



# Minimum wage and regional labor markets in Russia

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*Tartu  
27 august 2010*

**Minimum wage (MW) – labor market institution.**

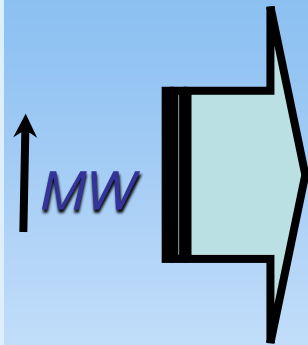
**The spectrum of economic consequences of MW is much wider, than increase of income of law-paid groups of workers.**

**Setting of MW causes a set of negative side-effects**

**If dynamics of MW and mechanism of MW setting are influence on labor market – what is the mechanism of this influence**



The MW effects on a labor market as follows:



✓ «price» dimension

- *Stimulation of growth of wages of low-paid workers*
- *Stimulation of growth of wages of other groups of workers (spillover effect)*
- *decreasing differentiation of wages*

✓ «quantity» dimension

- *growth of costs for creation of new workplaces*
- *Negative influence on employment and positive – on unemployment*
- *Expansion of informal employment*
- *bankruptcy*



## the factors strengthening the effects of MW on a labor market

- 1) *Labor structure*. To the greatest degree negative effect from an increase of MW is shown in the firms, branches, regions with a high share of low-paid workers (see, for example, Kertesi, Kollo, 2003; Bazen, Le Gallo, 2009).
- 2) *Coverage of employed by MW*. The larger **share workers covered by MW legislation** cause more substantial changes in dynamics of employment and unemployment. Coverage depends on MW legislation which can extend on overall labor market or on definite groups of workers. Besides, **coverage of MW legislation depends on enforcement of MW legislations**. In this case the informal (shadow) sector of economy is capable to "extinguish" a part of fluctuations in the employment, caused by increase MW (Bell, 1997, etc.)
- 3) *Relative size MW and speed of its change*. The ratio of the average wage and MW (Kaitz index) indicates the share of employed, whose salary directly depends on size of MW. Than above share of MW in average wage, the labor market is especially sensitive to fluctuations (increase) of MW (Kertesi, Kollo, 2003; Bazen, Le Gallo, 2009, etc.).



### *Centralized/decentralized*

**Centralized** - the level of MW is equal for all workers (in the majority of the OECD countries and number of developing countries and transitive economies)

**Decentralized** - setting of local subminima of the wages for different sectors of economy, groups of workers or country regions

Setting of wage subminima in a combination with indexation, considering dynamics of labor market enables to decline negative side-effects

T.Boeri's recent research (Boeri, 2009) is devoted to an estimation of interdependence of features of MW adjustment and level of MW. It is found out that when MW is established by the government, as a rule, level of MW will be more low, than in case of a tripartite adjustment.



- ✓ low level of MW (till 2007) was one of advantages of the Russian labor market, bringing the contribution to maintenance of high flexibility of wages

*-Till the mid of 2000<sup>th</sup>*

*- Relative size of MW (to the average wage - Kaitz index)*

*For Russia < 10%.*

*- Western Europe - 30-70%*

*- European transition economies – 20-50%*

- ✓ Centralized model of MW setting (till 2007) and high regional differentiation of labor markets in Russia ⇒ scales of MW influence should vary across different segments of labor market (1)
- ✓ Rapid and substantial growth of MW. Experience of other countries witnesses that it caused negative reaction of labor market on such shocks (2)



## Model of MW setting in Russia - I

### ***Dynamics of MW in Russia in 2000-2009***

Period of setting (from)	Level of MW (in roubles)	Ratio of MW and the level of standard of living, %	Kaitz index (ratio of MW and average wage), %
01.01.2009	4330*	78,8	24,2
01.09.2007	2300*	54,8	17
01.05.2006	1100	29,6	10,6
01.09.2005	800	24,3	9,2
01.01.2005	720	22,9	8,4
01.10.2003	600	25,6	10,8
01.05.2002	450	23	11,7
01.07.2001	300	18,1	8,8
01.01.2001	200	13,2	7,2
01.07.2000	132	9,8	6,1

\*including all kinds of transfers and payments for workers

In 2009 1 euro = 40 roubles

1) At this time the attempts have been undertaken to move up to decentralized model of setting minimum wage. This study is aimed to analyze the experience of setting subfederal minimum wage by regions of the Russian Federation;

2) this research, based on data of the Federal state statistics service of the Russian Federation for 2003-2007 examines the influence of minimum wage (MW) magnification on employment and unemployment, scales of informal economy on regional level, reveals the regional divergence in dynamics of employment, informal employment, unemployment.





