

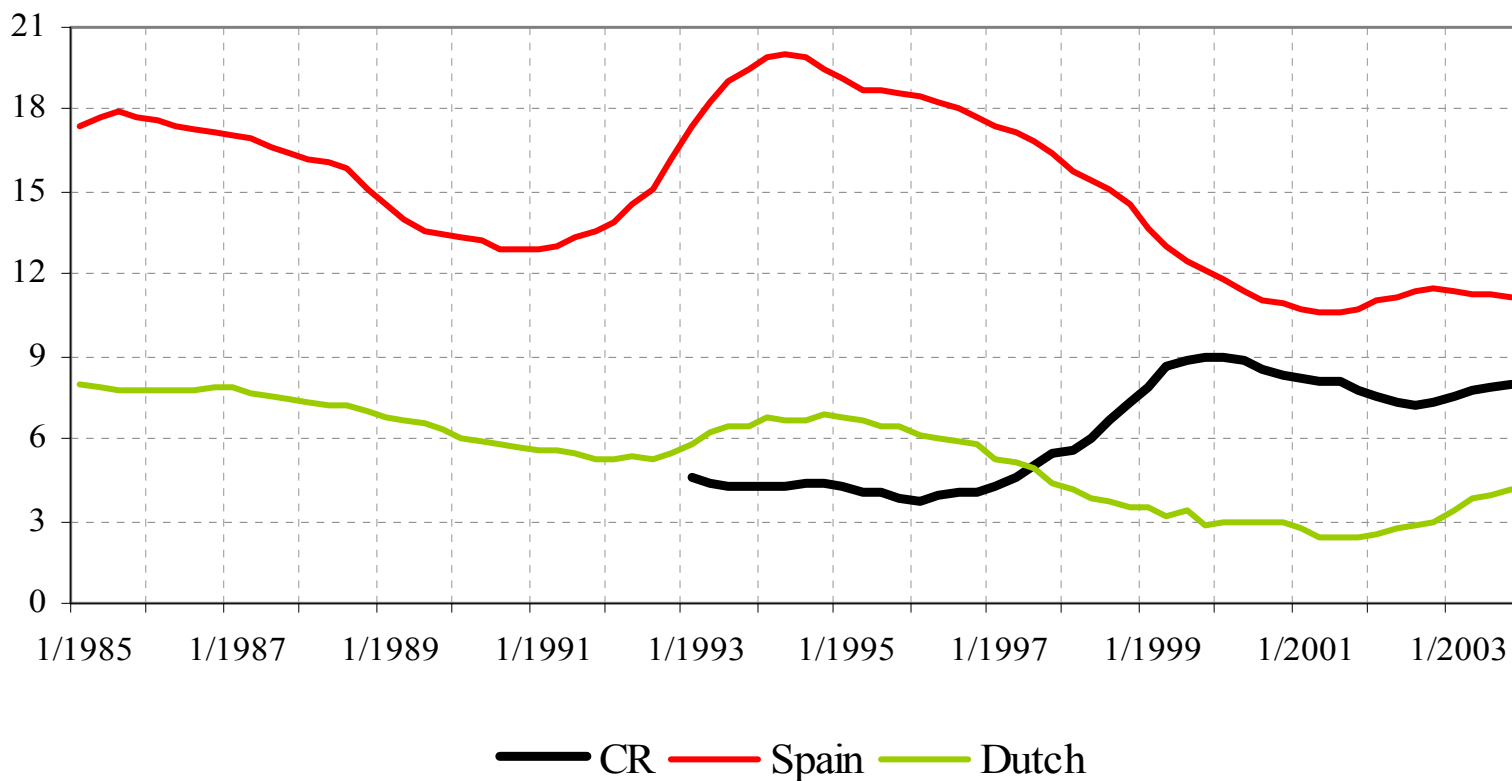


Trh práce

Marián Vávra



Vývoj na trhu práce





Struktura modelu

- *Nominální hrubá mzda*
- *Poptávka po práci*
- *Nabídka práce*



Mzdové vyjednávání

- *Firmy*

$$\Pi_t^L = P_t^Y (Y_t / L_t) - P_t^L - P_t^K (K_t / L_t)$$

- *Odbory*

$$W_t^U = W_t(1 - r_{SSL})(1 - r_{PIT}) - W_t^R$$

$$W_t^R = p[qW_t(1 - r_{SSL})(1 - r_{PIT}) + (1 - q)W_t^{MIN}(1 - r_{SSL})(1 - r_{PIT})] + (1 - p)[r_{RR}W_t(1 - r_{SSL})(1 - r_{PIT}) + \varepsilon W_t(1 + r_{SSE})]$$



...mzda

- *Optimalizace*

$$\max \rightarrow L_t^W = (\Pi_t^L)^{\alpha} (W_t^U)^{1-\alpha}, \quad \alpha=1/(1+\Omega)$$

