

Second World Congress of Comparative Economics “1917 – 2017: Revolution and Evolution in Economic Development”

Deriving Russian Labour Market Model From The Cross-Country Analysis

Evsey Gurvich (Economic Expert Group)

Elena Vakulenko (Higher School of Economics)

St. Petersburg, June 2017

What We Knew and What We Thought We Knew by 2014?

- Just few studies on macroeconomic properties of the Russian labour market have been published by 2014.
- Despite this there was broad belief in the concept of ‘Russian labour market model’ based on observation by Layard, Richter (1995) and later Gimpelson and Kapelyushnikov (2000, 2003, 2013, and other).
- It stated that the salient feature of Russian labour market (RLM) is the ‘special’ adjustment pattern to negative shocks: mainly through wages, with almost intact employment.

Weak points of the RLM standard concept

- The concept is presented in macroeconomic terms (adjustment patterns), but is based only on separate observations, with no macro models behind it.
- It doesn't discuss particular mechanisms resulting in the demonstrated adjustment patterns,
- The model refers to observations in the periods of severe crises, when labour markets in most countries deviate from the typical performance.
- No answer was given whether the alleged *Russian way of adjustment* was 'normal' or 'abnormal'.

General approach in this paper

- We build a series of basic macroeconomic models revealing the properties of the Russian labor market.
- We pick models for which estimates have been published for country samples or panels.
- The parameters obtained for Russia are compared to that for other countries.
- Systematic comparisons reveal similarities and disparities in the macro adjustment mechanisms.

1. Okun's law (OL)

(Gurvich, Vakulenko, 2015)

We consider several specifications of the basic Okun's model:

$$u_t - u_{t-1} = a + b g_t$$

where u – unemployment rate, g – GDP growth rate.

Short-run relationship:

- basic model;
- with additional lag of GDP growth rate;
- with asymmetry to growth and fall of GDP.

Long-run relationship:

- VECM;
- TAR, MTAR (model with asymmetry adjustment to LR).

Comparison of Okun's coefficients

Country	Coefficient b_1	Source	Time span
Spain	-0,40	Jardin, Gaetan, 2012	1984–2009
USA	-0,29	Ball et al., 2013	1948Q2–2011Q4
Great Britain	-0,24	Jardin, Gaetan, 2012	1984–2009
France	-0,22	Jardin, Gaetan, 2012	1984–2009
Czech Republic	-0,21	D'Apice, 2014	1994–2013
Germany	-0,17	D'Apice, 2014	1994–2013
	-0,13	Jardin, Gaetan, 2012	1984–2009
Hungary	-0,15	D'Apice, 2014	1994–2013
Switzerland	-0,14	Jardin, Gaetan, 2012	1984–2009
Brazil	-0,12	Tombolo, 2014	1980Q1– 2013Q3
<u>Russia</u>	<u>-0,10</u>	<u>Our estimates</u>	<u>1995Q1–2013Q3</u>
Netherlands	-0,10	Jardin, Gaetan, 2012	1984–2009
Italy	-0,06	Jardin, Gaetan, 2012	1984–2009

Conclusions

- OL in Russia holds both in the short and in the long run, and is robust in the LR (the variables are cointegrated).
- The reaction of unemployment to the production slow-down is much stronger than on its acceleration, Okun's coefficient for Russia is lower than for most developed countries and comparable to those for emerging markets.
- The Russian labor market does not differ much from the labor markets of other developing countries in terms of employment reaction to production shocks.

2. Model (Blanchard, Katz, 1999) (Gurvich, Vakulenko, 2015)

Model VECM:

$$\ln(w_t) = 7,74 + 0,59 \ln(z_t) - 0,14 \ln(u_t)$$

w_t – wage, z_t – labor productivity; u_t – unemployment rate in t .

All coefficients are significant.

Elasticity estimates of the long-term relationship between labor productivity and wages

	Country	Source	Time span	Elasticity
1	Malaysia	Goh, Wong (2010)	1970-2005	1,223
2	Great Britain	Pascalau (2007)	1960-2005	1,13
3	Sweden	Pascalau (2007)	1960-2005	0,787
4	Spain	Pascalau (2007)	1960-2005	0,745
5	Russia	Gurvich, Vakulenko (2015)	1995-2013	0,59-0,72
6	South Africa	Wakeford (2004)	1990-2002	0,58
7	Germany	Pascalau (2007)	1960-2005	0,454
8	USA	Pascalau (2007)	1960-2005	0,099
9	Japan	Pascalau (2007)	1960-2005	0,014
10	The panel, which includes 13 countries of the euro area	ECB (2012)	1995-2011	0,605
11	The panel, which includes 19 "emerging markets"	Klein (2012)	1996–2009	0,48*

Gurvich E.T., Vakulenko E.S.

Примечание: * Коэффициент коинтеграционного соотношения, не включающего безработицу.