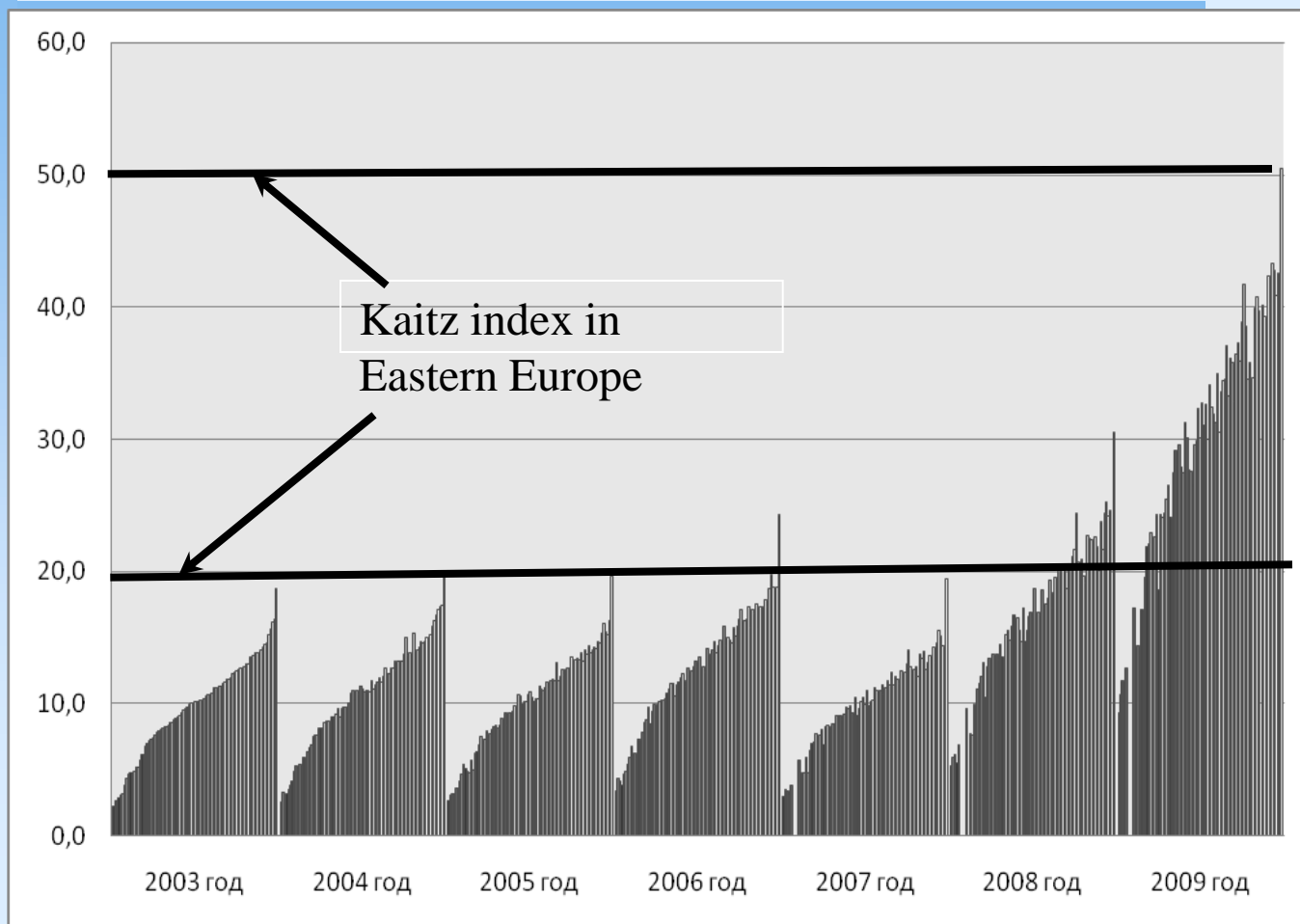
## Model of MW setting in Russia - II

1) High differentiation of regional relative MWs

2) Rapid and essential increase on relative MW

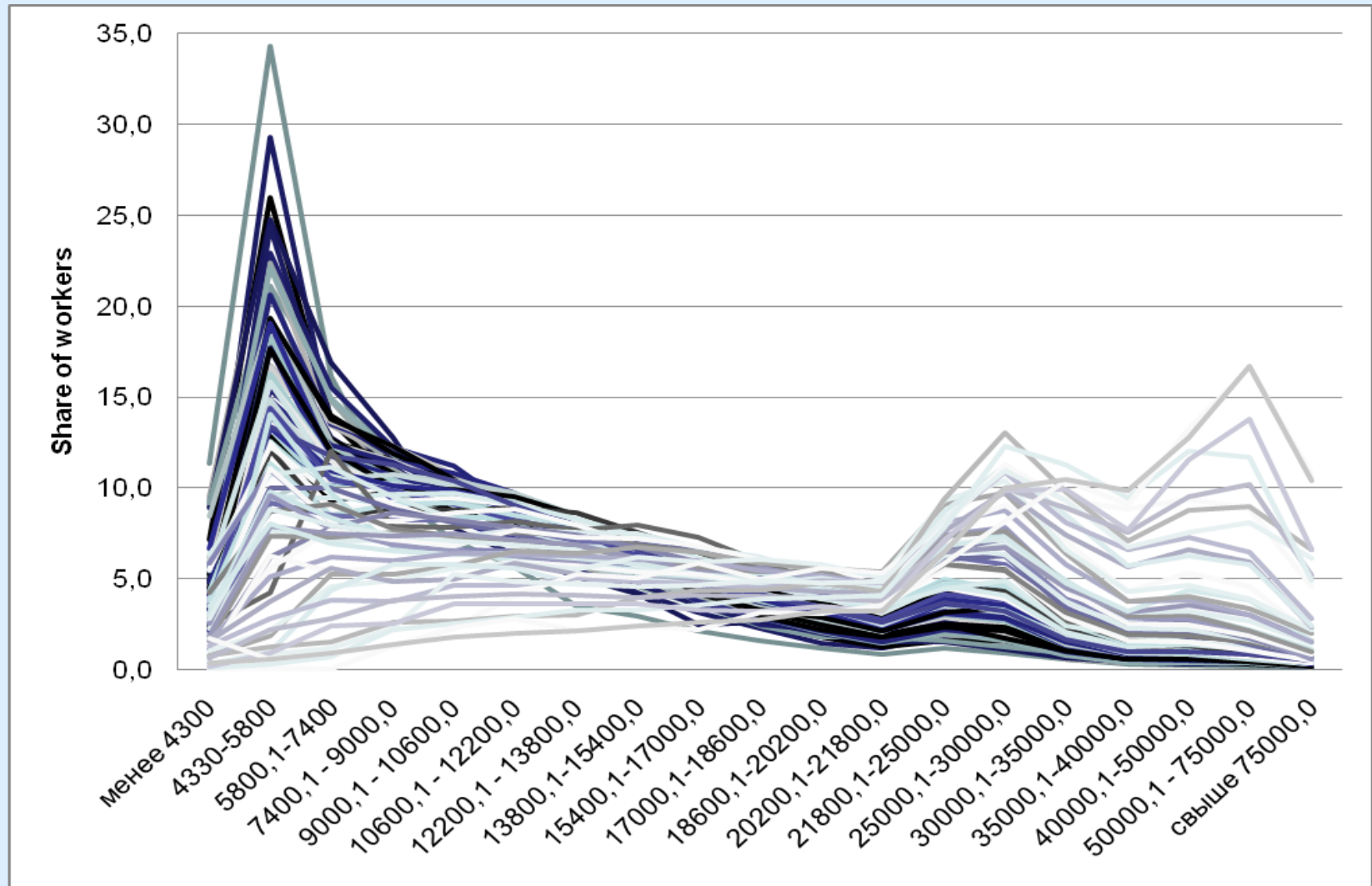
3) To 2009 relative MW for more than half regions came up to indicators for developed economies

*Relative size of MW (to the average regional wage - Kaitz index) in the Russian Federation in 2003-2009*



