



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

PRICING-TO-MARKET AT FIRM LEVEL: EVIDENCE FROM THE RUSSIAN WHEAT EXPORT MARKET

Kerstin Marit Friebel

Leibniz Institute of Agricultural Development in Central and Eastern
Europe (IAMO), Halle (Saale), Germany

Oleksandr Perekhozhuk

IAMO, Halle (Saale), Germany

Thomas Glauben

IAMO, Halle (Saale), Germany

Contact e-mail address: friebel@iamo.de



Poster presentation at the 53rd Annual Conference of the
German Society of Economic and Social Sciences in Agriculture (GEWISOLA)

**“How much market and how much regulation does
sustainable agricultural development need?”**

Berlin, September 25-27, 2013

Motivation

- Major shifts in global wheat markets occurred in recent years
- Supply side: Russia, Ukraine and Kazakhstan emerged as important exporters
- Demand side: Population and income growth in developing countries boost wheat trade
- Food security concerns due to high and volatile wheat prices
- Oligopolistic structure in international wheat trade
- Prior research focused on traditional wheat exporters based on aggregated national data

Our research focus

- Are wheat exporters able to exert market power and thereby influence price level and volatility?
- Are Russian wheat exporting firms able to price discriminate across destinations?

Methodology

Fixed effects panel estimation based on clustered variance estimators (cluster variable: country):

$$\ln p_{ijt} = \lambda_i + \theta_t + \beta_i \ln e_{it} + u_{ijt} \quad \forall i = 1, \dots, N; t = 1, \dots, T \text{ and } j = 1, \dots, J$$

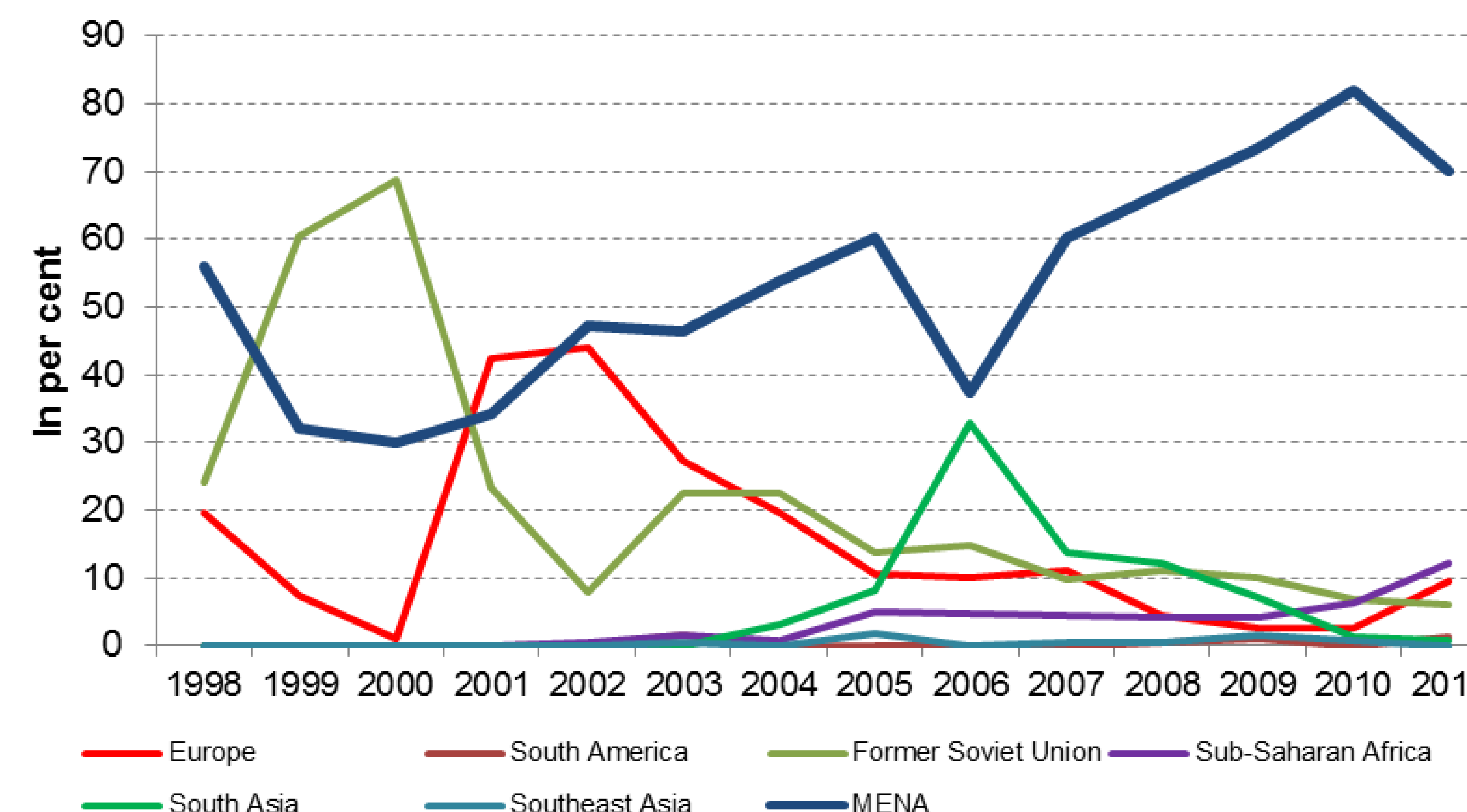
where p_{ijt} is the wheat export price (fob price) in RUB, by plant j to destination i in period t . e_{it} refers to the exchange rate (domestic currency per RUB). λ_i and θ_t measure the country and time effect. β_i is the PTM-elasticity and u_{ijt} denotes the error term.

