Principles of assessment of macroeconomic effects of creating a free trade area between EU and EAU

Laxenburg
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1. Is the creation of a free trade area between EU and EAU a factor that can stimulate economic development on a stretch of land from Lisbon to Vladivostok over the mid to long term?

2. What criteria should signify the readiness of EU and EAU to create a free trade area?

3. Is a step-by-step (sectoral) transition to a FTA possible? What are the possible terms for creating a complete FTA?

4. How does the possibility of a FTA between EU and EAU correlate with other integration processes (FTA between US and EU, etc.)?

5. What will be the most important effects of changes in tariff and nontariff barriers in trade, flows of capital and labor force?

6. What impact will the FTA creation process have on the dynamic and structural characteristics of development of EU and EAU countries?

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EAU

1) Not a significant single-step increase of import levels for internal markets of EAU countries
2) Preserving the cumulative rate of economic growth of EAU countries over the transition period

FREE TRADE AREA

1) Keeping the competitiveness of EU products on the EAU market
2) Preserving or increasing exports from European countries to EAU countries for several consecutive years in comparison to the base scenario

EU

3

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SOME SECTORS →
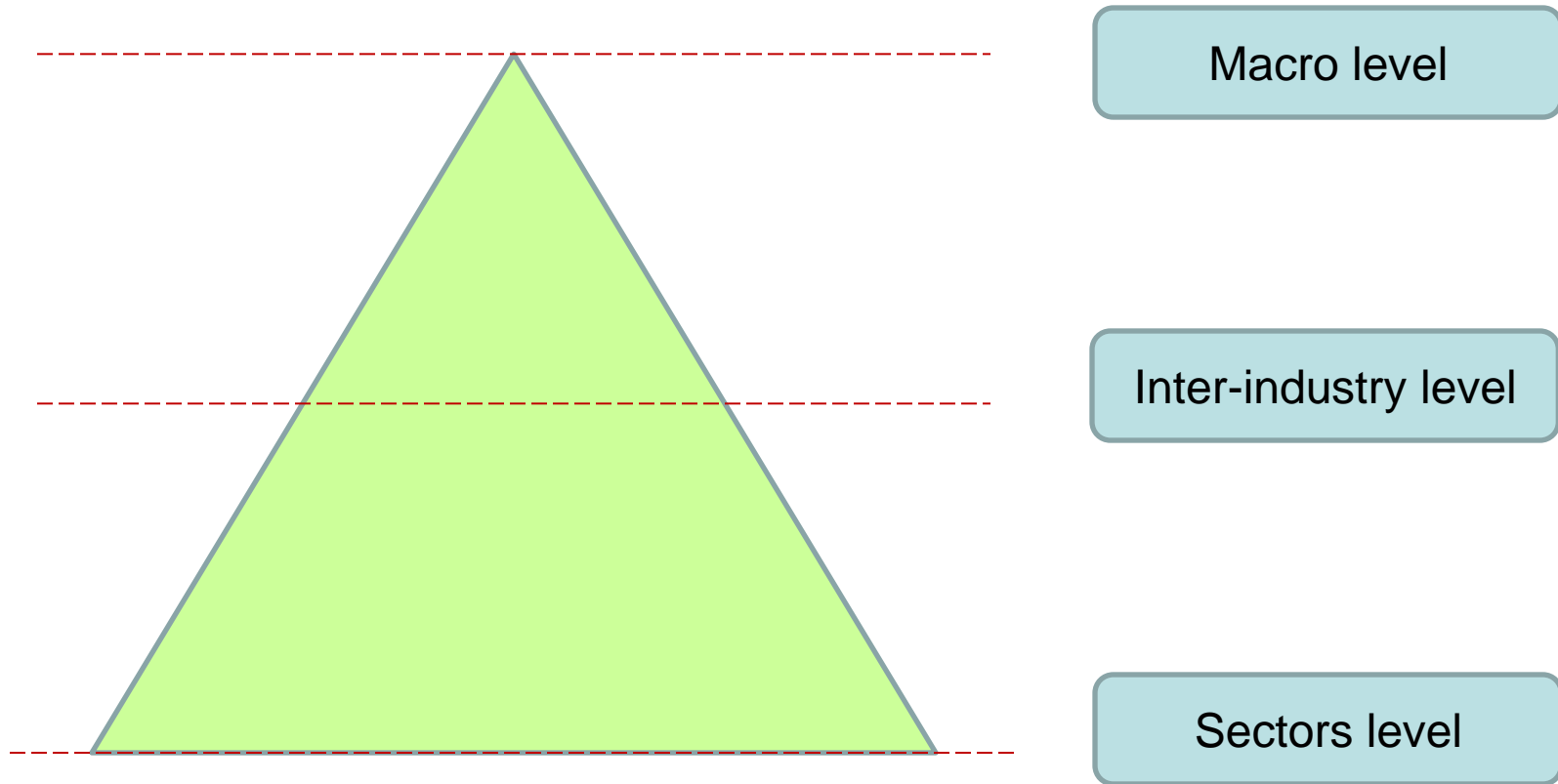
FTA with EXCLUSIONS →

