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Работа бизнес-аналитика:  
предотвращать и уничтожать  
неопределенность.

**How managers can make a  
decision in an uncertainty  
environment?**

2



d. Solution Criterion of Laplace (Bayesian)

The Bayesian postulate: if the probabilities of phenomena is unknown, they must be intaken for equal

**the expected value of the strategies**

The chosen strategy is a strategy with the highest expected value, subject to equal probabilities

GLASBERGEN

"I HAD MY DOCTOR DO A D.N.A. BLOOD ANALYSIS. AS I SUSPECTED, I'M MISSING THE MATH GENE."

For strategies S1, S2, S3, S4, S5, the expected value is 22/4, 24/4, 46/4, 42/4 and 47/4 respectively

### Decision matrix

Alternative strategies	The state of the external environment			
	$N_1$	$N_2$	$N_3$	$N_4$
$S_1$	6	6	6	4
$S_2$	25	7	7	-15
$S_3$	20	20	7	-1
$S_4$	19	16	9	-2
$S_5$	20	15	15	-3

The result of the assumption of equal probabilities for each state of the economy is a decision in a situation of risk

The criterion of Laplace - is the criterion of rationality, completely insensitive to the decision-makers

Suitable for **long-term forecasting** by large firms, as in fact equality of probabilities of all the States of the economy is impossible, especially in the short term

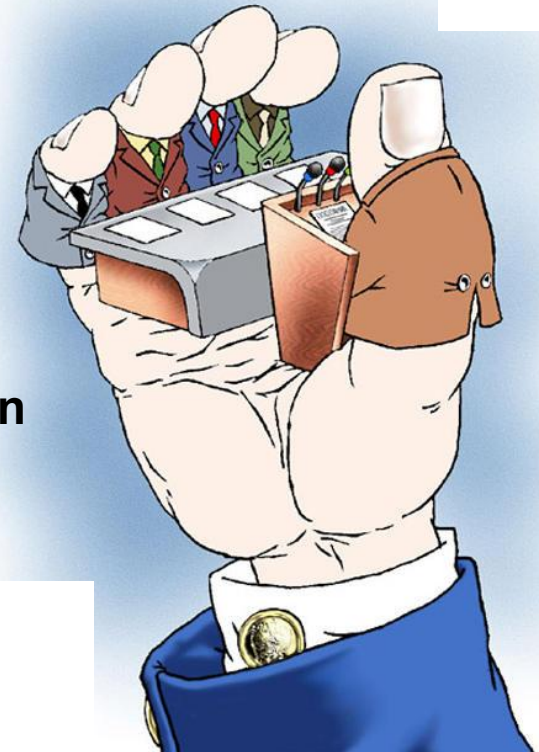


## Conclusion :

The process of decision-making under uncertainty is the process of criteria selection, and then performance of the calculations necessary to make a selection within this criterion

**What criterion is the most suitable?**

The choice often depends on personal reasons!



e. Other methods of avoidance of uncertainty

# Hedging

- method in which future uncertainty is replaced with the reliability of the current contract



**Manufacturer buys oil and plans to sell gasoline made of this oil after 3 months.**



**To reduce the risk, he enters into a forward contract for the supply of gasoline with expiry of 3 months.**

e. Other methods of avoidance of uncertainty

**FLEXIBLE INVESTMENT**

**I don't want to be locked in investments in specialized assets unless it will become clear that the demand for them will take place during the whole term of investments**





e. Other methods of avoidance of uncertainty  
**DIVERSIFICATION OF THE COMPANY'S INTERESTS**

