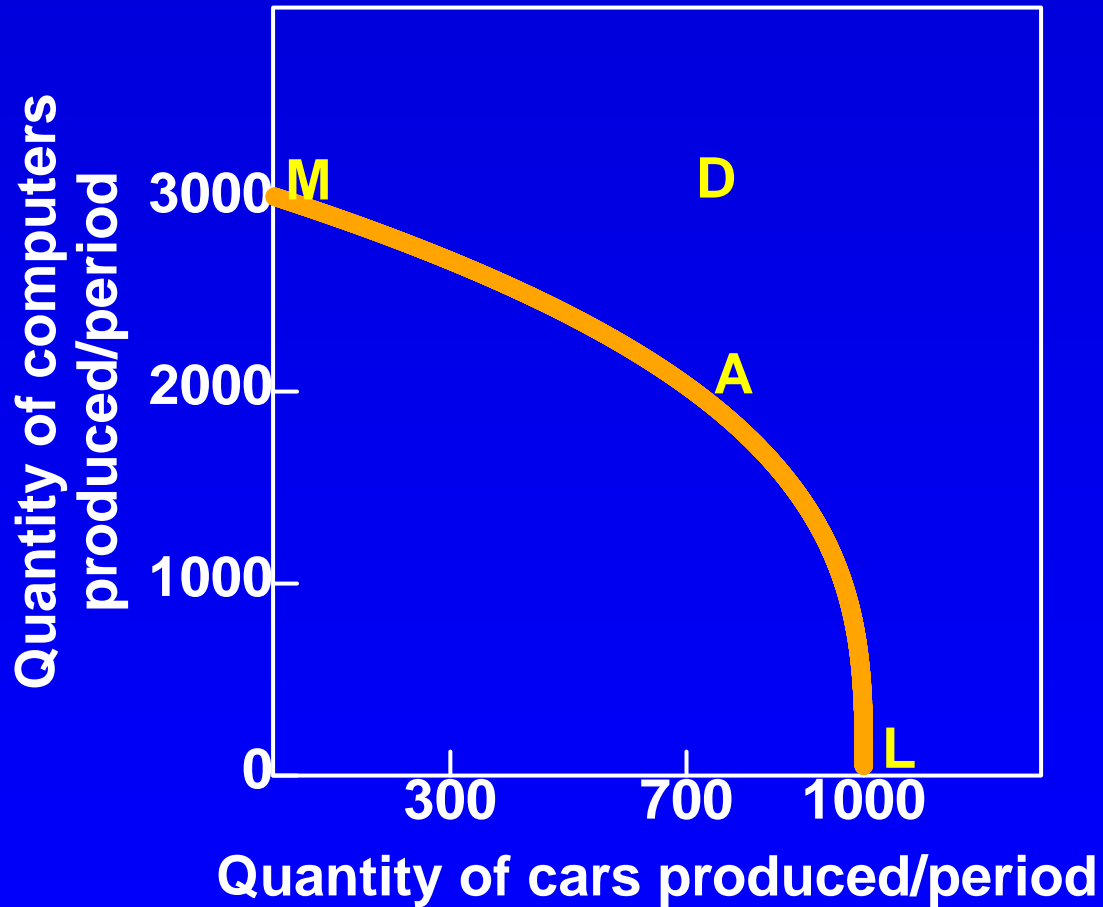
**If all resources used in the computer industry, then the economy produces 3000 computers/period and no cars (point M).**