- *Mzdová rovnice*

$$\tilde{W}_t = \frac{(1+r_{SSE})p(1-q)W_t^{MIN} + \gamma(1-\theta)P_t^Y (Y_t / L_t)}{(1+r_{SSE})[1-pq - (1-p)(r_{RR} + \varepsilon\Delta) + \gamma]}$$



Ekonomické modelování

$\Omega...$

	Trade union density			Bargaining coverage		
	1980	1990	1994	1980	1990	1994
Austria	56	46	42	98	98	98
Belgium	56	51	54	90	90	90
Denmark	76	71	76	69	69	69
Finland	70	72	81	95	95	95
France	18	10	9	85	92	95
Germany	36	33	29	91	90	92
Italy	49	39	39	85	83	82
Netherlands	35	26	26	76	71	81
Portugal	61	32	32	70	79	71
Spain	9	13	19	76	76	78
Sweden	80	83	91	86	86	89
United Kingdom	50	39	34	70	47	47
United States	22	16	16	26	18	18



Parametry mzdové rovnice

	Δ	Γ_{RR}	W^{MIN}	ur
France	...	0.14	0.25	-0.79
Germany	0.73	-2.10
Netherlands	0.13	0.75	...	-1.07
Spain	0.21	...	0.25	-0.68
United Kingdom	0.20	0.05	...	-0.79
United States	-0.40

van der Horst (2003), CPB



Odhad mzdové rovnice

$$\Delta w_t = 0.15 \left[0.5 p_t^{CPI} + 0.5 p_t^Y + (y_t - l_t) + 0.5 \Delta^W + 0.1 w_t^{MIN} \right] + \\ + 0.85 \Delta w_{t-1} - 0.06 (w_{t-1} - \bar{w}_{t-1})$$



Poptávka po práci

- Firmy*

$$\min \rightarrow C_t^F = C_t^Y + C_t^M = (P_t^L L_t + P_t^K K_t) + (P_t^M M_t)$$

$$Y_t^S = \left[\varpi^{1-\psi} (Y_t)^\psi + (1-\varpi)^{1-\psi} (M_t)^\psi \right]^{\frac{1}{\psi}}$$

...

$$C_t^F = \left[\varpi^{1-\psi} (Y_t)^\psi + (1-\varpi)^{1-\psi} (M_t)^\psi \right]^{\frac{1}{\psi}} \left[\varpi (c_t^Y)^{\frac{\psi}{\psi-1}} + (1-\varpi) (c_t^M)^{\frac{\psi}{\psi-1}} \right]^{\frac{\psi-1}{\psi}}$$



...*poptávka*

$$Y_t = \beta_t \left[\theta^{1-\varphi} (L_t)^\varphi + (1-\theta)^{1-\varphi} (K_t)^\varphi \right]^{\frac{1}{\varphi}}$$

$$c_t^Y = \frac{1}{\beta_t} \left[\theta (P_t^L)^{\frac{\varphi}{\varphi-1}} + (1-\theta) (P_t^K)^{\frac{\varphi}{\varphi-1}} \right]^{\frac{\varphi-1}{\varphi}}$$

$$P_t^L = W_t (1 + r_{SSE})$$

$$P_t^K = \left(\frac{P_t^I}{1 - r_{CIT}} \right) \left\{ (1 - r_{SUB} - r_{M2} - r_{CIT} r_{DEPR}) \left[r_{SCRAP} + ir - \pi_{t+1}^I \right] + \right. \\ \left. + r_{M2} \left[r_{SCRAP} + ir_{t-1}^L - \pi_t^I \right] - r_{CIT} \left[r_{SCRAP} + r_{M2} ir_{t-1}^L \right] \right\}$$

$$c_t^M = P_t^M$$



...poptávka

$$\tilde{L}_t = \theta Y_t (\beta_t)^{\sigma_\varphi - 1} \left(\frac{P_t^L}{C_t^Y} \right)^{-\sigma_\varphi}$$



Parametry poptávky...

	σ	(y-l)
France	0.12	1.00
Germany	0.48	1.00
Netherlands	0.33	1.00
Spain	0.27	1.00
United Kingdom	0.67	1.00
United States	0.92	1.00

van der Horst (2003), CPB



Odhad poptávky po práci

$$\Delta l_t = 0.11 \left[\frac{1}{4} \sum \Delta y_t - \frac{0.3}{4} \sum (\Delta p_{t-2}^L - \Delta p_{t-2}^Y) - 0.7(0.004) \right] + \\ + 0.89 \Delta l_{t-1} - 0.12 (l_{t-1} - \bar{l}_{t-1})$$



Nabídka práce

$$LF_t = r_{PR} POP_t$$

Míra nezaměstnanosti

$$ur_t = 100 \left(\frac{UN}{LF_t} \right) = 100 \left(1 - \frac{L_t}{LF_t} \right)$$



Sruktura QEPM

- *Domácnosti*
- *Firmy*
- *Trh práce*
- *Ceny*
- *Měnová politika*
- *Fiskální politika*
- *Zahraniční obchod*