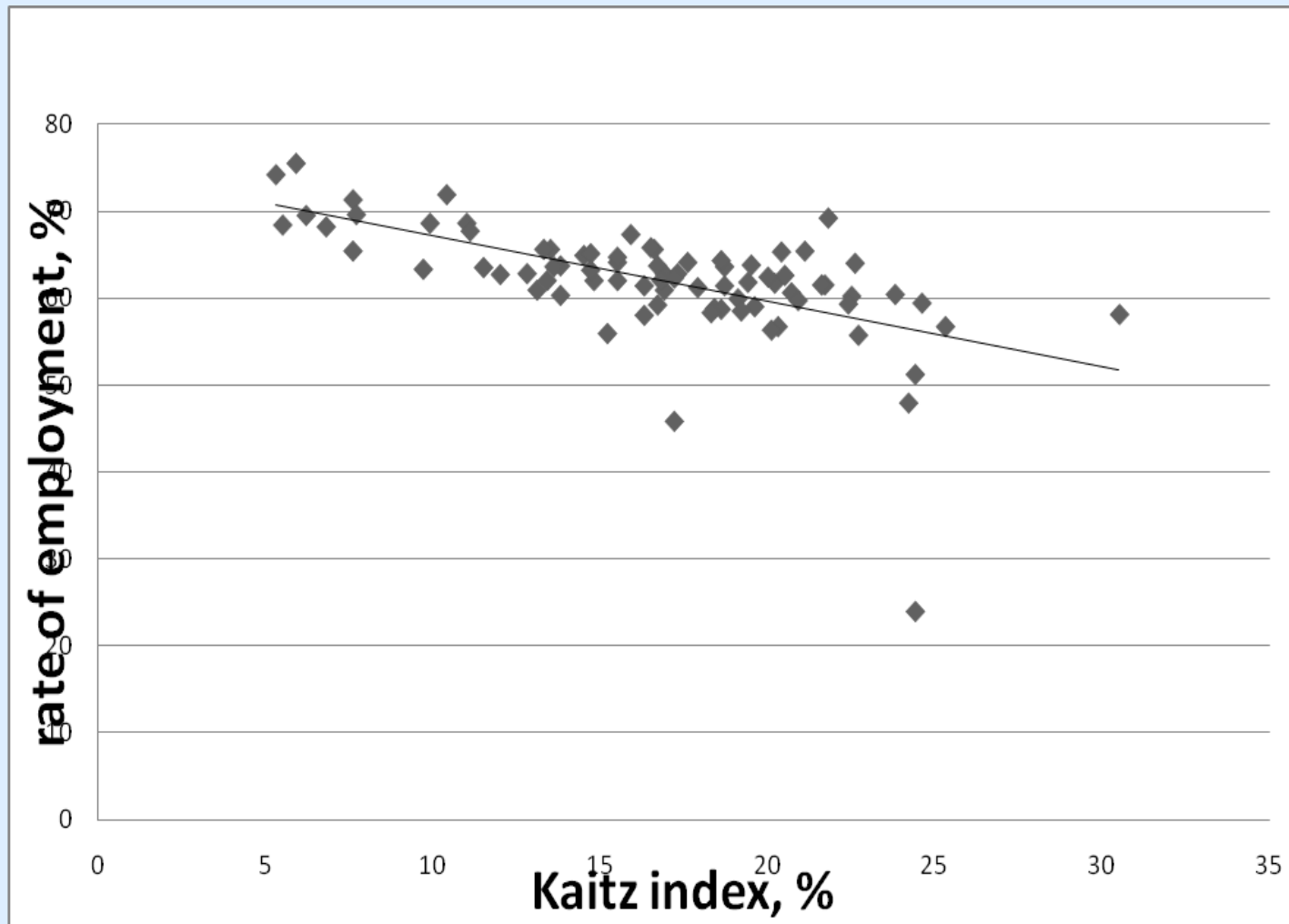
## Model of MW setting in Russia - III

### Wage distribution in 2009 in regions of the Russian