

# **МЕТОДОЛОГИЯ РЕГИОНОВЕДЕНИЯ**

**The methods of Regional Science**

# Методы региональных экономических исследований

- ***Балансовый метод*** – составление  
регионального баланса для  
оптимального соотношения между  
отраслями рыночной специализации

# The method of balanced estimates (regional material balances)

- The main instrument in GOSPLAN planning system (Soviet Union and other Eastern Bloc countries)



# GRAIN BALANCE (EXAMPLE)

## *A. Resources*

1. Stocks in hand at the beginning of the year, of which:
  - (a) In agriculture.
  - (b) In industry.
  - (c) In trade channels.
2. Harvest, gross (according to sectors).
3. Resources, total.

## *B. Consumption*

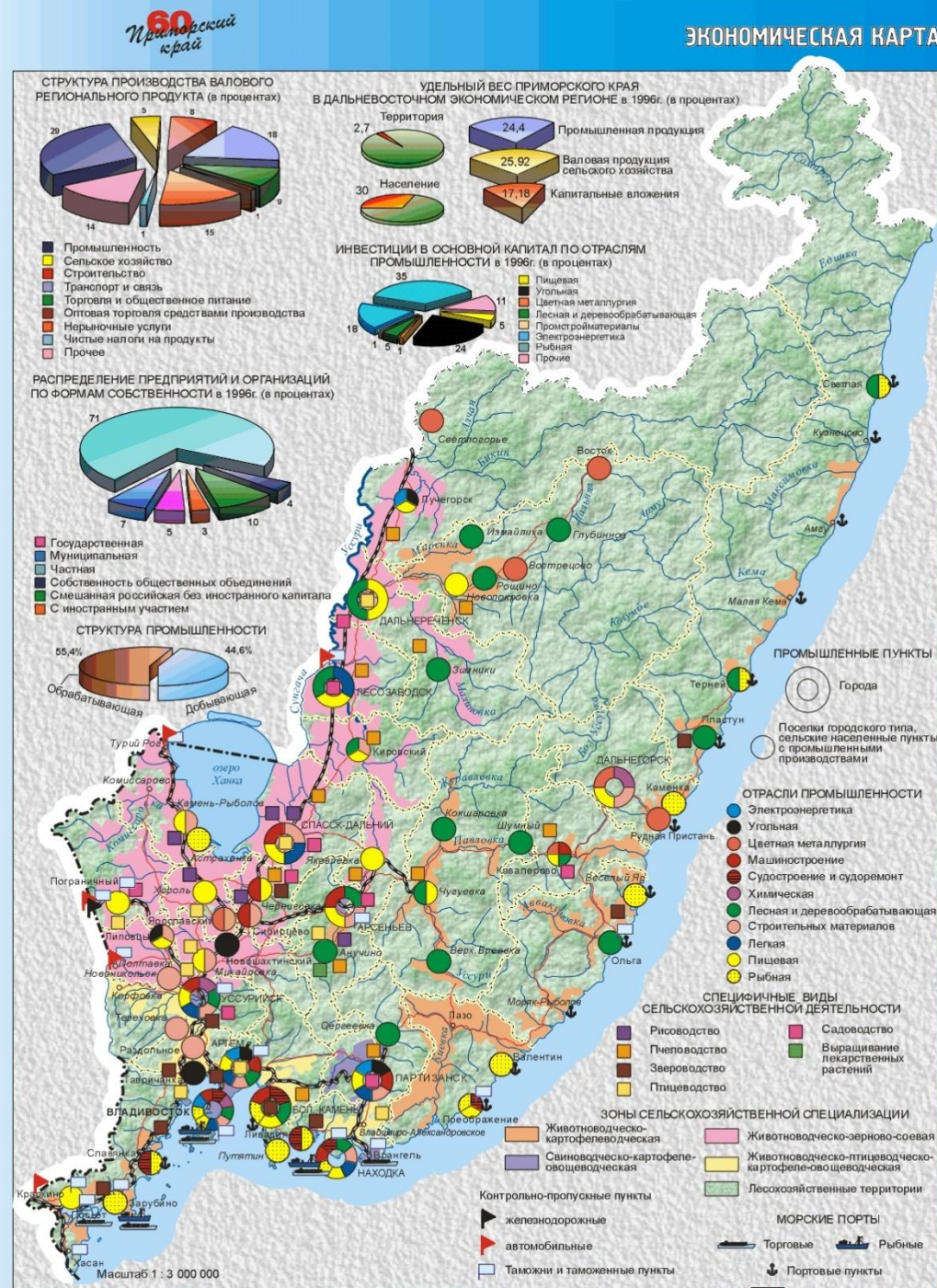
1. Consumed by production:
  - (a) Seed.
  - (b) Livestock feed (urban and rural).
  - (c) Industry.
2. Consumed by population and institutions:
  - (a) Agricultural (according to groups).
  - (b) Non-agricultural (according to groups).
  - (c) Institutions.
3. Export-Import.
4. Stocks in hand by the end of the year, of which:
  - (a) In agriculture.
  - (b) In industry.
  - (c) In trade channels.

