Sustaining Micro Competitiveness to Ensure Convergence & Macro Resilience in Poland: The Why, the what and the so what

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### The Why



### Beyond the Euro Adoption Discussion

- Project inception within context of Euro Adoption preparation
  - Crucial condition for Euro adoption is economic resilience at the macro level, and competitiveness at the micro level is key to that.
  - Sustained process of real convergence is necessary condition for the success of Poland's participation in a common currency area.
  - Analysis of firms' internationalization patterns helps us understand that process.
- But the analysis and implications go beyond Euro Adoption discussion
  - Understanding the performance of Polish firms in the international markets and their challenges is crucial to design better policies to support real convergence.



### The What



# To better understand the challenges of competitiveness at the micro-level...

- Partnership of MoF, NBP and WB.
- Combination of quantitative and qualitative analysis to look at:
  - How Polish exporters perform in the global marketplace in terms of growth, diversification, quality upgrading and survival.
  - Productivity dynamics within firm gains, allocative gains, entry and exit gains – and at the role of FDI in generating productivity spillovers.
  - Determinants of export decision and intensity, looking at role of RER shocks, as well as that of other factors: sunk costs, productivity, liquidity, R&D intensity.



# The main messages...in case there's attrition

- MM1: Polish firms are becoming increasingly internationalized through trade (and FDI).
- MM2: Productivity growth is solid and driven both by within firm gains and by allocative efficiency gains.
- MM3: The RER and its volatility matter for entry into export markets.
- MM4: ...but it's not just about the exchange rate. Other factors matter, and maybe more.



# **MM1:** Polish firms are becoming increasingly internationalized through trade (and FDI)

- The number of exporters increased by 36% during the last decade and increasingly, smaller firms are able to enter export markets.
- Smaller firms grow faster and achieve high growth through diversifying in products and in markets.
- Still, small firms are the most vulnerable to country and product specific shocks, as their bundle is concentrated.



### Number of Exporters

#### Poland

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Exporters	32,457	34,557	35,105	33,170	32,017	32,886	37,695	42,286	44,225
Exporters/GDP (million USD)	0.11	0.10	0.08	0.06	0.07	0.07	0.07	0.09	0.08

#### Other countries

Country	Year	N/GDP	Country	Year	N/GDP	Country	Year N	/GDP	Country	Year	N/GDP
Belgium	2010	0.04	Estonia	2009	0.27	Norway	2006	0.05	Sweden	2006	0.07
Bulgaria	2006	0.41	Mexico	2009	0.04	Portugal	2005	0.08	Turkey	2010	0.07
Chile	2009	0.04	New Zealand	2010	0.09	Spain	2009	0.06			



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# Distribution of Exporters by Extent of Diversification

2005		P	lumbe	r of Prod	lucts		Nu	mber o	of Produ	cts
	Exporters (%)	1	2-5	6-10	>10	Export value (%)	1	2-5	6-10	>10
r of tions	1	27	16	4	4	1	$\odot$	2	1	2
mbe tinat	2-5	5	15	6	6	2-5	2	5	з	5
Nu des	6-10	1	3	2	3	6-10	1	З	2	6
	>10	0	1	2	5	>10	0	7	5	58
2013										
	Exporters (%)	1	2-5	6-10	>10	Export value (%)	1	2-5	6-10	>10
r of tions	1	35	13	З	з	1	Ð	1	1	1
tinat	2-5	5	15	4	4	2-5	1	4	2	3
Nu des	6-10	1	З	2	3	6-10	1	2	2	6
	>10	o	2	2	6	>10	0	5	6	63



# In aggregate, export performance has been remarkable

- Country reach match EU and high income peers more than 200 countries with all sectors reaching at least 100 destinations.
  - Diversification is increasingly contributing to export growth.
- Export quality has been converging to mature EU member levels
- Survival chances are higher than observed in comparator countries including Spain.



### Firm-level decomposition of export growth





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# Export quality and sophistication has been converging to high income-country levels



### Which firms upgrade in quality?

#### • What makes quality upgraders different?

- They are smaller, less diversified in products and destinations, and export to popular markets.
- What determines a firm's quality upgrading?
  - Firms upgrade as they grow
  - Firms upgrade as they enter into new markets
    - This was validated by fieldwork firms enter new markets as they
      perceive higher profit opportunities, usually associated with
      improvements in product design effectively, upgrading.

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#### Export Relationships

#### Survival Rate 2000-2013





### Which export flows are more likely to survive?

- Surviving flows are more likely to the EU, come from firms that are larger, more diversified either in products or destinations.
- Firms benefit from accumulated knowledge about destination markets destination specific info seems to flow, but suffer from competition from other firms exporting similar products.
- Survival chances are the greatest in the food sector (63% for 1 year), and the lowest in the transportation equipment sector (45% for 1 year).



