Workshop Housing Indicators

Enabling Policy Instruments towards well-functioning housing market

Hanoi, Vietnam. January 12-13, 2012.

HOUSING MARKETS

affordable housing delivery

demand, supply, ability to pay, housing affordability

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Part 1: Basic Concepts

- Understanding how the housing sector works
- Principles of Supply and Demand
- Shifts in Supply and Demand
- Shortage and Surplus

Part 2: Housing Markets

- Supply and Demand
- Government Intervention
- Applying the Axiom Supply-Demand in Designing Policies
- Housing Affordability and Housing Needs Assessment

Part 3: Principles of Policy Intervention

- Enabling Housing Policies
- Do's and Don'ts in Policy Intervention

PART 1

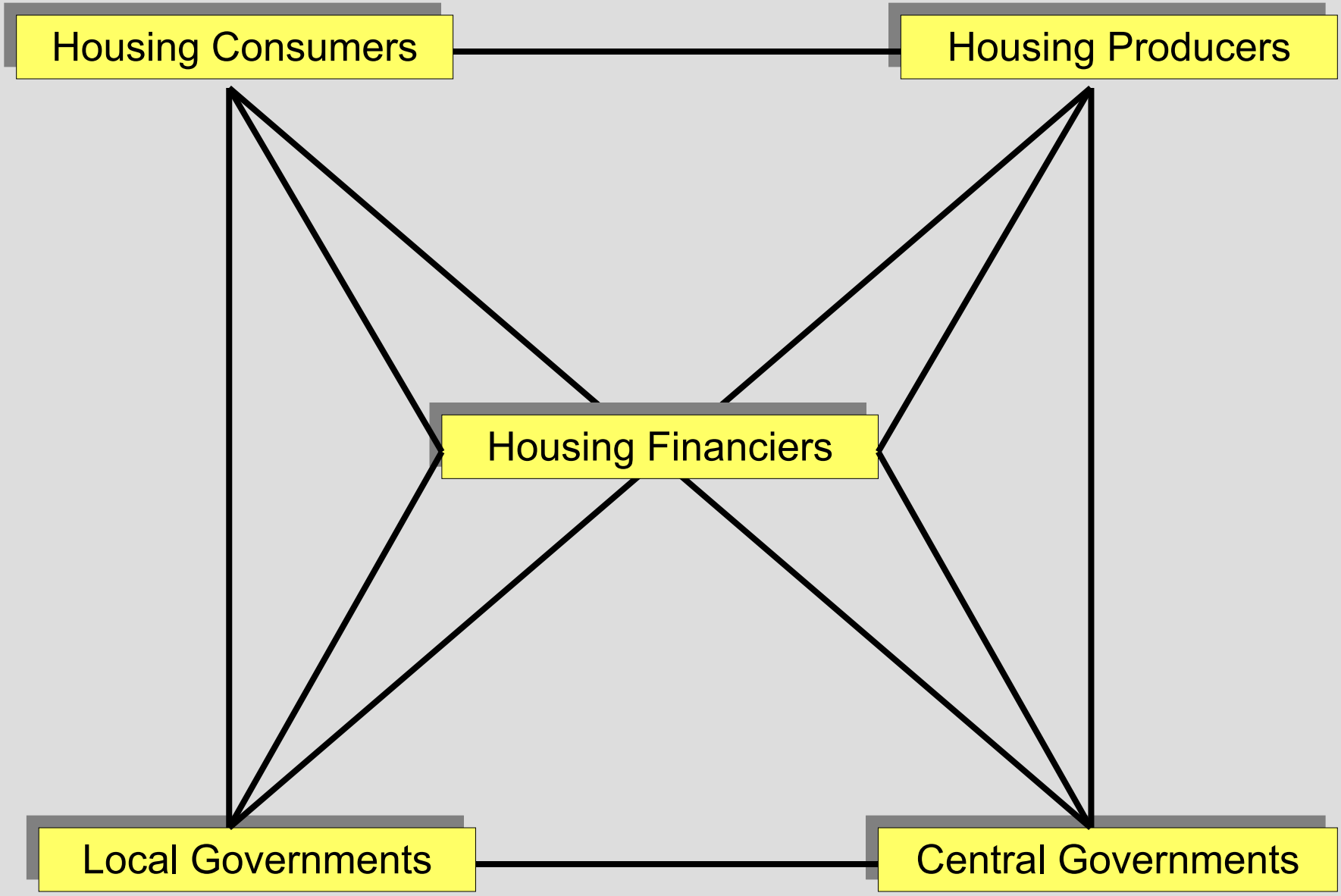
Basic Concepts

1.

Understanding How the Housing Sector Works:

some points of departure.

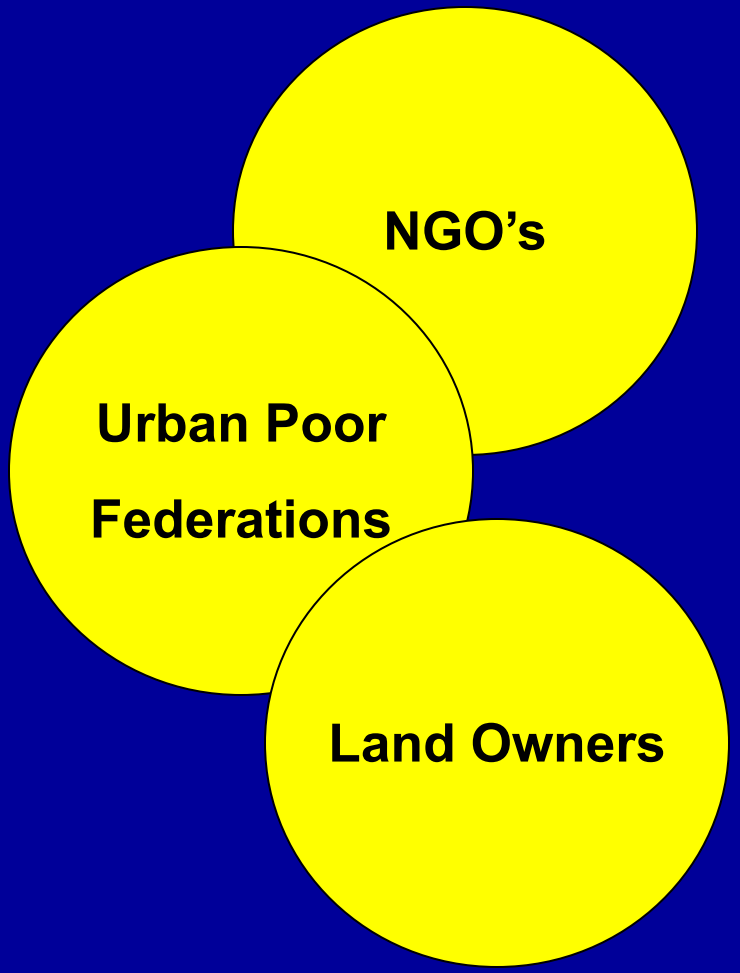
Multiple Actors and Specific Motivations



Based on World Bank, 1993.

What are these actors' motivations?

- Consumers
- Producers
- Financiers
- Local Governments
- Central Governments



Based on World Bank, 1993.

SOME POINTS OF DEPARTURE 1

ECONOMICS is the study of how society allocates its scarce resources to produce and distribute goods that are valued

(Steinemann et al, 2005)

Decisions that affect the public often depend on microeconomics (Steinemann et al, 2005)

SOME POINTS OF DEPARTURE 2

"Economic principles for private sector and public sector decisions are similar, yet the goals and analyses differ" (Steinemann et al, 2005)

PRIVATE SECTOR

Maximises profit = total benefits – total costs

Benefits: revenues from Sales

Costs: expenditures on materials for production

PUBLIC SECTOR

Goals + profit maximisation

Equity, employment, environmental protection, quality of life

Provide services even if doesn't generate monetary profit

Costs to society: environmental pollution

EXAMPLE

Land Development for New Houses

FROM THE PRIVATE SECTOR:

Costs for society:

loss of trees (not included in developers' accounting

Benefits:

decrease of unemployment (not included either)

Imposing a Tax

Costs:

individual citizens and firms

Government:

transfer of resources within the public

Costs for some and benefits for others

SOME POINTS OF DEPARTURE

(Steinemann et al, 2005)

1. **Public sector decision makers often need to consider multiple societal goals, not only profit maximisation…**

2. **also the impacts of their decisions on both private and public sector, not only their own agency…**

3. **need to asses various types of benefits and costs, not only those placed in monetary terms.**

2.

Principles of Supply & Demand

Supply and Demand

Consumer Preferences → **Consumer demand for commodities**

Business Cost → **Supply of commodities**

Changes in Supply and Demand → **Changes in Output and Prices**

Common Sense 1

The HIGHER the price of a good or commodity the LESS consumers are willing to buy provided that other things remain constant.

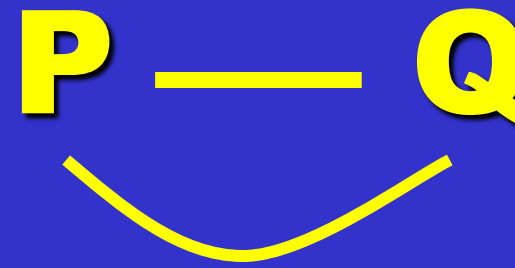
Other determinants of demand:

- average levels of income
- size of population - size of the market
- price & availability of related products - tend to perform the same function
- tastes and preferences - cultural + historical influences
- special influences

Common Sense 2

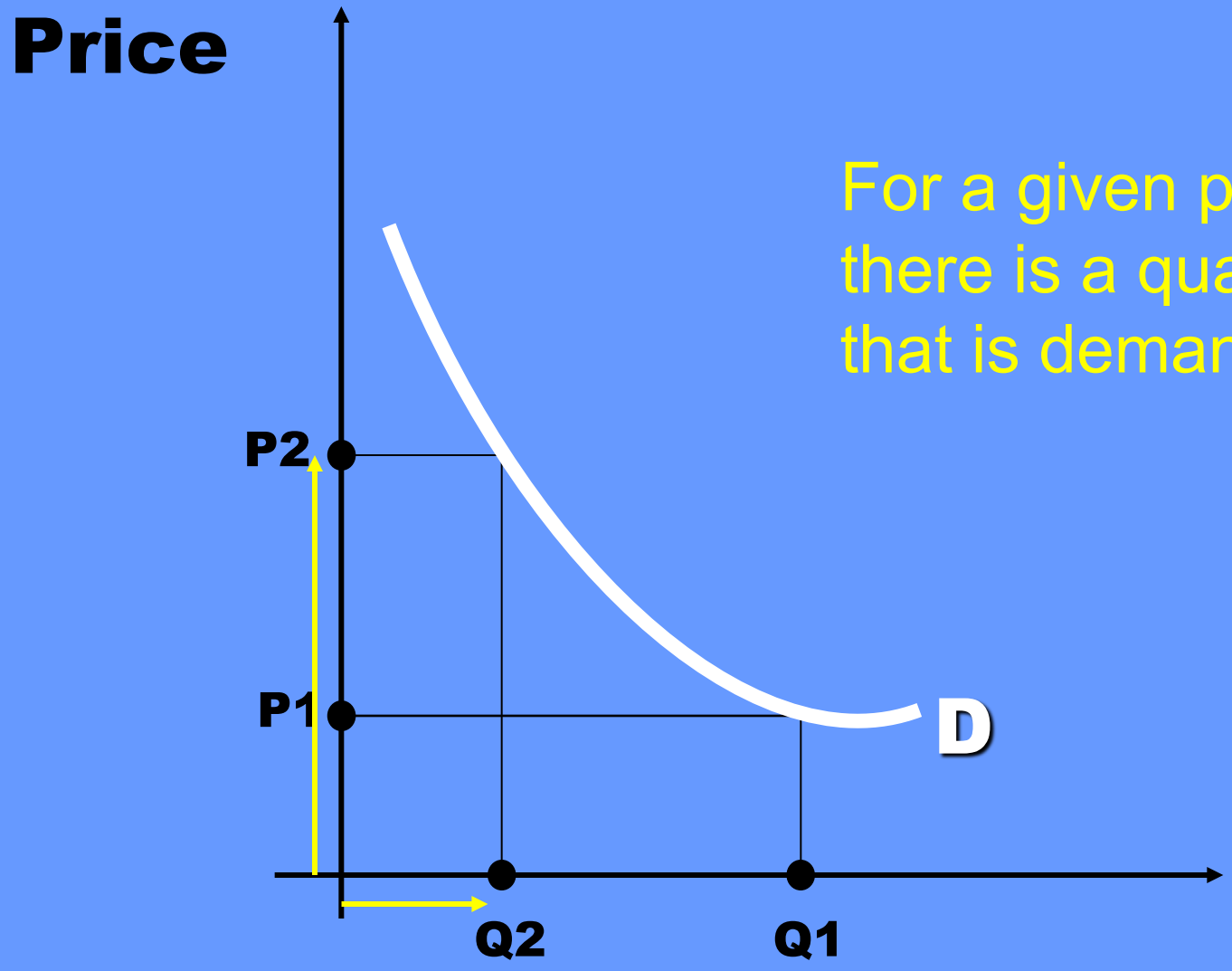
Relation between PRICE of a good and QUANTITY demanded

Relationship PRICE - QUANTITY PURCHASED



Inversely Related

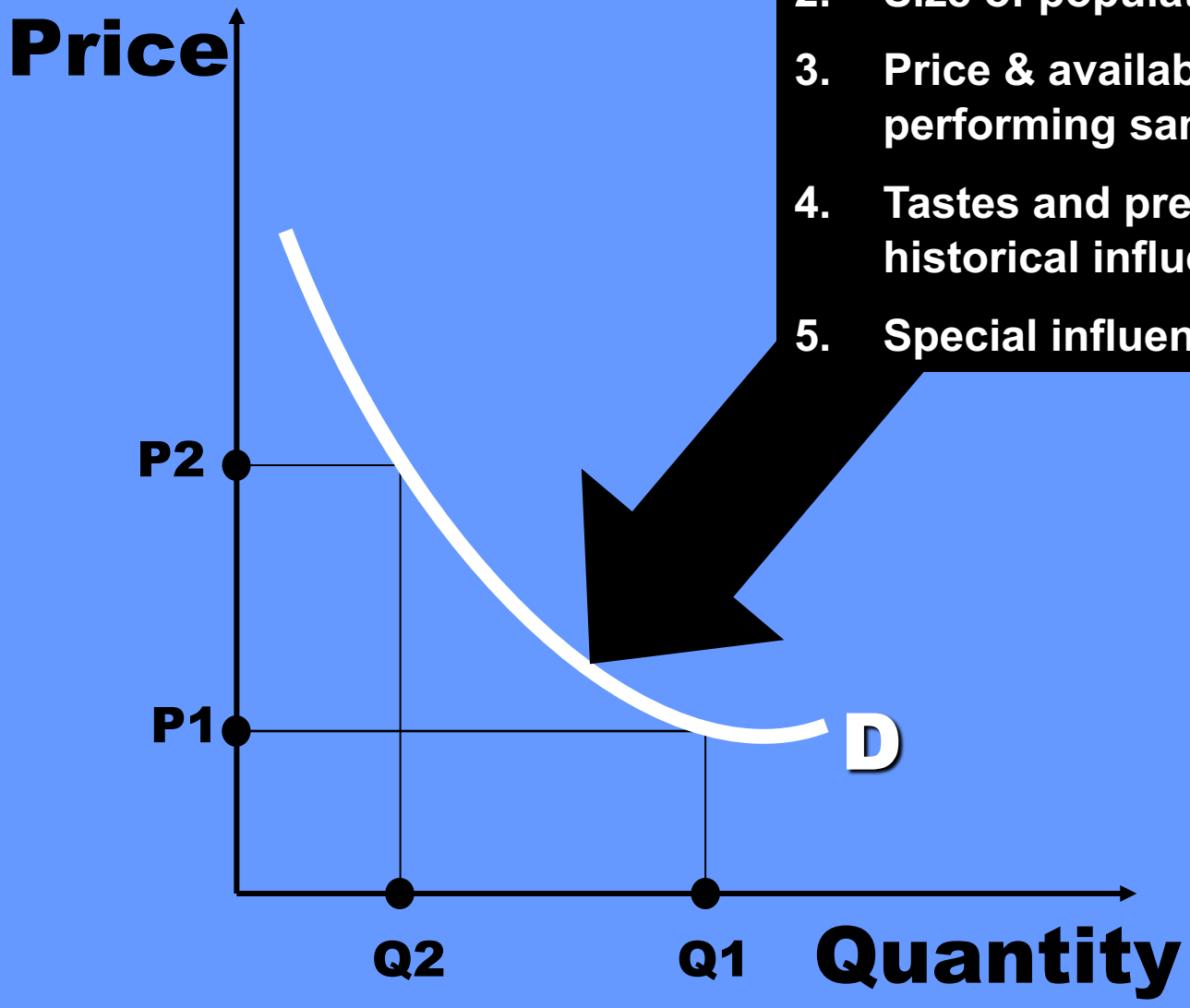
The DEMAND Curve



For a given price P2 there is a quantity Q2 that is demanded.

