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POLICY SEMINAR

EASTERN EUROPE AND SOUTH CAUCASUS INITIATIVE

SUPPORTING SME COMPETITIVENESS IN THE EASTERN PARTNER COUNTRIES

Benchmarking SME performance in the Eastern Partner region: discussion of an analytical paper

24 October 2016

OECD Eurasia Competitiveness Programme

Agenda

1. Objectives and methodology
2. Outline and summary of analysis:
   a) Access to finance
   b) Internationalisation
   c) R&D and innovation

Objectives of the paper

- Complement the analysis and recommendations of the SME Policy Index with a **deeper analysis of SME performance in the Eastern Partnership (EaP) region** using the World Bank/EBRD Business Environment and Enterprise Performance Survey (BEEPS)

- Assess the robustness and relevance of the SME Policy Index methodology by **testing the findings of the 2012 SBA assessment against firm performance in the region and across regions**

- Solidify the analytical underpinnings of the SME Policy Index and further **understand where and when the introduction of targeted SME support measures** and instruments could improve SME performance

- **Maximise the impact of the SBA assessment** across the SME communities (including policy makers, private sector organisations and academia)

Methodology

- Given the dearth of, and cross-country methodological inconsistencies in, business demographics data in the Eastern Partner region, we **exploit cross sectional firm-level data from the BEEPS V (2013)**.

- We focus on the areas of **access to finance, internationalisation and innovation** – corresponding to three dimensions of the SME Policy Index – selected based on relevance for SMEs and data availability.

- We carry out two types of analysis:
  1. **Benchmarking SME performance** in access to finance, internationalisation and innovation in the EaP - identifying trends over time and variations across countries, and comparing with the EU pre-accession and EU-10 regions.
  2. Adaptation of existing econometric models to draw **correlations between firm performance and the policy environment** (using scores from the relevant dimensions of the SME Policy Index 2012 assessment).

Benchmarking across 3 regions

Eastern Partner

- Armenia
- Azerbaijan
- Belarus
- Georgia
- Moldova
- Ukraine

EU pre-accession

- Albania
- Bosnia and Herzegovina
- Croatia*
- Kosovo
- Macedonia, FYR
- Montenegro
- Serbia
- Turkey

COVERED BY SME POLICY INDEX 2012

EU-10

- Bulgaria
- Czech Republic
- Estonia
- Hungary
- Latvia
- Lithuania
- Poland
- Romania
- Slovak Republic
- Slovenia

*Croatia is considered a EU pre-accession country for the purposes of the paper as both the policy and performance data used predate Croatia's accession to the EU.

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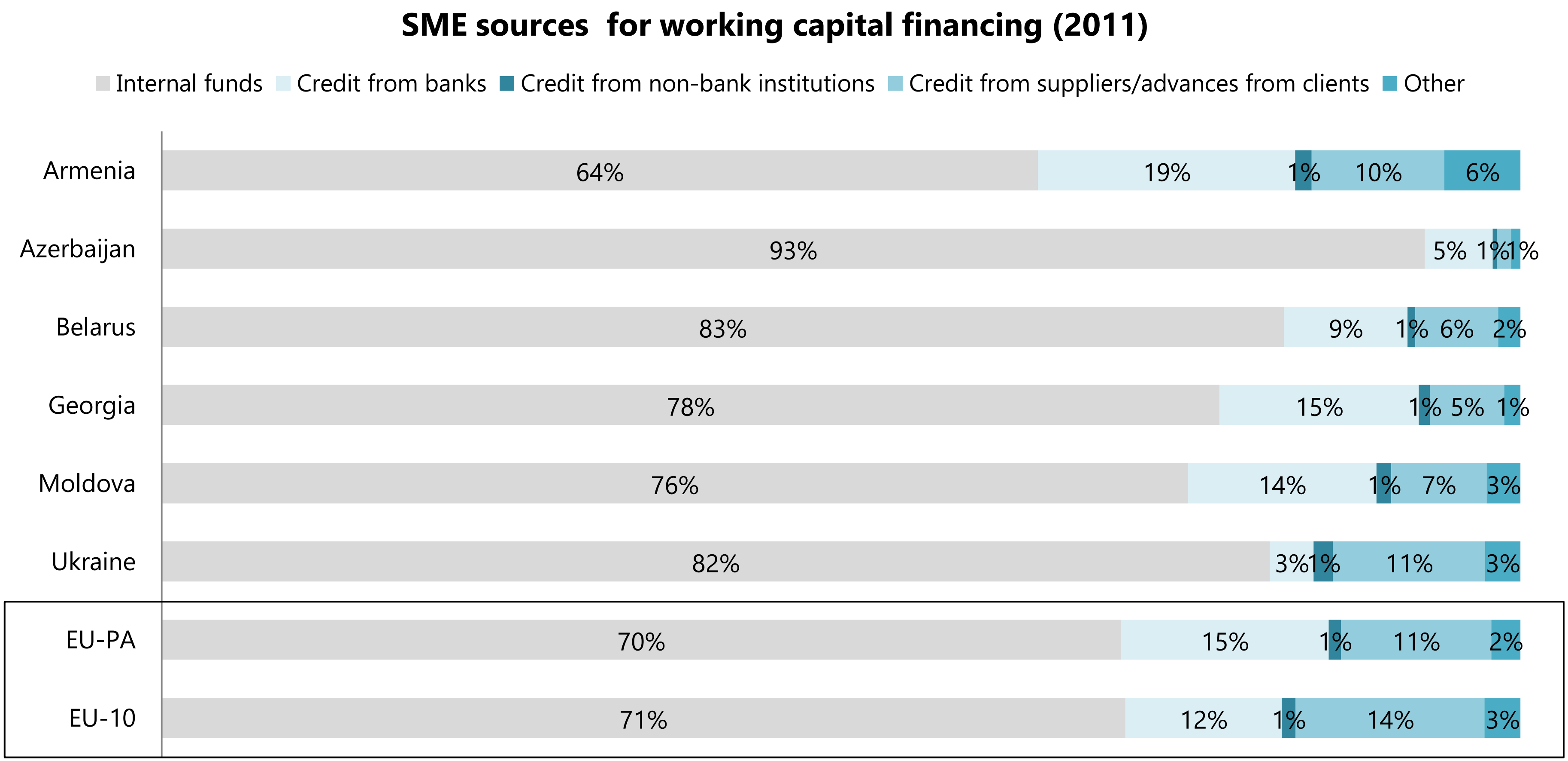
Access to finance: Benchmarking firm performance

1

- SMEs in the Eastern Partner region finance a larger proportion of their working capital from internal funds than their EU pre-accession and EU-10 counterparts
- Bank financing is particularly low in Belarus, Ukraine and Azerbaijan – financing from suppliers/clients is a popular alternative in Ukraine

