

AgMIP Coordinated
Global and Regional Assessment of
Climate Change Impacts on Food
Security and Agriculture

Building Blocks and Challenges

economics panel: institutions

Franz Sinabell¹

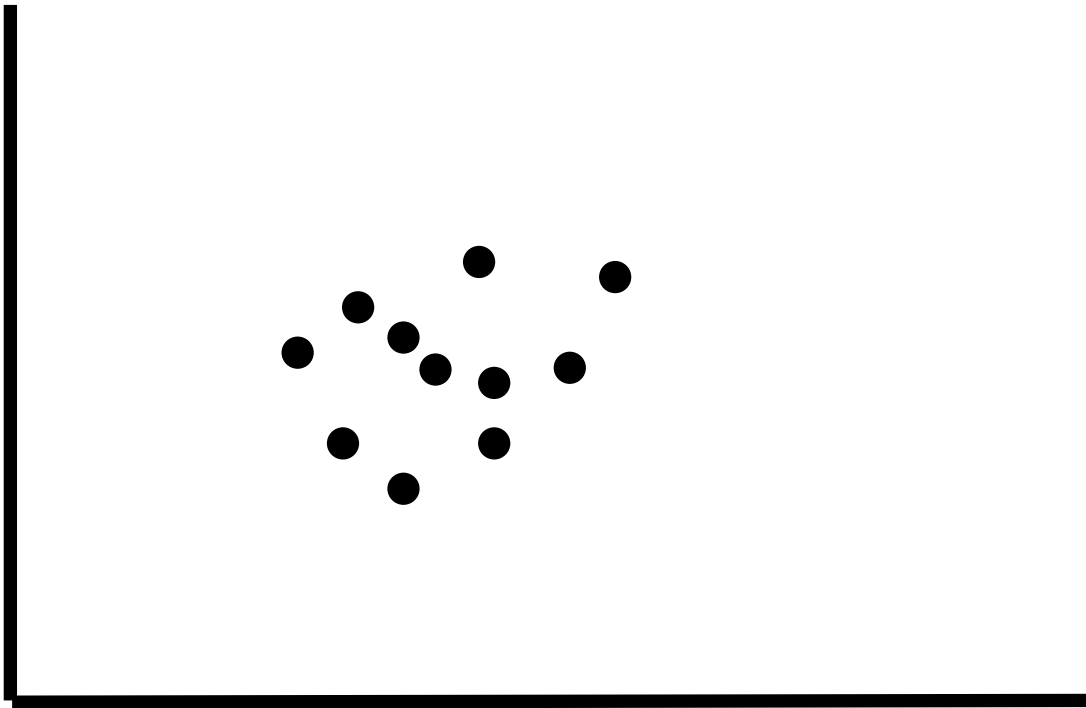
¹Austrian Institute of Economic Research, Vienna