What does influence Demand?

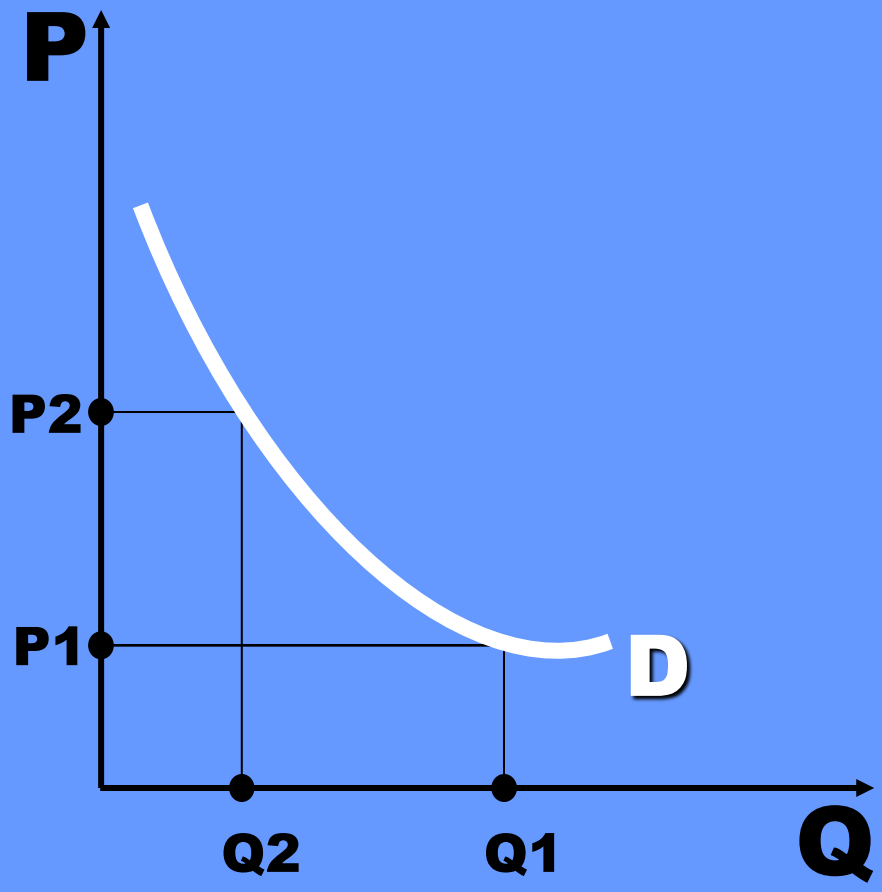
1. Income
2. Size of population - size of the market
3. Price & availability of related products performing same function
4. Tastes and preferences - cultural + historical influences
5. Special influences: (hot climate-airco)

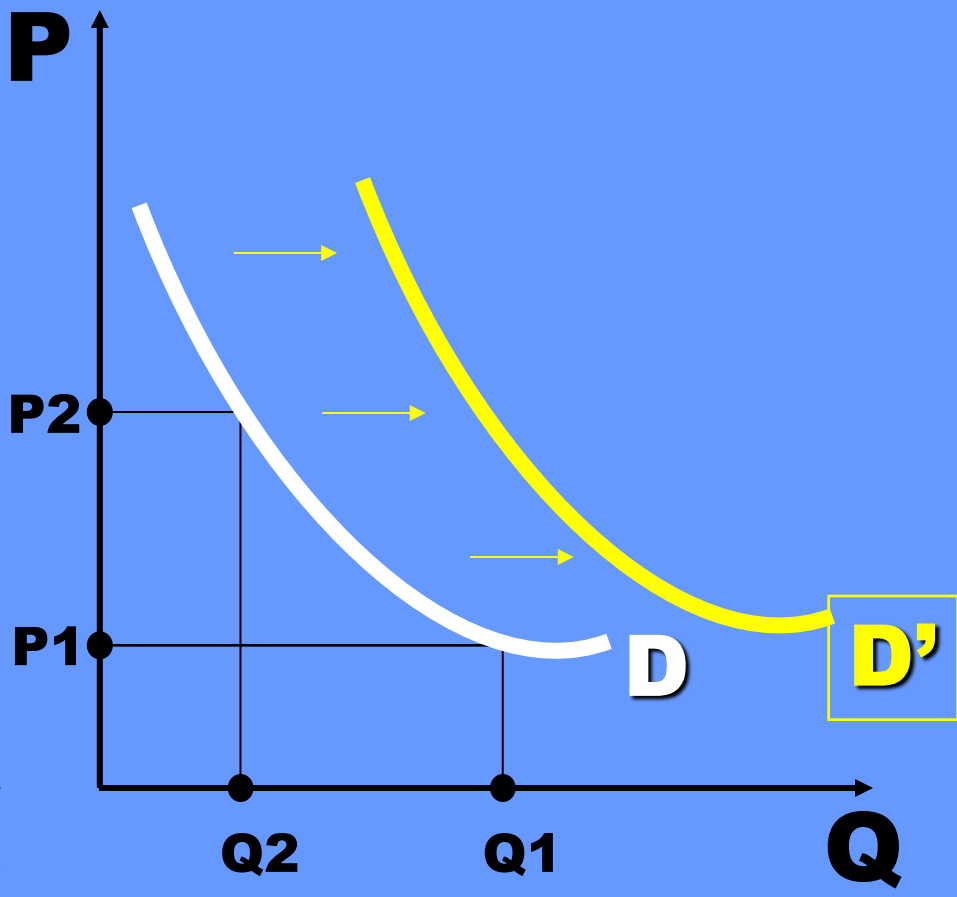


Change in Demand → Demand curve shifts

Influences change rather than the good's price.

For example, what happens if population increases?

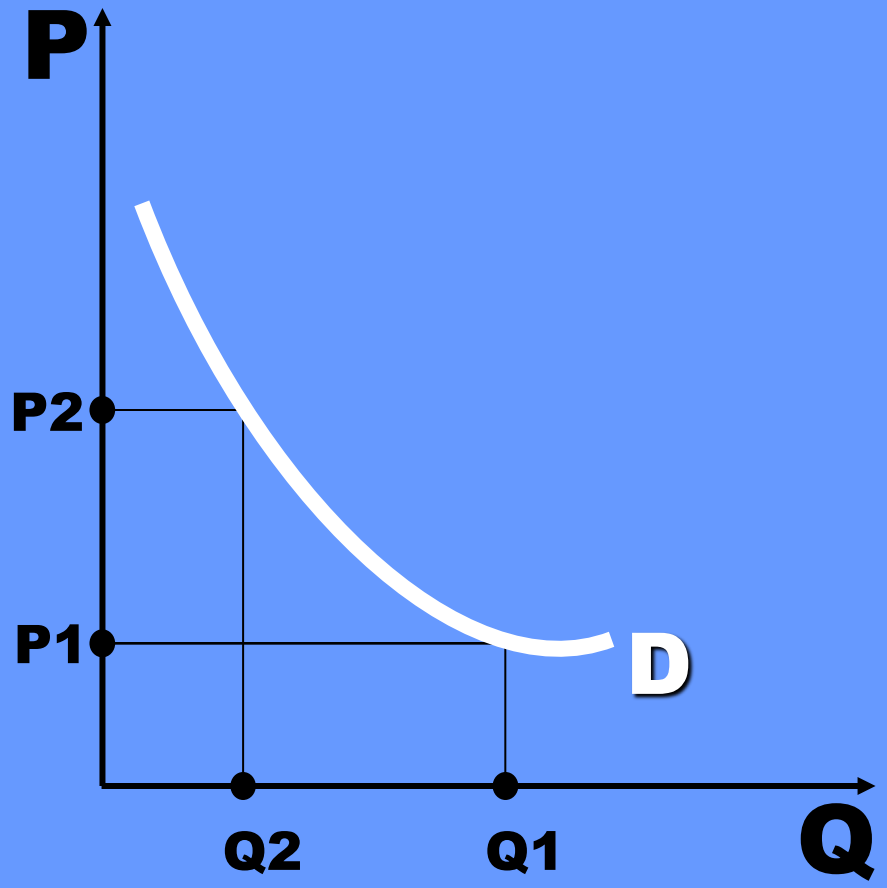


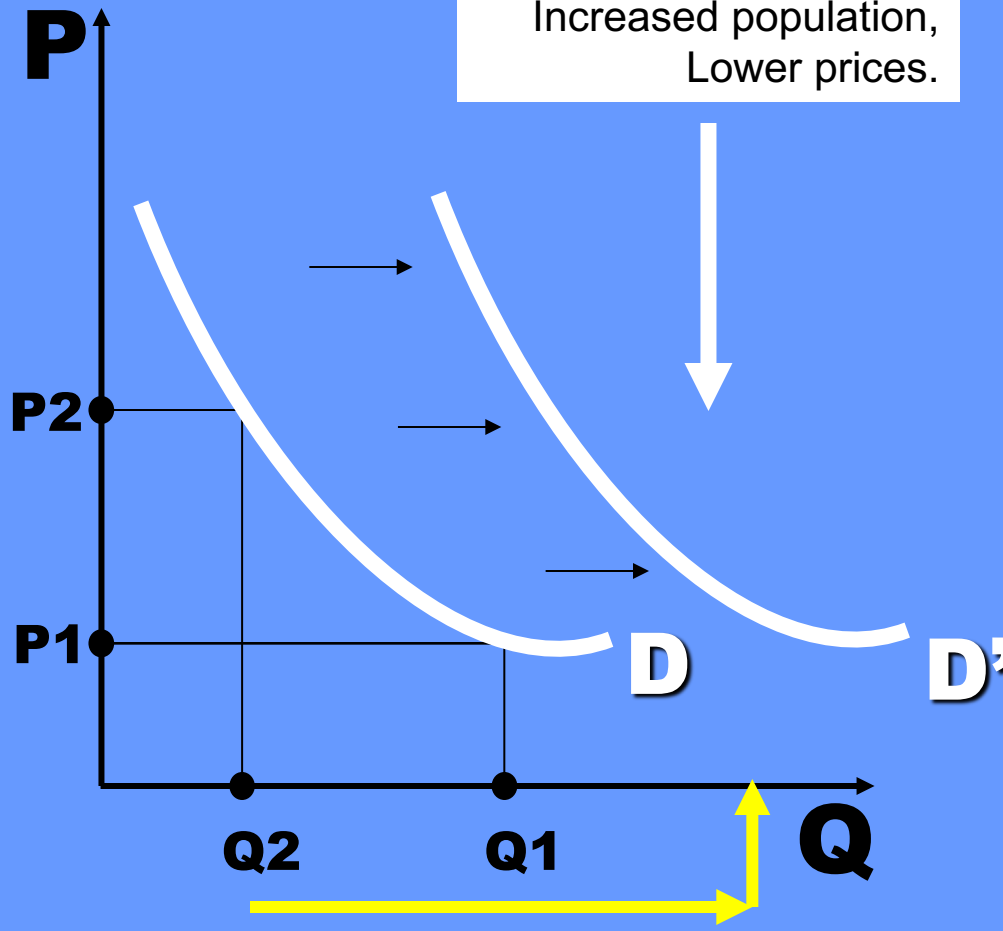


What happens if there is a rise in average income ?

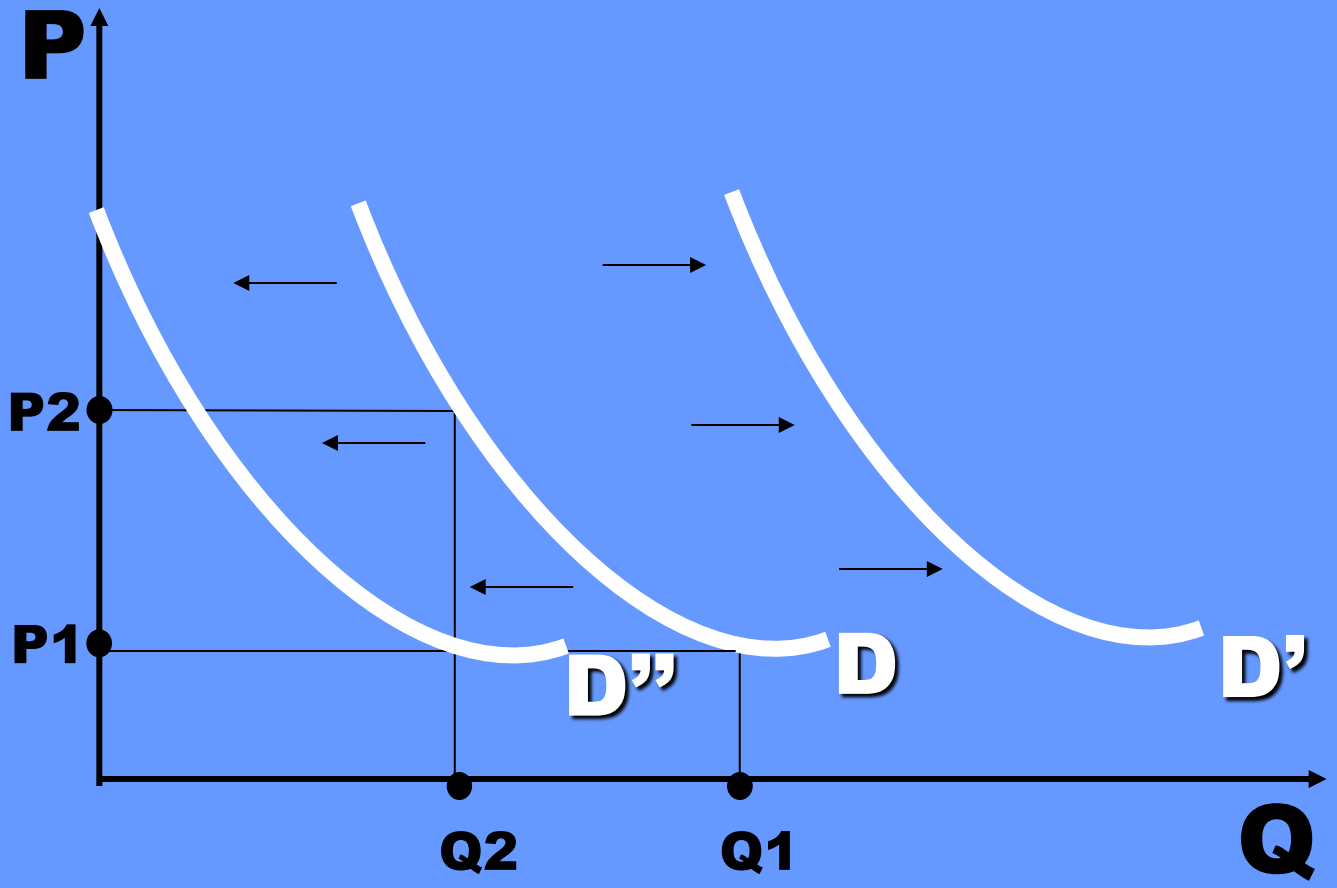
POSSIBLE CAUSES:

Rising average income,
Increased population,
Lower prices.





What happens if there is a decrease in average income ?



This is called the shift in DEMAND!

The SUPPLY Curve

Relates the QUANTITY supplied of a good/commodity to its market PRICE - other things remain constant.