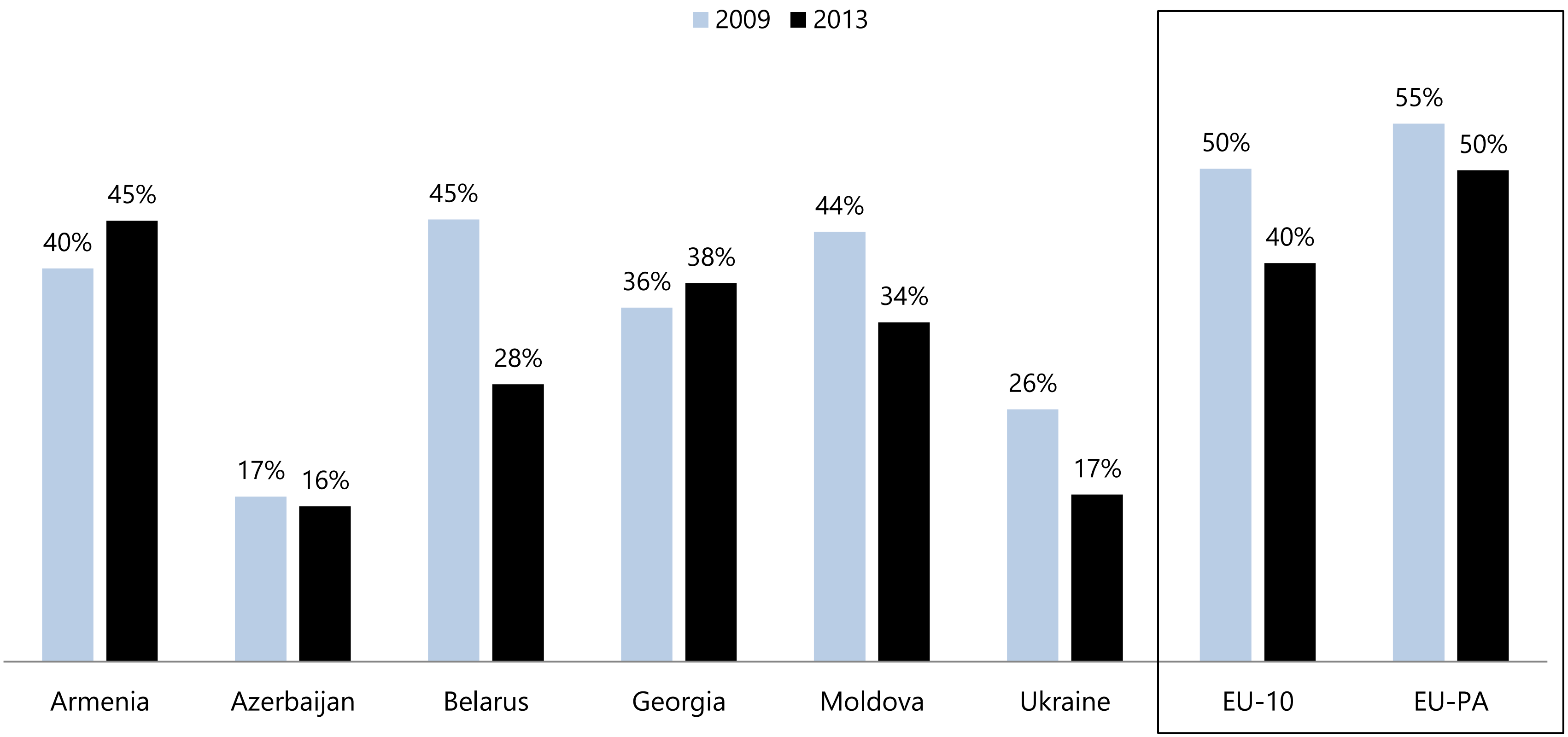


Access to finance: Benchmarking firm performance

2

- Loans to SMEs have declined across all regions since the financial crisis
- Armenia is the strongest regional performer, while other Eastern Partner countries lag behind the EU-10 and EU pre-accession regions

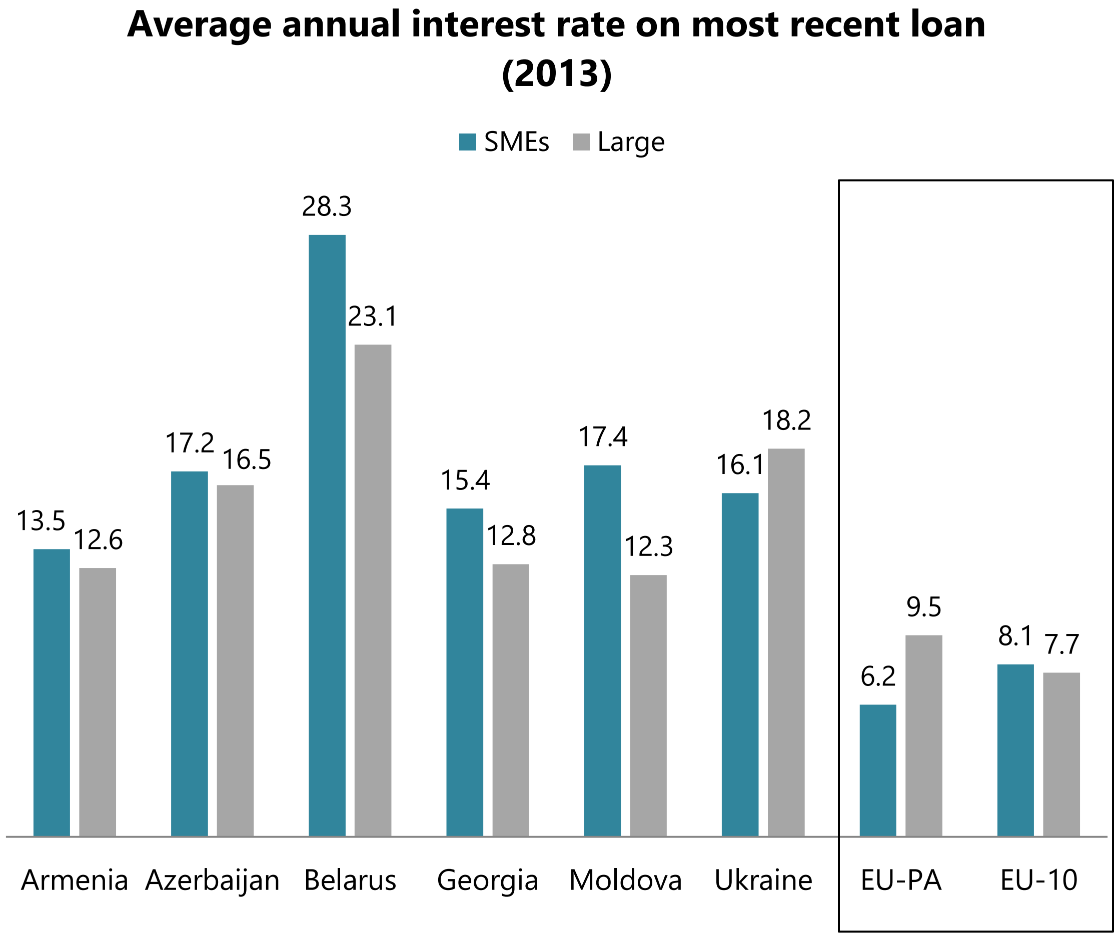
Percentage of SMEs with at least one loan from a financial institution (2009 vs 2013)

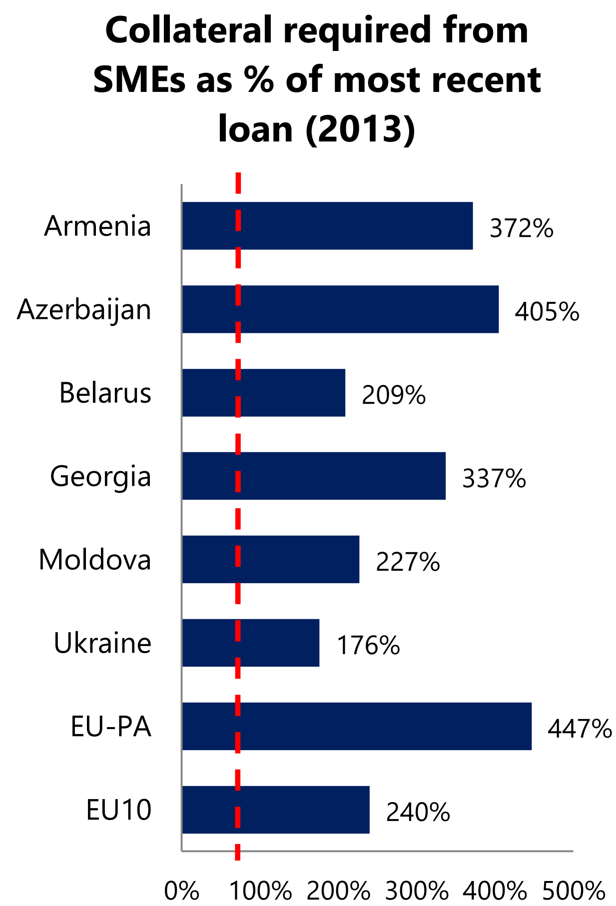


Access to finance: Benchmarking firm performance

3

- Average interest rates for both SMEs and large enterprises are significantly higher in the Eastern Partner region, and largely consistent across the region
- Average reported collateral requirements from SMEs are over 100% of the size of the loan in all regions