### **MM2:** Productivity growth is solid and driven both by within-firm gains and allocative efficiency gains

- Aggregate productivity growth stood at 5 % p.a. during 2006-2013.
- Growth due to firms increasing efficiency and due to more efficient firms gaining market shares – this latter component more important than observed in other countries.
  - Crisis of 2009 boosted the Darwinian mechanism
- Foreign firms are more productive, but productivity gains are observed for both domestic and foreign.
- Spillovers from FDI in upstream sectors account for up to 30 percent of within-firms productivity gains in manufacturing (about 7 percent in transport equipment, 9% in electrical machinery).



### Productivity Decomposition & International Comparison

	Overall change in TFP	Within-firm effect	Between-firms effect	Entrants	Exiters
Year	$\Delta \Phi$	$\Delta \varphi_S$	$\Delta COV_S$	$S_{E2}(\Phi_{E2} - \Phi_{S2})$	$S_{X1}(\Phi_{S1} - \Phi_{X1}).$
2006	0.089	0.058	0.030	0.0014	-0.0008
2007	0.067	0.077	-0.011	0.0013	-0.0013
2008	0.072	0.045	0.027	0.0015	-0.0009
2009	0.022	-0.021	0.041	0.0031	-0.0018
2010	0.035	-0.007	0.042	0.0012	-0.0010
2011	0.058	0.023	0.035	0.0011	-0.0013
2012	-0.021	0.008	-0.030	0.0015	-0.0012
2013	0.090	0.048	0.042	0.0015	-0.0006
2006-2013	0.051	0.029	0.022	0.002	-0.001

Country	Period	Within	Between	Entry	Exit	TFP growth	Study
Portugal	1997-2000	0.0096	0.0008	0.0005	-0.0002	0.0107	Carreira & Teixeira (2009)
France	1991-2006	0.0390	-0.0133	0.0013 (net)		0.0229	Osotimehin (2013)
Slovenia	1996-2000	0.208	0.041	0.0132	-0.0003	0.2621	Melitz & Polanec (2015)
Tunisia	1996-2008	0.0288	0.0014			0.0302	Marouani & Mouelhi (2013)
China	1998-2007	0.0305	0.0056	0.0026	0.0013	0.0399	Du, Liu & Zhou (2014)
Colombia	1982-1998	0.0108	0.0038	0.0001 (net)		0.0147	Eslava et al. (2006)
Belgium	1996-2003	0.01037	0.0003			0.0104	Van Beveren (2010)

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### TFP Distribution by Foreign/Domestic





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# % of TFP gains accounted for by vertical spillovers through forward linkages





# **MM3:** The RER and its volatility matter for entry into export markets

- The effect of RER shocks on export decisions, however, depends on the intensity with which firms use imported intermediates.
  - The threshold is estimated at 30% of input bill accounted for by imports.
  - 80% of exporters are thus not naturally hedged against RER shocks.
- Higher RER volatility reduces the probability of participating in export activities
  - Small firms are more sensitive to RER volatility –less able to hedge.



### Percentage of firms 'vulnerable' to RER shocks – by sector





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### MM4: It's not just about the exchange rate

- Sunk costs
  - Firms face high sunk costs for entering export markets, making incumbents 50% more likely to export in the following year.
  - Returns to having paid the sunk costs, however depreciate rapidly.
- Productivity
  - Blurry effect on export participation, but significant on intensity of exporting
- Local spillovers
  - Proximity between exporters in the same sector reduces entry costs.
- Liquidity
  - Access to finance crucial for exporters, more liquid firms more likely to export.
- R+D
  - Exports are not intensive in the type of innovation that requires R&D expenditure



### The So What



### Implications - 1

 Supporting firms' internationalization is likely one of the most effective convergence & innovation policies – particularly given the increasing relevance of SMEs in export markets – and the role of diversification in achieving growth and quality upgrading.

How?

- (a) Providing information ("trade intelligence") sunk costs remain high
- (b) Encouraging mentorship very successful among start-ups and ICT firms
- (c) Supporting managerial training for the implementation of the 'export business model' – experiences of interventions in India, Colombia and Argentina



### Implications - 2

2. Improving access to hedging instruments against ER volatility in particular for small and medium exporters, as well as access to finance for SMEs and firms in the services sector.

How?

- (a) Liaising with the banking system to work towards fragmenting forward contracts so that these are accessible for SMEs.
- (b) Incentives for a dynamic funding ecosystem for exporting startups and high-growth services firms.



### Implications - 3

- 3. Boosting productivity by stimulating FDI attraction and linkages between domestic and foreign firms. How?
  - (a) Evaluating existing suppliers' development programs aiming at maximizing their impact.
  - (b) Re-consider restrictions to FDI in the form of equity limits in specific sectors.



### Dziekujemy

