

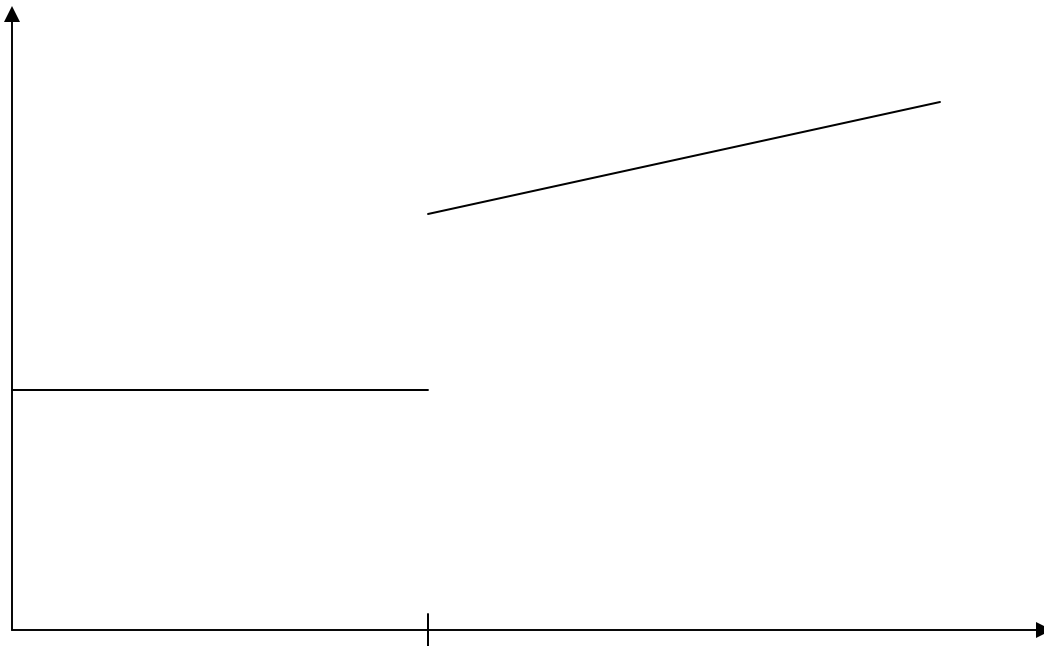
2. MANAGERIAL INCENTIVES.

Sometimes, it is thought that inefficiencies of central planning are related to absence of incentives like in many government bureaucracies.

Wrong! There were incentives but they worked often in the wrong direction and were the source of many of the observed inefficiencies.

The basic plan fulfilment bonus.

bonus



100%

Plan fulfilment

1) “Micawber” effect.

Micawber says to D. Copperfield: “Annual income: 20 pounds.

Annual expenses: 19 pounds 19 shillings six pence.

Result: happiness.

Annual expenses: 20 pounds 0 shillings six pence.

Result: misery.

2) Mild increase for overfulfilment.

Plan targets (or success indicators):

1) Volume indicators.

Electricity: kw/hour. OK

Coal: tons but no incentive to purify.

Steel: tons => too heavy steel.

Paper planned in tons => weight of 51.5 gr/square meter (44 to 46 in the West). Economy of 0.1 gr/square meter could have doubled production of Pravda.

Glass initially planned in tons. => too heavy. Then in square meters => Too light and broke too much.

2) Value indicators(*valovaya produktsiia*, “*val*”).

Incentive to produce goods with higher prices.

BUT, prices were planned : cost plus fixed markup.

⇒ Incentive to produce goods with the highest costs!

1965 Kosygin reform: profits (value minus costs).

⇒ Incentive to produce goods with highest profit margin

Also, output became less predictable

Coordination became more difficult.

The ratchet effect.

Berliner (1952)

Puzzle: despite unbalanced plans, only mild overfulfilment observed. Why not higher over-fulfillment ratio's given unbalanced plans?

Ratchet effect related to

- asymmetric information (planner does not know real capacities)
- lack of commitment to given incentive schemes.

Planners tried to get managers to reveal capacity to overcome asymmetric information.

Managers had no incentive to reveal information about their real capacities.

Counter-planning (*vstrechnye plany*).

“The New Soviet Incentive Scheme”

Copied on incentive schemes within IBM

3 stages:

1) Planner decides target \bar{q} and bonus \bar{B} .

2) Manager selects counter plan \hat{q}
associated to bonus $\hat{B} = \bar{B} + \beta(\hat{q} - \bar{q})$

3) If $q \geq \hat{q} \Rightarrow B = \hat{B} + \alpha(q - \hat{q})$
if $q \leq \hat{q} \Rightarrow B = \hat{B} - \gamma(\hat{q} - q)$

$$\gamma > \beta > \alpha$$

$\beta > \gamma \Rightarrow$ Declare high \hat{q}
and under-fulfill
 $\alpha > \beta$ Declare small target
and over-fulfill

In practice, counterplanning did not work...

... because of the ratchet effect.

Next period, the planner would select a higher target.

General problem of commitment to incentive schemes.

Trade-off between benefit of current reward and future cost of information revelation.

Why did it work in IBM?

Competition for managers in market economy vs monopsony in socialist economy.

The soft budget constraint.