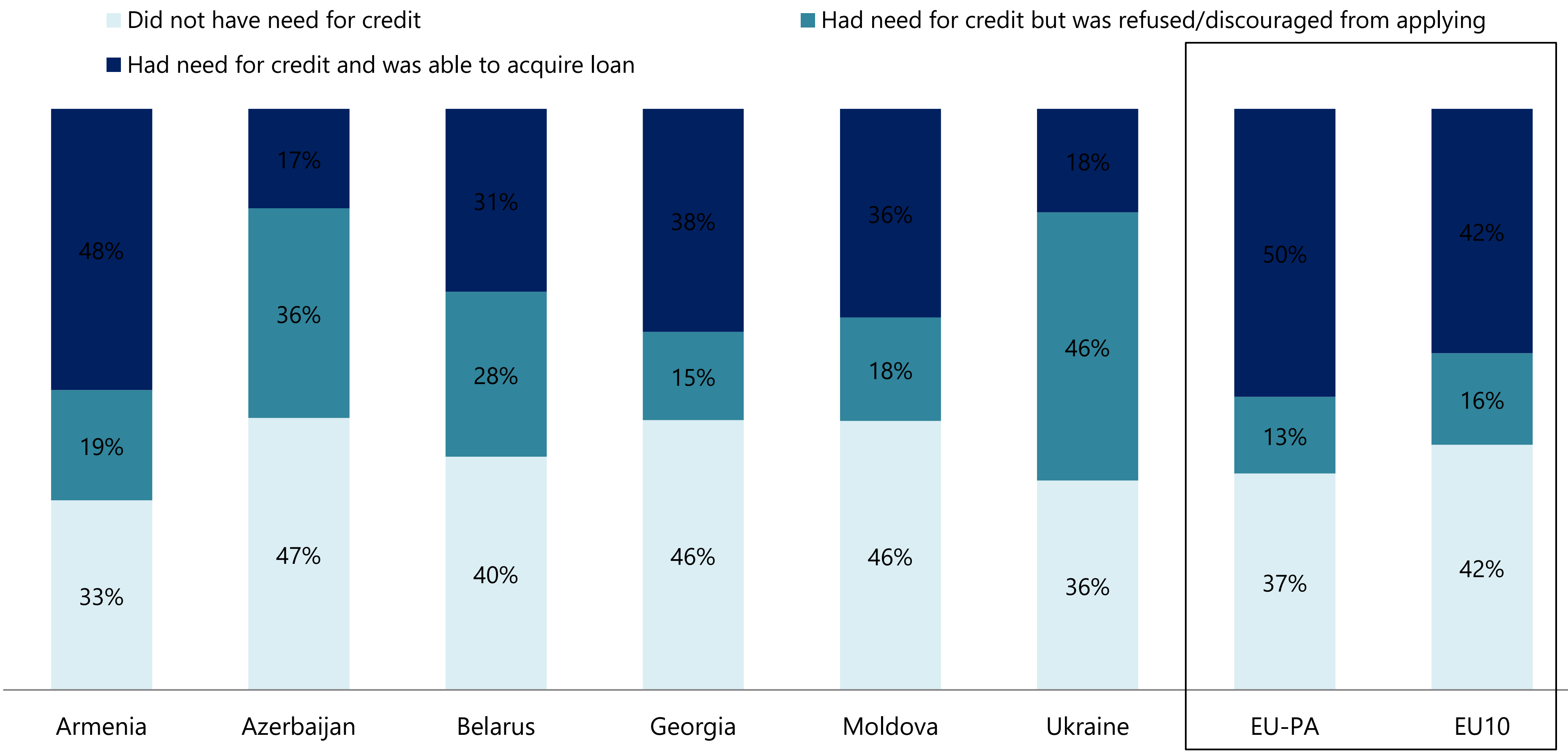


Access to finance: Benchmarking firm performance

4

- There is evidence of SME credit demand unmet by bank financing, particularly in Azerbaijan, Belarus and Ukraine
- SME access to finance varies across the EaP with some countries (e.g. Armenia and Georgia) at EU-10 levels

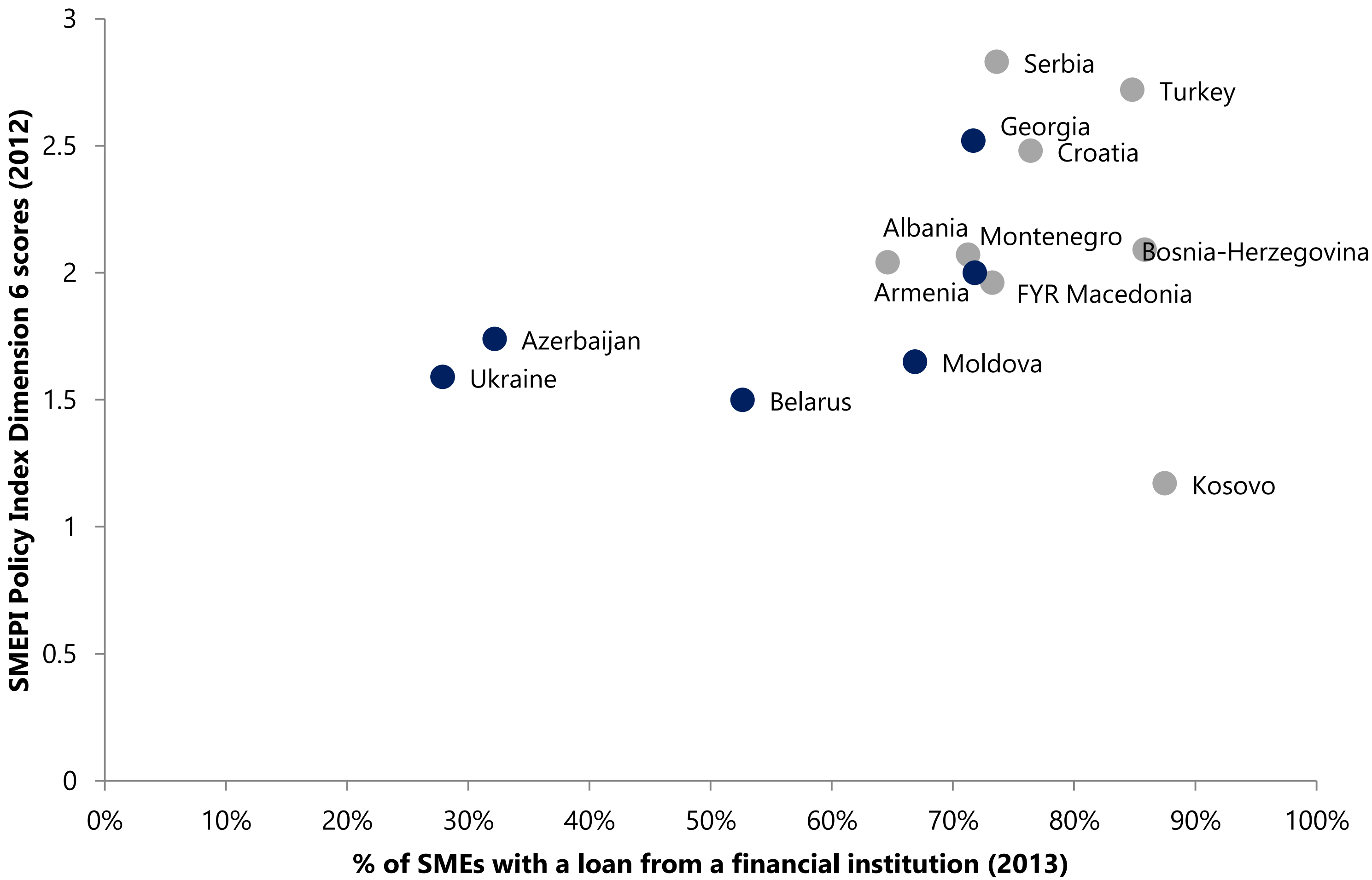
Demand and access to credit by SMEs (2013)



Access to finance: Benchmarking firm performance

5

- Countries with a better developed legal and regulatory framework and targeted tools for access to finance (as measured by SME Policy Index Dimension 6: Access to finance for SMEs) are more likely to have a higher percentage of SMEs with access to credit.



Access to finance: Measuring impact of policies on performance (1/2)

- **Objective:** To examine the influence of the policy environment on SME access to finance in transition economies.

- Based on **Hainz and Nabokin (2013)** we look at:
  - Determinants of firm **access to loans among those firms that demand them**
  - Determinants of **perceived access** to finance (as measured by firm perception question in BEEPS)

- Addition of a **variable on SME Policy Index 2012 scores for Dimension 6** (for Eastern Partner and EU pre-accession regions) to measure impact of the policy environment

- **Access to credit** and **demand for credit** are defined as follows:

Categories	Demand	Access
- Firm has a loan	1	1
- No loan, because application turned down	1	0
- No loan, because discouraged from applying	1	0
- No loan, because no need	0	-

Access to finance: Measuring impact of policies on performance (2/2)

Firm level factors affecting performance

- **Increasing firm size is related to increased demand and access to loans** – the impact of firm size is particularly strong for access, suggesting smaller firms are more credit constrained and rely more on internal financing.
- Among firms with credit demand, **large firms are less likely to identify access to finance as an obstacle** to doing business.
- **Manufacturing firms** have a greater likelihood to demand loans than retail and other services firms, although they do not appear to differ in terms of actual or perceived access.

