

Diversification of Belarusian Exports: The Potential of Machinery Exports on Non- Traditional Markets

- Summary of results -

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1. Introduction

- Belarus' exports of goods over GDP is over 50% → open economy
- Machinery exports plays an important role: USD 5 bn or 18% of total exports
- But market diversification is very low: 70% exported to Russia, and 23% to traditional markets (the EAEU, other CIS and the EU)
- Diversification of machinery exports towards non-traditional markets could give a strong boost for Belarus' economy

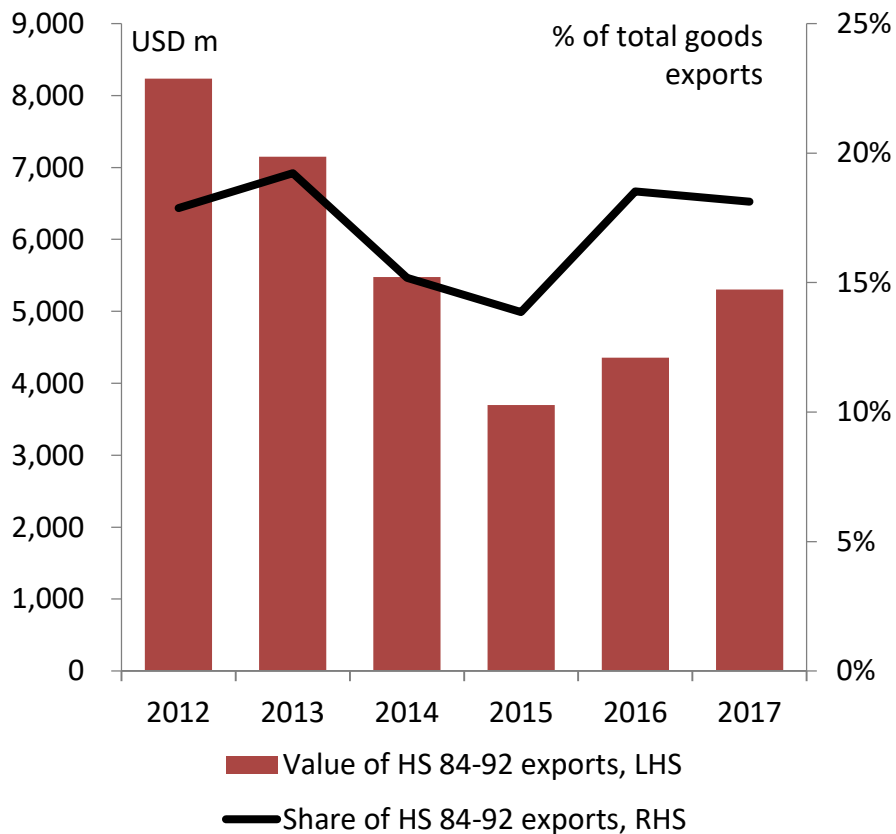
Key questions:

- What machinery products have the highest export potential on non-traditional markets?
- What export destinations among non-traditional markets have the highest potential?

This Policy Briefing summarizes our Policy Paper 05/2018 on the same subject

2. Belarus' exports of machinery

Belarus' exports of machinery (HS 84-92), 2012-2017



Source: UN ComTrade, Belstat

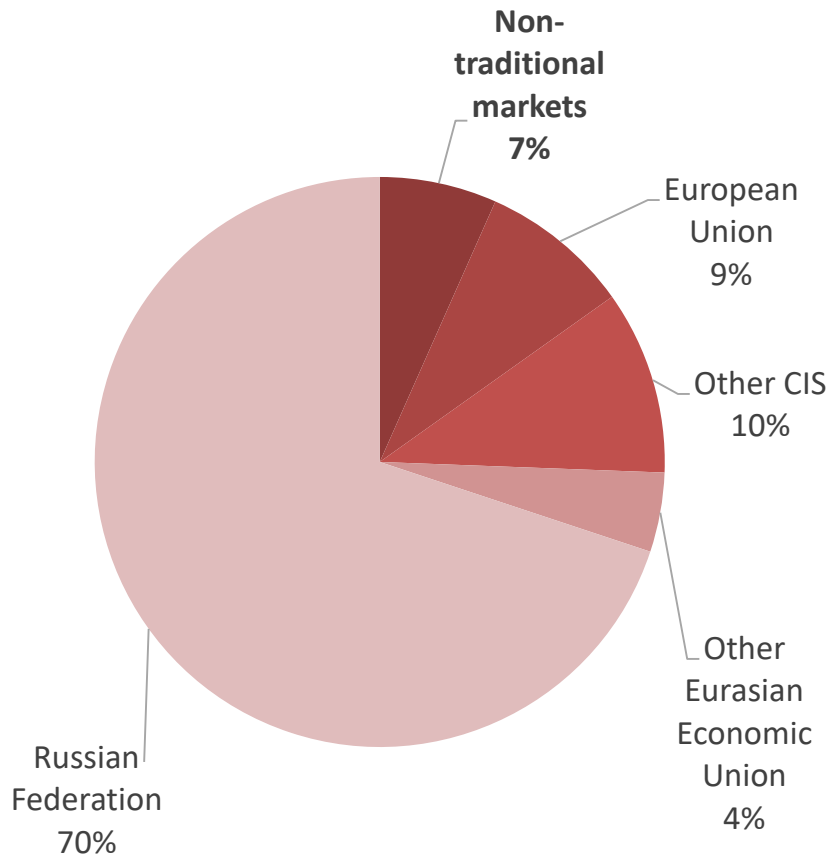
- Belarus' machinery exports, 2017:
 - Nominal value: USD 5.3 bn
 - Share: 18% of total
 - Growth: +22% yoy