FULL FTA →

TIME - ?

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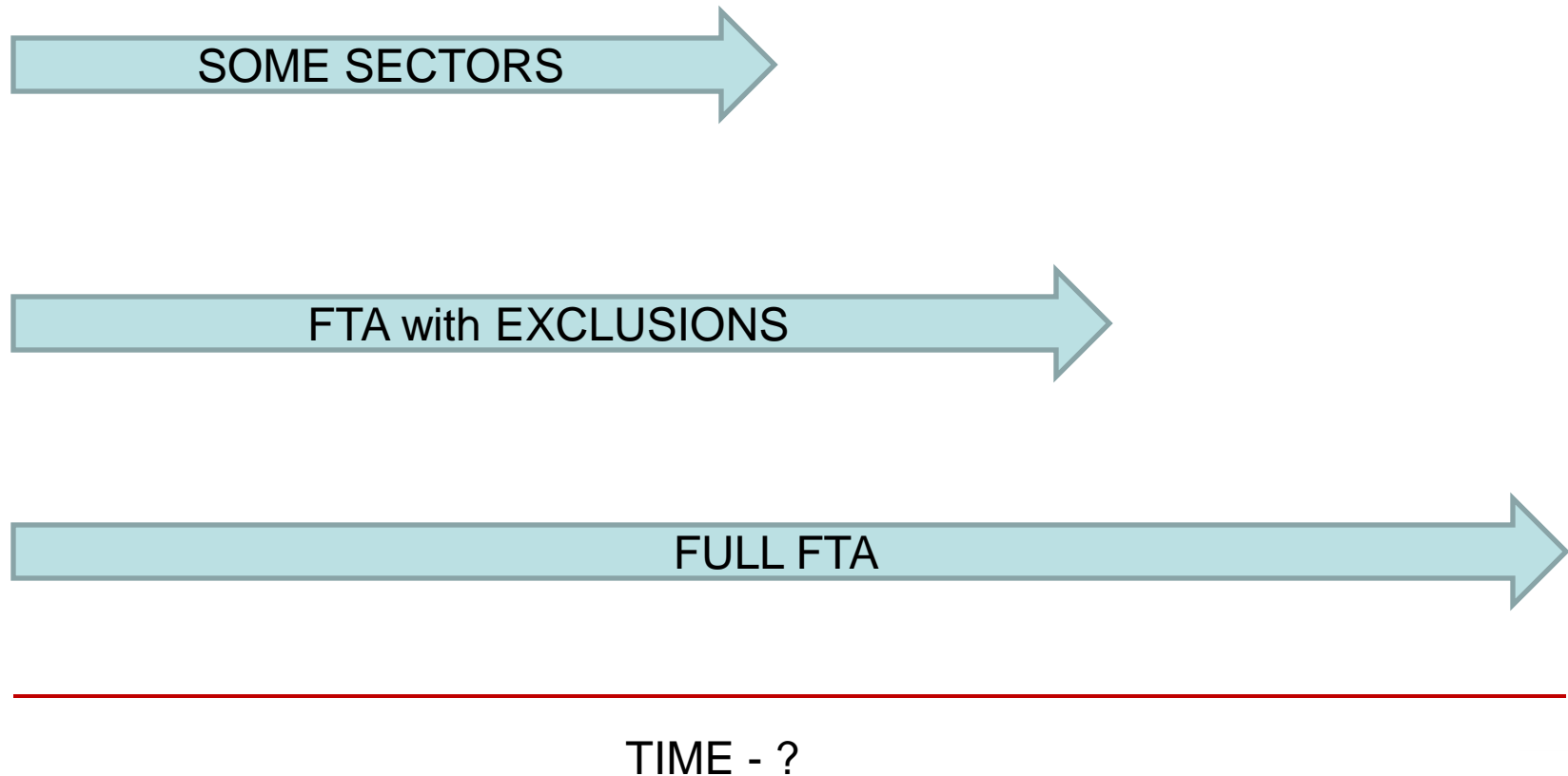
Main data sources