Impact of policies on performance

- **SME Policy Index 2012 – Dimension 6: Access to finance for SMEs** scores are insignificant in the demand equation but have a positive and significant impact on likelihood of accessing a loan:
  - ➢ Policy environment does not affect the need for external financing, although it does affect ease of access.
  - ➢ Policies to ease access to finance do not appear to have a distortive effect on the market, as they do not influence demand.
- **SME Policy Index Dimension 6 variable is also strongly positively correlated** with perceived access to credit, suggesting that firm perceptions of access to finance are linked to "objective" measures of the policy environment.

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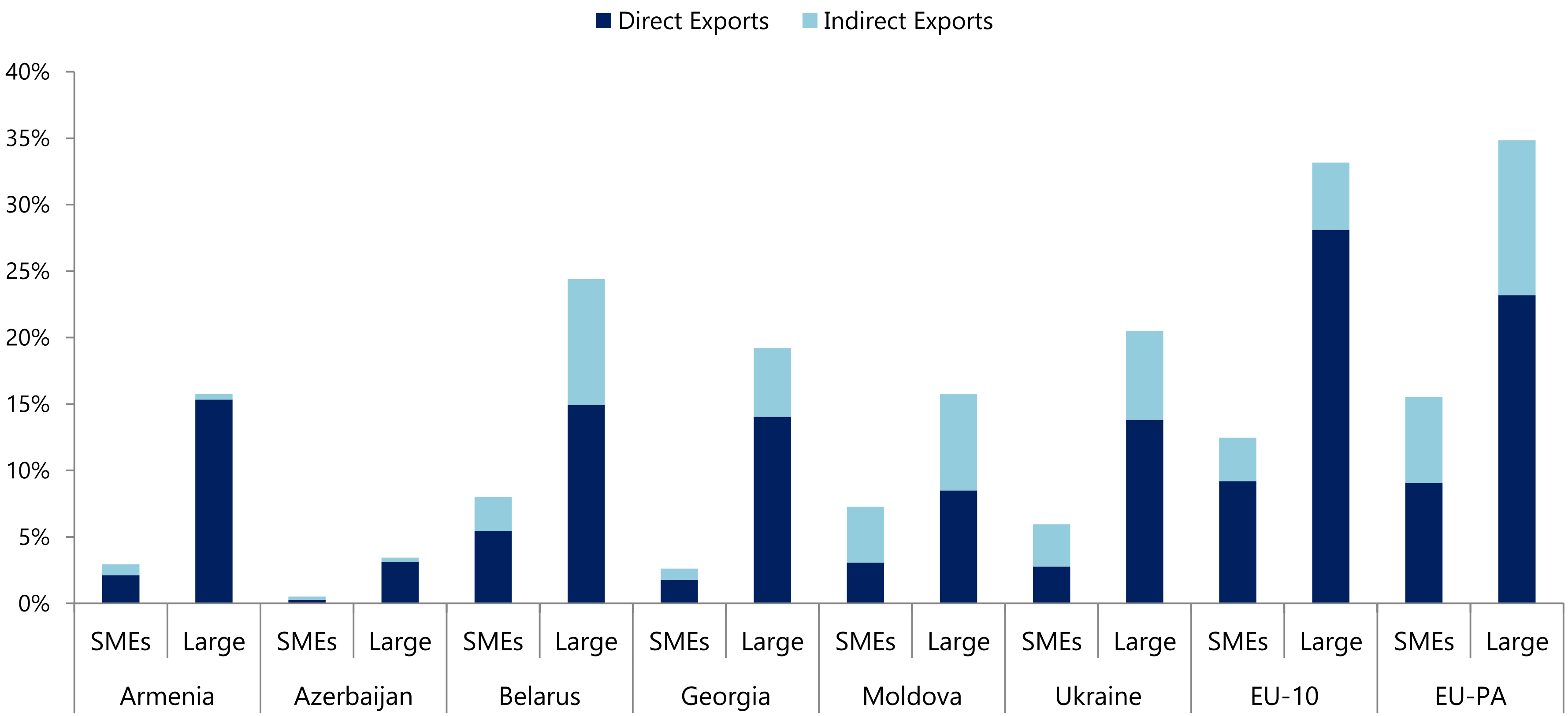
Internationalisation: Benchmarking firm performance

1

- SMEs have difficulties accessing export markets. Large firms exhibit higher rates of both direct and indirect exports.
- Exports vary significantly across Eastern Partner countries, with the lowest rates observed in Azerbaijan.
- Firms in the EU-10 and EU pre-accession regions are considerably more active in export markets.

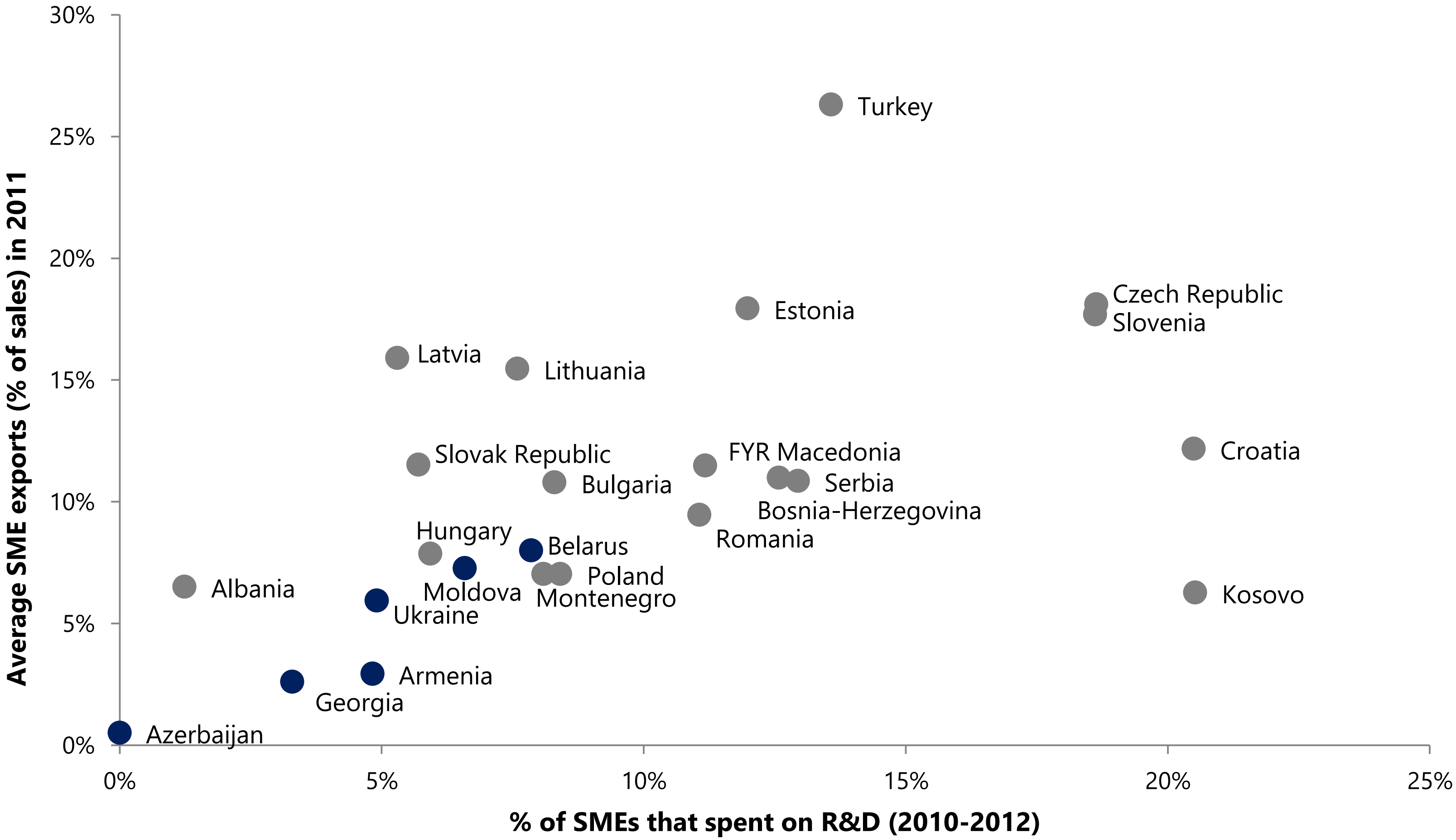
Average percentage of annual sales exported directly or indirectly (2011)



