Effects of Common Economic Space Creation

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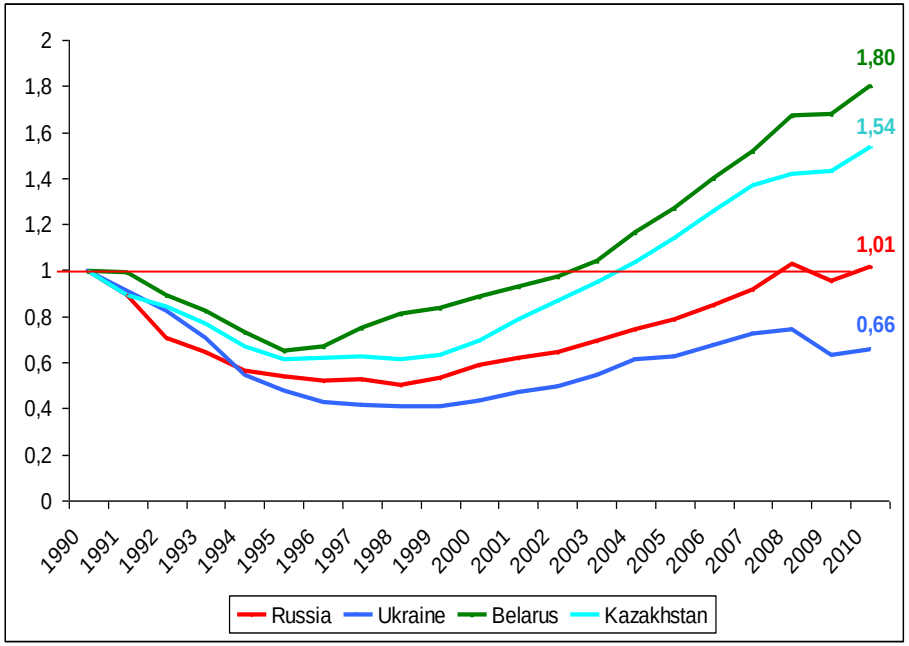
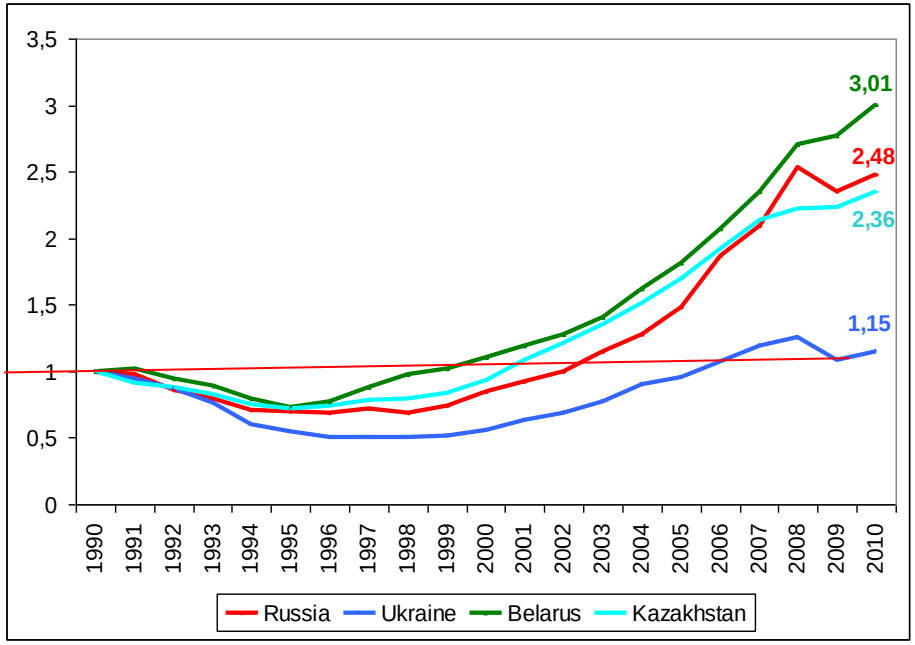
20 years of independent economic development

Dynamics of GDP in 1990-2010 (1990 = 1)



Dynamics of GDP per capita in PP (1990 = 1)



For the past 20 years, the largest post-soviet countries have managed to almost overcome the crisis of 90s. The market institutions were formed. The economy of the former Soviet Union has adapted to the new market conditions.

At the same time, all countries have a need for a long-term strategy to mobilize available resources to achieve development goals.