**If resources divided between the two industries, the economy could produce 700 cars and 2000 computers (point A).**

# THE PPF: PLOTTED

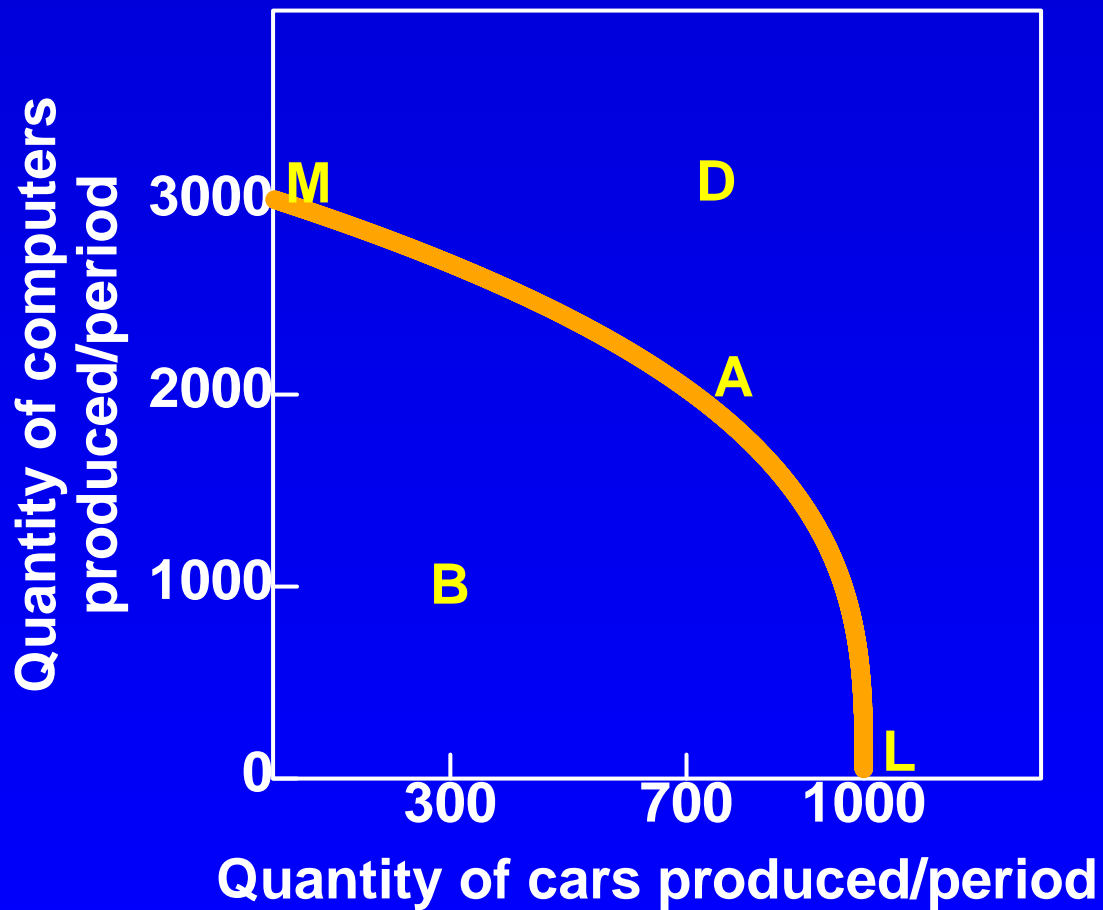


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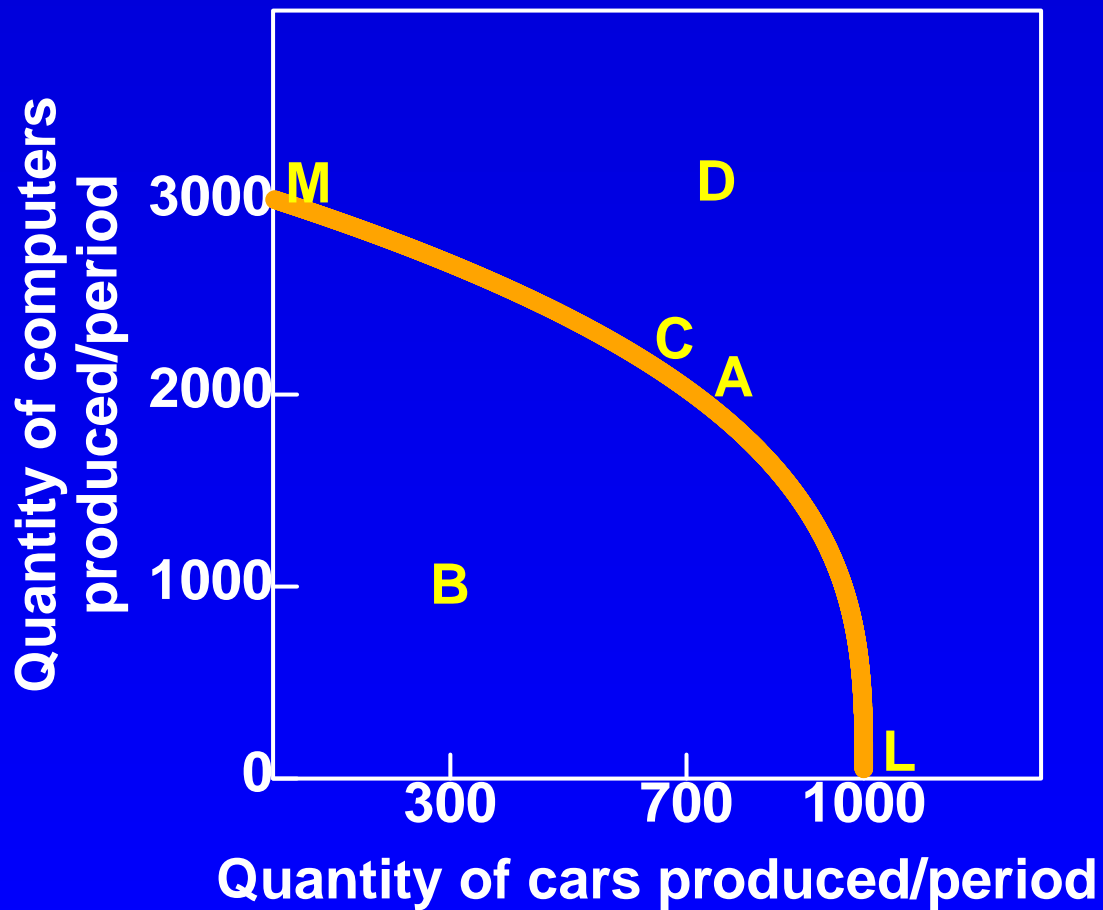




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**Point B is inefficient:** output could be higher in terms of cars or computers or both (to the NE).



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computers is 100 cars.**

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**It is also possible to ask what the cost is in terms of computers forgone of making an additional car.**

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**Does the converse follow? No. Bad management could waste inputs — that's where you come in!**

# THE PPF & NEW TECHNOLOGY

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- the opportunity costs (or trade-offs) can change.**