Internationalisation: Benchmarking firm performance

2

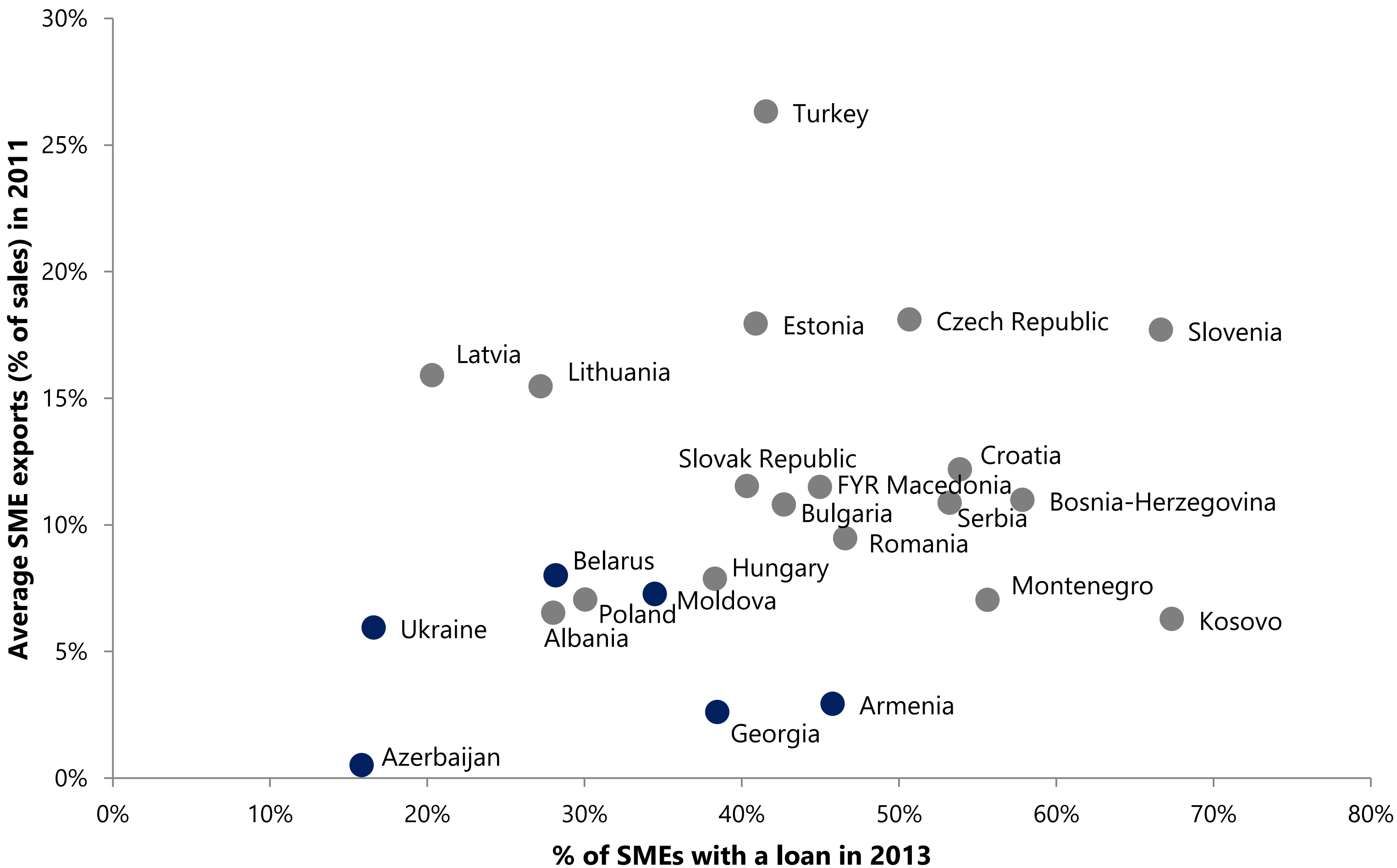
- A clear positive correlation is observed between innovation (R&D expenditure) and SME internationalisation.
- Performance in the Eastern Partner countries is weak when compared with countries in the EU-10 and EU pre-accession regions.



Internationalisation: Benchmarking firm performance

3

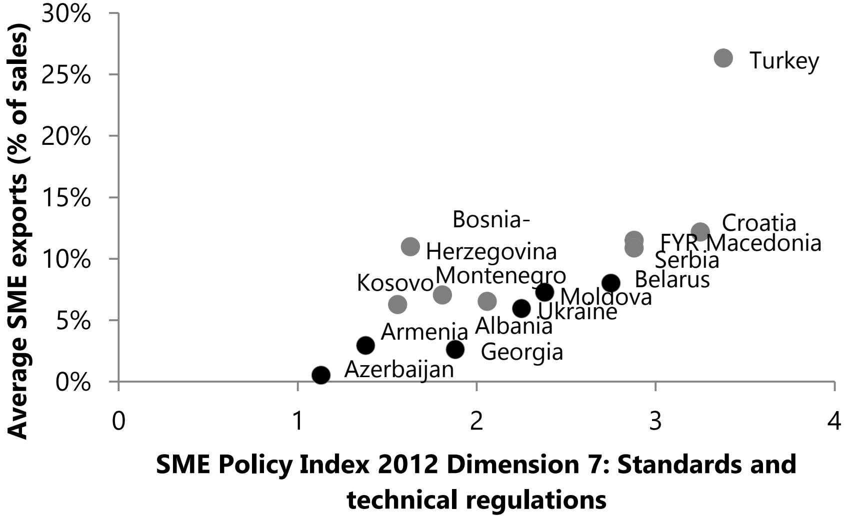
- Countries with better rates of SME financing tend to have a higher share of SMEs active in international markets.
- Access to loans varies substantially across the Eastern Partner countries, but is generally weak when compared with countries in the EU-10 and EU pre-accession regions.

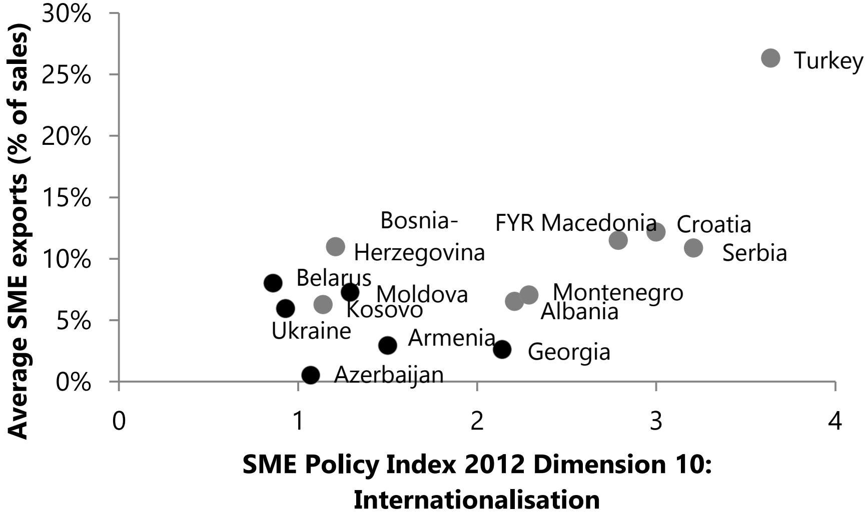


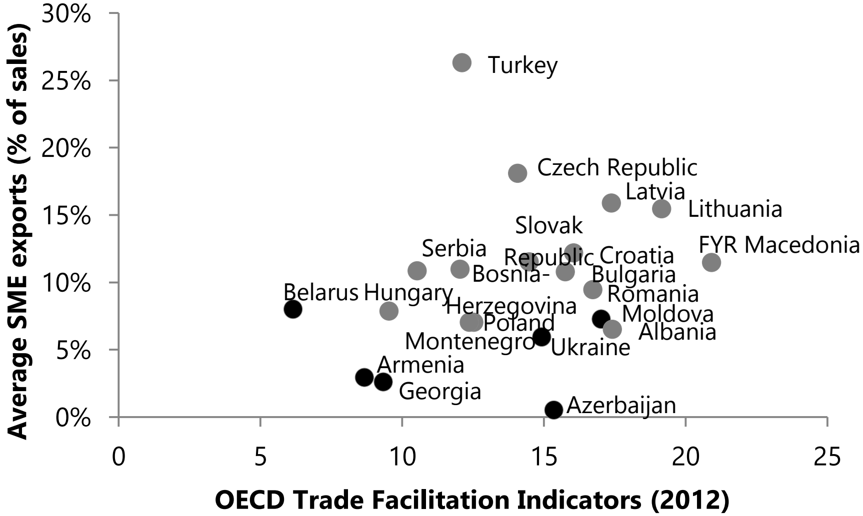
Internationalisation: Benchmarking firm performance