Federation



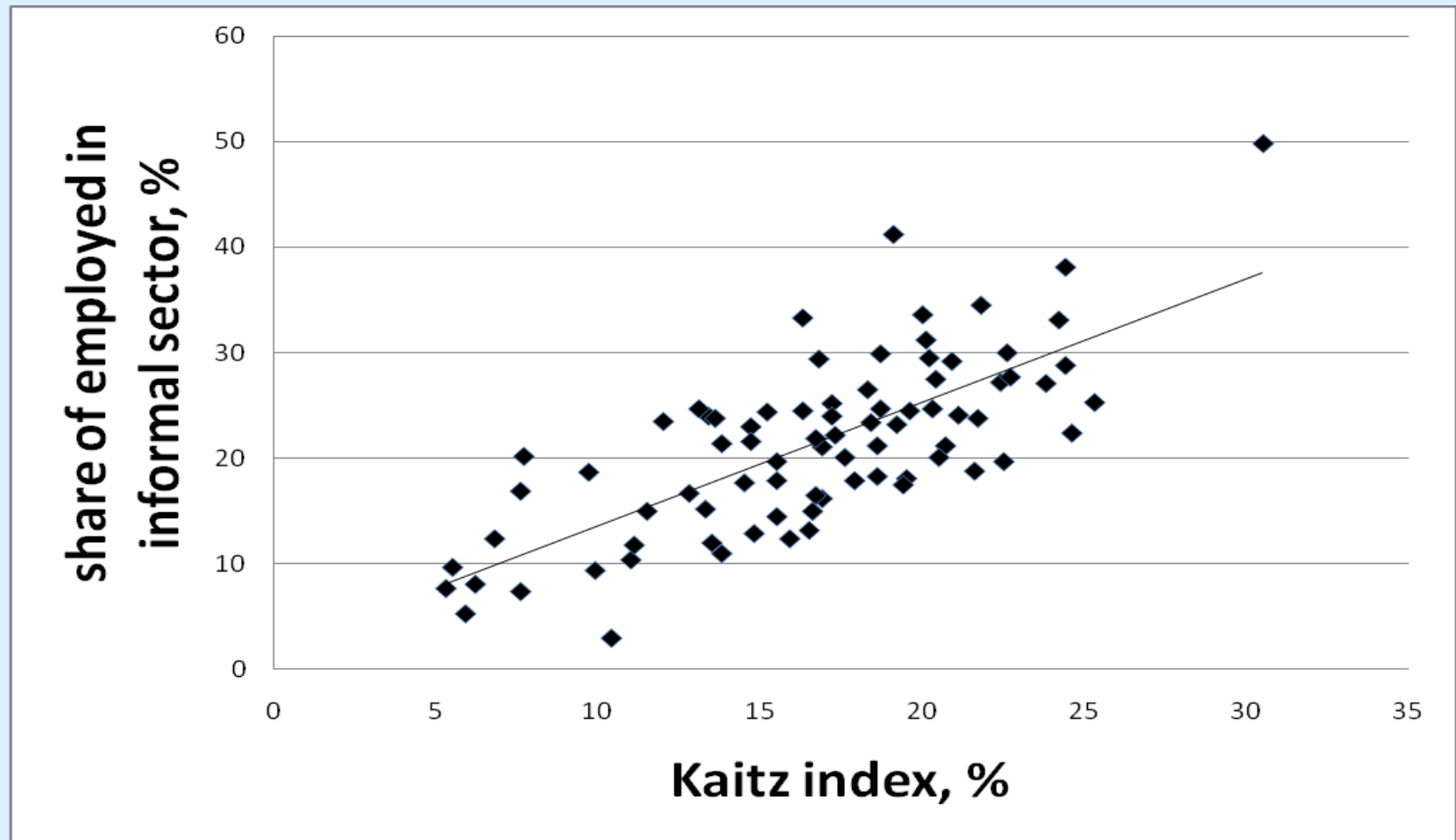
## Regional differentiation in MW influence on the russian labour market - I