Market scenarios	λ	β
I Perfect competition or Imperfect competition with common markup	$\lambda = 0$	$\beta = 0$
II Constant elasticity of demand → constant markup which may differ across destinations	$\lambda \neq 0$	$\beta = 0$
III Non-constant elasticity of demand → varying markup which may differ across destinations	$\lambda = 0$ or $\lambda \neq 0$	$\beta \neq 0$
IV Amplification of the exchange rate effect → PTM	$\lambda = 0$ or $\lambda \neq 0$	$\beta > 0$
V Local currency price stability (LCPS) → PTM	$\lambda = 0$ or $\lambda \neq 0$	$\beta < 0$

Data

- Firm-level data of Russian wheat exporting firms
- Sample period: 1998-2011
- 7511 observations
- 59 destination countries

Composition of Russian wheat exports by region



Selected results of fixed effects panel estimations

Country name (ISO code)	λ	β
Armenia (ARM)	-1.460***	0.345*
Egypt (EGY)	-0.820***	-0.091
Jordan (JOR)	0.667*	0.357***
Kyrgyzstan (KGZ)	-1.501***	1.994***
Lithuania (LTU)	0.330	0.518***
Moldova (MDA)	1.029	1.628*
India (IND)	-2.075***	2.831***
Saudi Arabia (SAU)	3.156***	1.941***
Uganda (UGA)	-2.328***	0.394***

Notes: Those countries with a PTM elasticity significantly different from zero are displayed in bold (see country codes below). * indicates the ten per cent, ** the five per cent and *** the one per cent significance level.

AFG, ALB, ARE, DZA, **ARM**, AUT, AZE, **BGD**, **BGR**, **CHE**, CYP, DNK, EGY, **EST**, **ETH**, **FIN**, GEO, **DEU**, GRC, **IND**, **IDN**, **IRN**, **IRQ**, **ISR**, **ITA**, **JOR**, **KAZ**, **KEN**, **KGZ**, **KOR**, **LBY**, **LVA**, **LTU**, **MYS**, **MDA**, **MNG**, **MAR**, **MOZ**, **NLD**, **NGA**, **NOR**, **OMN**, **PAK**, **PER**, **POL**, **ROU**, **RWA**, **SAU**, **ESP**, **SDN**, **SYR**, **TJK**, **TZA**, **TUN**, **TUR**, **UGA**, **UKR**, **YEM**

Conclusion

- For 22 countries hypothesis of competitive pricing not rejected
- Evidence for PTM in 37 out of 59 export destinations
- Country effects reveal unequal wheat export prices among destinations