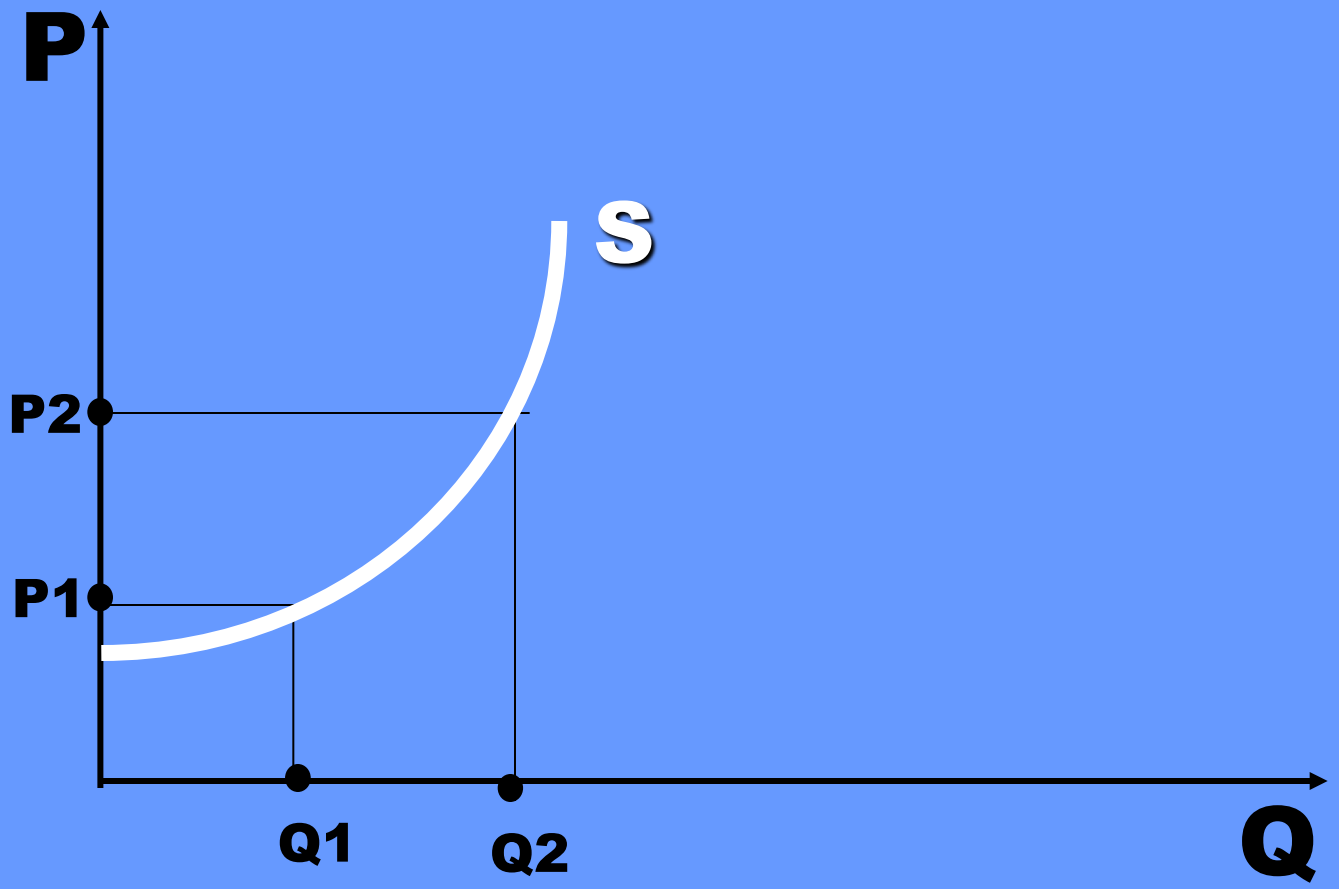
Cost of production

Prices of related goods

Government policies!

The SUPPLY Curve

Relationship between its market PRICE and the QUANTITY/amount of that commodity that producers are willing to produce and sell - other things remain constant

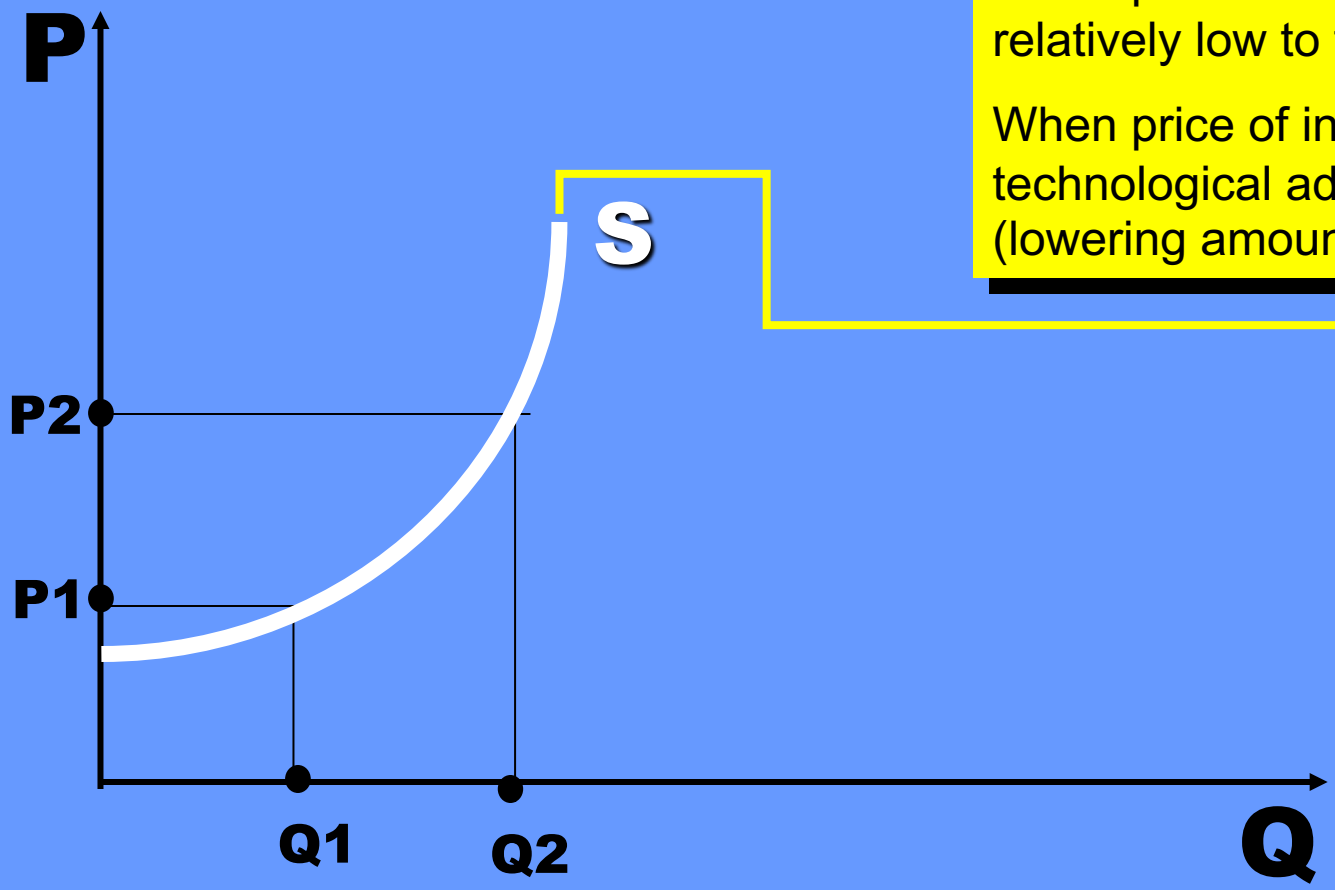


What are the elements underlying the SUPPLY CURVE ?

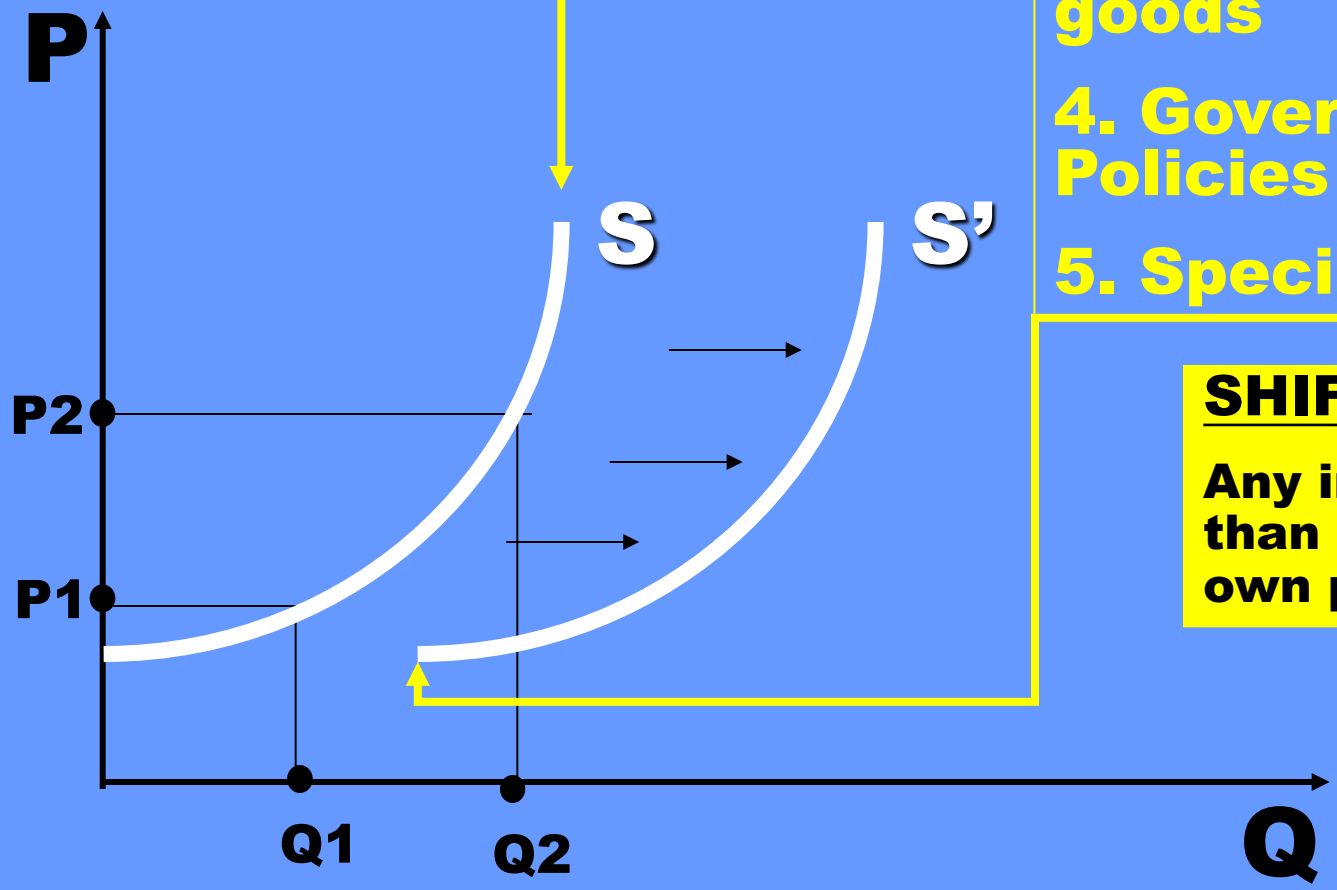
Costs of Production:

When production costs are relatively low to the market price.

When price of inputs and technological advances are low (lowering amounts of inputs).



What are the factors affecting SUPPLY ?



1. Technology
2. Input prices
3. Prices related goods
4. Government Policies
5. Special influences

SHIFTS IN SUPPLY !

Any influences rather than commodity/good's own price change!

PART 2

Housing Markets

Housing Markets

- Housing Markets has both "**demand**" and "**supply** side"
- **Demanders:** housing buyers who most commonly need and want finance in order to be able to demand housing they need and can afford.
- **Suppliers:** housing suppliers who produce housing for those demanding and willing to pay for it.

- Land
- Laws
- Regulations,Norms
- Administrative practices
- Investments
- Taxes
- Targeted Subsidies
- Programmes
- Projects
- Finance & Credits
- Property rights
- Buildings material inputs
- Buildings Technology
- Construction Industry

HOUSING POLICY

Addressing market failures and dealing with causes rather than effects of housing problems.

Well Functioning Housing Sector

Productive & Efficient

Responsive to Needs & Resources

Environmentally Sustainablle

Economically Sustainable

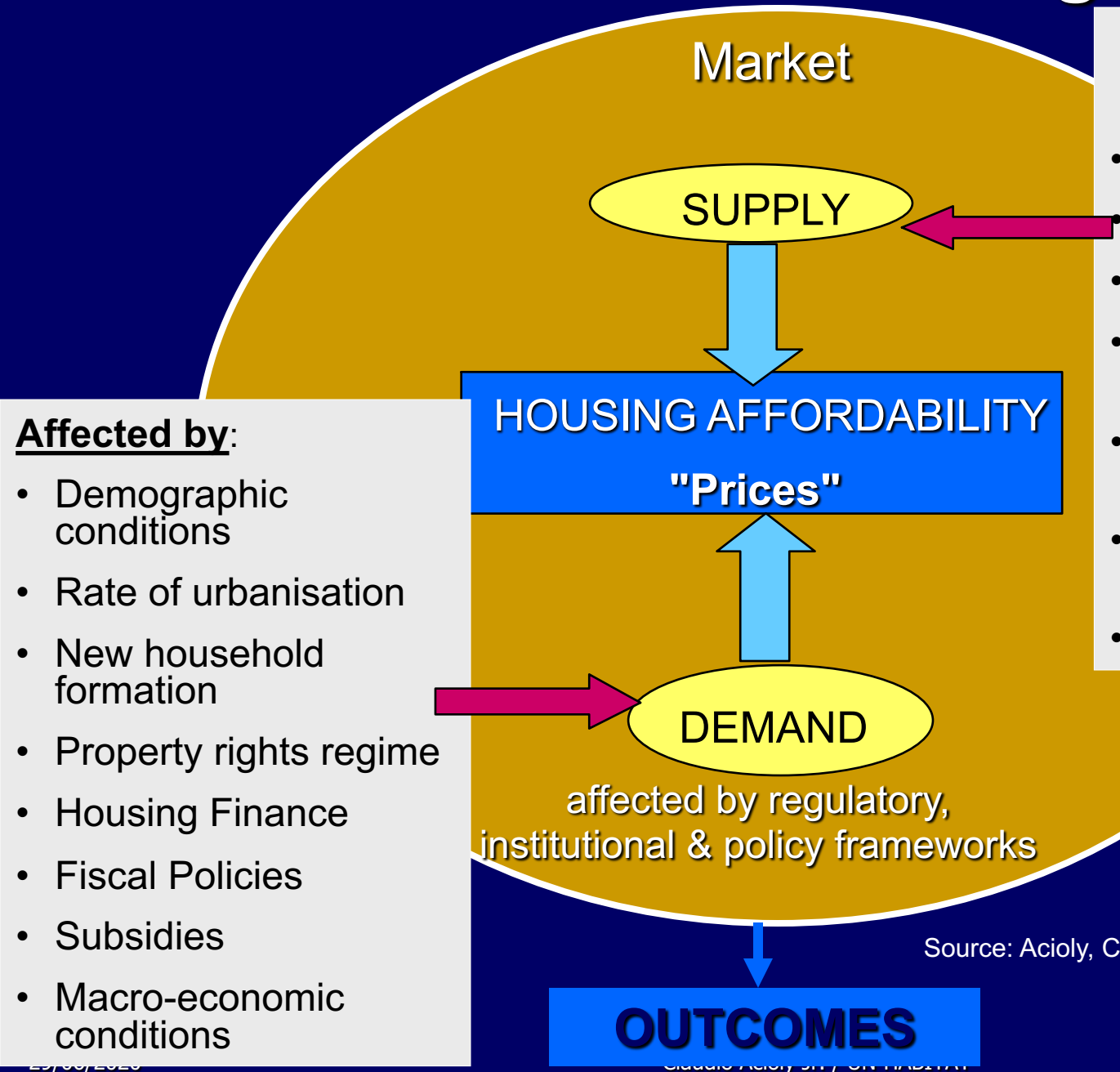
Institutionally Sustainable

- Freedom of Choice
- Residential Mobility
- Raised Welfare
- Prosperity

POLICY OUTCOMES

- Affordable prices
- Neighbourhood improvements
- Improvements in city's physical stock
- Economic activity
- Employment generation

The Context of Housing Policy



Affected by availability of:

- land
- Infrastructure
- Building Materials - BM
- Organisation Building Industry
- Skilled & Productive Labour
- Self-reliance BM production
- Urban Planning

Affected by:

- Demographic conditions
- Rate of urbanisation
- New household formation
- Property rights regime
- Housing Finance
- Fiscal Policies
- Subsidies
- Macro-economic conditions

Source: Acioly, C. IHS: 1994 2003.; World Bank, 1993; UN-HABITAT, 2011.