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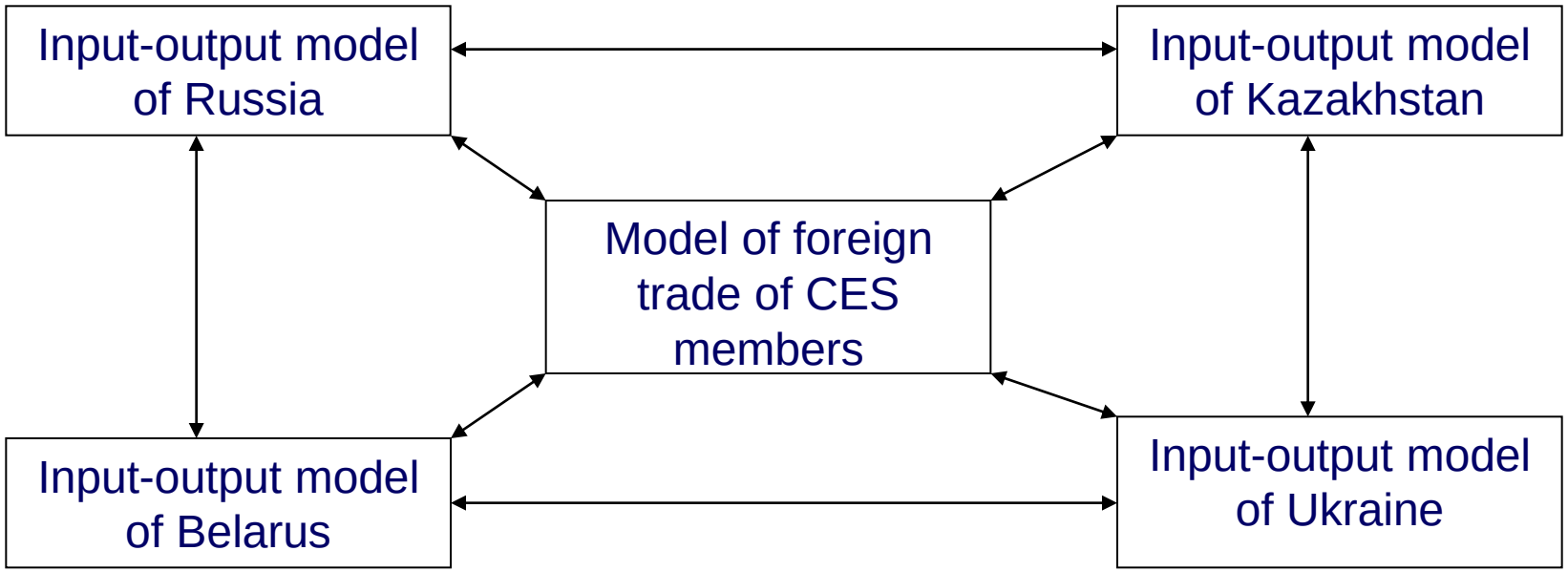
Foreign trade

Shares of trade between CES and Ukraine in their total foreign trade

	Share of export to CES+Ukraine in total export	Share of import from CES+Ukraine in total import
Russia	**9%**	**12%**
Kazakhstan	**27%**	**39%**
Belarus	**50%**	**58%**
Ukraine	**32%**	**36%**

The most dependent on foreign trade inside CES frame country evidently is Belarus, and the least dependent on it is Russia.
Kazakhstan and Ukraine also have high degree of dependency on mutual trade inside CES, because about one third of their total foreign trade falls to it's share

Scheme of the model



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.

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)

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

The most significant permanent 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. This convergence is faster when technological gaps between countries are relatively small - as in the case of post-Soviet space. Furthermore, in this case, countries would be able to maintain its industrial potential.