1. Eurostat, Rosstat, other national statistical offices;

2. WIOD project database;

3. World Bank, OECD, IMF and UN databases;

4. GTAP database on international trade

When analyzing the mirror statistics of international trade, we propose to draw upon the export data, because in our opinion this data is less subject to distortions due to better administration (especially in EAU countries) and a lower level of fiscal burden on exportation of goods.

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Macro level

Inter-industry level

Sectors level

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Estimation of integration effects

Integration effects can be divided on two types :

• *instant*, associated with simultaneous improvement in the terms of trade (as a rule, such effects are fading with time in nature)

• *long term*, associated with the convergence of the level of economic development (such effects as time increases)

The most significant long term effects associated with changes in the level of technology, expenditures, and as a result, overall growth in production efficiency. Countries with less production efficiency gradually catch up to the more advanced.

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• EAU sectoral markets where EU products may be most coveted, considering competition with products from other regions;

• Possibilities for EU to receive competitively and steadily priced energy and other resources;

• Fulfillment of EAU transit potential;

• Technology transfer from EU to EAU countries in exchange for priority access to the market;

• Use of parity methods of project financing allowing for smart usage of available financial resources for distribution of industries and promotion of products on foreign markets.

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x_{irjr}	x_{irjb}	x_{irju}	x_{irjk}	x_{irjw}	y_{rr}	y_{rb}	y_{ru}	y_{rk}	y_{rw}	X_r
x_{ibjr}	x_{ibjb}	x_{ibju}	x_{ibjk}	x_{ibjw}	y_{br}	y_{bb}	y_{bu}	y_{bk}	y_{bw}	X_b
x_{iujr}	x_{iujb}	x_{iuju}	x_{iujk}	x_{iujw}	y_{ur}	y_{ub}	y_{uu}	y_{uk}	y_{uw}	X_u
x_{ikjr}	x_{ikjb}	x_{ikju}	x_{ikjk}	x_{ikjw}	y_{rr}	y_{rb}	y_{ru}	y_{rk}	y_{rw}	X_k
x_{iwjr}	x_{iwjb}	x_{iwju}	x_{iwjk}							
VA_r	VA_r	VA_r	VA_r							
X_r	X_b	X_u	X_k							