Markets

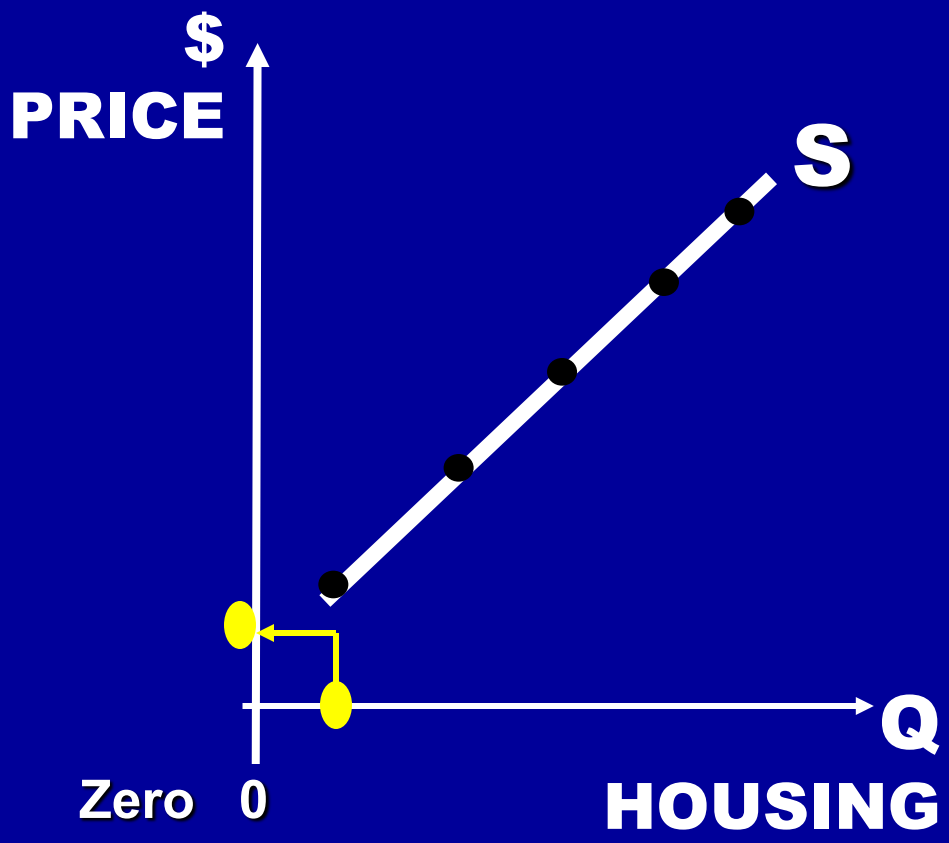
- Buy & Selling
- People

Sellers:

people who sell

If you offer me zero I sell you nothing.

If price is low, those who sell tend Not to sell much: SUPPLY

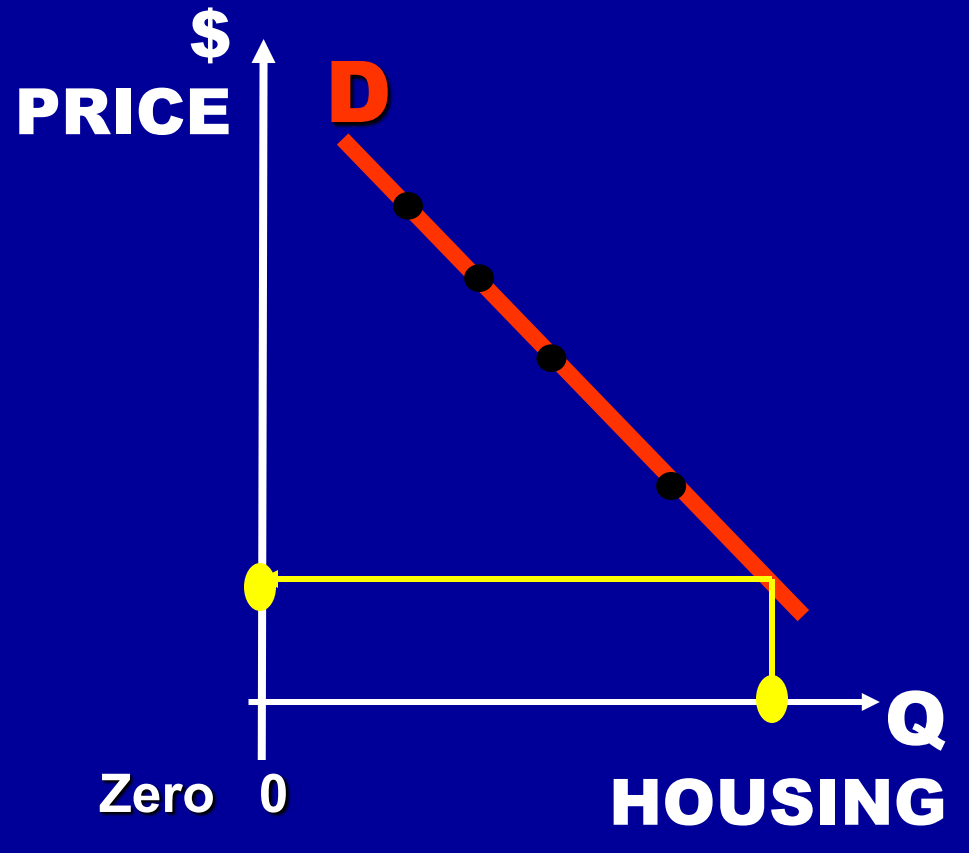


Buyers:

people who consume

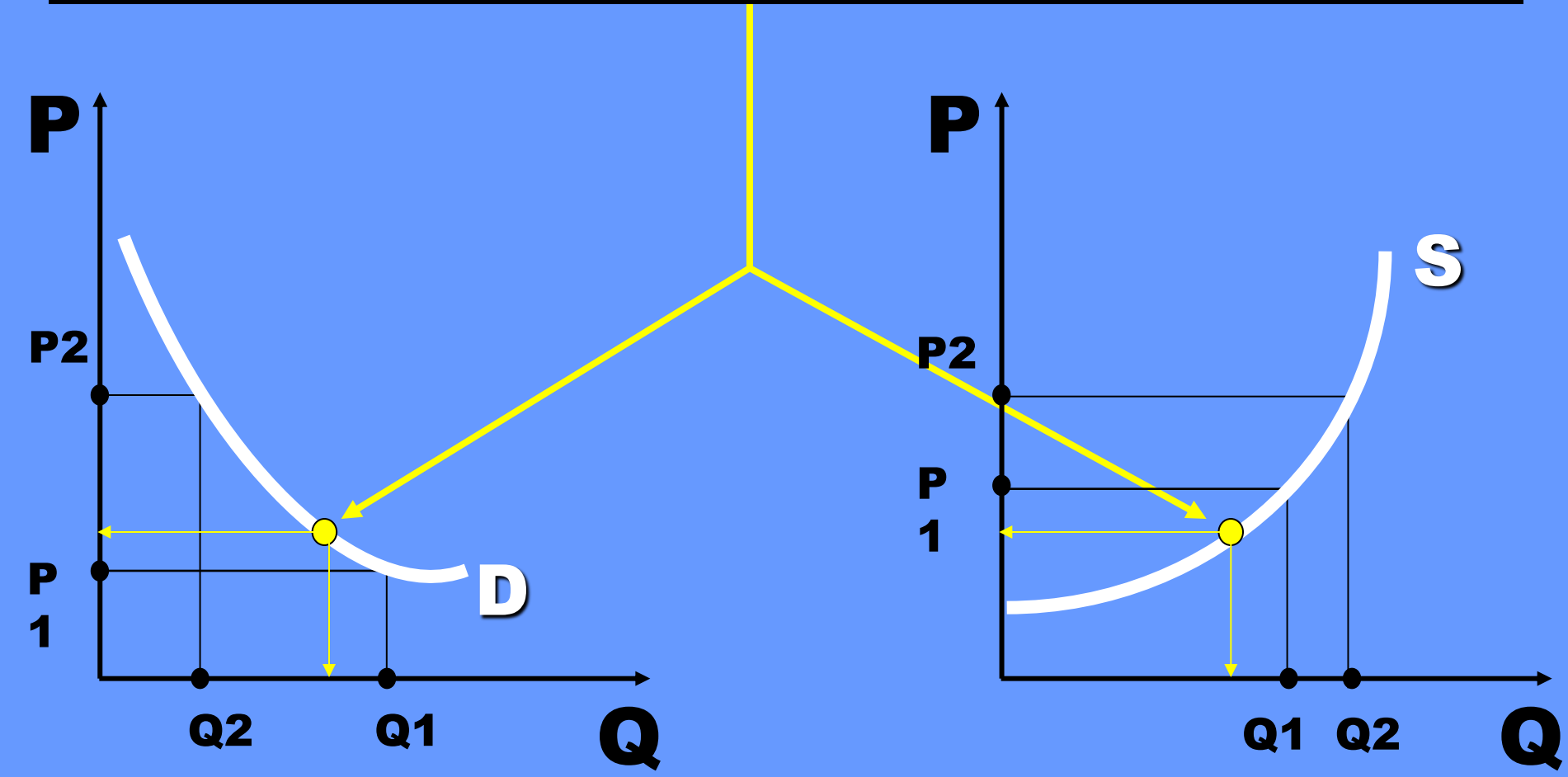
If price is low, the buyers will tend to buy a lot.

If price is high, buyers tend Not to buy a lot: DEMAND



The Market Equilibrium

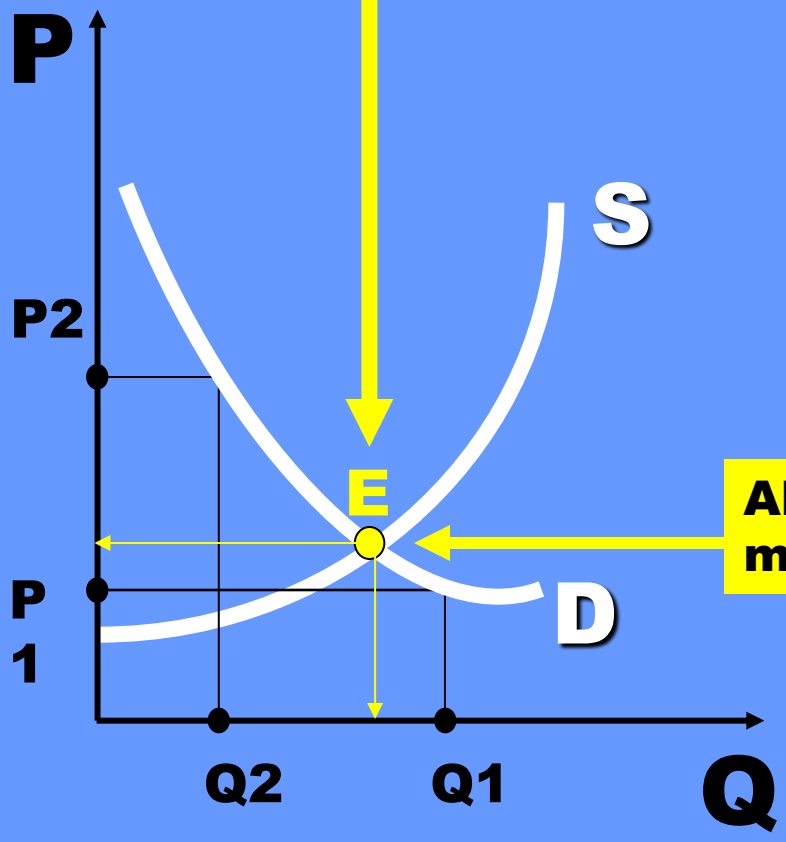
The amount that BUYERS want to buy is just equal to the amount that SELLERS want to sell.



The Market

EQUILIBRIUM: There is no reason for price to rise or fall as long as other things remain unchanged.

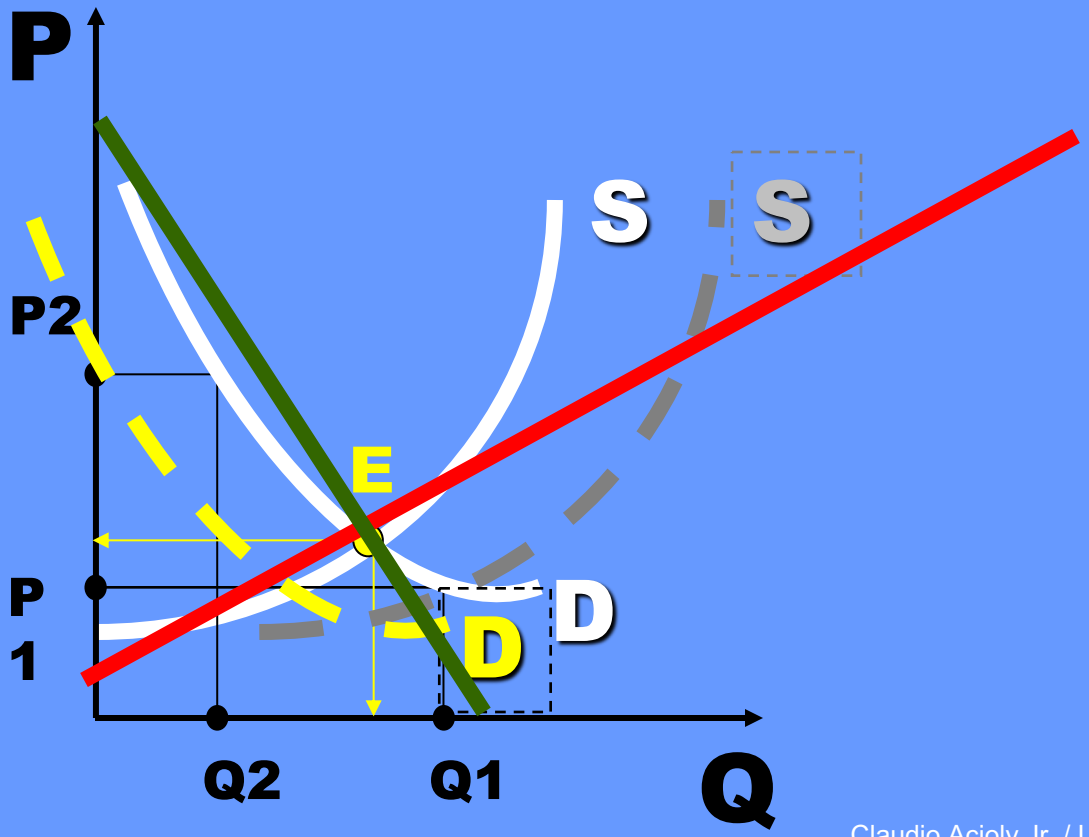
At a price at which QUANTITY demanded = QUANTITY supplied



Also known as market clearing price

The Market Equilibrium

When the elements underlying Demand and Supply change, this leads to shifts in demand or supply and changes in the market EQUILIBRIUM of Prices and Quantity.