*This approach is illustrated by the old adage:  
"don't put all your eggs in one basket"*



e. Other methods of avoidance of uncertainty

**THE ACQUISITION OF ADDITIONAL  
INFORMATION**



**Obviously, the more information you gather about the future, the less it will be undefined**

**However, in some time the law of diminishing marginal utility will occur**

# *Tropical Products*



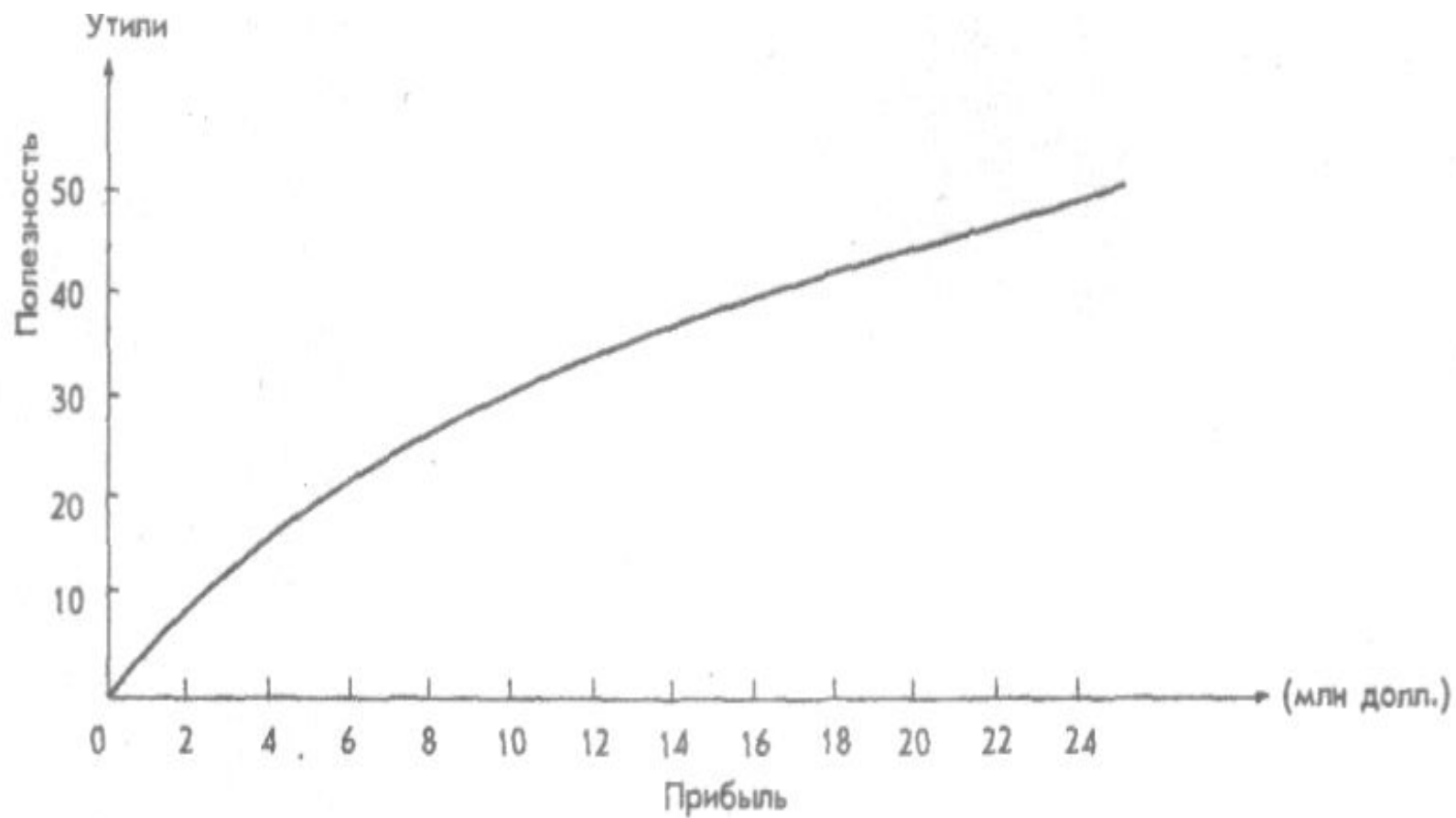


Рис. 4.12. Предполагаемая функция полезности