$$x_{ir} = \sum_{jr=1}^{n} x_{irjr} + \sum_{jb=1}^{n} x_{irjb} + \sum_{ju=1}^{n} x_{irju} + \sum_{jk=1}^{n} x_{irjk} + \sum_{jw=1}^{n} x_{irjw} + y_{irr} + y_{irb} + y_{iru} + y_{irk} + y_{irw}$$
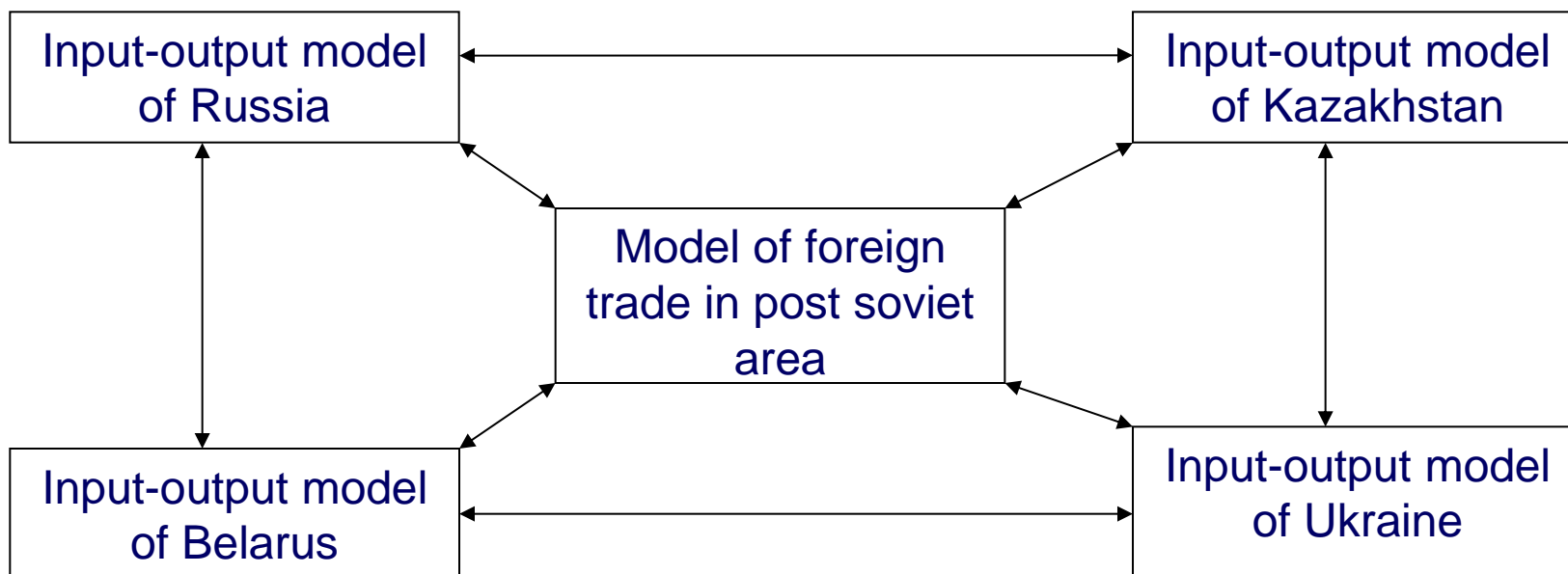
- RUSSIA   - BELORUSSIA   - UKRAINE   - KAZAKHSTAN