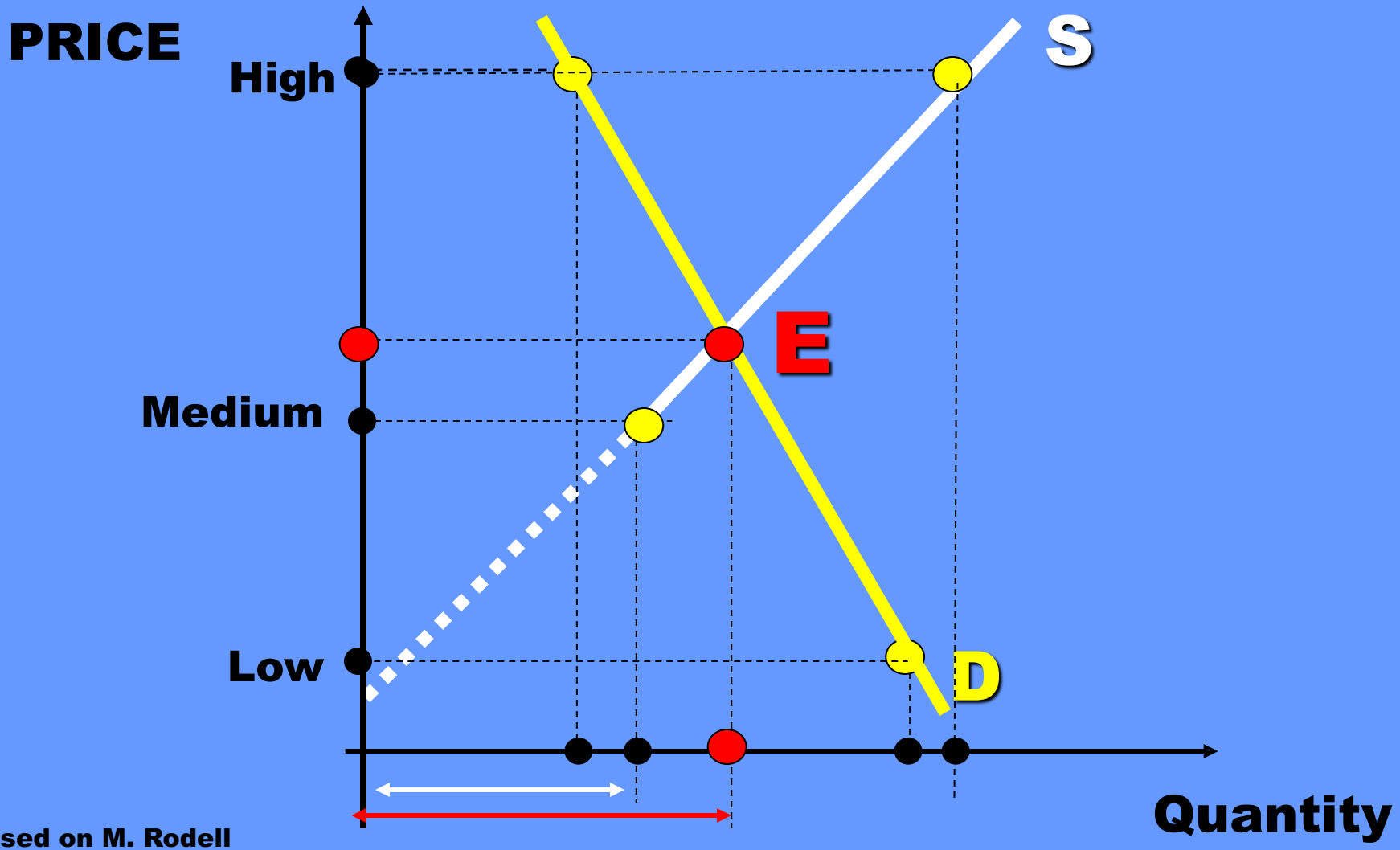


3.

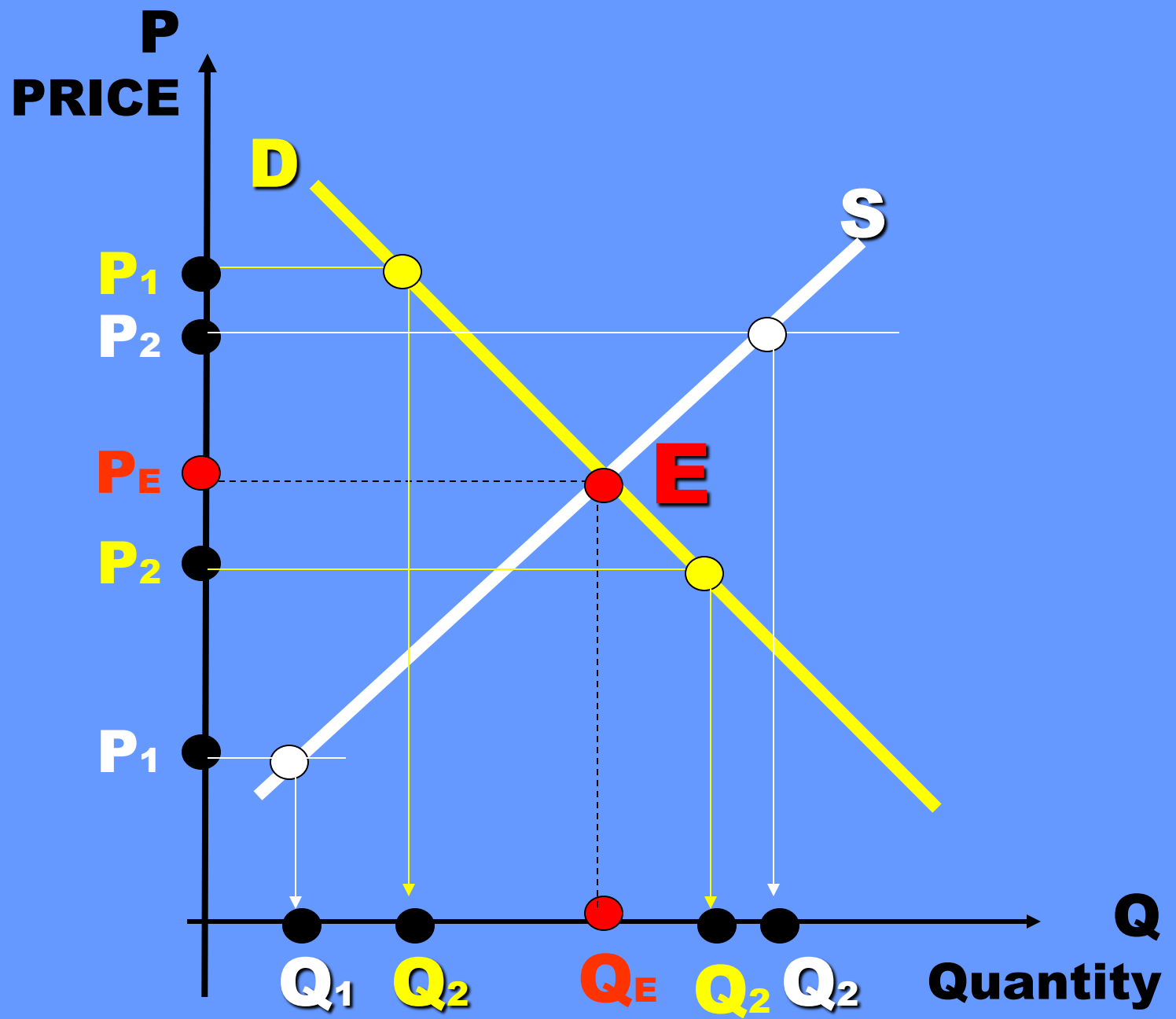
Supply & Demand: what happens if?

How ECONOMISTS look at housing ?

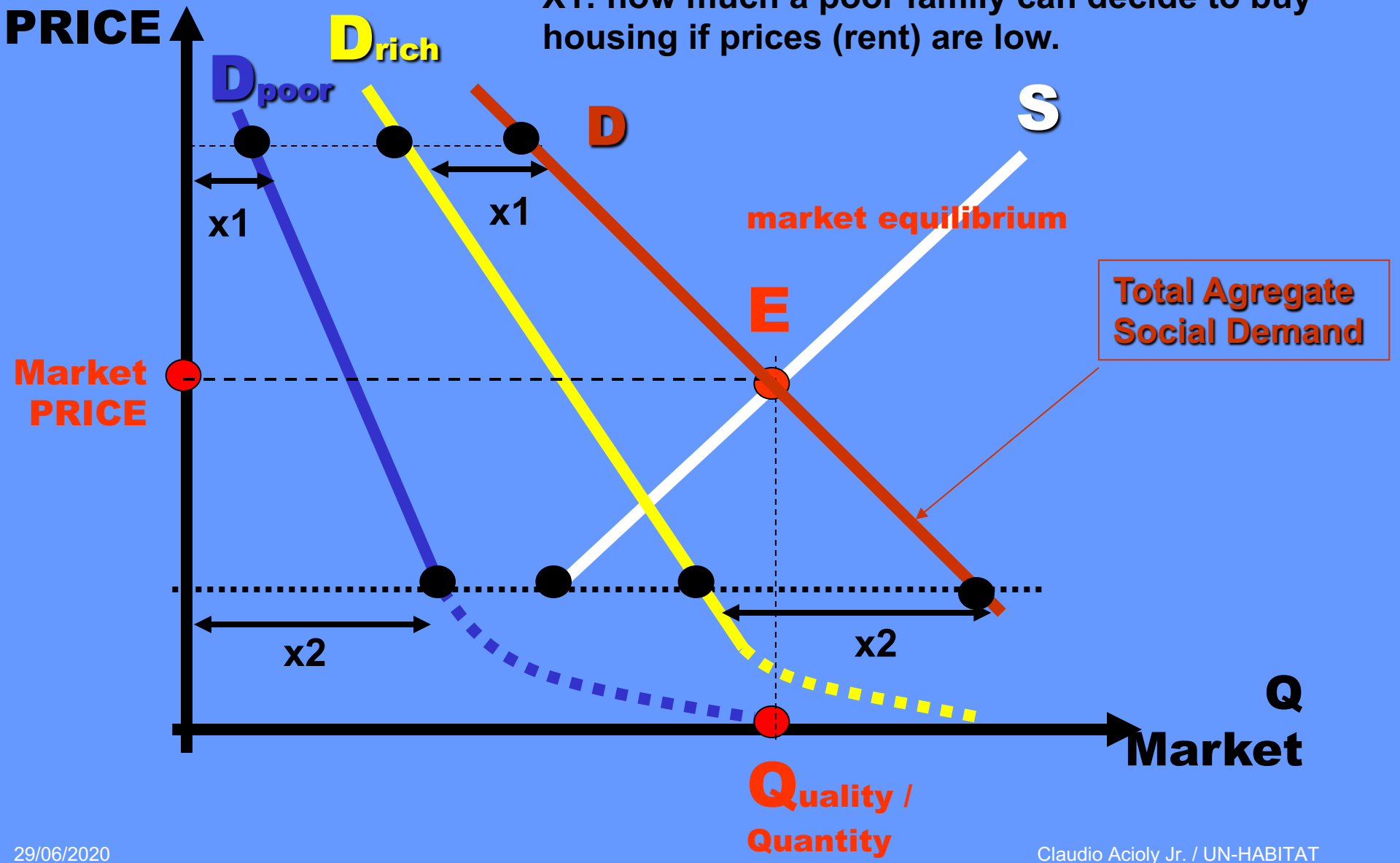
HOUSING = use of a house + associated services for a specific period of time

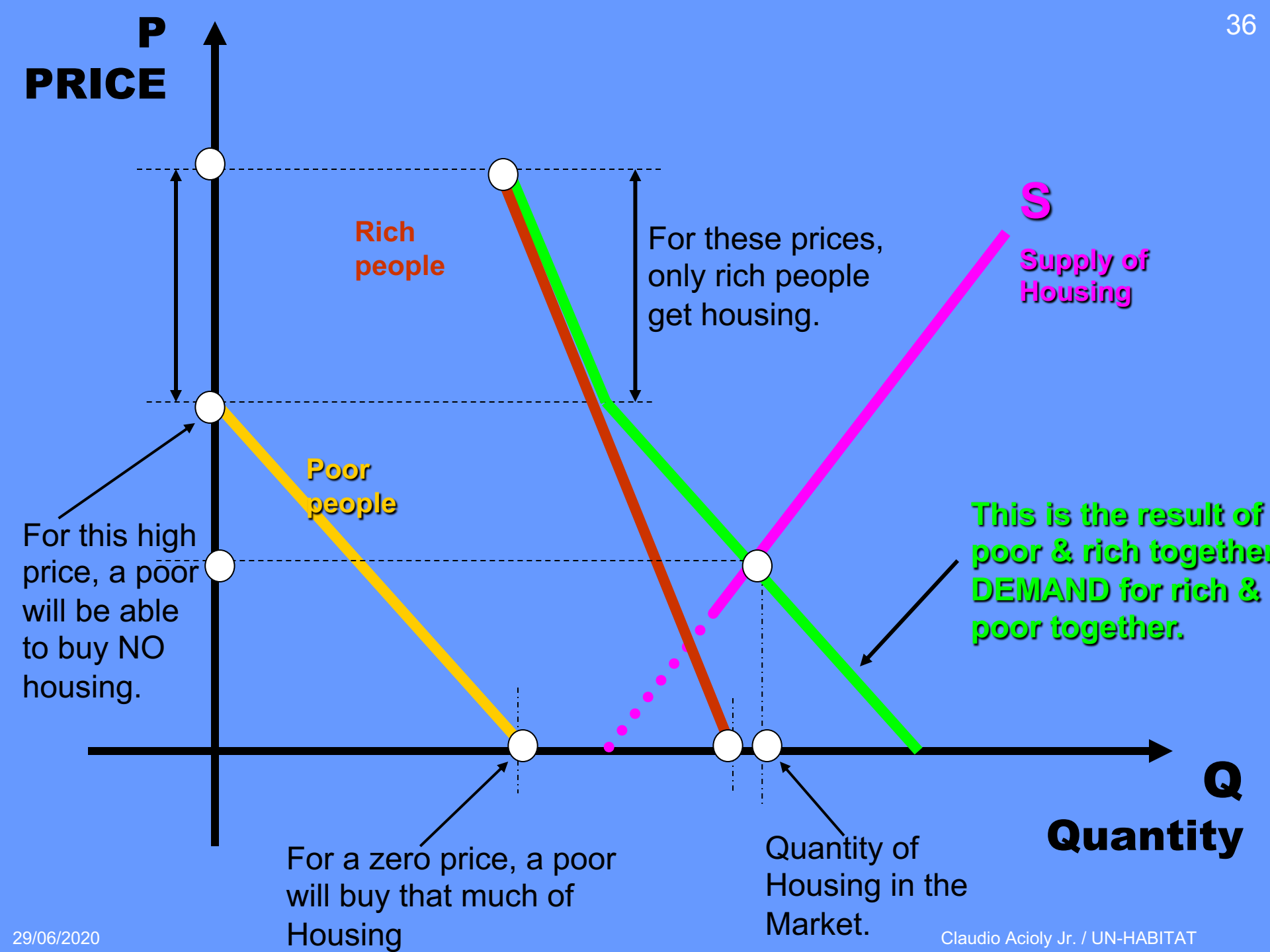


Based on M. Rodell


P
PRICE
D
S
P1
P2
PE
E
P2
P1
Q
Quantity
Q1
Q2
QE
Q2
Q2

X1: how much a poor family can decide to buy housing if prices (rent) are low.




P
PRICE
Rich people
For these prices, only rich people get housing.
S
Supply of Housing
Poor people
For this high price, a poor will be able to buy NO housing.
This is the result of poor & rich together DEMAND for rich & poor together.
Q
Quantity
For a zero price, a poor will buy that much of Housing
Quantity of Housing in the Market.

4.

SHIFTS in HOUSING SUPPLY

&

HOUSING DEMAND

Situation: you want to buy housing and then PRICE of housing has doubled !!!

WHAT DOES IT MEAN?

The demand for housing has increased?

OR

The production cost has risen?