→ **Strong recovery, but still below 2014 level**

- Key products, % of machinery exports:
 - Vehicles: 43%
 - Non-electrical machinery: 28%
 - Electrical machinery: 18%
 - Instruments: 6%

Machinery exports by key destinations

Structure of Belarus' machinery exports by categories, 2017



Sources: UN ComTrade, Belstat

- Belarus exports mainly to traditional partners
 - Traditional partners in 2017:
 - Russia: 70% of machinery exports
 - Other EAEU: 4%
 - Other CIS: 10%
 - EU: 9%
 - 'DCFTA' (UKR+MLD+GEO): 12%
 - Role of non-traditional markets is small: 7%
- **Concentration on traditional markets**

Exports of machinery by regions and product categories

Regional structure of Belarus machinery exports by categories, 2017

	Russia	Other EAEU	Other CIS	EU	Non-traditional markets
Non-electrical machinery	75%	5%	11%	5%	4%
Electrical machinery	79%	3%	5%	9%	4%
Railway equipment	71%	1%	18%	10%	0%
Vehicles	64%	5%	13%	9%	9%
Ships, boats	54%	4%	30%	13%	1%
Instruments & apparatus	56%	2%	5%	22%	15%
Clocks & watches	59%	1%	1%	34%	6%
Musical instruments	67%	0%	2%	25%	6%

Sources: UN ComTrade, own estimates

- The role of non-traditional markets varies for different products
- Exports to non-traditional markets is the highest in case of instruments & apparatus (15%) and vehicles (9%), and the lowest for railway equipment

Belarus' access to non-traditional markets

- Belarus access to non-traditional markets is constrained by its so far modest participation in global trade policy integration processes
- **World Trade Organisation (WTO):**
 - Belarus is only EAEU member that has not joined yet
 - It implements key norms of the WTO as it has a customs union with the WTO members, but remains unprotected against trade policy changes of the WTO members, cannot use the Dispute Settlement
- **Free trade agreements (FTAs):**
 - Two FTAs with 'non-traditional markets': Serbia and Vietnam
 - Serbia: some key machinery products are excluded from the FTA
 - Vietnam: launched in 2016, long transition periods
- **International standardisation bodies:**
 - The member of the ISO and the IEC, a companion standardization body for the CEN and the CENELEC

3. Methodology for export potential assessment (1/3)

- Export potential assessment is based on the modified International Trade Centre (ITC) methodology
- Three dimensions of export potential assessment:
 - *Supply side dimension*: export performance of Belarus in the world
 - *Demand side dimension*: import performance of non-traditional markets (as a whole and by individual country)
 - *Interaction dimension*: indicators characterizing the relative competitiveness of Belarus on individual non-traditional markets
- Assessment is conducted in two stages
- For each stage, a composite indicator is estimated as average of normalized scores for two dimensions

Methodology for export potential assessment (2/3)

Stage I:

- Aimed at identifying the Top-20 products with the highest export potential on non-traditional markets
- Based on the assessment of two dimensions:
 - *Supply side dimension*: export performance of Belarus in the world
 - *Demand side dimension*: import performance of non-traditional markets as a whole (global demand)
- The composite indicator is estimated as average of normalized scores for these two dimensions

Methodology for export potential assessment (3/3)

Stage II:

- For each of the Top-20 products, aimed at identifying the Top-10 countries (non-traditional markets) the highest export potential
- Based on the assessment of two dimensions:
 - *Demand side dimension*: import performance of individual countries - non-traditional markets
 - *Interaction dimension*: indicators characterizing the relative competitiveness of Belarus on individual non-traditional markets
- The composite indicator is estimated as average of normalized scores for these two dimensions
- Further information can be found in Annex, in Policy Paper 05/2018 and Technical Note 03/2018