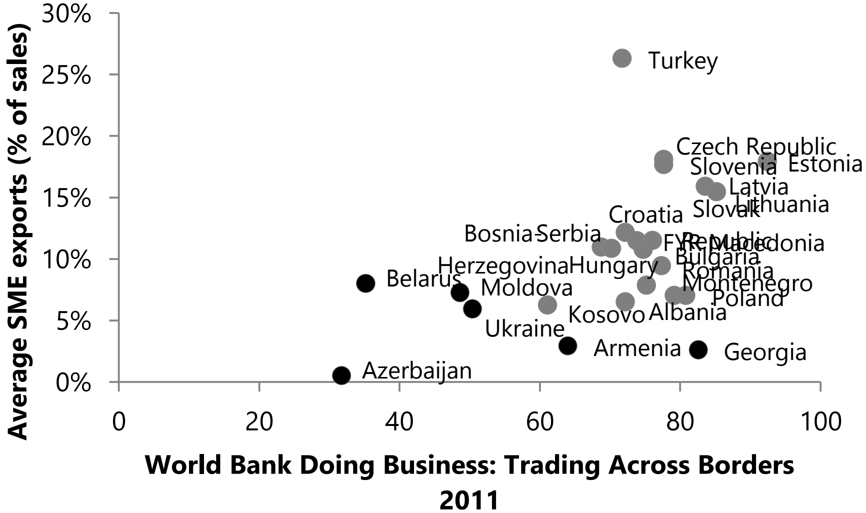
4

- A clear positive correlation is observed between SME internationalisation and policies to foster and facilitate trade (SME Policy Index Dimension 7: Standards and technical regulations, SME Policy Index Dimension 10: Internationalisation of SMEs, OECD Trade Facilitation Indicators, World Bank Doing Business: Trading Across Borders).









Internationalisation: Measuring the impact of policies on firm performance (1/2)

- **Objective:** To examine the influence of aspects of the domestic business environment on the degree of internationalisation of SMEs in transition economies.

- Based on **Shirokova and Tsukanova (2013)** and **Lejárraga *et al.* (2014),** we measure the determinants of SME internationalisation (i.e. exports as a share of sales), using a set of firm-level characteristics and country-level institutional factors.

- Addition of **variables on SME Policy Index 2012 scores for Dimension 7: Standards and technical regulations and Dimension 10: Internationalisation of SMEs** (for Eastern Partner and EU pre-accession regions) to measure the impact of the policy environment and support measures.

Internationalisation: Measuring the impact of policies on firm performance (2/2)

Firm level factors affecting performance

- **Firm size** has a positive and significant influence on a firm's propensity to export. Larger firms are more likely to engage in both direct and indirect export activity.
- Firms with a high share of **foreign ownership**, firms with an **internationally recognised quality certification** and firms using **technology licensed from a foreign company** are also more likely to be exporters.
- **Manufacturing firms** have a substantially higher likelihood of engaging in exports.
- The link between innovation and internationalisation is illustrated by the strong positive correlation between **R&D expenditure** and export activity.
- **Formal training programmes** have a positive impact on SME internationalisation.

Impact of policies on performance

- The **World Bank Doing Business 2011 – Trading Across Borders** variable is positively correlated with SME exports, suggesting that country-level border procedures and trade costs have an important influence on a firm's ability to export.
- The **SME Policy Index (2012)** scores for **Dimension 7: Standards and technical regulations** and **Dimension 10 – Internationalisation of SMEs** are important predictors of firm exports. This suggests that SMEs can benefit greatly from the removal of technical barriers to trade and government programmes to promote export-oriented SMEs to access international markets.
- The **OECD Trade Facilitation Indicators** variable is also positively correlated with firm exports, providing further evidence of the benefits that can come from improving border procedures and reducing trade costs.

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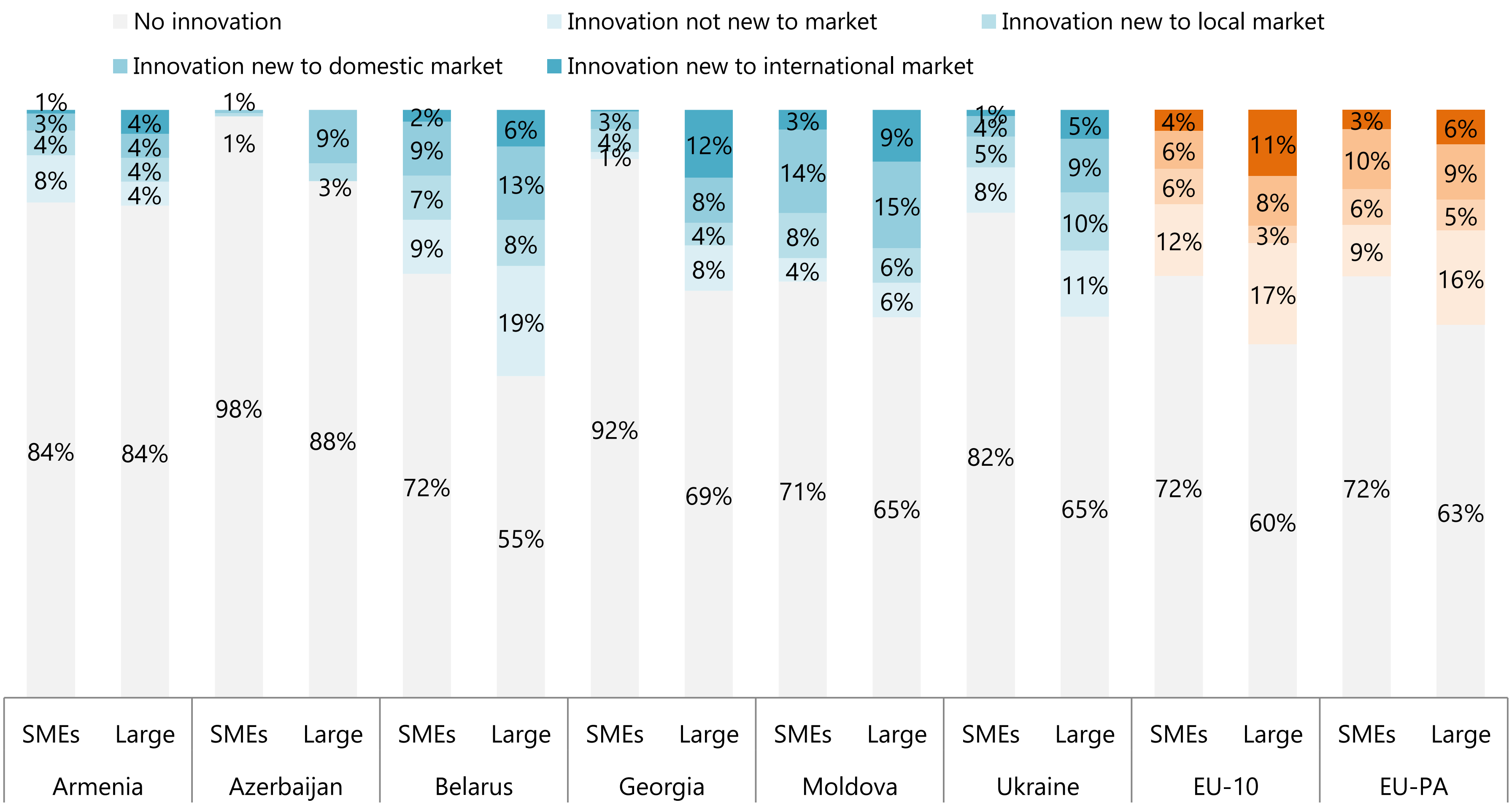
R&D and innovation: Benchmarking firm performance 1

- Innovation performance varies greatly across the region although in general performance is poorer than EU-10 and EU pre-accession region
- Gap between SMEs and large enterprises more notable in certain countries e.g. Georgia and Ukraine