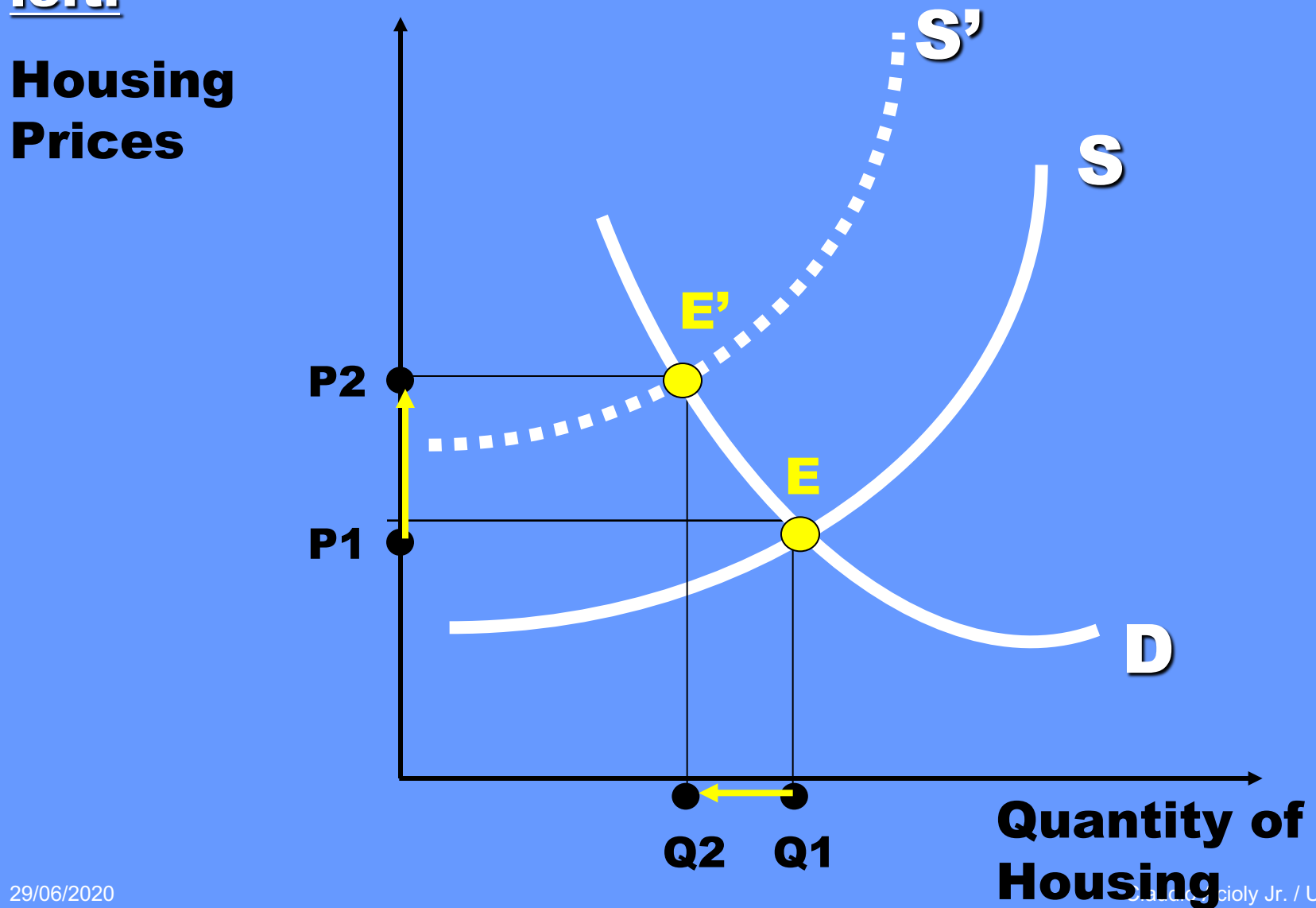
Could be both ! Or either one !

WE NEED MORE INFORMATION !

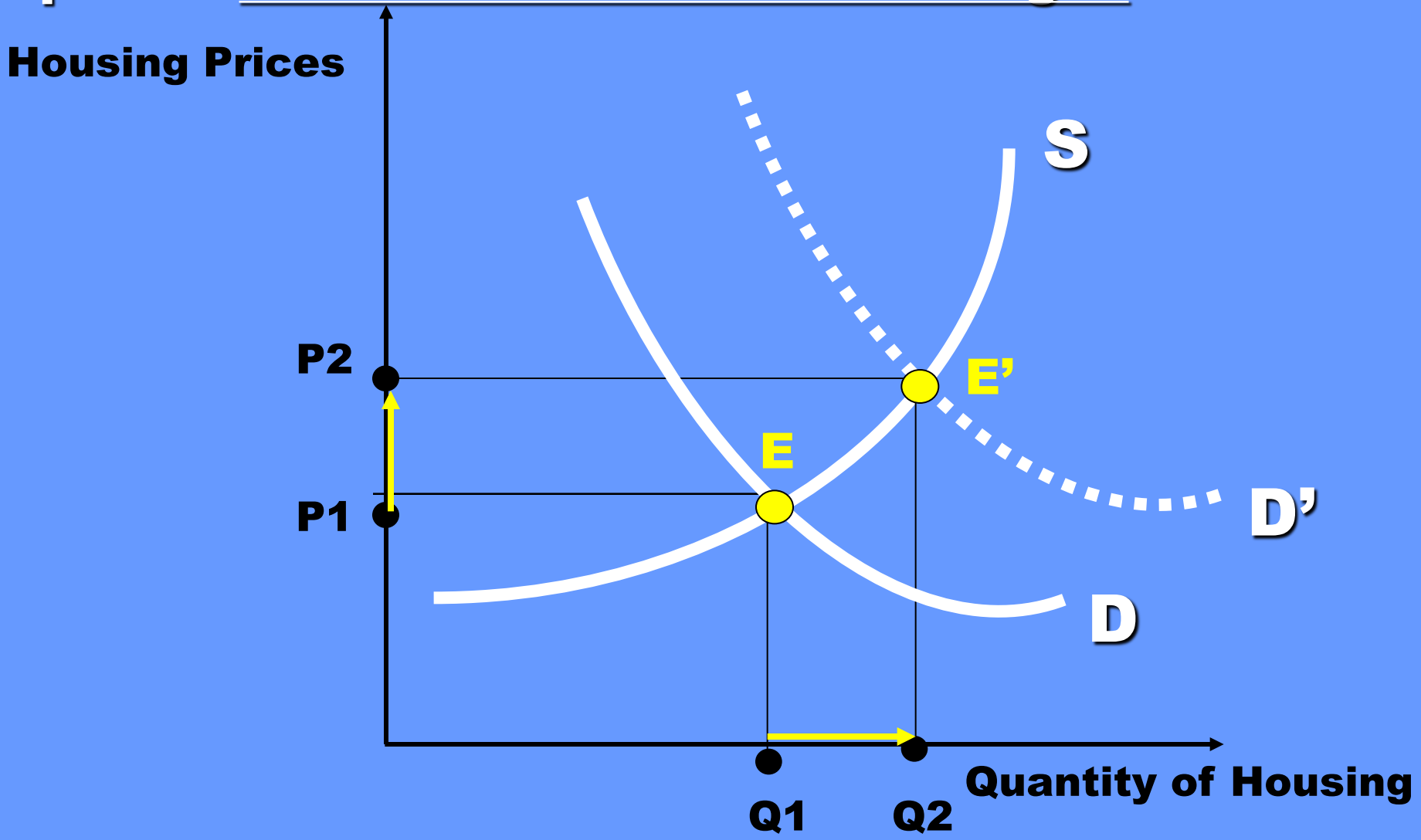
ECONOMISTS: when PRICES or QUANTITIES change in market, does the situation reflect change on the SUPPLY side or the DEMAND side?

Situation 1: if Housing SUPPLY decreases

Housing PRICES increases accompanied by decrease in QUANTITY of Housing = Supply curve shifts to the left!



Situation 2: a shift in the DEMAND curve leads to excess DEMAND for Housing and PRICES will be bid up as equilibrium PRICE and QUANTITY move upward. Demand curve shifts to the right!

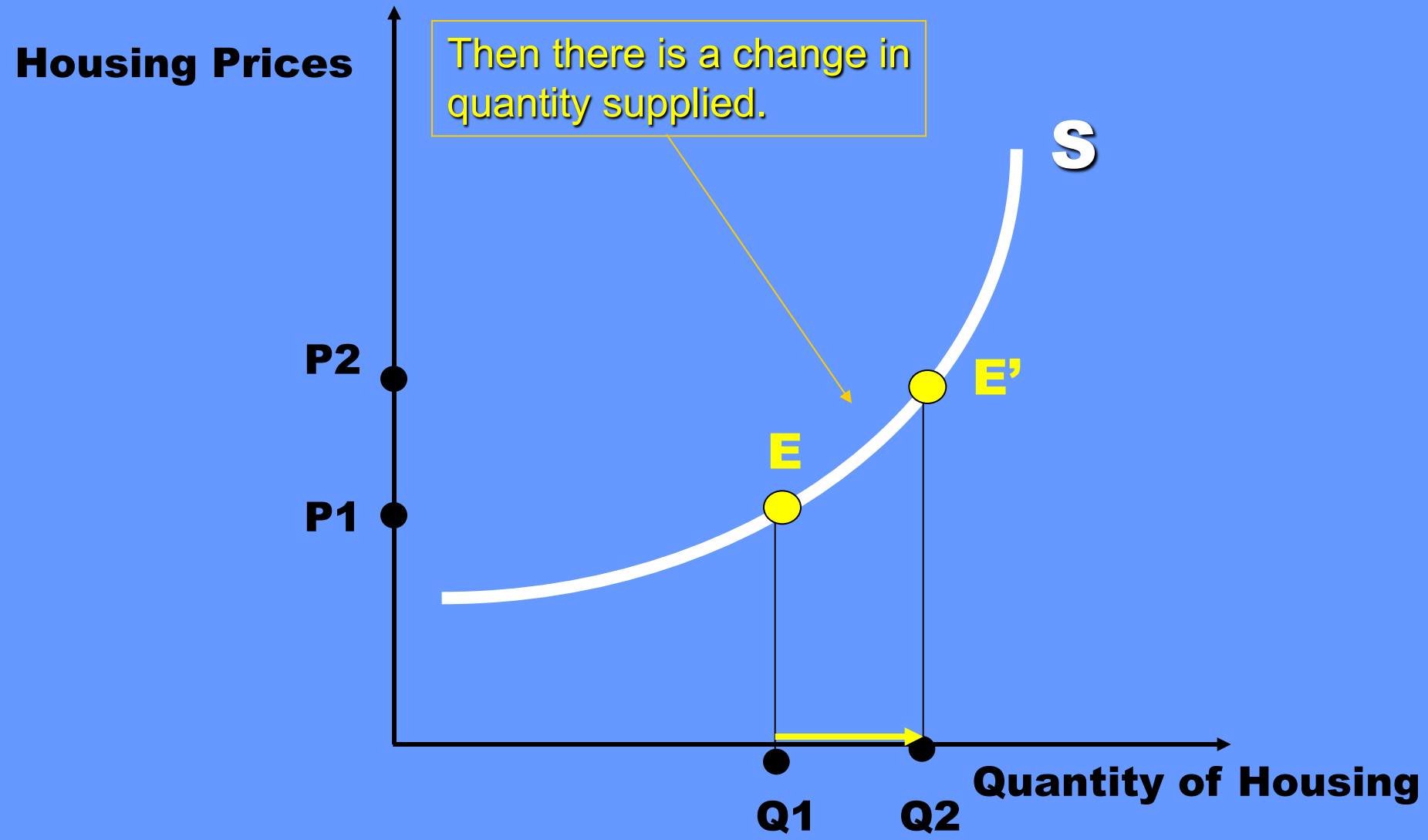


Situation 1:

What happens if only prices change?

Situation 2

What happens if only prices change?



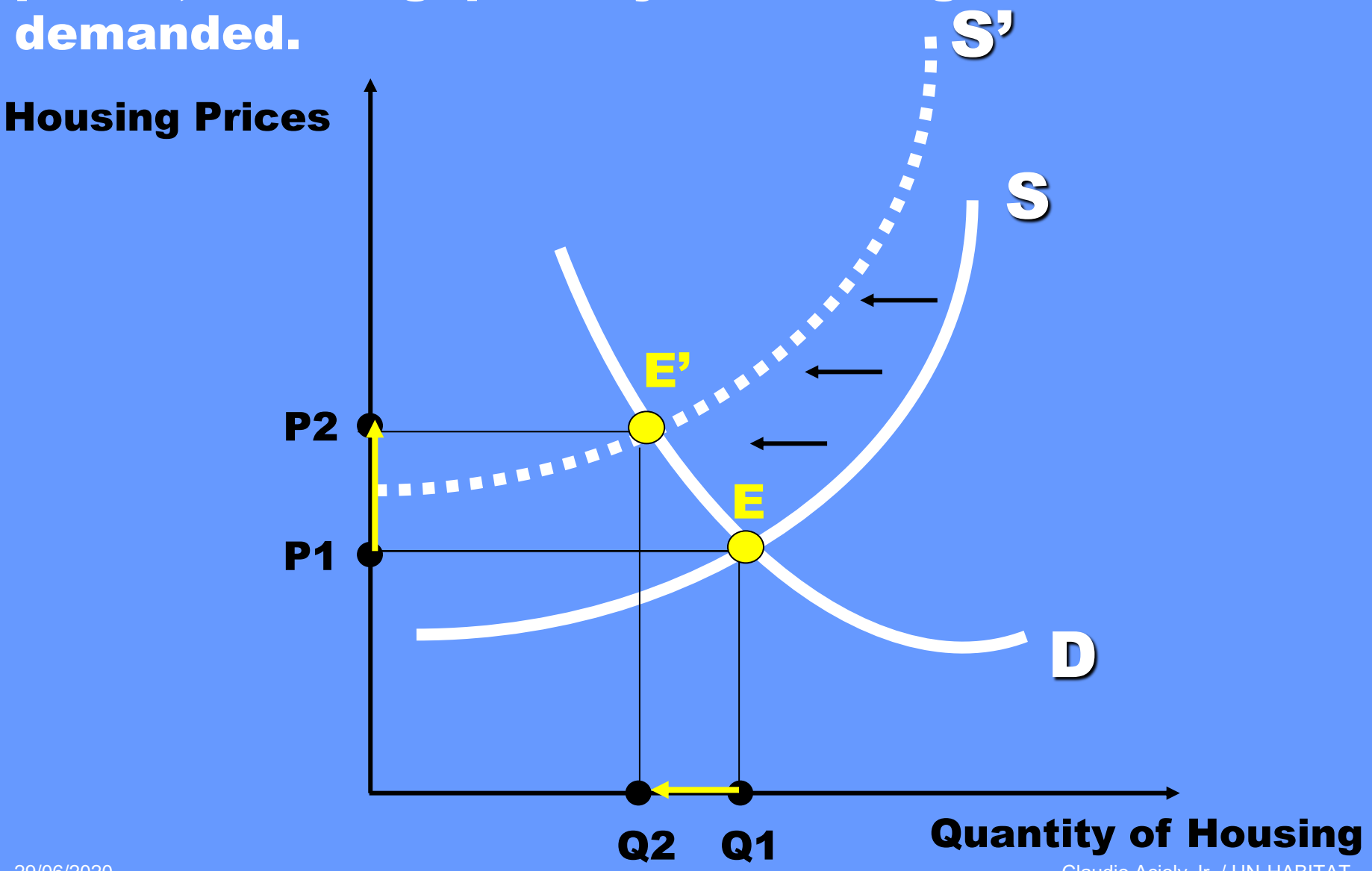
Practical Example 1

Crisis in the cement industry causes LESS cement production and high prices of cement per sack.

HOUSING developers produce less housing for the old prices.

So, quantity of HOUSING that is demanded exceeds quantity of housing that is supplied

CONCLUSION 1: low supply of cement affects housing supply (shift to the left) raises housing prices, lowering quantity of Housing that is demanded.