4. Stage I: the Top-20 machinery products (1/2)

Rank	HS code	Description	BEL exports, USD m, 2016	BEL exports, % change, 2016/2015	Imports of non-traditional markets, USD m, 2016
1	8537	Boards and other bases, equipped with apparatus for electric control	53	44.9%	37,035
2	9031	Measuring or checking instruments, appliances and machines	16	86.4%	32,234
3	8507	Electric accumulators	24	36.1%	24,765
4	9021	Orthopaedic appliances	14	299.4%	29,756
5	8516	Heaters	73	64.0%	24,484
6	8708	Parts of the motor vehicles	219	17.4%	212,848
7	8703	Motor cars	266	110.7%	454,455
8	8418	Refrigerators, freezers	192	13.2%	26,427
9	8411	Turbo-jets, gas turbines	2	66.6%	97,100
10	9022	Apparatus based on the use of X-rays or of alpha, beta or gamma radiations	21	18.2%	15,171

Sources: UN ComTrade, own estimates

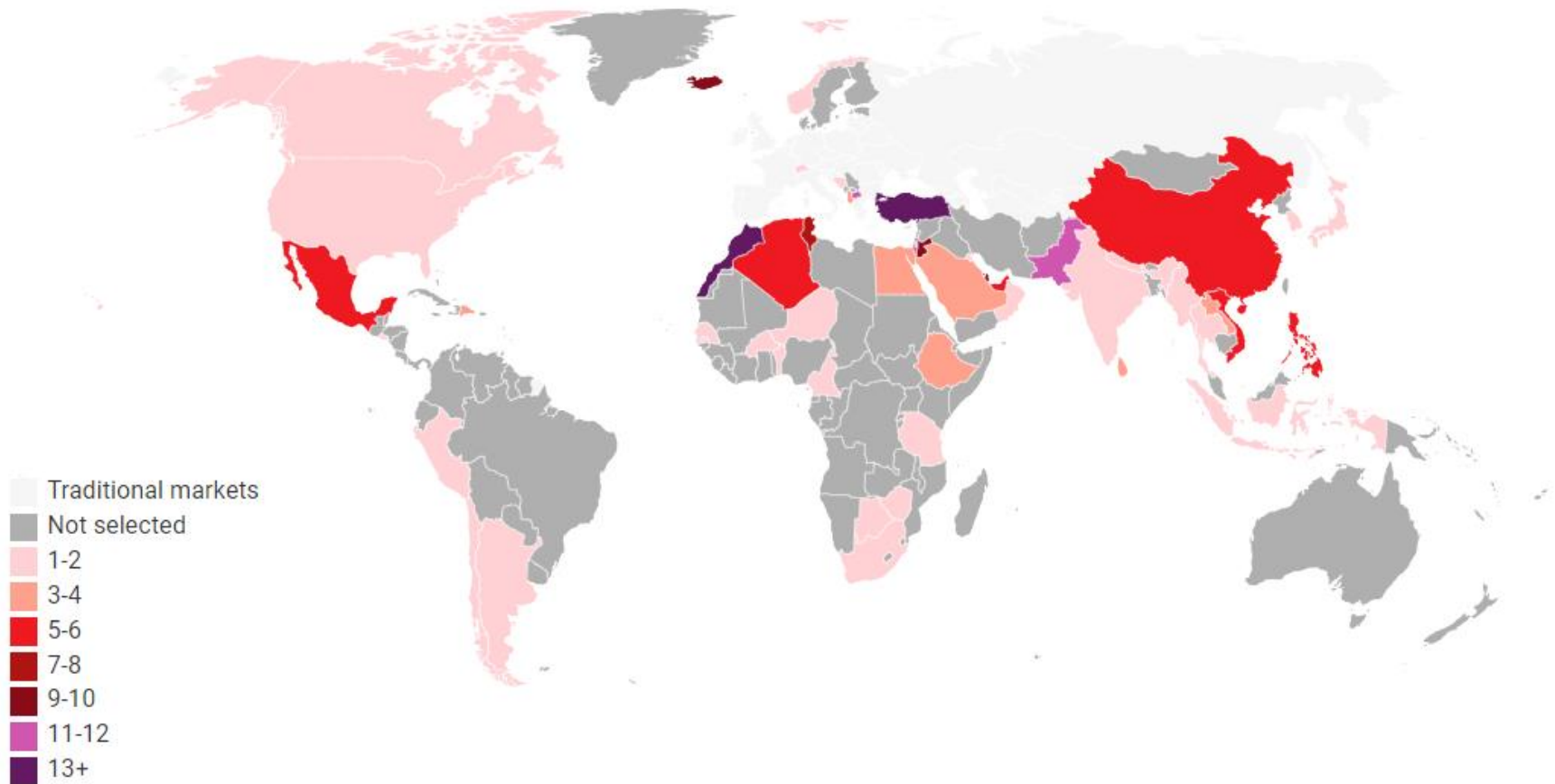
Stage I: the Top-20 machinery products (2/2)