Aspen, 16 Sept. 2015

Institutions & economics: **overview**

Institutions & economics: **markets**

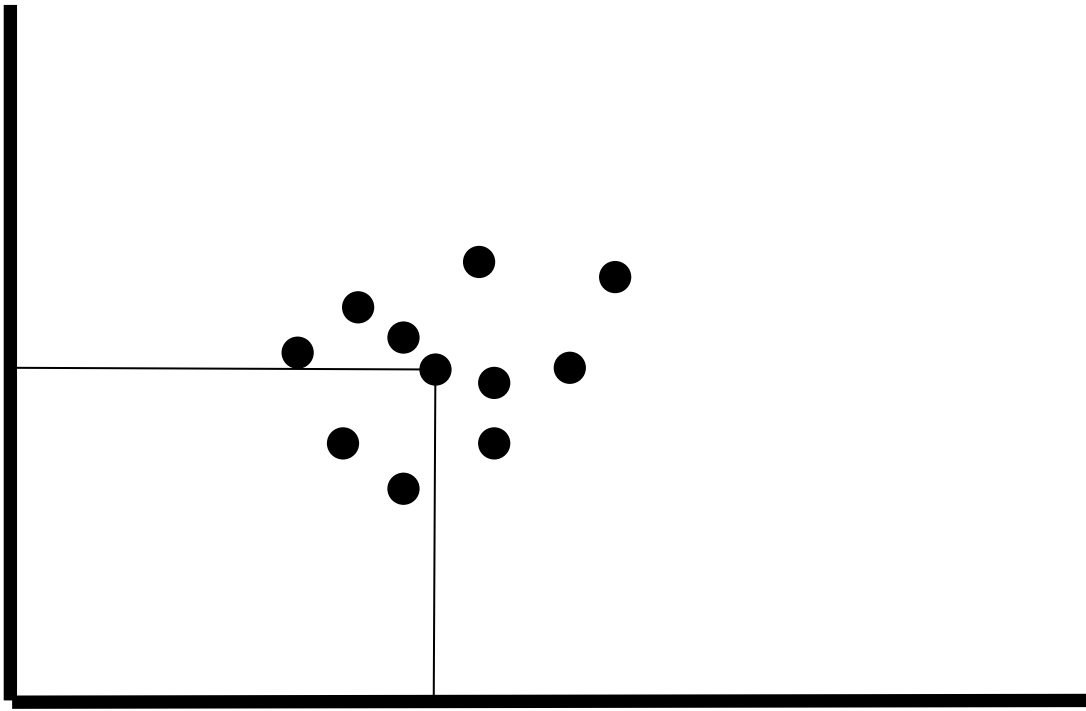
price



cereal quantity

Institutions & economics: **markets**

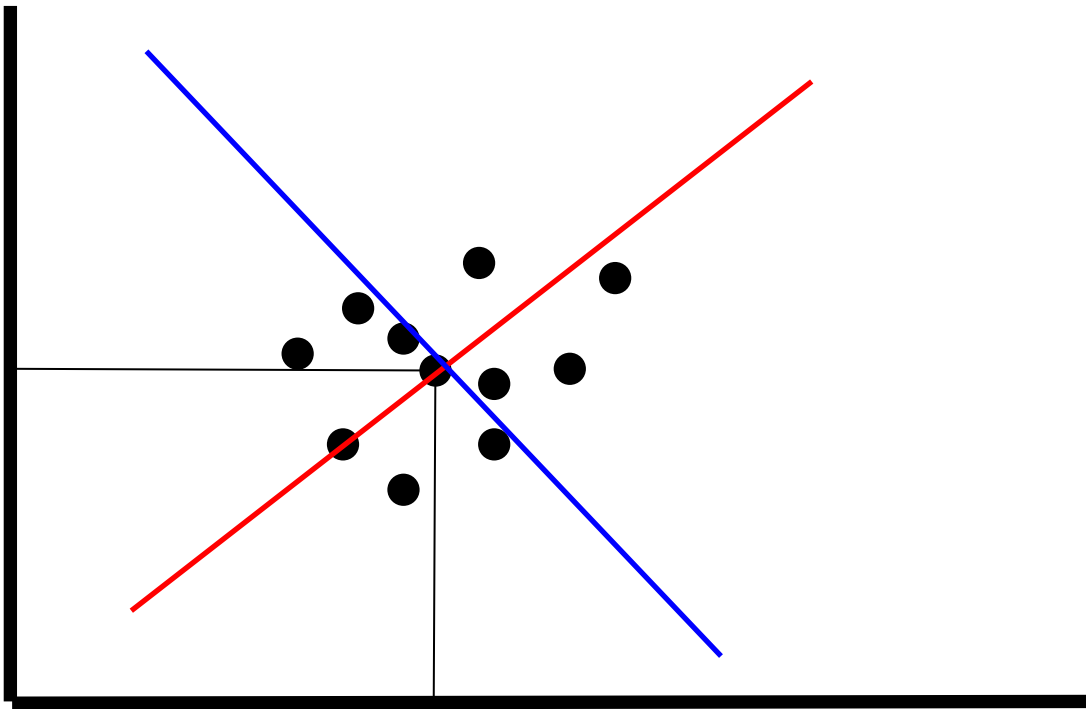
price



cereal quantity

Institutions & economics: **markets**