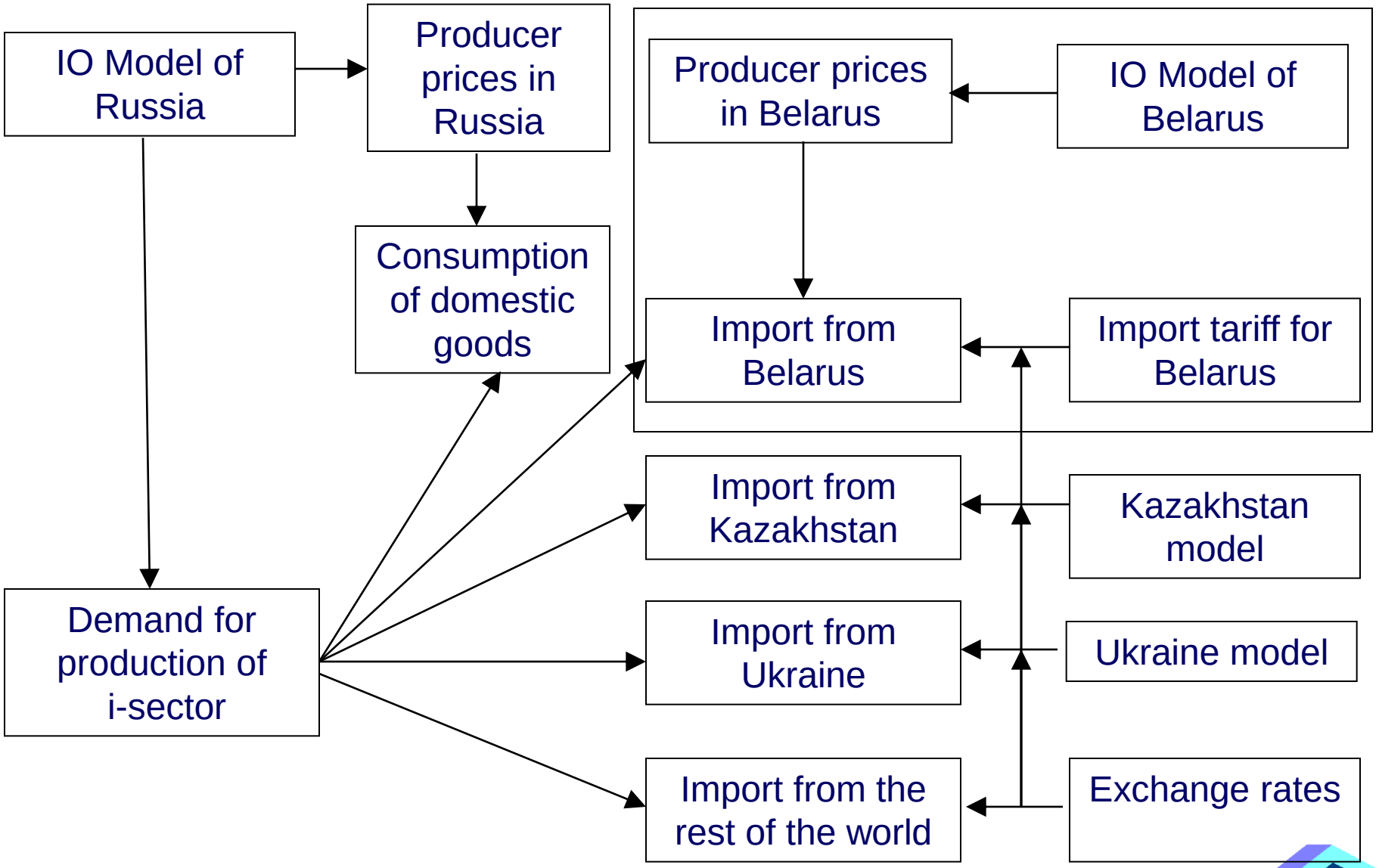
Bilateral foreign trade model

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.

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

Exchange rates

Exchange rates for national currencies were estimated from oil prices

	2010	2011	2012	2015	2020	2025	2030
Urals oil prices, USD/ barrel	78,2	103,0	110,0	118,7	150,3	172,9	191,7
Exchange rate of Russian ruble to USD	30,4	30,5	30,2	29,3	27,9	26,5	25,2
Exchange rate of Kazakhstan's tenge to USD	147,4	147,5	145,3	139,0	129,0	119,7	111,2
Exchange rate of Ukrainian grivna to USD	7,9	8,0	8,6	9,2	10,1	11,2	12,4
Exchange rate of Belarussian ruble to USD	2144	5000	8800	9261	10478	11855	13413

USD – United States dollar

Changes of technological structure

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

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

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

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

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

Macroeconomic scenario

Average annual rates of GDP growth, in constant prices of year 2010

	2010-2015	2015-2020	2020-2025	2025-2030
Russia	4,9%	5,0%	4,6%	4,3%
Kazakhstan	5.1%	4.9%	4.6%	4.6%
Belarus	4,7%	2,6%	2,3%	2,7%
Ukraine	4.4%	3.8%	3.9%	3.6%