Rank	HS code	Description	BEL exports, USD m, 2016	BEL exports, % change, 2016/2015	Imports of non-traditional markets, USD m, 2016
11	8428	Other lifting machinery	123	23.6%	18,850
12	8512	Electrical lighting equipment	12	49.1%	17,020
13	9027	Instruments and apparatus for physical or chemical analysis	10	4.5%	28,282
14	8603	Self-propelled railway or tramway coaches, vans and trucks	46	33.1%	3,200
15	9018	Instruments and appliances used in medical, surgical, dental sciences	39	-4.3%	67,146
16	8542	Electronic integrated circuits	56	-8.8%	593,940
17	8415	Air conditioning machines	5	71.5%	27,491
18	8541	Diodes, transistors and similar semiconductor devices	9	-23.6%	96,982
19	9013	Liquid crystal devices; lasers; other optical appliances and instruments	112	12.5%	57,519
20	8606	Railway or tramway goods vans and wagons, not self-propelled	17	284.3%	1,218

Sources: UN ComTrade, own estimates

Stage II: Export destinations with highest potential

Map of non-traditional markets with the highest export potential for Belarus' machinery products



Sources: Own estimates

Note: The value assigned to each country refers to how often the country was mentioned in the Top-10 destinations calculated for each of the Top-20 machinery products

5. Conclusions

- Our empirical analysis showed that the Top-20 machinery products with the highest export potential on the non-traditional markets are:
 - **Electric machinery** (heaters, electric control boards, lighting equipment, accumulators)
 - **Non-electric machinery** (freezers, lifting equipment, turbines)
 - **Vehicles** (motor vehicles for transportation of persons and goods, spare parts)
 - **Instruments and apparatus** (for medical purposes, for physical and chemical analysis, measuring instruments)
- The clustering of identified Top-10 markets for each products highlighted the export potential of several regions:
 - **Middle East** (Turkey, Israel, Jordan)
 - **Mediterranean Africa** (Morocco, Tunisia)
 - **Small European countries outside the EU** (Macedonia, Iceland)
 - **South Asia** (Pakistan, China)

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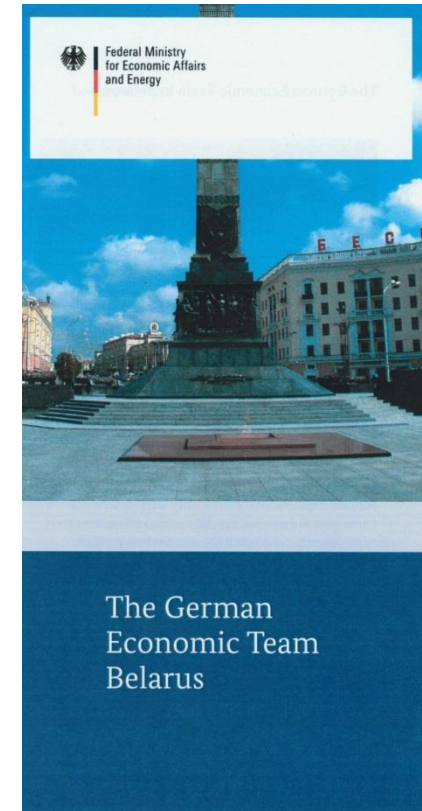
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Annex 1.a: Supply side dimension

- *Total export value.* The larger the total exports of the country, the greater its potential for the expansion.
- *World market share.* It is an indicator of the competitiveness of the product. While the total export value is biased towards large industries, the world market share could show the potential of smaller industries.
- *Total export growth (in value).* The faster the export growth, the better it is for export potential.
- *Revealed comparative advantage (RCA).* The RCA is traditionally used to evaluate competitiveness of exporters.

Annex 1.b: Demand side dimension

- *Total value of imports.* It shows the potential size of the market.
- *Import growth (in value).* The higher growth of imports signals about the demand expansion and thus could produce more opportunities for the exporter compared to a stagnant, or declining market.

In this analysis, the calculations are done separately for:

- Non-traditional markets as a whole (a sum across all non-traditional markets)
- Individual countries belonging to non-traditional market group

Annex 1.c: Interactive characteristics

- *Average tariff faced by Belarus.* It allows comparing the markets of different countries putting the countries with more liberal tariff regime up
- *Average tariff advantage of Belarus compared to the country's applied average.* It reveals the relative competitiveness of the exporter on the importing market.
- *Relative unit value.* It shows whether the exporter can supply to the importing market cheaper than its competitors can.
- *Distance to the country from Belarus.* The distance is an important proxy of transportation costs.
- *Distance advantage of Belarus compared to the country's average distance of imports.* It reveals whether Belarus is better off placed than its potential competitors if the distance of shipping is compared.