Cross-country comparison

- Russia occupies a median position among countries by the elasticity value. The relationship is fairly pronounced (unlike the US and Japan), and at the same time it is within reasonable and safe limits, remaining substantially below unity (which compares favorably with Great Britain and South Africa). Panel regressions by groups of countries give values close to our estimates of elasticity for Russia.
- Comparative analysis does not support the hypothesis that the Russian labor market stands out by an acute wage reaction to labor productivity shocks.

3. Estimation of wage flexibility by unemployment rate (Gurvich, Vakulenko, 2016)

- We consider three different models for the change in real wages to the level of unemployment to obtain more reliable conclusions:
- **Model 1. van Poeck, Veiner (2007).**
- **Model 2. Arpaia, Pichelmann (2007).**
- **Model 3. Huber (2004). Regions.**
 - Models differ in lagged structure and in a set of control variables.

Model 1. Cross-country comparisons

Country	Semi-elasticity of real wages by unemployment rate	Country	Semi-elasticity of real wages by unemployment rate
Slovakia	0.06 (insignificant)	Poland	-0.35
Spain	-0.18	Denmark	-0.38
France	-0.28	Germany	-0.42
Portugal	-0.29 (insignificant)	Czech Republic	-0.48
Great Britain	-0.29	Netherlands	-0.51
Belgium	-0.3	Hungary	-0.81
Italy	-0.31	<i>Russia</i>	<i>-0.93</i>

Model 2. Cross-country comparisons

Country	Semi-elasticity of real wages by unemployment rate
Ireland	0.07
Greece	-0.08
Spain	-0.16
Luxemburg	-0.18
France	-0.22
Netherlands	-0.25
Finland	-0.39
Италия	-0.65
Belgium	-0.71
Germany	-0.73
Portugal	-0.97
Austria	-1.17
<i>Russia</i>	<i>-1.22</i>

The coefficient of wage flexibility in Russia is $\beta = -1.22$, which is higher than in other countries.

Model 3. Cross-country comparisons

Variables/countries	Romania	Bulgaria	Central and Eastern Europe	Poland	Czech Republic	EU	Russia	Hungary	Estonia
year	1992-1998	1995-1998	1992-1998	1992-1998	1992-1998	1989-1995	2002-2010	1992-1997	1995-1998
National unemployment rate	0.0792*** (0.0037)	0.0857*** (0.0297)	0.0031 (0.018)	-0.0084*** (0.0022)	-0.0189*** (0.0017)	-0.0262*** (0.0031)	-0.0330*** (0.0043)	-0.0342*** (0.0094)	-0.1384*** (0.0834)
Unemployment rate	0.0039 (0.0025)	-0.0538** (0.0216)	-0.0037 (0.0047)	-0.0011 (0.0022)	-0.0028* (0.0016)	0.0006 (0.0010)	0.0010 (0.0018)	-0.0022 (0.0030)	0.0951 (0.0341)
Unemployment rate (t-1)	-0.0109*** (0.0017)	0.1300*** (0.0131)	0.0080 (0.0110)	0.0017* (0.0011)	0.0011 (0.0014)	0.0062 (0.0043)	0.0073*** (0.0017)	0.0002 (0.0028)	-0.0981** (0.0341)
+ control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.79	0.81	0.18	0.40	0.71	0.68	0.38	0.90	0.68
Number of observations	246	84	1257	294	518	388	702	100	15