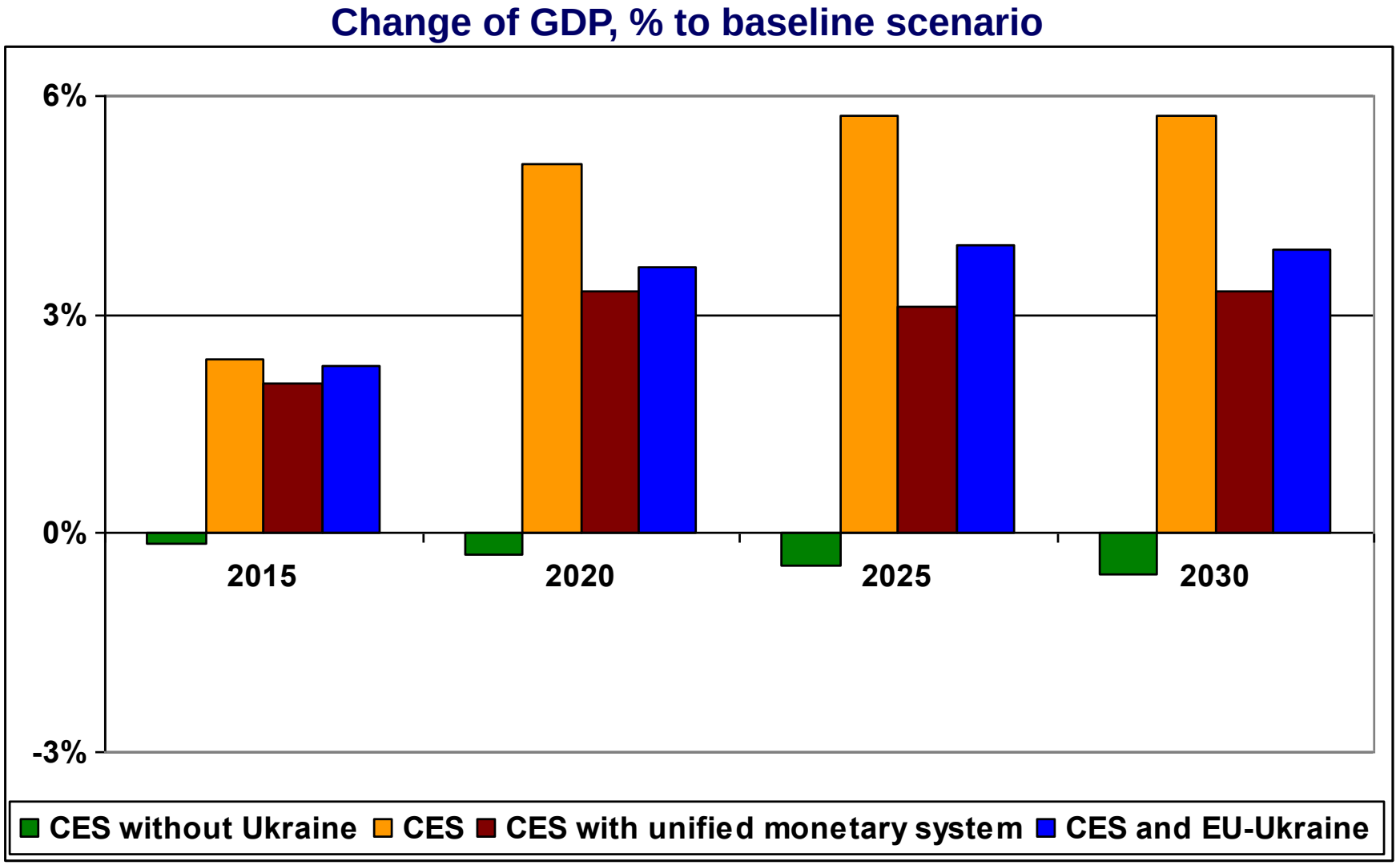
Share of investment in GDP,%

	2010	2015	2020	2025	2030
Russia	21%	27%	28%	30%	31%
Kazakhstan	25%	28%	31%	34%	37%
Belarus	33%	32%	35%	36%	36%
Ukraine	19%	20%	24%	29%	32%

Integration scenarios

	Scenario	Impact	Objective
1	Baseline	Contains baseline inertial macroeconomic scenarios for Russia, Kazakhstan, Belarus, and Ukraine. Does not include the creation of the CES or other form of integration processes in the post-Soviet area	Formation of the baseline characteristics of economic development for the countries under analysis; creation of a basis for the analysis of the CES effects on Russia, Kazakhstan and Belarus
2	CES-Ukraine	Russia, Belarus, Kazakhstan form CES Ukraine does not joins the CES	Estimation of the CES impact on the economic development of the countries under analysis
3	CES FTZ + EU FTZ for Ukraine	Ukraine joins the European Union FTZ; CIS FTZ countries take foreign trade protective measures envisaged by the agreement dated 18/10/2011	Assessment of the impact of the Ukraine's joining to the EU FTZ in case of simultaneous deterioration of trade and economic relationships with the CES countries
4	CES + Ukraine	Ukraine joins the framework CES Agreements	Assessment of the impact of the complete removal of foreign trade barriers between the countries, the expansion of cooperation, and technological convergence of the Ukrainian economy and the CES countries
5	CES + Ukraine (exchange rate unification)	Ukraine joins the framework CES agreements; the countries unify the currency system within the CES and implement a single currency policy	Estimation of the impact of exchange rate unification, within the framework of deeper integration, on the Ukrainian economy and the CES countries