*Kaitz index and employment rate in Russian regions in 2008*



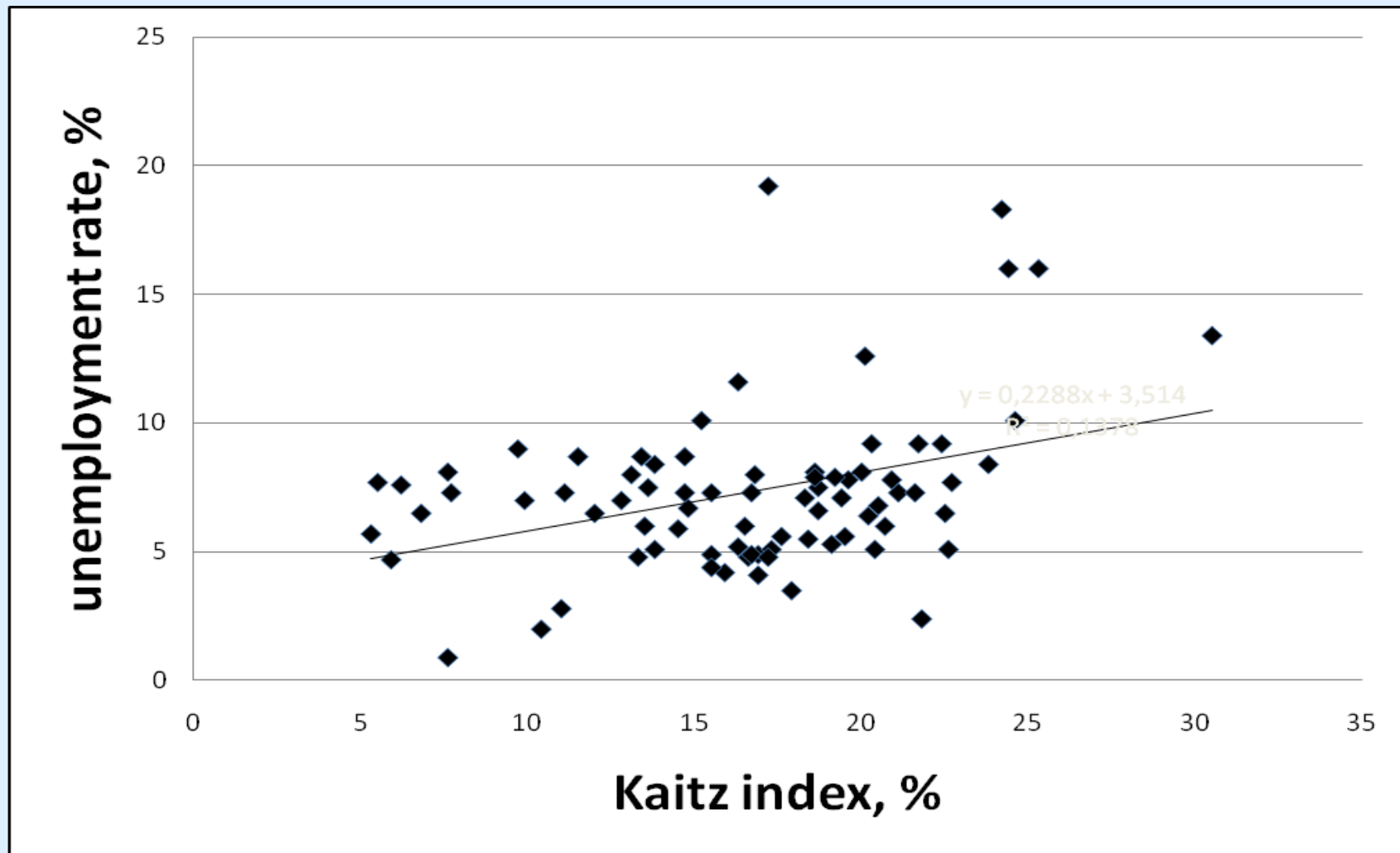
## Regional differentiation in MW influence on the russian labour market - II

*Kaitz index and share of employed in informal sector in Russian regions in 2008*