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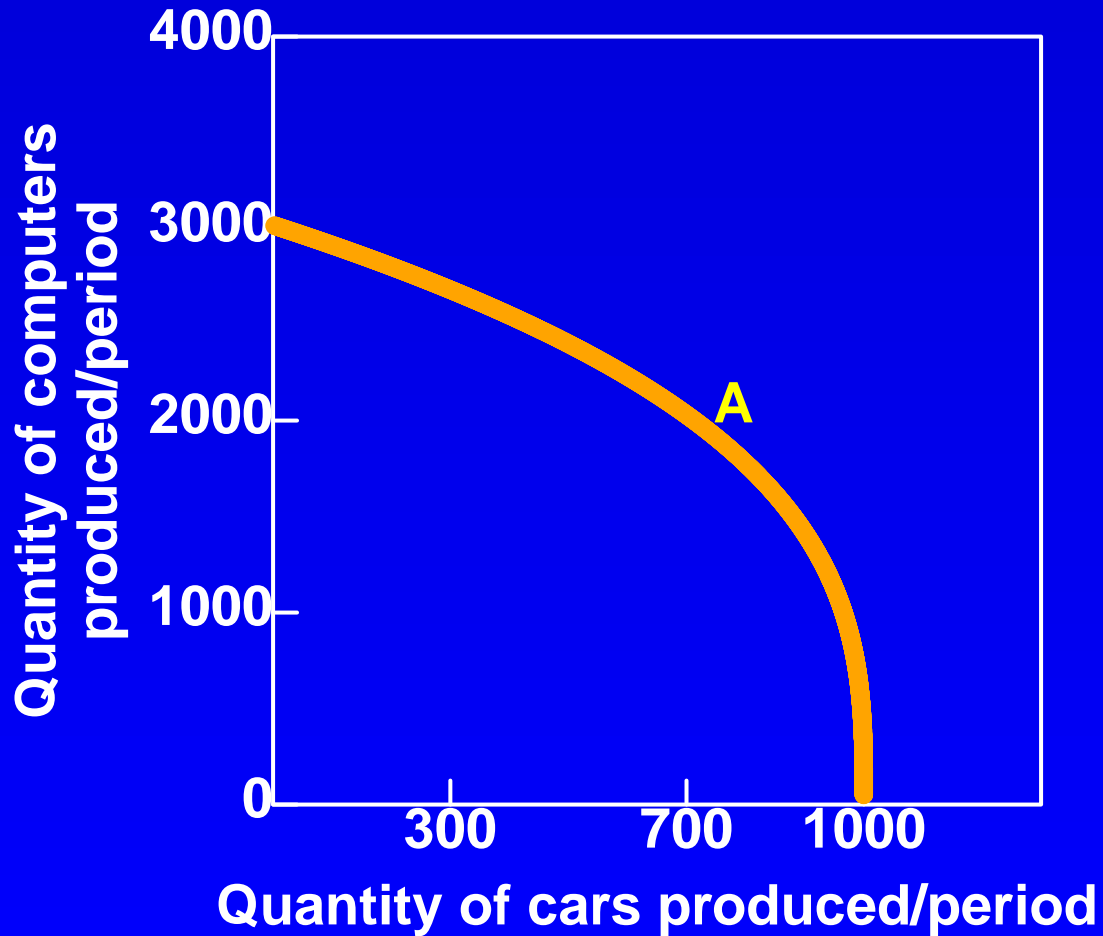
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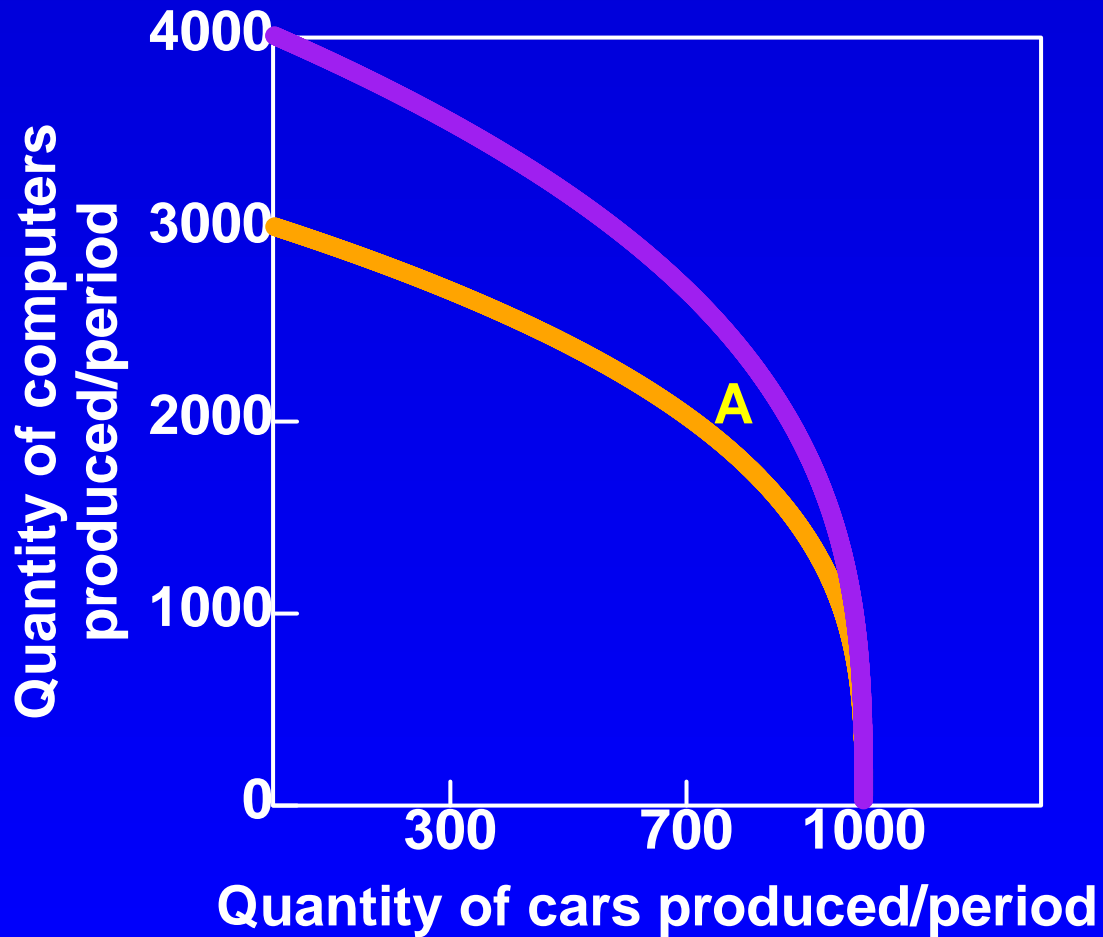
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**The economy might shift production from point A to point E: producing both more computers and more cars.**