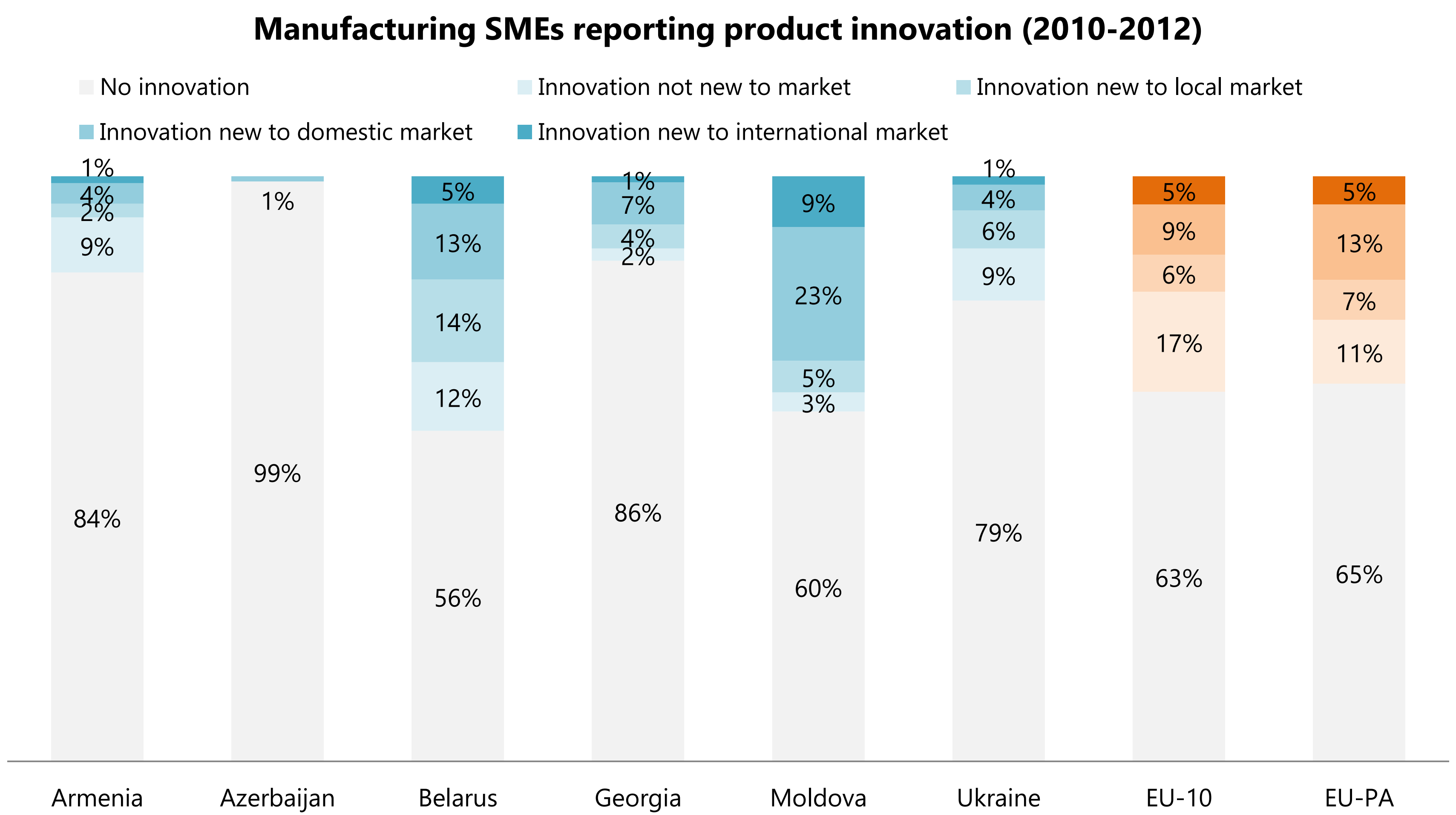
Firms reporting product innovation (2010-2012)



R&D and innovation: Benchmarking firm performance

2

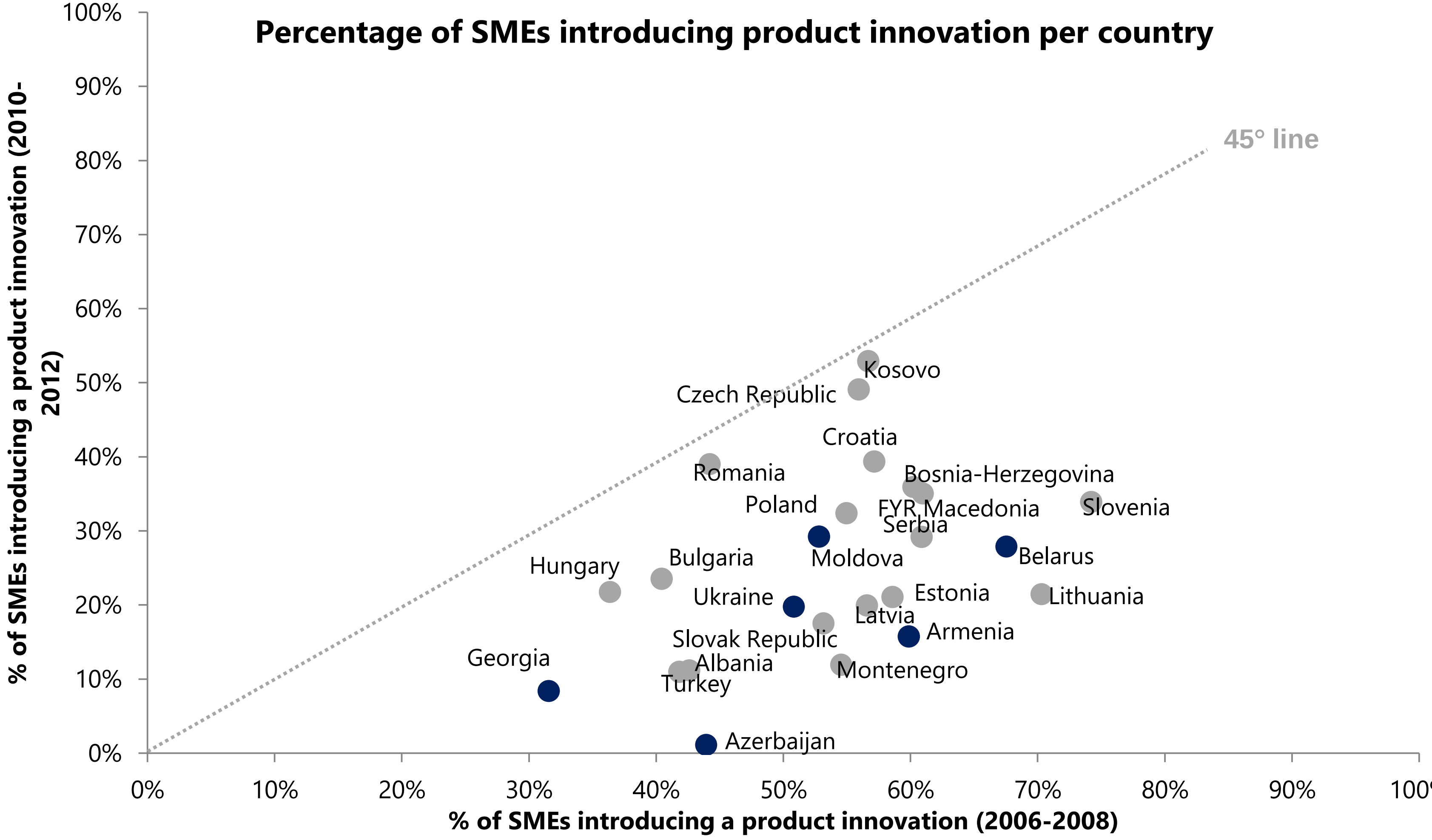
- Manufacturing SMEs more likely to introduce product innovation and more likely to introduce innovations that are new to the market
- Most innovations new to the firm in Armenia and Ukraine – technology catch-up dynamics