“The material balance is at the core of Soviet planning; it is the most operational (or bureaucratic) of all balances in the sense that all its elements – output orders, import and export quotas, inventory changes and all allotments of materials to various consuming groups – hang on administrative decisions”

*J.M. Montias, Planning with Material Balances in Soviet-Type Economies, The American Economic Review, Vol. 49, No. 5, Dec., 1959*

# CARTOGRAPHY

Spatial scheme with  
basic branches of the  
area



# ***INDICATORS***

- Determining the “level of specialization” of an economic area based on the key indicators
  1. Location Quotient
  2. Specialization Quotient

# Коэффициент локализации

- отношение удельного веса данной отрасли в структуре производства района к удельному весу той же отрасли в стране



## Coefficient of Localization (Location Quotient)

- A method of determining the extent to which an industry is localized compared with the spatial (multi-regional) distribution of all (or at least a larger set of) economic activities.

# Coefficient of Localization (Location Quotient)

- The coefficient is calculated by subtracting for each region the percentage employment share of the industry in question from the total regional employment share (the region's share of national employment in all activities).

# Coefficient of Localization (Location Quotient)

Location Quotient=	Regional Employment in <u>Industry I in Year T</u>	/	National Employment in <u>Industry I in Year T</u>
	Total Regional Employment in Year T		Total National Employment in Year T

# Коэффициент локализации

- $$K_{\text{л}} = \frac{O_{\text{р}}}{P_{\text{р}}} \times 100 \div \frac{O_{\text{с}}}{P_{\text{с}}} \times 100$$

$O_{\text{р}}$  - отрасль района;  $P_{\text{р}}$  – производство района;  $O_{\text{с}}$  - отрасль страны;  
 $P_{\text{с}}$  – производство страны

# Location Quotient

## *Localization of an Industry*

REGIONS	PERCENT OF NATIONAL TOTAL EMPLOYMENT OF FOCAL INDUSTRY IN REGION (A-D)	PERCENT OF TOTAL U.S. MANUFACTURING EMPLOYMENT IN REGION (A-D)	DIFFERENCE IN RELATIVE REGIONAL EMPLOYMENT IN FOCAL INDUSTRY & ALL MANUFACTURING ACTIVITIES	LOCATION QUOTIENT OF FOCAL INDUSTRY IN RESPECTIVE REGIONS
A	15	35	-20	.43
B	35	30	+5	1.17
C	30	20	+10	1.5
D	20	15	+5	1.33
Sum	100%	100%	-20 +20	(1.0)

The focal industry has a coefficient of localization of .2. The higher the coefficient, the greater the localization (spatial concentration) of the industry. We could also calculate a coefficient of dispersion by deducting .2 from 1.0 = .8

# Location Quotient I

- **LQ < 1.0** = All Employment is **Non-Basic**
- A LQ that is less than one suggests that local employment is less than was expected for a given industry. Therefore, that industry is not even meeting local demand for a given good or service. Therefore all of this employment is considered non-basic by definition.

# Location Quotient II

- A **LQ = 1.0** = All Employment is **Non-Basic**
- A LQ that is equal to one suggests that the local employment is exactly sufficient to meet the local demand for a given good or service. Therefore, all of this employment is also considered non-basic because none of these goods or services are exported to non-local areas.

# Location Quotient III

- A **LQ > 1.0** = Some Employment is **Basic**
- A LQ that is greater than one provides evidence of basic employment for a given industry. When an  $LQ > 1.0$ , the analyst concludes that local employment is greater than expected and it is therefore assumed that this "extra" employment is basic. These extra jobs then must export their goods and services to non-local areas which, by definition, makes them Basic sector employment.



# Коэффициент душевого производства

- исчисляется как отношение  
удельного веса отрасли хозяйства  
района в соответствующей структуре  
отрасли страны к удельному весу  
населения района в населении  
страны

# Коэффициент душевого производства

- $$K_d = \frac{O_p}{O_c} \times 100 \div \frac{H_p}{H_c} \times 100$$

$O_p$  - отрасль района;  $O_c$  – отрасль страны;  $H_p$  - население района;  $H_c$  – население страны

# Коэффициент межрайонной товарности

- $$K_{MT} = \frac{V_p}{\Pi_p}$$

$V_p$  - вывоз из района данной продукции;  $\Pi_p$  – производство данной продукции в районе

# Коэффициент специализации

- $$C_y = \frac{y_o}{y_p}$$

$C_y$  - показатель специализации района на соответствующей отрасли;  $y_o$  - удельный вес района в стране по данной отрасли;  $y_p$  - удельный вес района в стране по промышленности в целом

- ***Системный анализ***
- ***Метод экономико-математического моделирования***