Effects of CES on GDP. Ukraine



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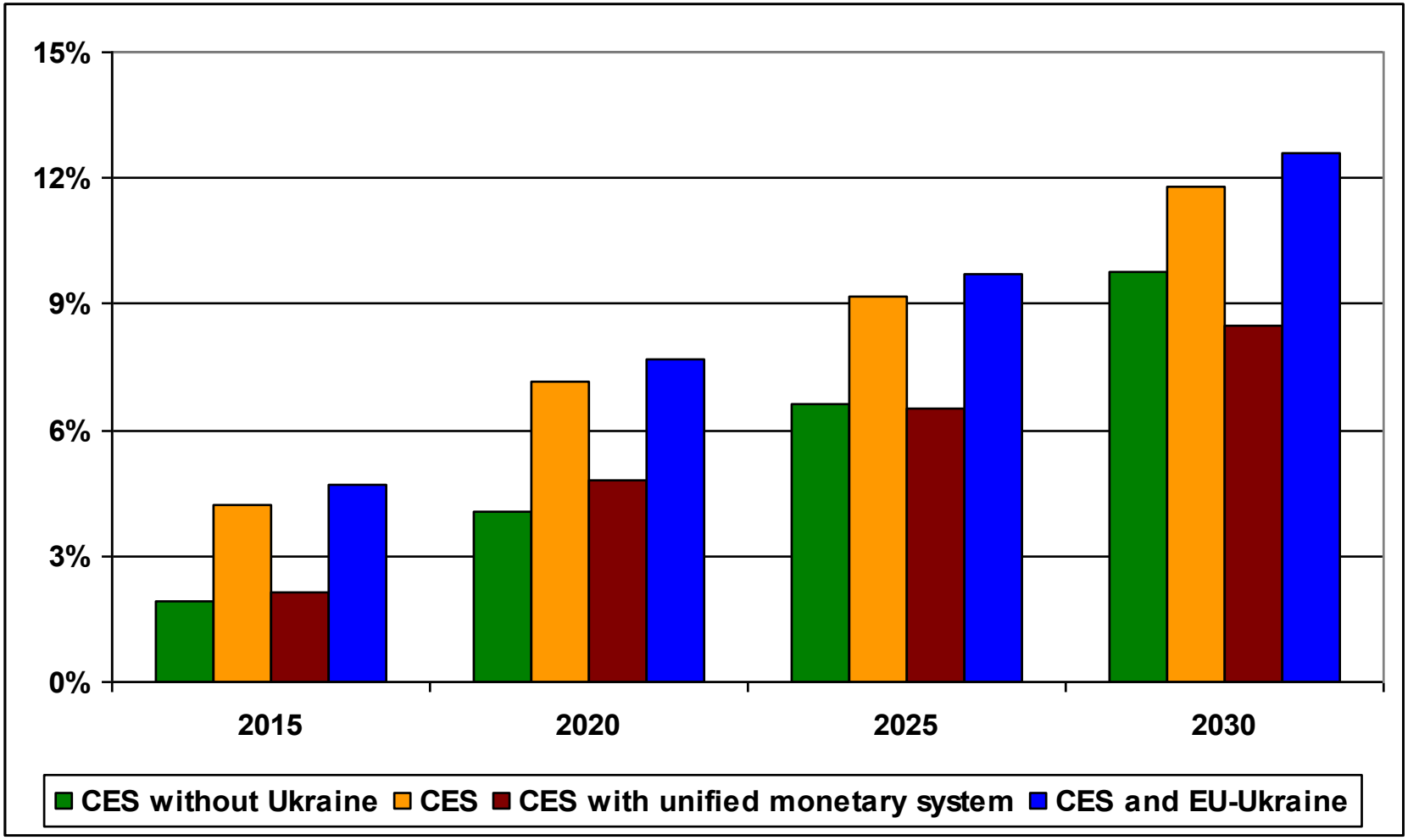
Effects of CES on GDP. Belarus