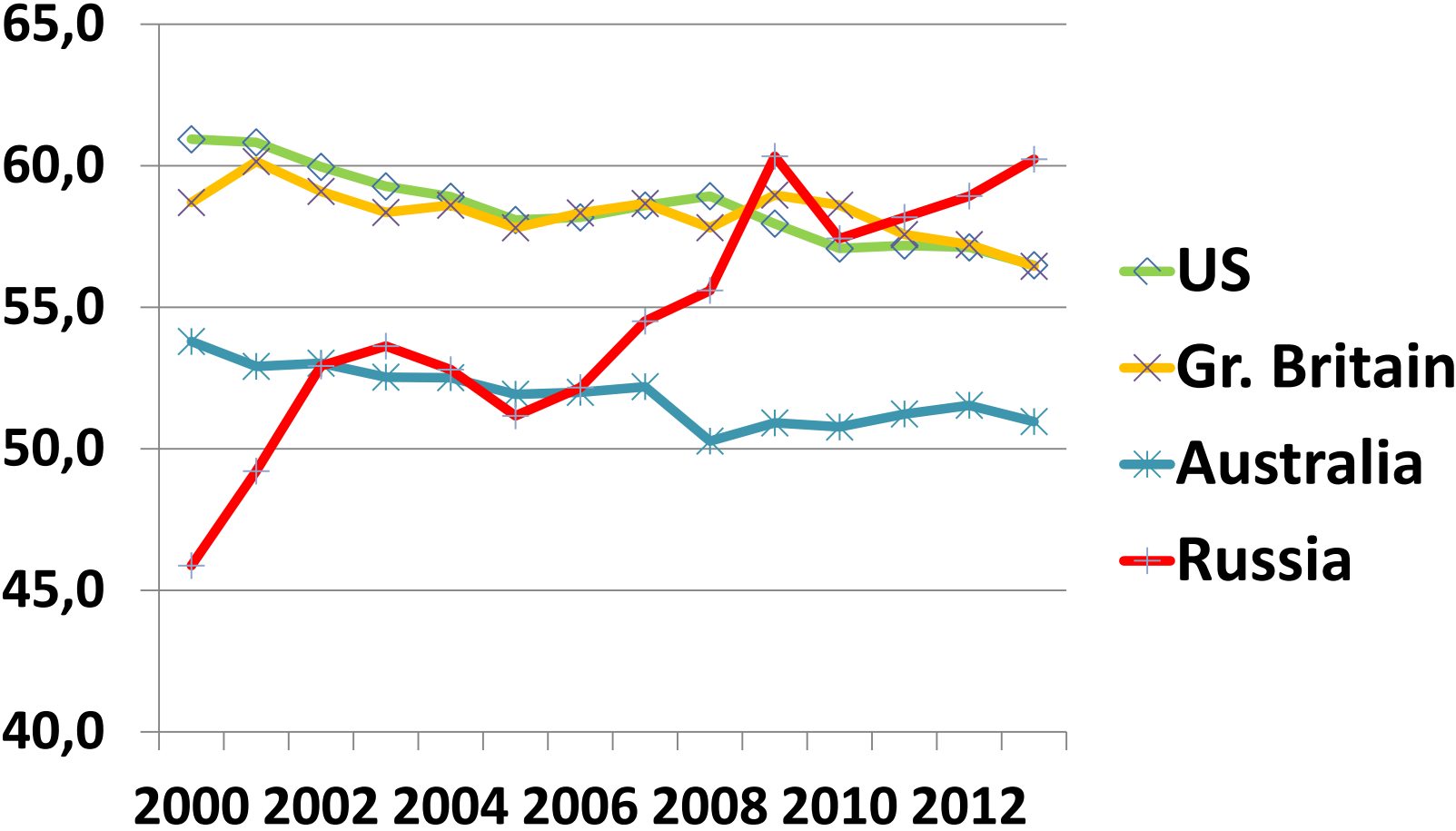
General conclusions

- The results of three different models show that Russia has quite **high wage flexibility** on unemployment.
- This is consistent with the Layard's hypothesis (supported later by Gimpelson, Kapeliushnikov et al.) that adjustment to shocks in the Russian labor market is going via wages rather than than by employment.
- We find though the mechanism explaining this hypothesis, and answer that Russian adjustment pattern is 'norm', not a 'deviation'.

Practical applications: the growing share of wages in GDP

- The Russian economy is practically the only one where the share of wages in GDP grows.
- The constructed model (Gurvich, Vakulenko, 2015) provides an explanation: within the previous model of extensive growth, economy growth was accompanied by an increase in employment and a decrease in unemployment, which, due to the high elasticity of the real wage, increases wages at a rate higher than productivity.
- 1996 -2013. An increase in labor productivity and a decrease in unemployment made an almost equal contribution to the growth of real wages. Thus, the channel of reducing unemployment doubled the growth of real wages.
- **Conclusion: the old growth model was close to its margin, its performance would fade even if oil prices grew further.**

Labour Share Trends (% of GDP)



The model explains the growth in the share of wages in GDP (Gurvich, Vakulenko, 2015)

	Q1 1996 -> Q3 2013
Increase in productivity	135%
Unemployment change	9,1% -> 5,5%
Increase in real wage	213%
Estimated wage change due to productivity	79%
Estimated wage change due to unemployment rate	75%

General conclusions

- The Russian labor market is established and mature,
- The Russian labor market is effective from the macroeconomic viewpoint,
- No signs of “non-standard” mechanisms have been found in the RLM (such as “Efficiency wages”).

«Model of the Russian labor market»

- The main feature of the RLM is its NORMALITY.
- Our specificity is the absence of pathologies.
- RLM has a high macro-economic efficiency.
- One consequence is the lack of prerequisites for using fiscal or monetary stimulus.

Are there institutional grounds for the high flexibility of real wages?

- Weak role of trade unions (OECD, 2011).
- The minor distorting effect of some key labor market institutions (minimum wages, unemployment benefits) and weak compliance of labor law.
- A significant (more than one-third) share of premiums and other payments in the wage structure (Gimpelson, Kapeliushnikov, 2011).
- Relatively high inflation, which, if necessary, reduces the real value of wages without changing its nominal size.
- Low labor migration in Russia (Guriev, Vakulenko, 2012).
- A big role of state and quasi-public companies (Poeck, Veiner, 2007), operating under soft budget constraints.

But institutions do not arise exogenously, they are endogenously form

Our hypothesis: the labor market in Russia, unlike commodity markets, avoided excessive regulation due to the lack of large potential sources of "administrative rent" on it. Therefore, there is no distortion of market mechanisms -> high efficiency is demonstrated.

More detailed analysis can be found in a book:

«Механизмы российского рынка труда» (под ред. Е.Т.Гурвича и Е.С.Вакуленко, 2016).

Free access at the Economic Expert Group web-site:

<http://www.eeg.ru>

Thank you for your
attention!