- REST OF THE WORLD

Scheme of the model

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┌─────────────────────┐                    ┌─────────────────────┐
│  Input-output model │◄──────────────────►│  Input-output model │
│      of Russia      │                    │    of Kazakhstan    │
└─────────────────────┘                    └─────────────────────┘
         ▲                 ┌──────────────┐            ▲
         │                 │   Model of   │            │
         │                 │ foreign trade│            │
         │                 │ in post      │            │
         │                 │ soviet area  │            │
         ▼                 └──────────────┘            ▼
┌─────────────────────┐                    ┌─────────────────────┐
│  Input-output model │◄──────────────────►│  Input-output model │
│     of Belarus      │                    │     of Ukraine      │
└─────────────────────┘                    └─────────────────────┘
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Model toolkit consists of input-output model of Russia, Kazakhstan, Belarus, Ukraine and model of bilateral foreign trade. All four IO models work by the same algorithm and have similar classification of sectors.
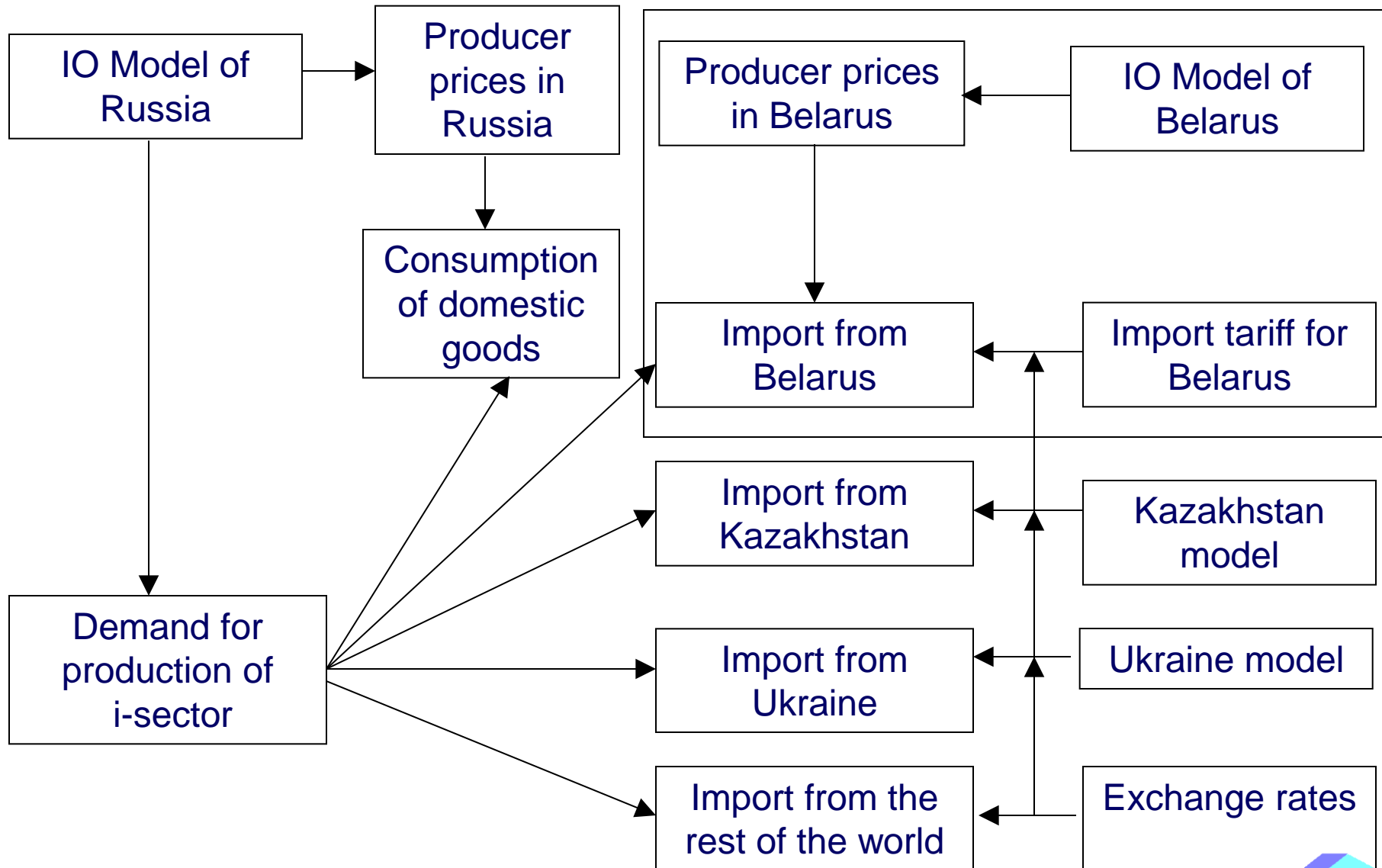
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Bilateral foreign trade model

Im[A][B] = Ex[B][A], where A and B – countries in consideration

Im[A][B] = Demand[A]* (a+b*Prices[AB]/Prices[A]

+ c * Prices[AC]/Prices[A])

– amount of import are determined by total amount of demand on selected commodity and ratio of import and domestic prices.

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Example of model ties

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Bilateral foreign trade model

Prices[AB]=Prices[B]*ExchangeRate[BA]*

TransportTariff[BA]*ImportTariff[BA]

Prices[B] – domestic prices on commodity in country B

Demand[A] = Function (outT[A],M) – demand on commodity in country A

M – matrix of I-O coefficients

ImportTariff[BA] – Import tariffs are one of the main

exogenous variables determined by scenario

Changes of technological structure

$$M[i][j] = Mold[i][j]*capOld[t]/capT[t]$$
$$+Mnew[i][j]*capNew[t]/capT[t]$$

$$capT[t] = capOld[t]+capNew[t]$$

$$capNew[t] = capNew[t-1]*(1-w[t])+inv[t-1]$$

$$capOld[t] =capOld[t-1]*(1-w[t])$$

Amount of investment defines speed of fixed capital modernization and depends on financial results of the sector

THANK YOU

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