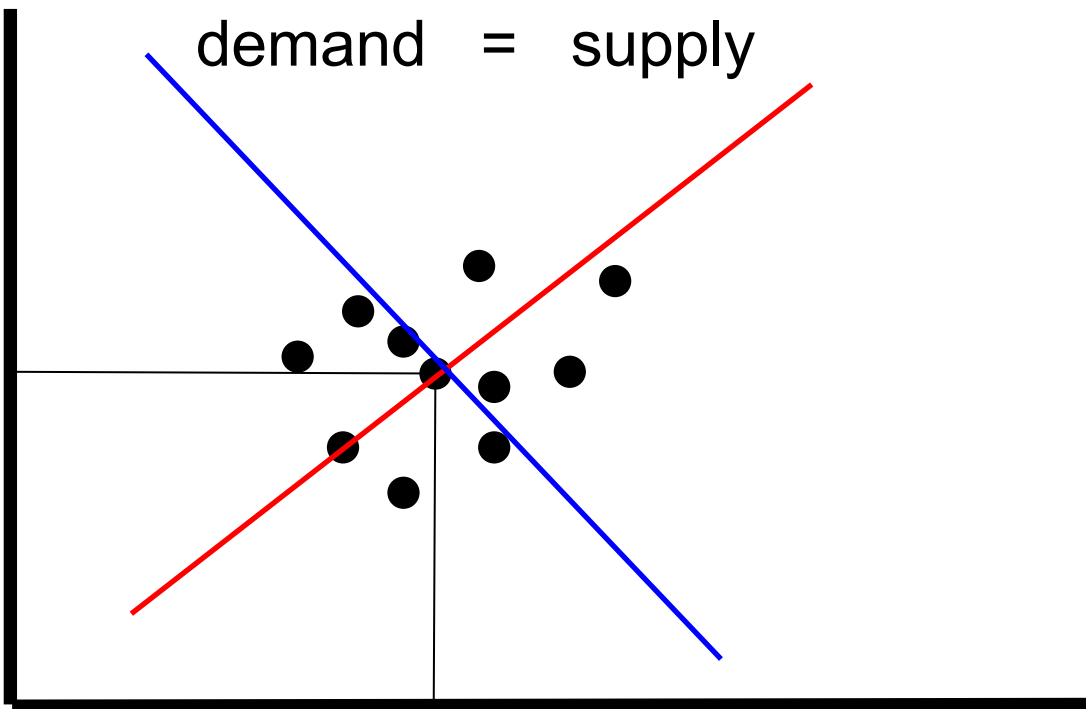
price



cereal quantity

Institutions & economics: **markets**

price

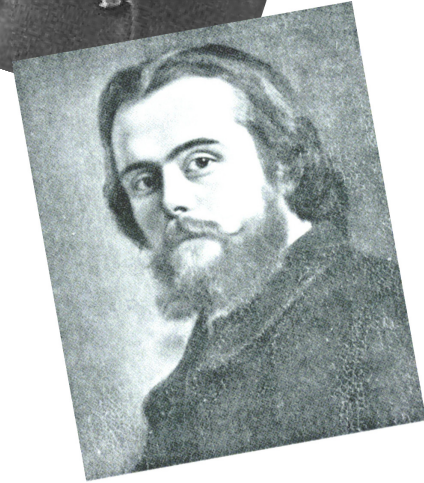
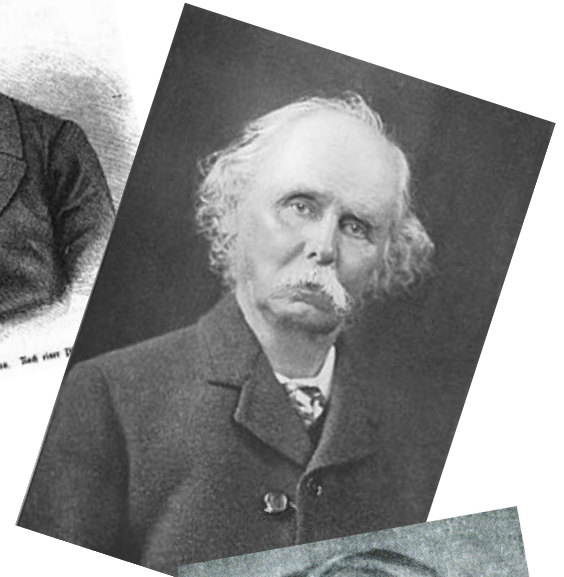
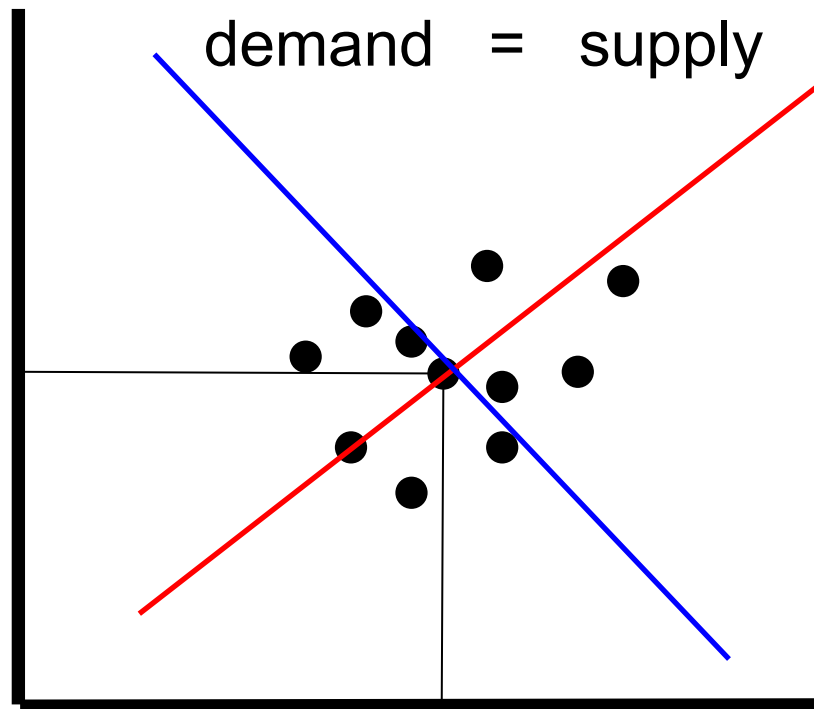


cereal quantity

Institutions & economics:

markets: excellent for **private goods**

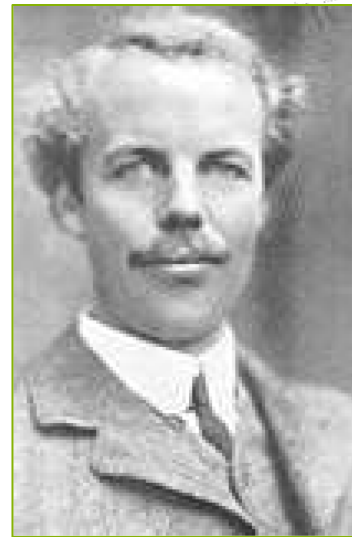
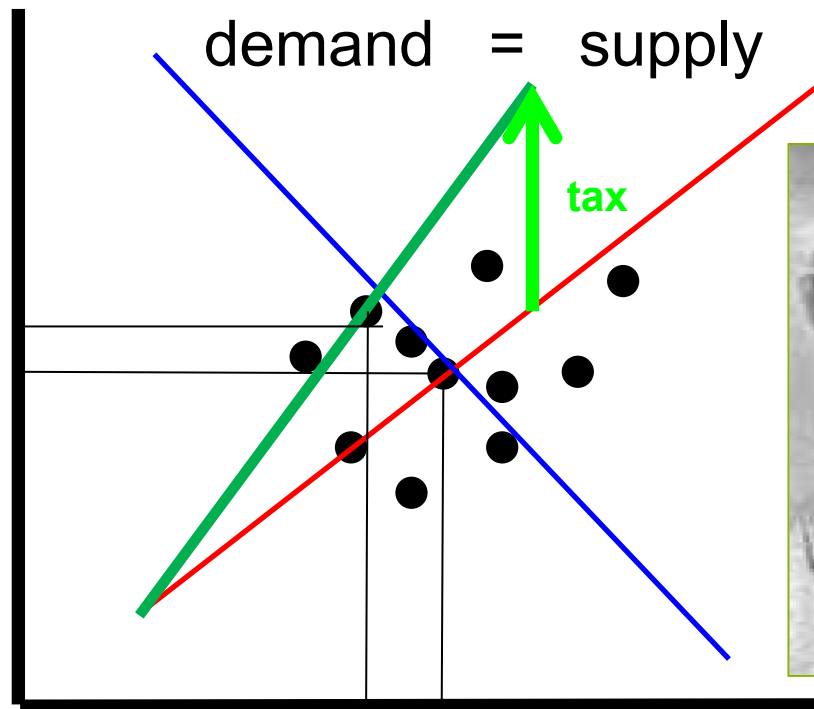
price



Institutions & economics:

markets: excellent for private and
many public **bads** (1912)

price



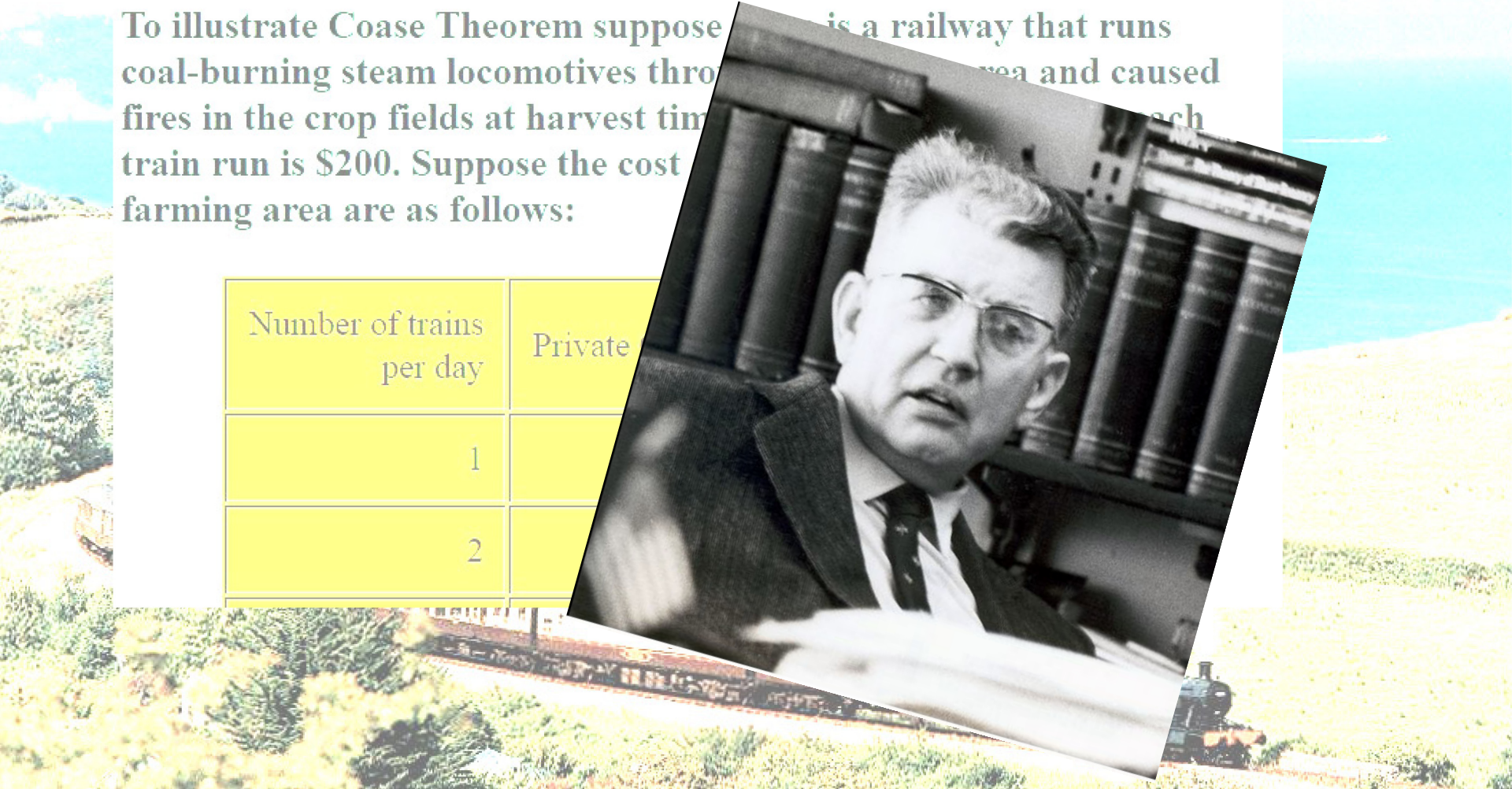
Institutions & economics: **property rights & private contracts**