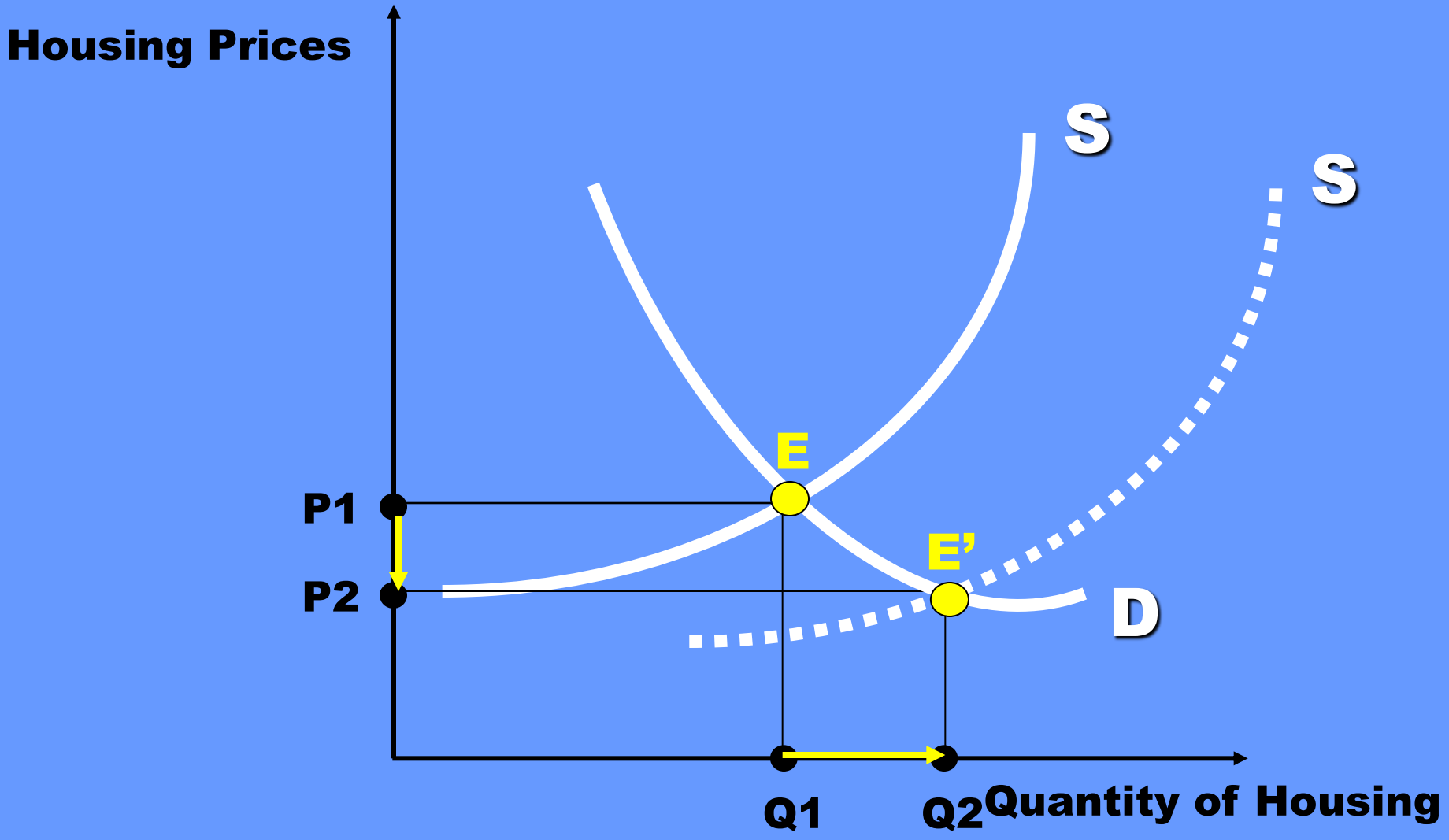
Practical Example 2

New building technology has been developed that allows lower housing production costs.

HOUSING developers produce more housing for the old prices.

So, quantity of HOUSING that is supplied exceeds quantity of housing that is demanded for the old prices

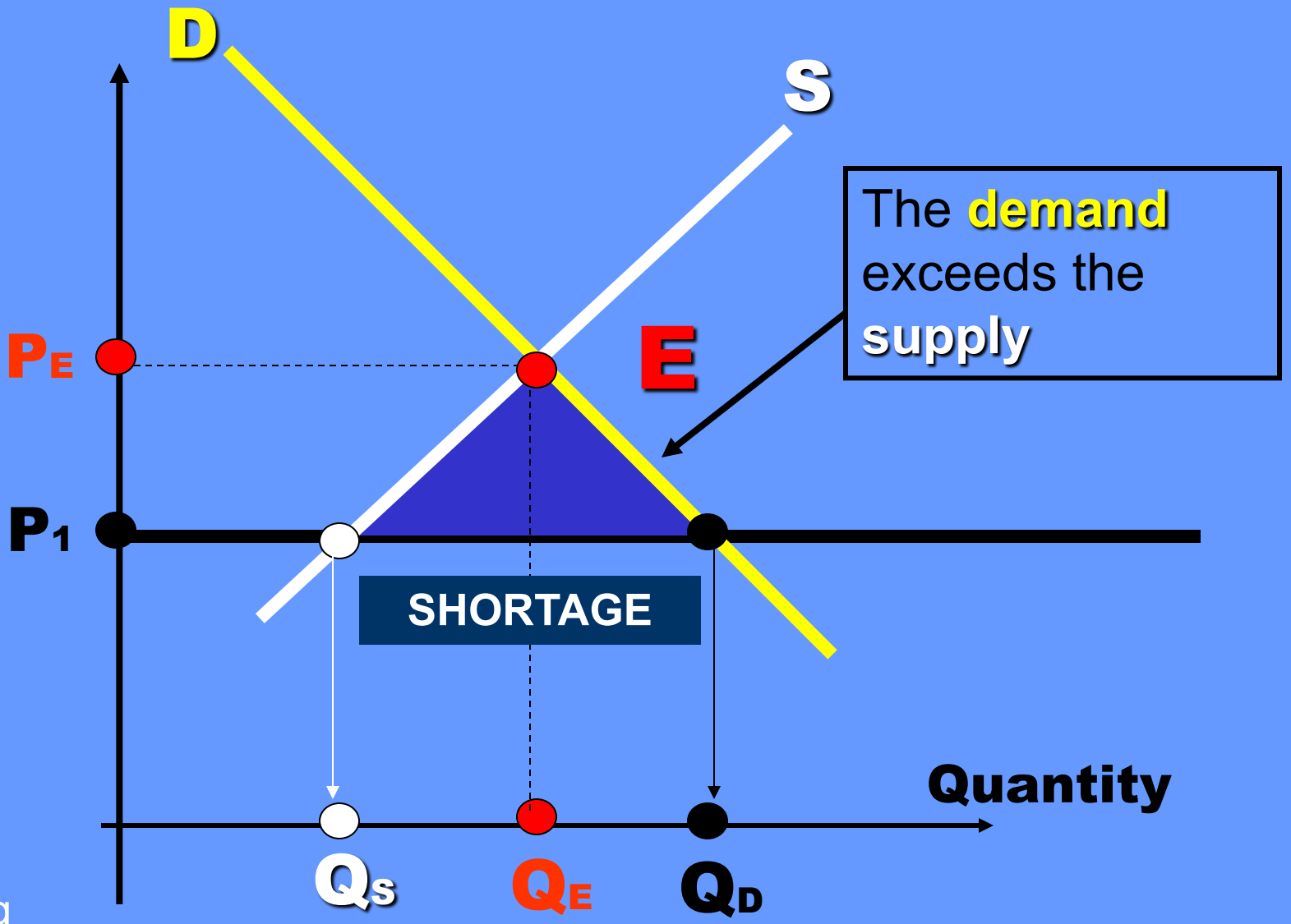
CONCLUSION 2: technological advances stimulates housing supply (shift to the right) lowering housing prices, increasing quantity of Housing that is demanded.



5.

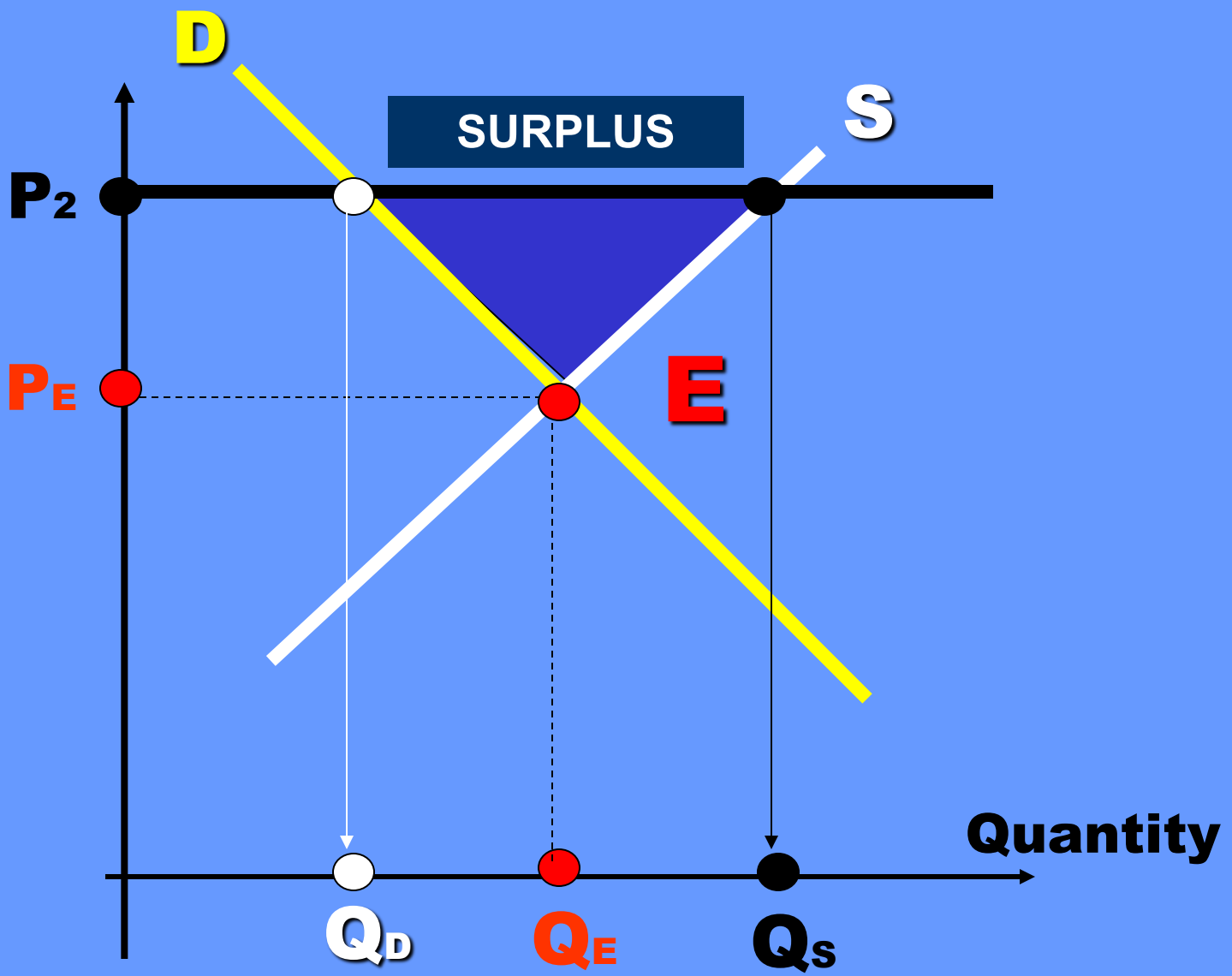
SHORTAGE AND SURPLUS

SHORTAGE: quantity demanded greater than quantity supplied



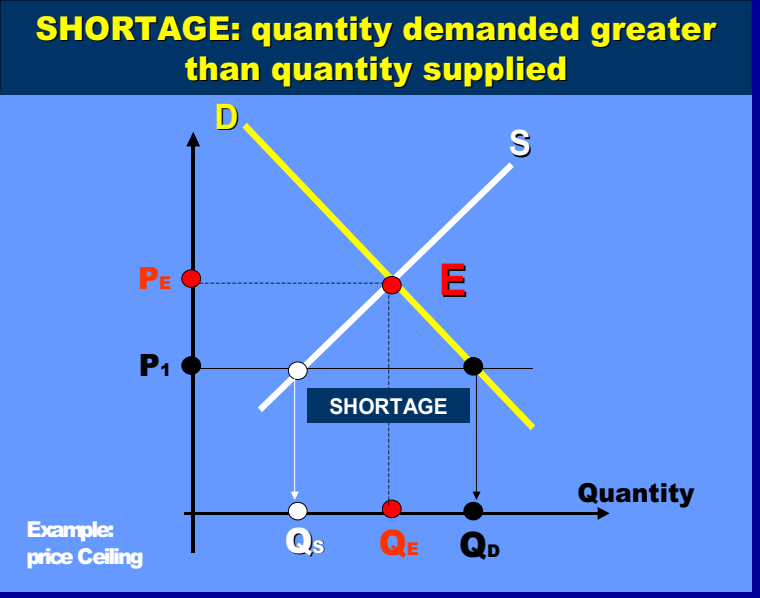
Example:
price Ceiling

SURPLUS: quantity supplied greater than quantity demanded.



Example:
price Floor

RENT CONTROL



Unregulated market rent = $ 1,000.00 / month.

Rent control law sets rent = $ 500.00/month

Figure shows that at rent controlled prices, not all consumers can find rent-controlled apartments.

1. Shortages develop because quantity demanded (Q_D) is greater than quantity supplied (Q_S).
2. People obtain units by luck, persistence or prior arrangements.
3. Black markets can also emerge: units that typically go for $1,000.00/month are now only $500.00/month. Black market might offer that unit for $800.00, both seller and byer would be money ahead.
4. Owners may have little incentive to maintain units, quality of controlled units may deteriorate.

The Economic Impact of Subsidy can be analysed in terms of shift in Supply and Demand

Subsidy can be thought as "negative tax".

BASIC CONCLUSIONS

Tax or Subsidy given to producer or consumer, the incidence would be the same amount, according to economic analysis, YET societal implications can differ!

Providing subsidy or imposing a tax will affect the market price of a good which affects all consumers and all producers. But not all will gain or loose equally.

LOW INCOME HOUSING: subsidy to producers or consumers?

GIVING TO PRODUCERS:

Subsidy could encourage new additions to housing stock, if sufficient to bridge gap between what target population could afford and the cost of construction. Further, need to oversight that subsidy serves the populations they are designed to assist.

GIVING TO CONSUMERS:

Subsidy would allow to purchase housing that ordinarily may not have been affordable. Not necessarily provide new additions to housing stock. May not sufficiently increase the price to provide incentives to producers to increase the quantity or quality of housing stock.

How Infrastructure provision affects Housing Supply?

1. **If short in supply, serviced residential plots get a scarcity premium**
2. **Shortfall in infrastructure fees may elevate land prices**
3. **Infrastructure iresponsive to demand , supply of service land become inelastic and shifts in demand results increases in land and housing prices**
4. **The amount, type and price of infrastructure will influence the demand for complementary housing inputs, thus affecting the type of housing supplied in different locations, residential densities, and land and housing prices.**

6.

APPLYING THE AXIOM SUPPLY-DEMAND IN THE DESIGN OF HOUSING POLICIES

Public Actions affect Housing Supply & Demand

DEMAND:

1. Tenure security
2. Property rights
3. Housing subsidies (rent control)
4. Taxes
5. Availability of Mortgage Finance

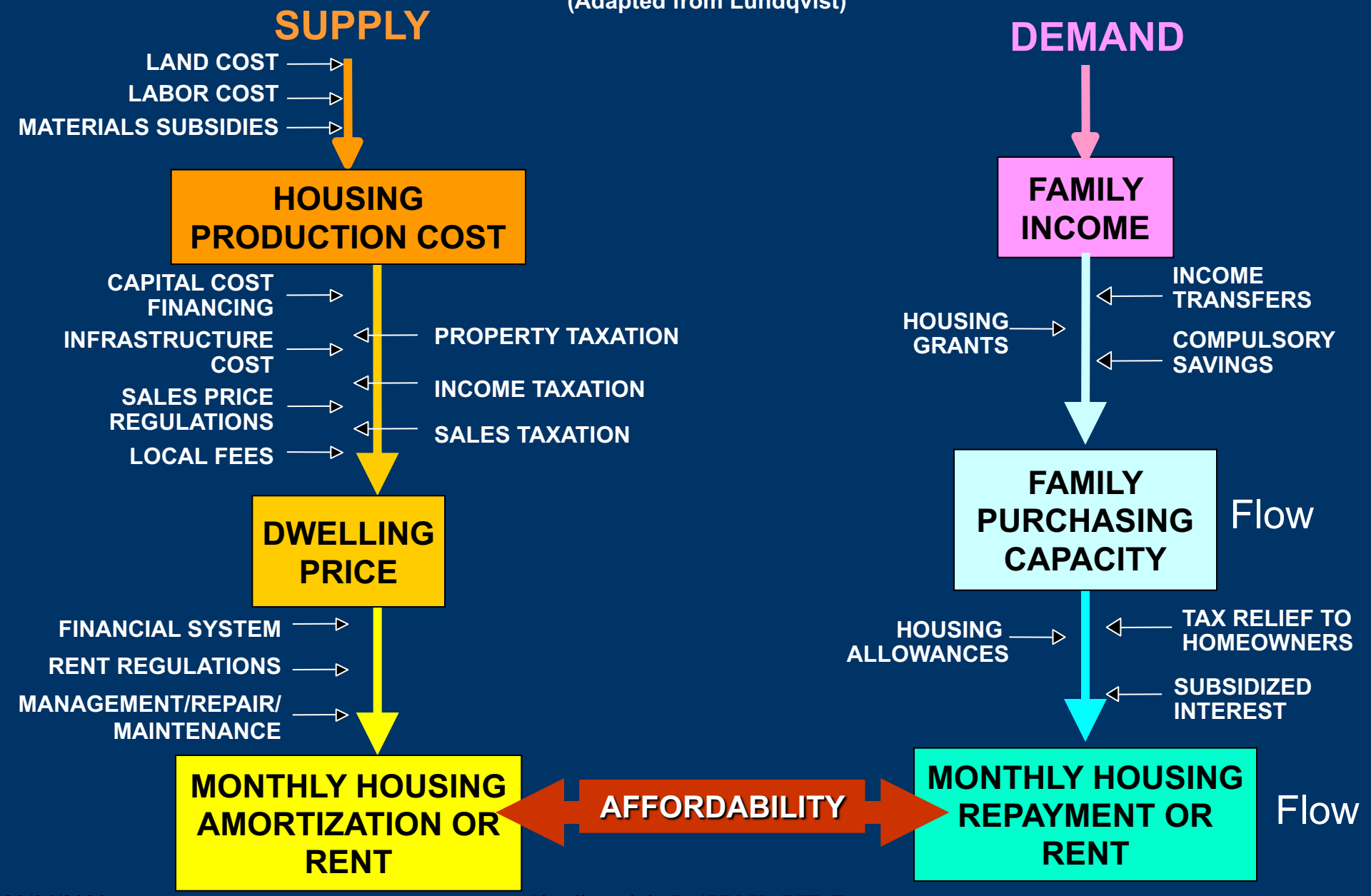
SUPPLY:

1. Regulatory framework
2. Land use
3. Building regulations
4. Cost of inputs: land, labour, building materials
5. Efficiency of housing development process
6. Provision of infrastructure

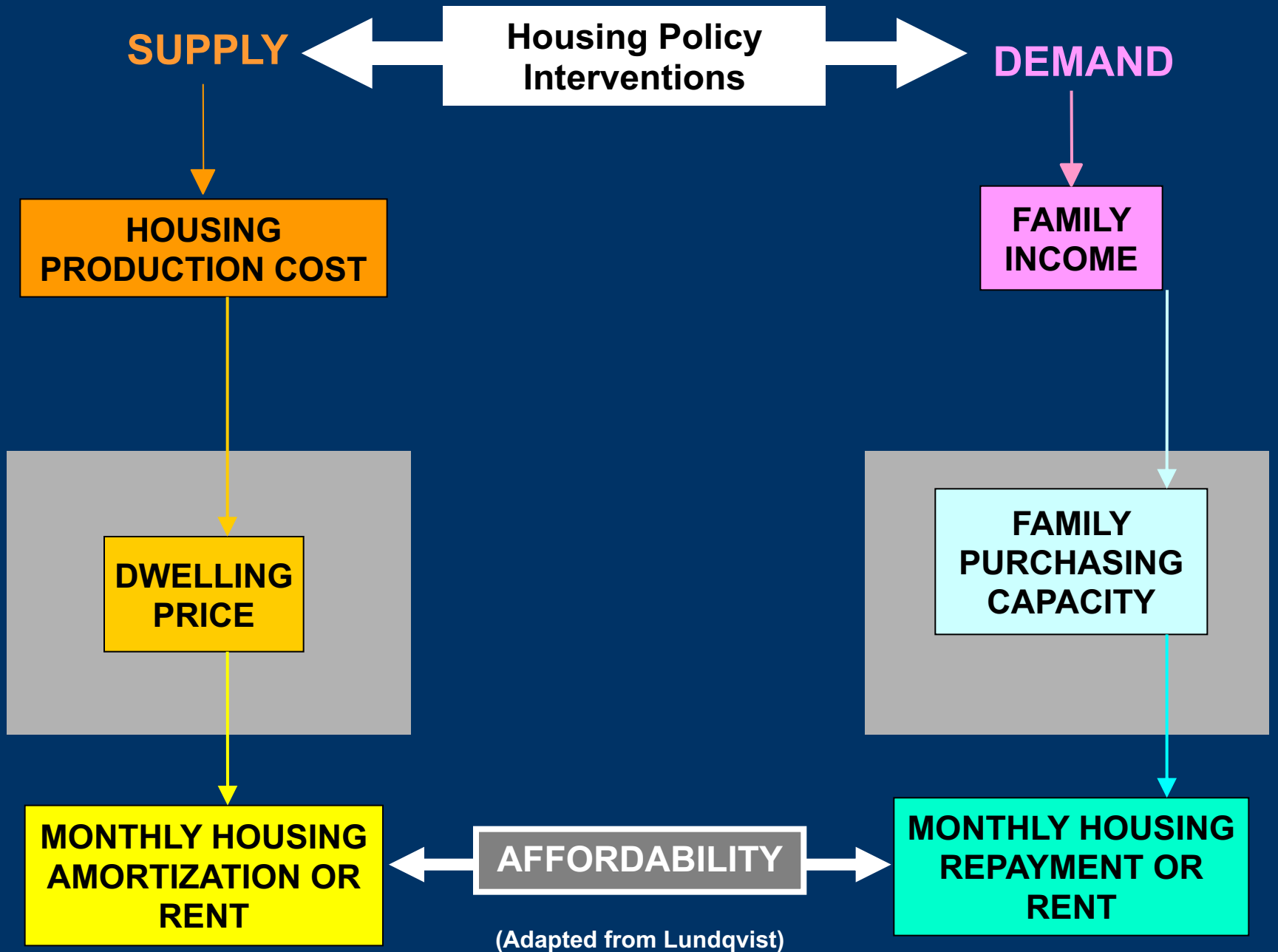
BUT.. When supply is competitive, the long-run price of housing will be determined primarily by production costs rather than demand; increases in demand will be translated into increases in housing output and not into price increases. World Bank, 1993.

POSSIBLE GOVERNMENT INTERVENTIONS

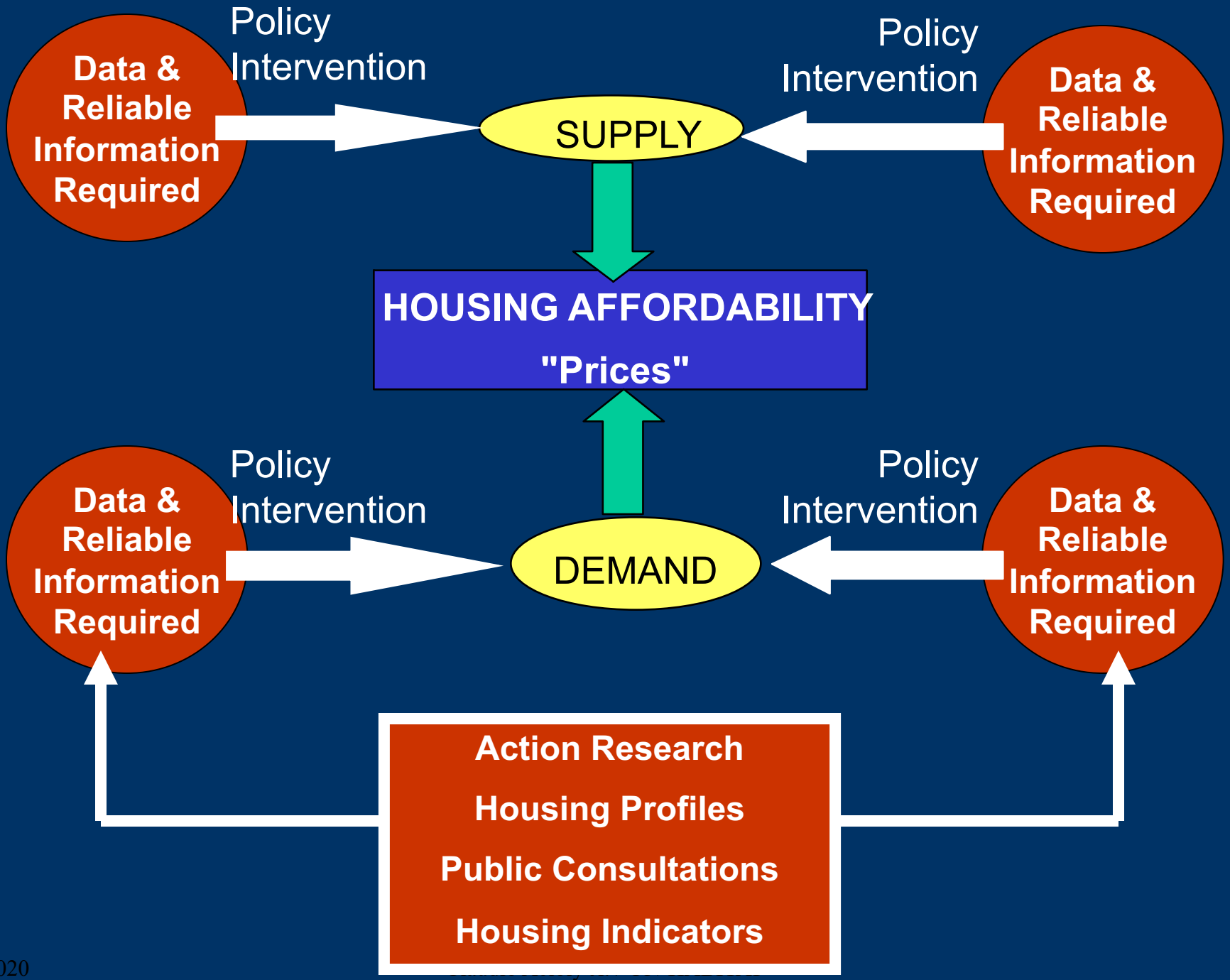
(Adapted from Lundqvist)



GOVERNMENT & POLICY INTERVENTIONS



(Adapted from Lundqvist)


Data & Reliable Information Required
Policy Intervention
SUPPLY
Policy Intervention
Data & Reliable Information Required
HOUSING AFFORDABILITY
"Prices"
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HOUSING AFFORDABILITY

5th Annual Demographia International Housing Affordability Survey

265 major urban markets

UK (16), Ireland (5), Canada (34), USA (175), Australia (27), New Zealand (8)

2009

INDICATOR: house price-to-income ratio

- **Australia:** most unaffordable housing at 6.3 annual household earnings
- **New Zealand:** 5.7 times
- **Ireland:** 5.4 times
- **UK:** 5.3 times
- **Canada:** 3.5 times
- **USA:** least housing stress at 3.2 times annual household earnings

Source: Demographia Survey 201

Table 2
Distribution of Markets by Housing Affordability Rating Category

Rating	Median Multiple	Number of Markets
Affordable	3.0 or Less	87
Moderately Unaffordable	3.1 to 4.0	74
Seriously Unaffordable	4.1 to 5.0	40
Severely Unaffordable	5.1 & Over	64
TOTAL		265

Of the 6 countries surveyed - Australia has the worst housing affordability with 24 of its 27 major urban markets severely unaffordable.

Of the 265 urban markets surveyed by *Demographia,* the Sunshine Coast in Queensland has the most severely unaffordable housing within the English speaking world, with housing prices 9.6 times household earnings - above that of Honolulu at 9.1 times, the Gold Coast, Queensland 8.7, Vancouver, Canada 8.4, Sydney Australia 8.3, San Francisco 8.0, Los Angeles 7.2, New York 7.0 and London, United Kingdom at 6.9 annual household earnings.

Source: Demographia Survey 2012

HOUSING AFFORDABILITY

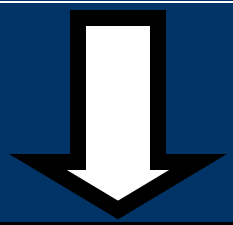
- **How much housing can a household buy with its basic income?**

in other words

- **How many months/years a household earning a mean household income should save in order to be able to purchase a standard adequate housing at present market prices?**

or

- **What is the co-relation between household income and the price of a standard/minimum/adequate housing being sold in the market?**



Indicator: house price-to-income ratio

7.

Defining Housing Needs.

What is Housing Needs Assessment-HNA?

Housing Needs Assessment-HNS

FACTORS TO CONSIDER:

1. Actual Housing Shortage as per today.
2. Actual Population Growth: actual size of the Market
3. Actual Rate of New Household Formation (present and future demand)
4. Effective Demand: ability to pay (affordability)
5. Different types of Housing Problems (different needs) & the Social Demand
6. Delivery and Construction Capacity
7. Special Needs Group (elderly, women, very poor…)
8. Availability of Housing Finance

Components of a Housing Needs Assessment

1. Survey of population characteristics
2. Examination of existing housing situation
3. Assessment of housing demand
4. Determination of affordability
5. Assessment of housing supply
6. Identification of existing housing resources
7. Identification of policy interventions

Typical Steps in Preparing a HNA

- Initiate the Process
- Define the Scope and Focus of the HNA
- Develop a Housing Sector Profile
- Identify Specific Housing Needs
- Set Policy Goals and Objectives
- Prepare Strategies
- Implement, Monitor and Evaluate

What is a "Housing Needs Assessment"?

- A study of the current and future relationship between demand and supply & related issues underlying supply and demand for housing;
- Baseline information in support to policy interventions
- Assessment can be short-term (3-5 years), long-term (10-15 years or longer) or both;
- Level – country, region, city, community
- Quantitative and qualitative
- Must be linked to ongoing monitoring and housing indicators

Why do we need a Housing Needs Assessment?

1. What country's/region's/city's housing needs are?
2. I*s there a housing problem … what is it exactly?"*
   - Existing housing shortage
   - Future needs for housing (scale of problem)
   - Existing housing resources & their ability to accommodate future demand
3. Support for prioritising housing needs
4. Guide for developing and focusing housing policies, strategies and programmes
   - Estimate existing & anticipated housing supply capacity & bottlenecks to supply

Steps to Implement a HNA

1. Survey (population, household, sample)
2. Examination of Housing Conditions
3. Examination of Housing and Rental Prices
4. Housing Stock Survey (sample, census data…)
5. Appraisal of Housing Demand
6. Assessing Affordability
7. Review Brokerage & Real Estate Market

1: Surveying Population Characteristics

- **Demography:**
  - Population
  - Number of households
  - Average household size
  - Existing & expected annual rate of population growth
  - Existing & expected rate of new household formation
  - Special needs groups (e.g. single female-headed households, elderly)

- **Economic:**
- Income distribution
- Percent below poverty line
- Willingness to pay
- Ability to pay: affordability and income levels

2. Appraisal of Existing Housing Conditions

- Existing housing stock:
  - *Total stock*
  - *Typology*
  - *State of repairs/maintenance*
  - *Tenure form (rented & owner occupancy)*
  - *Vacancy & Occupancy Rates*
- Trends in housing prices
- Trends in rent levels
- Estimates of Shortage, Backlog
- Data disaggregation: region / district / city / neighborhood

3.
Appraisal of Housing & Rental Prices

- Brokerage survey:
  Property value gradient
  Period properties are for sale
  Values per region, district, city, neighbourhood
  Newspapers: what owners are willing to sell for

- Trends in rental prices
- Existing legal and regulatory frameworks governing rental market
- Housing price-to-rent ratios and housing price-to-income ratios

5.
Assessing Housing Demand

- New units needed for anticipated new families
- New units needed to reduce overcrowding
- New units needed to remove substandard housing that cannot be upgraded.
- New units needed to compensate for regular demolitions. This could be about 2% per year if the average building life is 50 years. In Eastern Europe this ratio is as high as 9% because of poor maintenance and repair
- Vacant stock. In urbanised market economies, there typically is a ‘vacancy rate’ of about 1 to 4%
- Need for replacement of unit types. Replacing larger flats with more smaller flats as family size reduces

5.
Calculating Housing Demand

Step 1:

•Population by age group x headship rate = projected number of households.

Step two:

•Projected households x dwelling type propensities (plus vacancies, demolition replacements) = projected household demand.

A projection that uses this approach reflects what might reasonably be anticipated in the context of a gradual evolution of market demand in a given context, based on recent demographic and housing market trends / propensity data.

6. Asessing Affordability

- **‘Total’ Versus ‘Effective’ Demand**
- Everyone says they would like a large new house
- However, can they pay for it?
  - what can people afford?
  - what would they be willing to pay for

4. Determining Affordability (1)

- Median household income for each decile of the population
- Average household income for each of 10 segments with same number of households
- Estimating effort ratio (maximum spending on housing as % of annual household income)
  - How much do people currently spend on housing?
  - What is the maximum that they can spend on housing after food, school, taxes, etc.? 20% - 30%?

4. Determining Affordability (2)

- What housing can households buy for this money?
- Is housing finance available?
- Is housing finance accessible?
  - If yes, determine housing product based on lenders' guidelines (maximum loan amount, maximum loan-to-value ratio, debt service coverage ratio, …)
  - If not, analyze how do households finance housing acquisition
- How does each income group's affordability fare relative to existing supply products?

END