Change of GDP, % to baseline scenario



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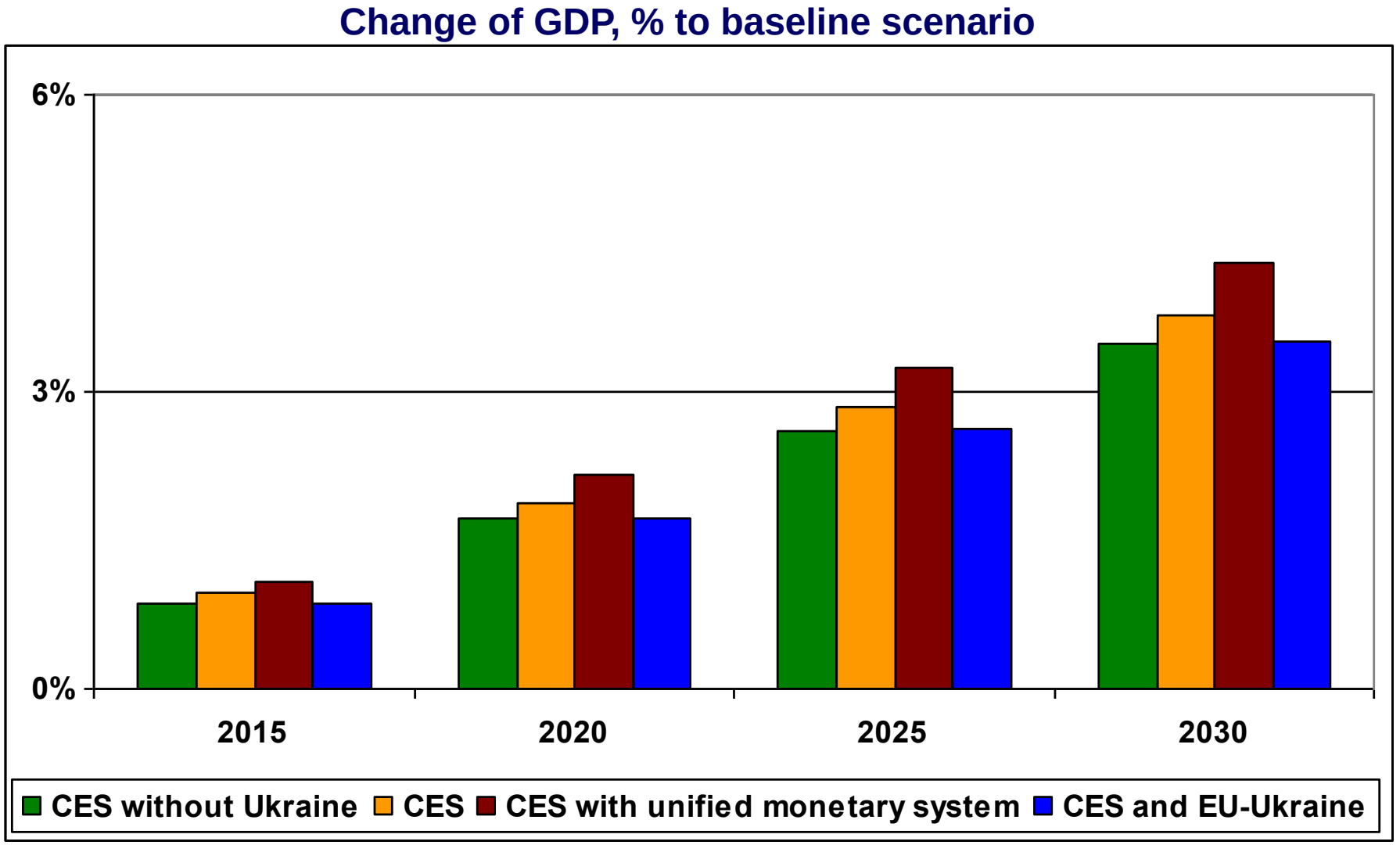
Effects of CES on GDP. Kazakhstan