Institutions & economics: property rights & private contracts

To illustrate Coase Theorem suppose there is a railway that runs through a farming area and caused fires in the crop fields at harvest time. The cost of each train run is \$200. Suppose the cost of the farming area are as follows:

Number of trains per day	Private
1	
2	



Institutions & economics: **common pool problem**



Institutions & economics: **common pool problem**

access control

service team

consumers



Institutions & economics: **common pool problem**

~~access control~~

~~service team~~

consumers

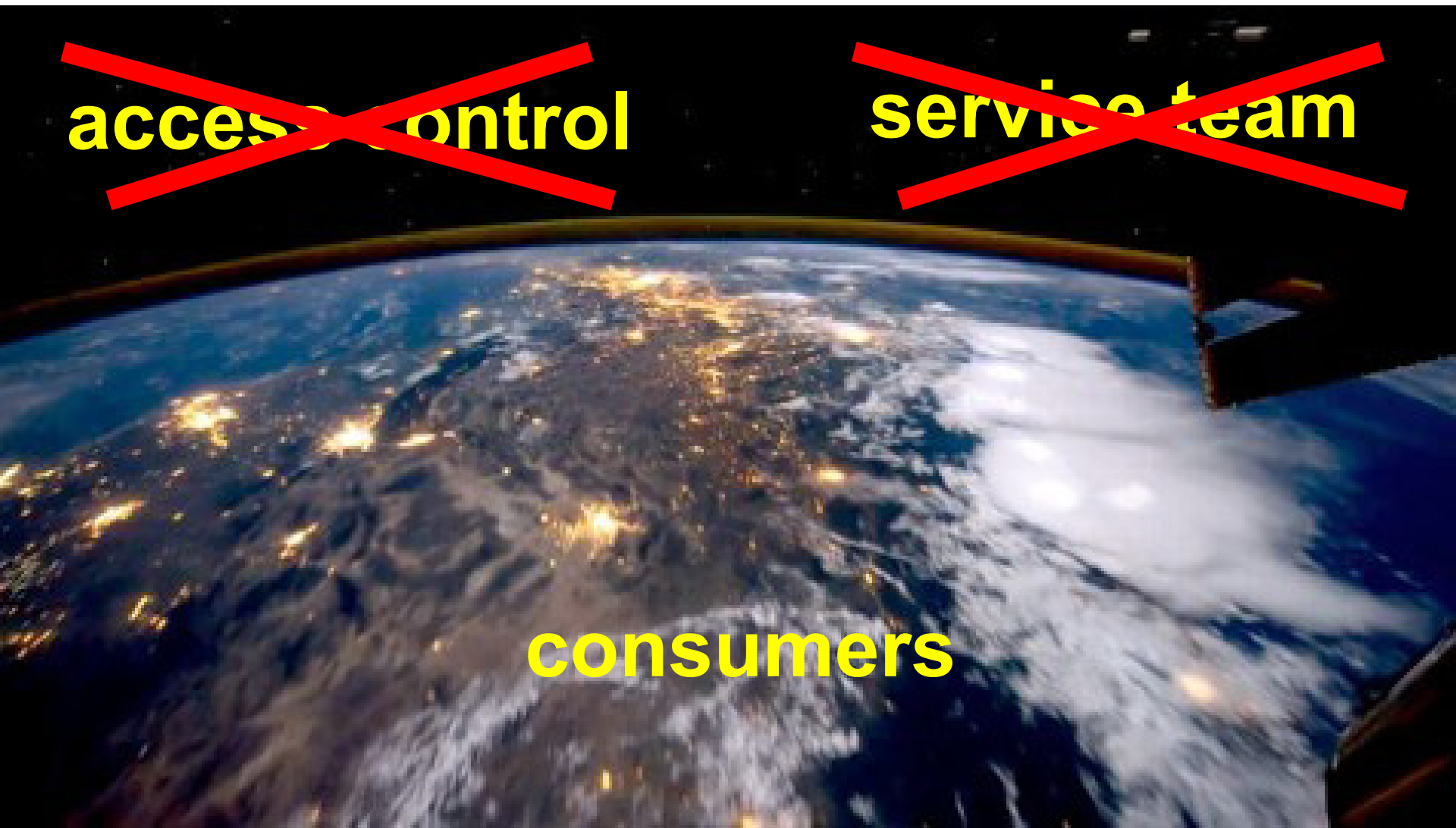