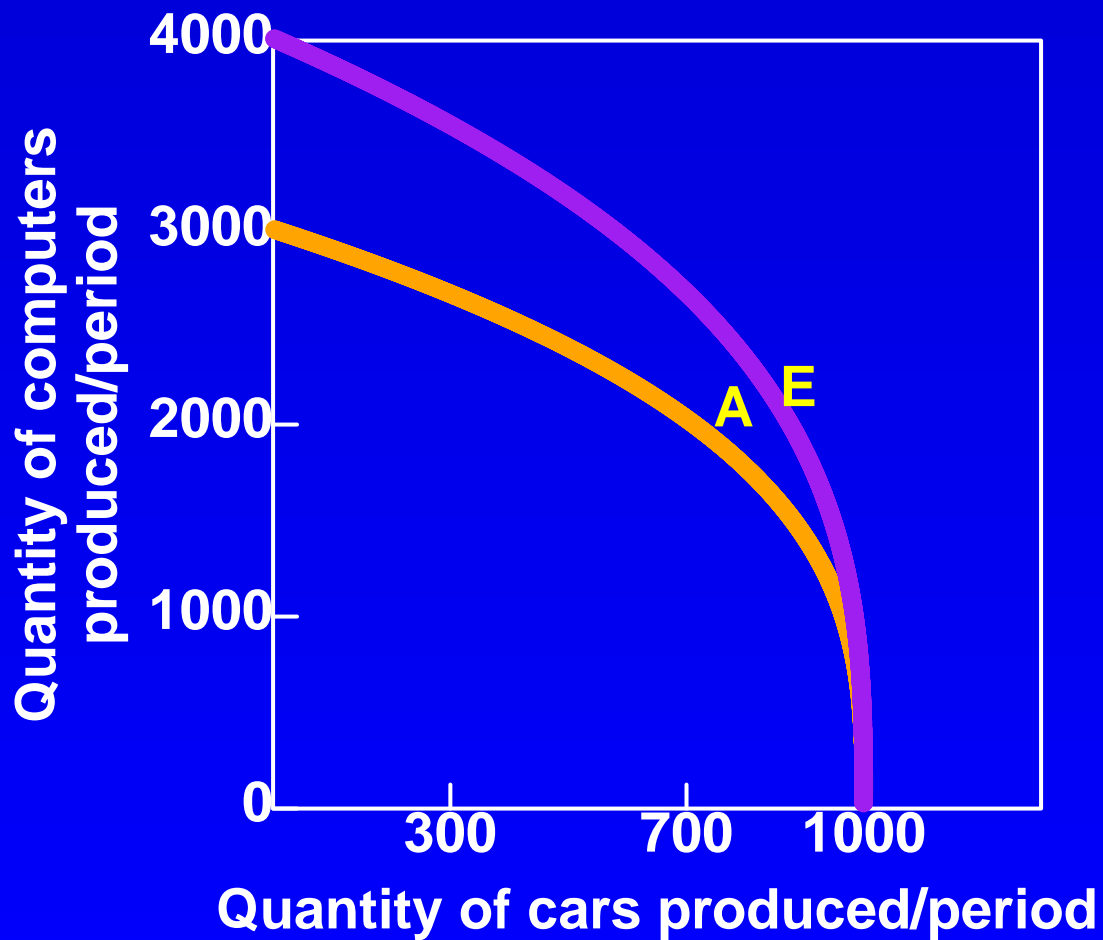
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# MICRO v. MACRO