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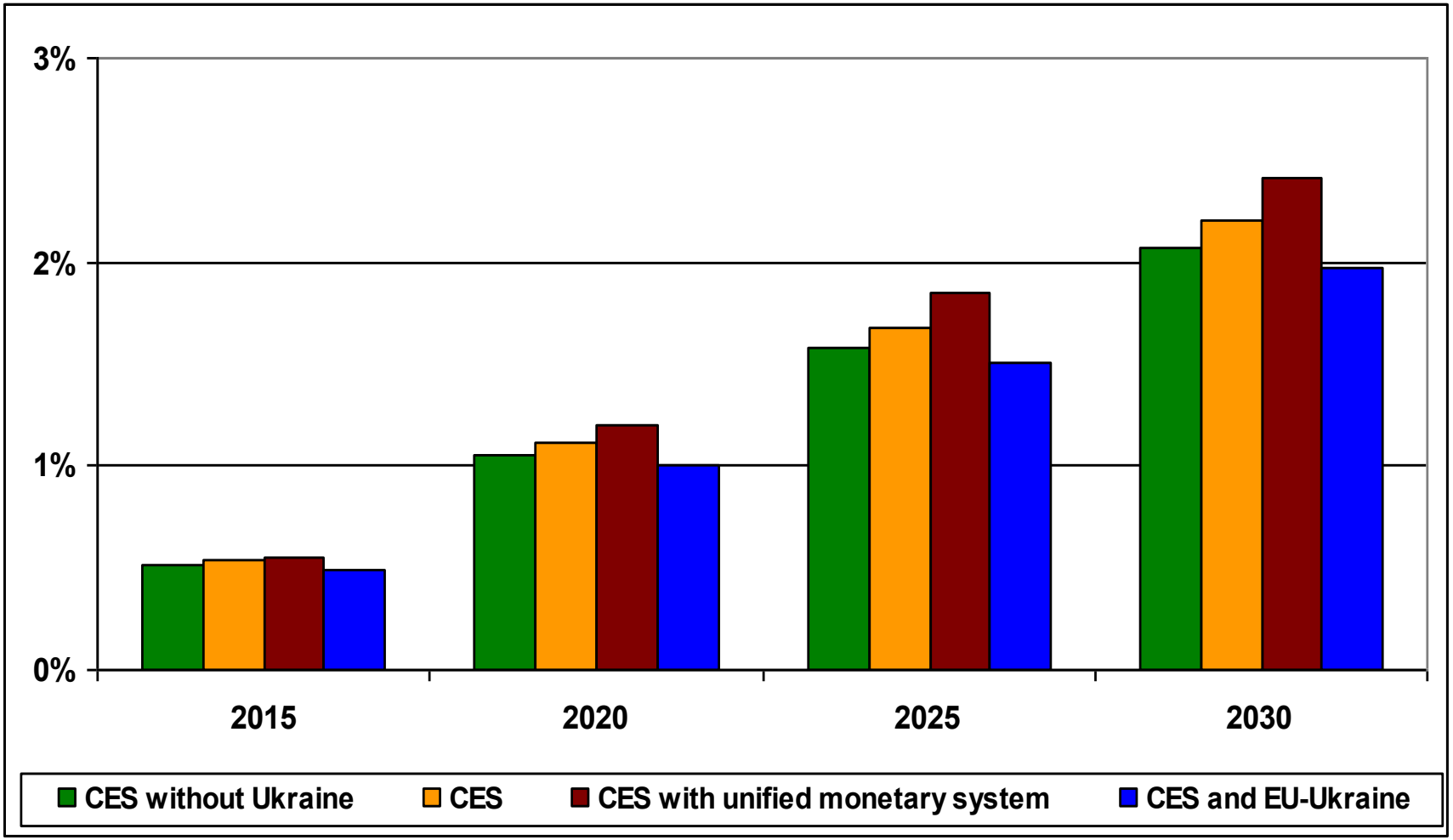
Effects of CES on GDP. Russia

Change of GDP, % to baseline scenario



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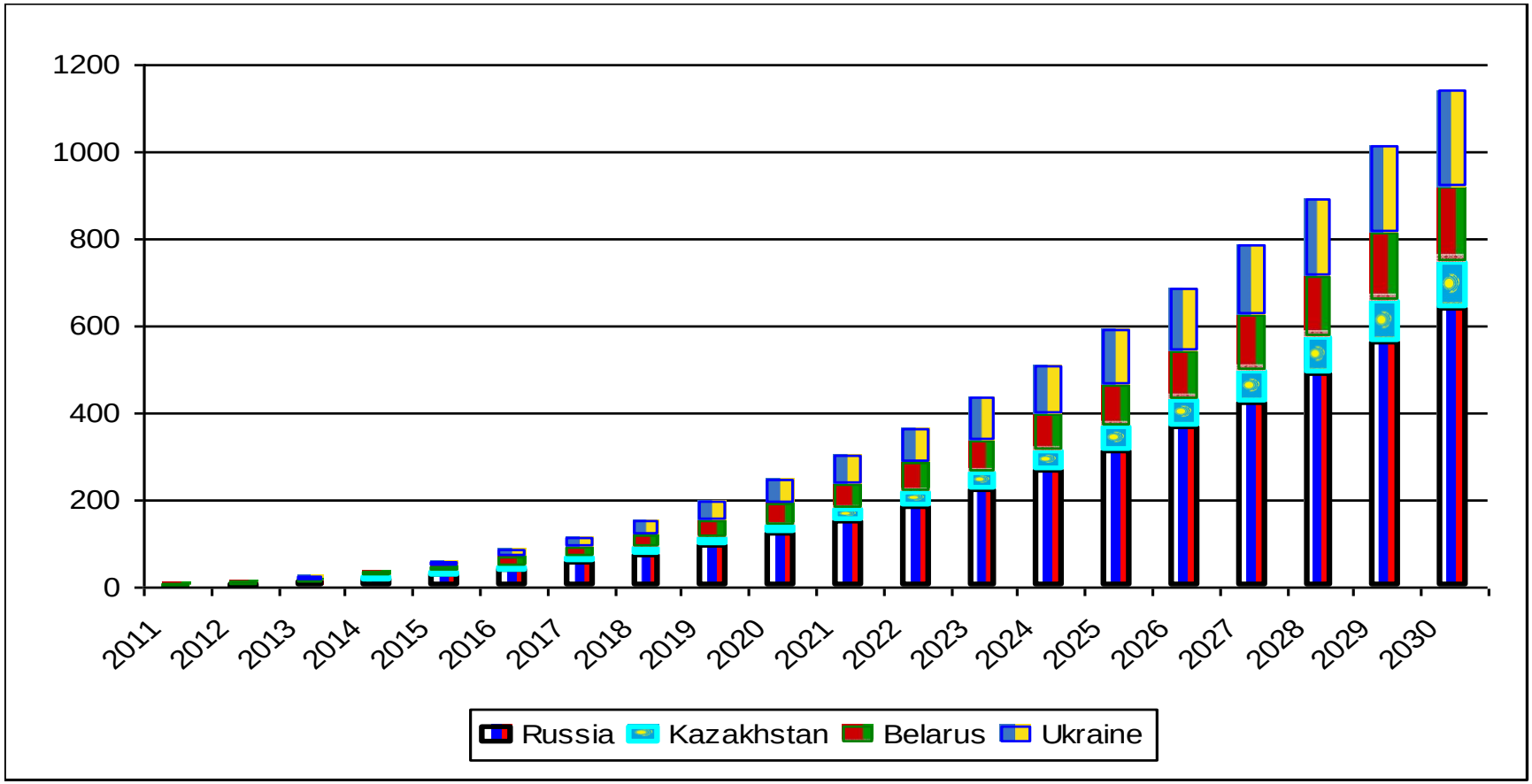
The total effect for Belarus, Kazakhstan, Ukraine and Russia