Institutions & economics: **common pool problem**

~~access control~~

~~service team~~

consumers



Institutions & economics: **common pool problem**



Elinor Ostrom
Nobel laureate in economic sciences
talks about managing common pool

Institutions & economics: common pool problem



HOW FARMER MANAGED IRRIGATION SYSTEMS BUILD SOCIAL CAPITAL TO
OUTPERFORM AGENCY MANAGED SYSTEMS THAT RELY PRIMARILY
ON PHYSICAL CAPITAL

Elinor Ostrom¹

Let me share with you some of the experiences I have had in studying irrigation systems in Nepal since 1992.

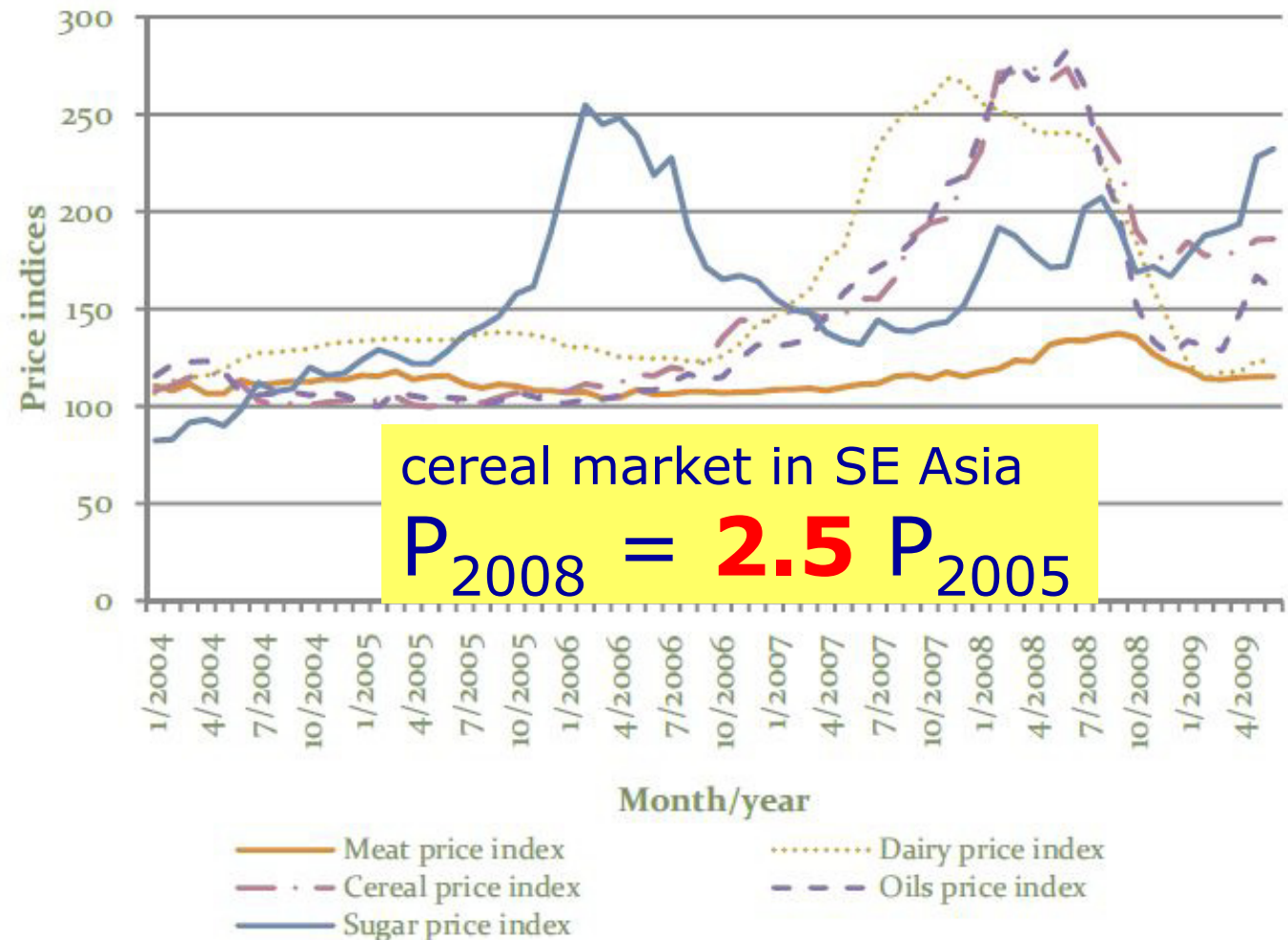
Sources: NASA, OECD, <http://www.fordfoundation.org>