R&D and innovation: Benchmarking firm performance

3

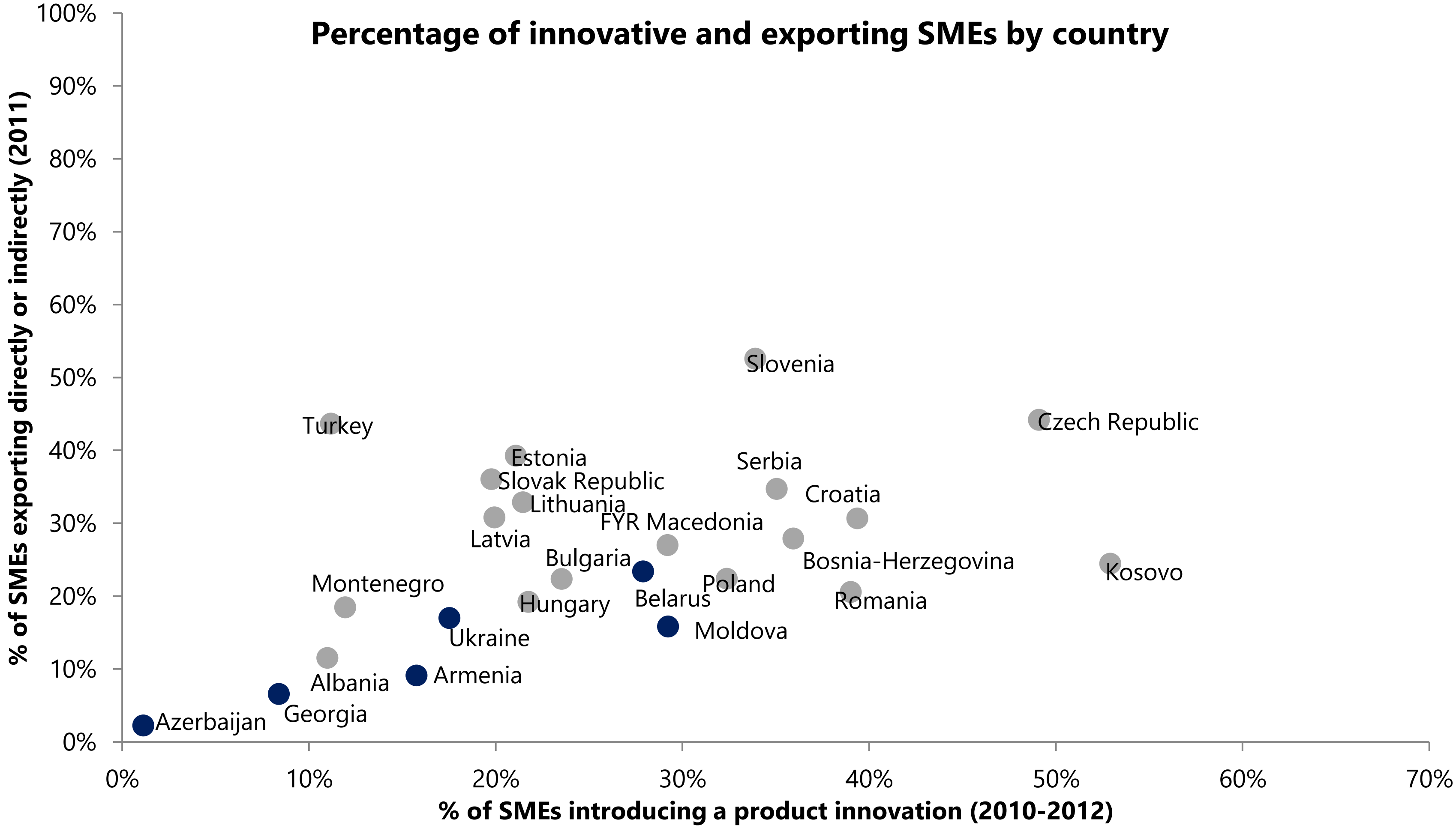
- Innovation appears to have fallen across all countries in the post-crisis period
- Some Eastern Partner countries have been affected more strongly (e.g. Georgia and Azerbaijan), and all countries have fallen below 30% in 2013



R&D and innovation: Benchmarking firm performance

4

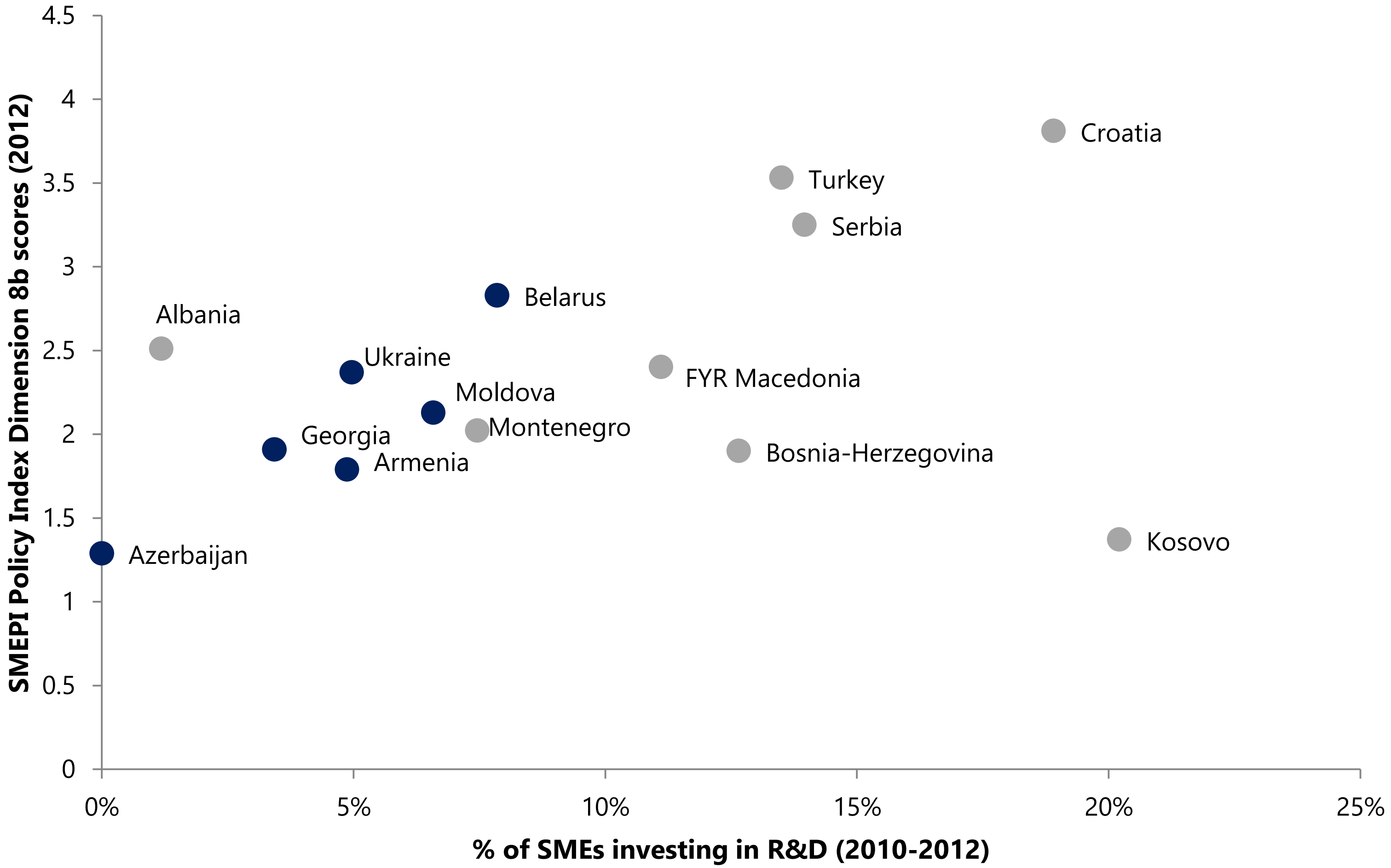
- Close relationship between innovation and internationalisation with few exceptions
- Correlation not as strong in Eastern Partner countries – other barriers and quality of innovations may be reasons why export performance not very strong across the region



R&D and innovation: Benchmarking firm performance

5

- Overall positive relationship between a good policy environment for innovation (as measured by SME Policy Index Dimension 8b: Innovation) and percentage of SMEs that invest in R&D. The EaP countries are clustered in the lower end of both, indicating potential to improve policies and consequently performance.



R&D and innovation: Measuring impact of policies on performance (1/2)

- **Objective:** To examine the influence of the policy environment on SME investment in R&D and explore the link between R&D, innovation and productivity in transition economies.

- Based on the **Crépon, Duguet, Mairesse (1998)** model, which has three stages:
  1. Firms make a decision on whether and how much to invest in R&D
  2. Firms produce innovation output (sales from innovative products) determined by investment in R&D
  3. Labour productivity is determined by innovation output

- Addition of **variable on SME Policy Index 2012 scores for Dimension 8b** (for Eastern Partner and EU pre-accession regions) to measure impact of the policy environment and support measures

R&D and innovation: Measuring impact of policies on performance (2/2)

Firm level factors affecting performance	• **Likelihood to report R&D expenditure and innovation output both increase with firm size**. While larger firms invest less in R&D in per employee terms, due to their size, they are more likely to report R&D and invest more in absolute terms, resulting in higher innovation output. • **Manufacturing firms are the most likely to report R&D expenditure**, followed by non-retail services and retail. Labour intensive industries are less likely to report R&D expenditure and have a lower volume of sales due to innovative products. • **Exporting firms invest more in R&D**, conforming to expectations regarding increased technology transfer and adoption with internationalisation, particularly for those countries which are within the technology frontier. • **Innovation output appears to have a very strong impact on productivity**.
Impact of policies on performance	• The **SME Policy Index: Dimension 8b – Innovation** scores have a positive and significant impact on the likelihood to invest in R&D, and have a positive but insignificant impact on R&D intensity.

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