Kornai(1980)

A contractor receives a budget of 100 to construct a new building. The building is half-finished and will yield 0 return if unfinished. The contractor asks for an additional 50 to finish. The finished building will have a return of 120.

What does the investor do?

The initial 100 are *sunk cost*. If terminated, *ex post* return of 0. If bailed out, *ex post* return of 70.

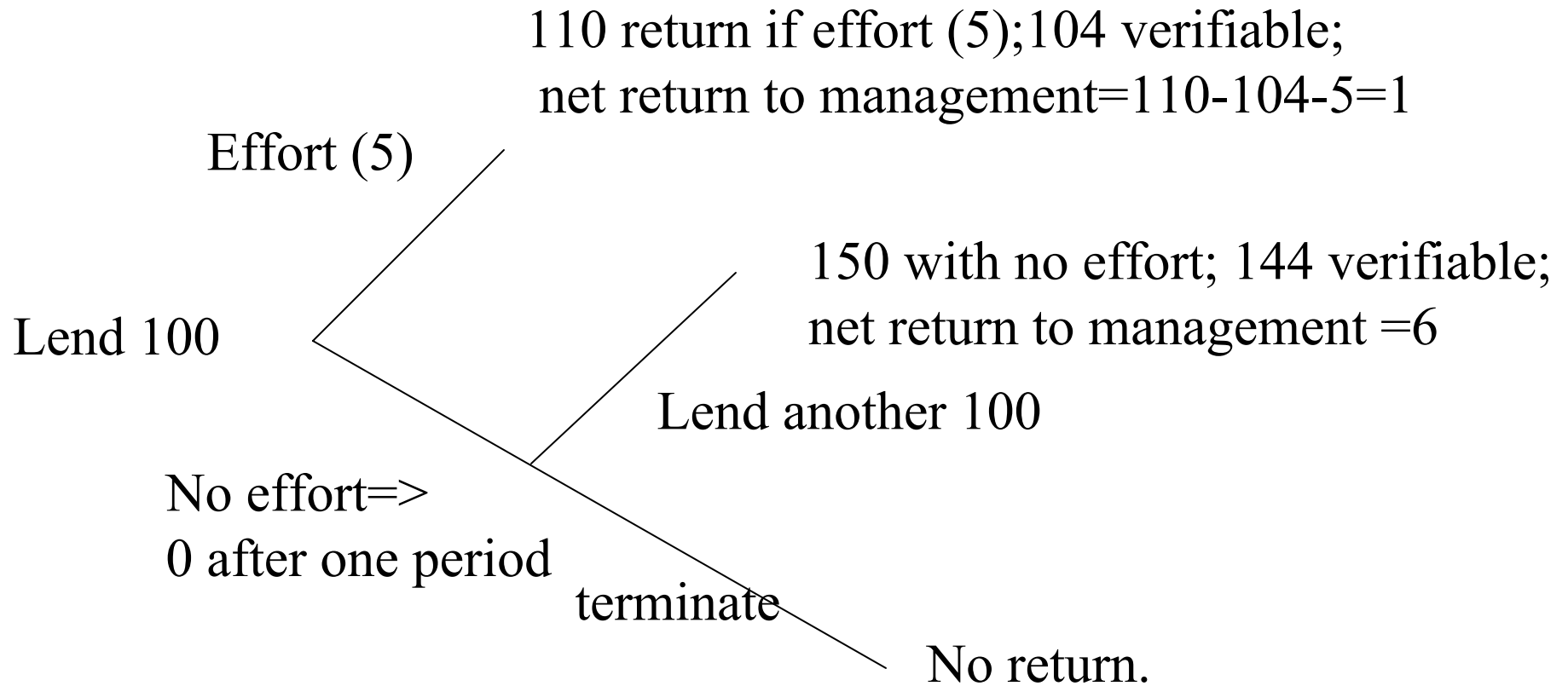
=> *Ex post* optimal to bail out even if the operation turns out to be loss-making.

A city council decides to build a bridge.
The bridge is half-finished. The contractor asks
for an additional 50 to finish the bridge.
What does the city council do?

Likely to be ex post optimal from the political point of view
(cover up).

In both cases, a credible commitment (lack of) to terminate
may have positive (negative) incentive effects.

An example.



Consequence of general system:

SHORTAGE (excess demand)!

Output not adequate to demand:

- 1) Bad quality. Higher quantity at cost of quality.
Concerns innovation.
Exception: military and space programs.

State was direct consumer.

- 2) Inadequate assortment. Children's shoes, wrong width of screws.
- 3) Too "high" quality. Cheap solid goods replaced by expensive goods.

- Waste and inefficiency. Possible to satisfy demand better at no real extra cost.

- Shortage.

Why shortage more prevalent than overproduction (excess supply) if inadequation is the problem?

Overproduction for consumer goods, rarely for producer goods.

Shortage is cumulative, not overproduction.

90% delivery => 90% plan fulfilment downstream.

110% delivery => 100% plan fulfilment downstream and input hoarding.

Contrast with market economy where excess supply is cumulative.

Other explanation of shortage:

Kornai (1980): soft budget constraints.

Soft budget constraint \Rightarrow high demand levels that could not be satisfied (and that were not sensitive to price increases).

Demand-driven explanation. My explanation is more based on supply behavior. Shortage can then coexist with hard budget constraints.

Soft budget constraints however often needed to hoard excess inputs.