The total cumulative effect of the creation of the CES and the subsequent admission of Ukraine can be estimated for the four countries for the period 2011-2030 as 1100 bln. U.S. dollars (in 2010 prices). And by the end of the forecast period integration of CES will provide up to 2.8% of the increase in the total GDP of the four countries over the base case.

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Structure of machinery import

Closing technological gap between CES and developed counties will allow to reduce share of machinery and equipment imported from the rest of the world

Importer	Exporter	2010	2020	2030
Russia (Share of import 43%)	**From CES and Ukraine**	8.3	14.1	17.1
	Kazakhstan	0.2	0.2	0.3
	Belarus	3.4	5.2	6.5
	Ukraine	4.8	8.7	10.3
Kazakhstan (Share of import 71%)	**From CES and Ukraine**	28.3	41.9	46.6
	Belarus	1.6	2.5	3.2
	Ukraine	5.7	10.4	12.2
	Russia	20.9	29.0	31.2
Belarus (Share of import 67%)	**From CES and Ukraine**	24.7	35.8	39.1
	Ukraine	3.6	6.4	7.6
	Russia	21.1	29.2	31.4
	Kazakhstan	0.1	0.1	0.1
Ukraine (Share of import 50%)	**From CES and Ukraine**	16.9	23.8	26.4
	Kazakhstan	0.1	0.1	0.1
	Belarus	2.8	4.3	5.5
	Russia	14.0	19.4	20.8

Significance of gas prices

Expected prices changes by sectors of Ukrainian economy in case of gas prices reduction by 10%, (estimated in assumption of constant profitability)

Agriculture	-0,7%
Food, beverages, tobacco	-0,7%
Textiles, apparel, leather	-0,6%
Forestry, timber and pulp-and-paper	-0,9%
Chemicals	-3,3%
Stone, Clay, and Glass products	-1,7%
Metals	-1,8%

Machinery	-1,2%
Electric power, gas, and water utilities	-1,6%
Construction	-1,1%
Transport and communication	-0,9%
Wholesale and retail trade	-0,3%
Services	-0,3%

Changes of technological structure

Expected sector's output growth in Ukrainian economy in case of gas prices reduction by 10%

	Direct effects	In case of correspondent electric power prices reduction
Agriculture	0,10%	0,14%
Mining	0,25%	0,46%
Food, beverages, tobacco	0,12%	0,15%
Textiles, apparel, leather	0,09%	0,15%
Forestry, timber and pulp-and-paper	0,09%	0,16%
Chemical production	2,40%	2,48%
Stone, Clay, and Glass products	0,90%	1,02%
Metals	0,50%	0,64%

Changes of technological structure

Expected sector's output in Ukrainian economy in case of gas prices reduction by 10%

	Direct effects	In case of correspondent electric power prices reduction
Machinery	0,39%	0,44%
Electric power, gas, and water utilities	1,09%	1,22%
Construction	0,03%	0,06%
Transport and communication	0,47%	0,57%
Wholesale and retail trade	0,04%	0,05%
Services	0,04%	0,12%
Total	0,36%	0,45%

THANK YOU

FOR YOU ATTENTION