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**Examples: competition policy, the profitability of different industries, changes in access to foreign markets and increased foreign competition in Australian markets.**

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**Examples: impact of changes in monetary policy on interest rates, on financial markets, and on the real economy; changes in fiscal policy (government borrowing and spending).**

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**But MBA students focus on descriptions of how individuals, households, and firms behave and interact, with little focus on policy-making.**

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**Nonetheless, there is widespread agreement (see Table 2.2 in the text).**

# Issues in Microeconomics

(Not for discussion today.)

- How can bad weather help farmers?
- How do borrowing and lending help smooth consumption across years?
- What impact does a fall in discount rates have on this pattern?
- Why do some people choose not to work?
- Why do some people choose not to work longer when their wage rates increase?
- Why is there a greater reliance on machinery in Australian construction than in Chinese construction?
- When will higher tax rates raise tax revenues, and when will such revenues fall?
- Why do some firms go out of business?
- Why do some restaurants offer “weekday specials”?
- Why do high interest rates discourage investment?

- **Why might price controls result in queuing?**
- **How could minimum wage laws result in lower employment?**
- **When might governments use quotas (which raise no revenues) rather than tariffs (which, as taxes on imports, do raise revenues)?**
- **How can growing demand for computers accompany lower prices for computers?**
- **How best should governments allocate scarce resources, such as the electro-magnetic spectrum?**
- **When is a monopoly not a monopoly? (Or, should the Australian Competition and Consumer Commission care that there is only a single manufacturer of Coca Cola in Australia?)**
- **Are Australian CD prices too high?  
If so, why, and what could the Government do to reduce them?**
- **Why have slide rules disappeared from sale?**
- **Why does Telstra charge a monthly amount, plus an amount per call?**
- **How could Telstra change its billing, and how would subscribers' behaviour change?**

- What methods do firms use to reduce loafing on the job?
- Why are employee-owned firms rare?
- What is the difference between a firm's average cost and marginal cost? And does it matter?
- What information does the firm need to calculate both costs?
- How do decision makers respond to future uncertainty?
- What if advertising were prohibited?
- What if coffee drinking (or cigarette smoking) were prohibited?
- What is Gresham's Law and why is it important in times when the *quality* of goods and services is not easily observed before purchase?
- How to sell music? Bundled on a CD, or track by track over the Internet?