## Regional differentiation in MW influence on the russian labour market - III

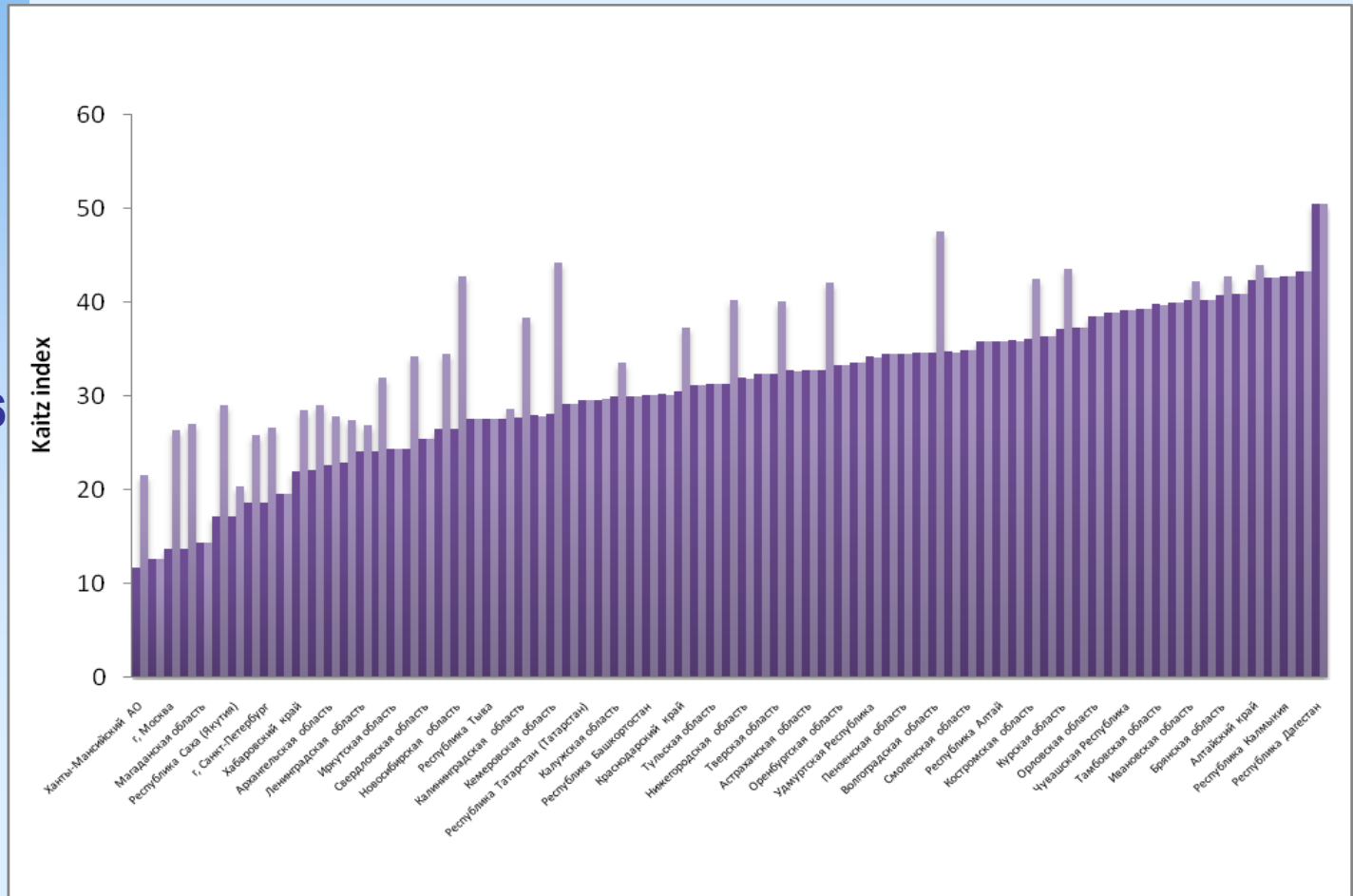
*Kaitz index and unemployment rate in Russian regions in 2008*



## Shift to decentralized model of MW setting, Regional MWs were set in 49 russian regions in 2008 (in every 2d region) and 31 – in 2009

- 1) Regions of Siberia and Far East set MW less often but its size higher
- 2) Contrary to expectations subfederal MW in each 6 case is set in regions with worst situation on the labor market

*Proportion of federal and regional MW with average wages on regions of Russia in 2009*



- 1) The poor regions (Southern federal district, republics of the Siberian federal district) for which increase MW unequivocally means aggravation and without that a difficult situation on a labor market – *have refused from setting of subfederal MW by 2009;*
- 2) “average” regions which owing to higher level of social and economic development, dare at essential increase MW (a surplus from 50 to 100 % to level of the federal minimum wage rate) – regions of Siberia, Moscow. A number of regions narrows coverage of employed by regional MW;
- 3) regions with bad situation on a labor market (the North of Russia, a part of regions of the Central Russia etc.) which nevertheless, raise MW, quite often without limiting degree of its distribution on employed in private sector.