institutions at work: policies & markets & property rights & culture & ...

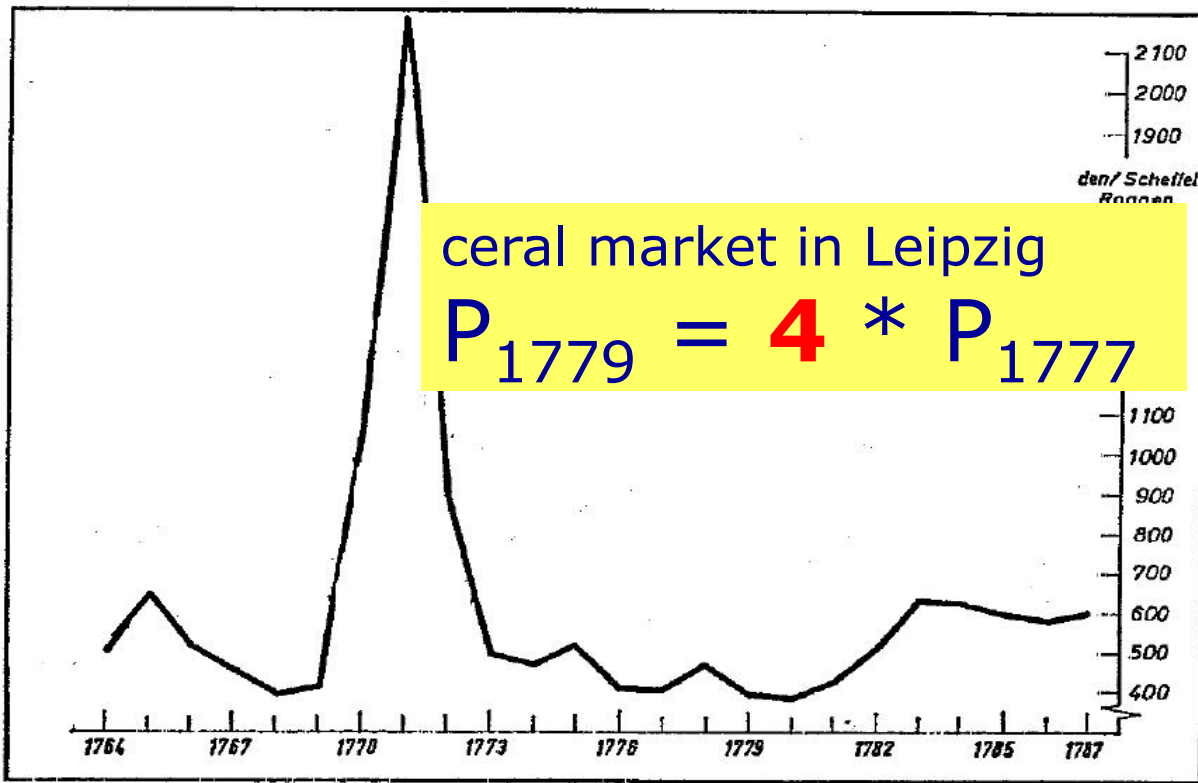


Institutions & economics: food markets

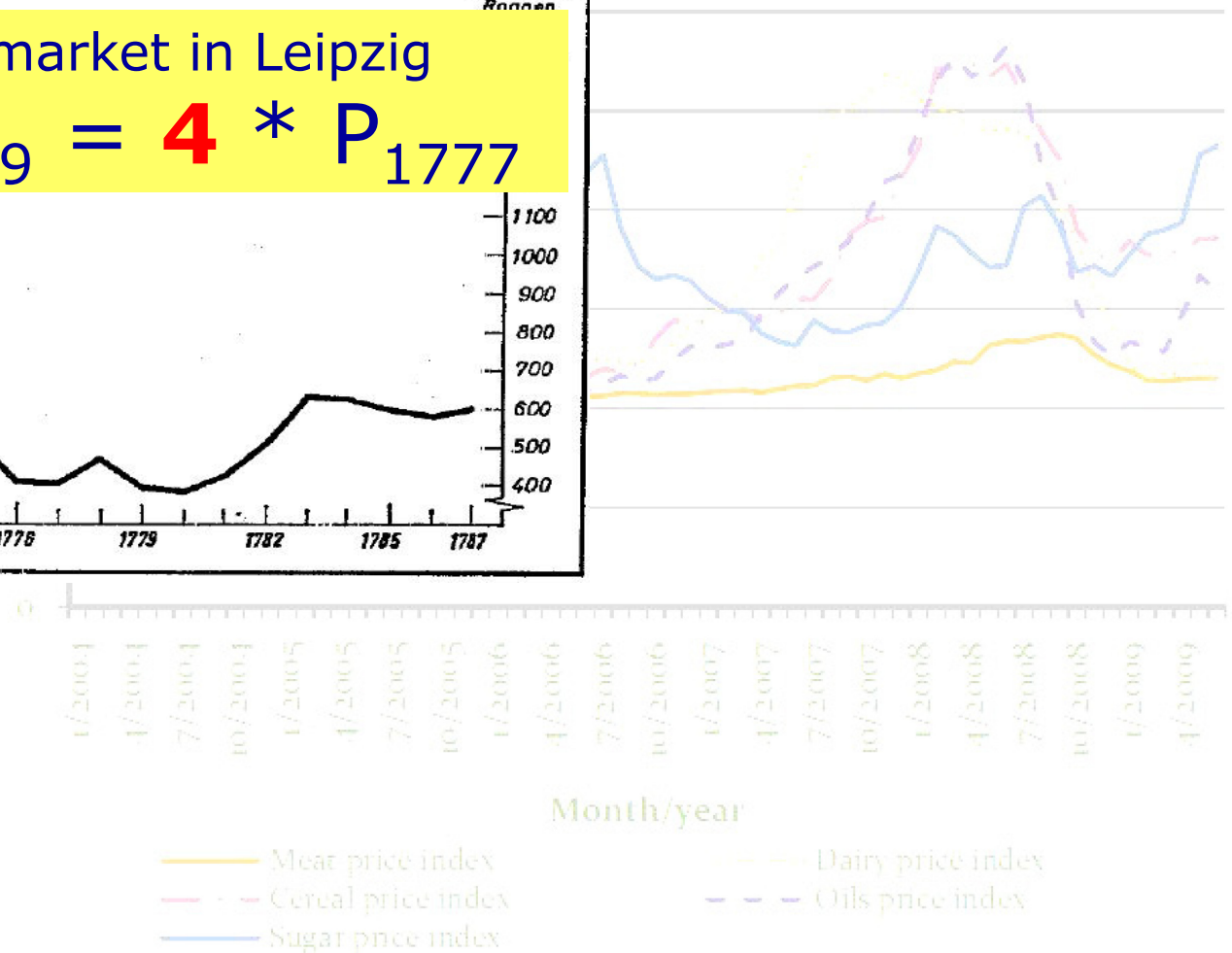
FIGURE 1.2. PRICE INDICES OF INDIVIDUAL FOOD CATEGORIES, 2004-09



Institutions & economics: food markets



FOOD CATEGORIES, 2004-09



Institutions & economics: food markets & policies

FIGURE 1.2. PRICE INFLATION

OVERVIEW OF POLICY INSTRUMENTS ADOPTED IN SOUTH ASIAN COUNTRIES IN DEALING WITH FOOD PRICE INFLATION

Policy Instruments	Afghanistan	Bangladesh	Country India	Nepal	Pakistan	Sri Lanka
Economic Policies						
Reduce taxes on food grains	✓	✓	✓		✓	✓
Stock management		✓	✓	✓	✓	
Export restrictions		✓	✓		✓	✓
Pricing policies						
Social Protection Programs						
Cash transfers	✓	✓	✓	✓	✓	✓
Food for work		✓	✓	✓	✓	✓
Food ration/stamps		✓	✓	✓	✓	✓
School feeding		✓	✓	✓	✓	✓
Rural employment schemes		✓	✓	✓	✓	✓

Month/year

— Meat price index
 - - Cereal price index
 — Sugar price index
 - - Dairy price index
 - - Oils price index

Institutions & economics: food markets & policies !!!

FIGURE 1.2. PRICE INDEXES IN SOUTH ASIAN COUNTRIES IN DEALING WITH FOOD
2004-09
Pakistan Sri Lanka

A number of simultaneous events explain the unusually high food-price inflation that took place during 2007-08. While supply constraints (in particular low levels of world cereal stocks) played a role, the main drivers were increases in demand (especially the rapid increase in the use of food crops to produce biofuels), speculation (large flows of speculative capital into agricultural commodity futures markets) and **policy failures** (especially export restrictions).