$$\text{Employment} = \alpha_0 + \alpha_1 \text{Kaitz} + \alpha_2 \log\_gdp + \alpha_3 \text{agri} + \alpha_4 \text{budj} + \alpha_5 \text{kf} + \alpha_6 \text{FO} \quad (1)$$

$$\text{Informal employment} = \beta_0 + \beta_1 \text{Kaitz} + \beta_2 \log\_gdp + \beta_3 \text{agri} + \beta_4 \text{budj} + \beta_5 \text{kf} + \beta_6 \text{FO} \quad (2)$$

$$\text{Unemployment} = \gamma_0 + \gamma_1 \text{Kaitz} + \gamma_2 \log\_gdp + \gamma_3 \text{agri} + \gamma_4 \text{budj} + \gamma_5 \text{kf} + \gamma_6 \text{FO} \quad (3)$$





## Influence of MW on Russian Labour market

	Level of employment				Share of employed in informal sector				Level of unemployment			
	OLS		Fixed effects		OLS		Fixed effects		OLS		Fixed effects	
	Coeff.	t-st	Coeff.	z-st	Coeff.	t-st	Coeff.	z-st	Coeff.	z-st	Coeff.	z-st
<b>MW</b> <b>(Kaitz index)</b>	0,26	1,27	0,04	0,11	0,55	1,38	-0,008	-0,01	<b>0,29*</b>	1,9	0,19	1,36
GDP per capita (lg)	6,45***	7,3	0,15	0,18	1,57	0,89	4,03	1,02	-0,63	-0,88	0,10	0,12
Share of employed in agriculture	-0,58	-0,9	0,19	1,38	0,55***	4,40	0,09	0,22	-0,02	-0,43	-0,29**	-3,35
In public health service and employment	-0,47***	-5,73	-0,19	-0,75	0,15		-0,60	-0,79	0,59***	9,85	-0,19	-1,07
Dispersion of income (fund coeff)	-0,11*	-1,73	-0,03	-0,66	0,18	0,98	0,08	0,56	0,18	0,38	0,02	0,52
Region												
Central	4,88***	6,56			-4,23**	-2,93			-5,47***	-9,85		
North-West	5,14***	5,28			-4,25*	-2,25			-4,23***	-5,83		
Povolghsky	4,86***	6,59			-3,04*	-2,13			-4,71***	-8,57		
Ural	2,00*	1,76			3,01	1,37			-3,02***	-3,59		
Siberia	3,206***	3,77			0,84	0,51			-2,92***	-4,54		
Far East	5,19***	4,60			-1,47	-0,67			-3,19***	-3,78		
year (2003)												
2004	-2,06**	-2,75	0,28	0,56	0,77	0,53	0,11	0,08	-0,42	-0,74	-0,73*	-2,14
2005	2,49**	-3,05	1,16*	1,67	2,51	1,58	0,86	0,42	-3,30***	-3,69	-2,92***	-6,31
2006	-4,31**	-3,26	1,54	1,23	0,64	0,25	-0,54	-0,15	-1,69*	-1,67	-2,47**	-2,95
2007	-4,03***	-3,51	3,05	2,34	2,08	0,94	-1,95	-0,51	-1,26	-1,44	-3,17***	-3,65
N of obs.	384		78		384		78		384		78	
R^2	0,629				0,324				0,603			



## Influence of MW on Russian labor market (conclusions)

- 1) Estimations of MW effect on employment and employment in informal sector insignificant in all used specifications .
- 2) Interaction of MW and unemployment (result of OLS estimation), is positive and significant. In regions with higher relative MW higher rate of unemployment was observed. **Growth of unemployment rate can be result of inflow to unemployment of low-paid workers** and, simultaneously, to reflect **an exit on a labor market of those from economically inactive**, whose reserve wages were more than minimum wage rate in previous period, but more low then newly established.
- 3) The revealed influence MW on a rate of unemployment and absence of influence on scales of informal employment can mean that the workers superseded from workplaces under the influence of MW, do not flow in informal sector and remain in the unemployment, waiting for workplaces in formal sector of economy.