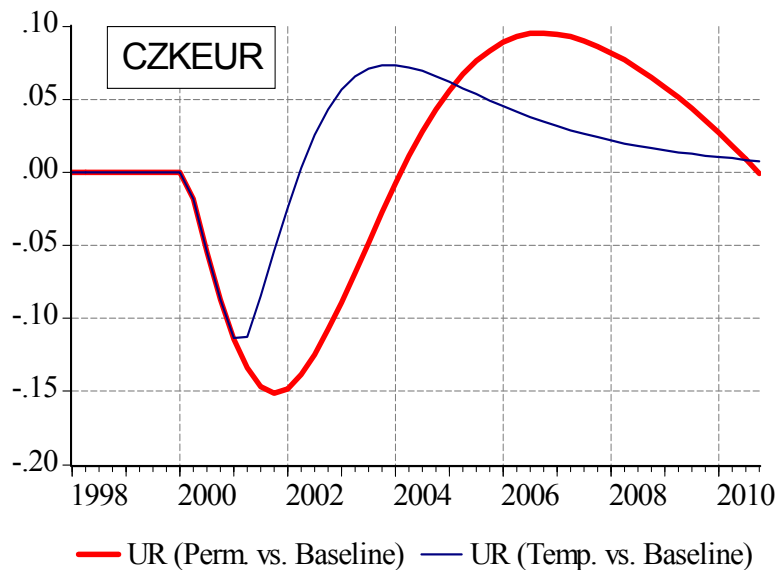
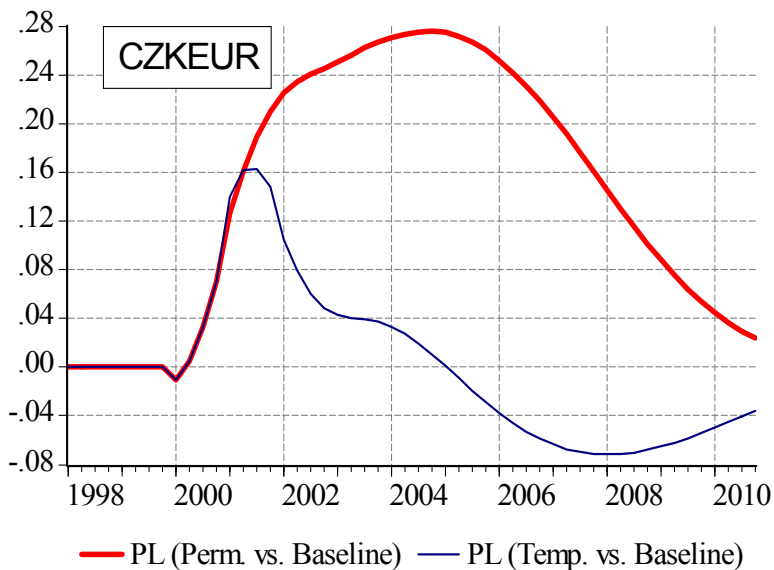


Simulace...

- *Proměnné*
 - *Cena práce*
 - *Míra nezaměstnanosti*
- *Šok (start v roce 2000)*
 - *Dočasný šok*
 - *Trvalý šok*
- *Faktory*
 - *Vnější (kurs, ropa, HDP EU a PPI EU...)*
 - *Vnitřní (starobní důchody, vládní výdaje, investiční výdaje, DPFO, DPPO, minimální mzda, úrokové sazby...)*

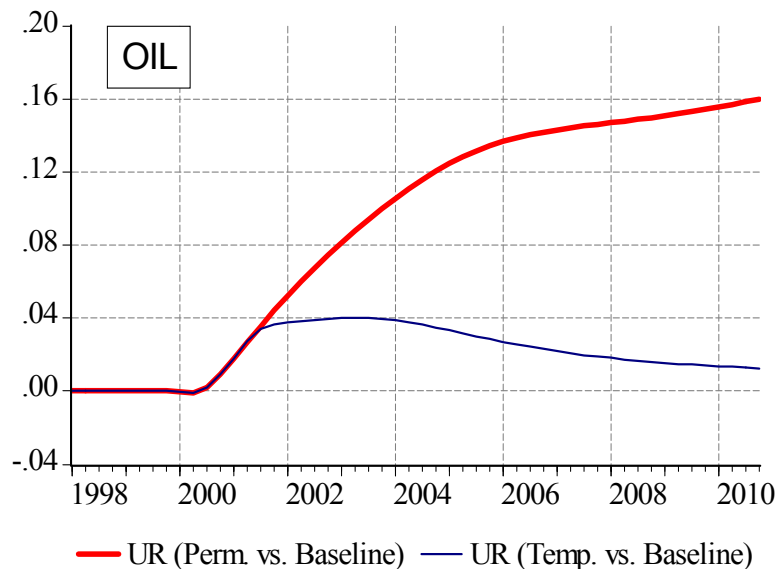
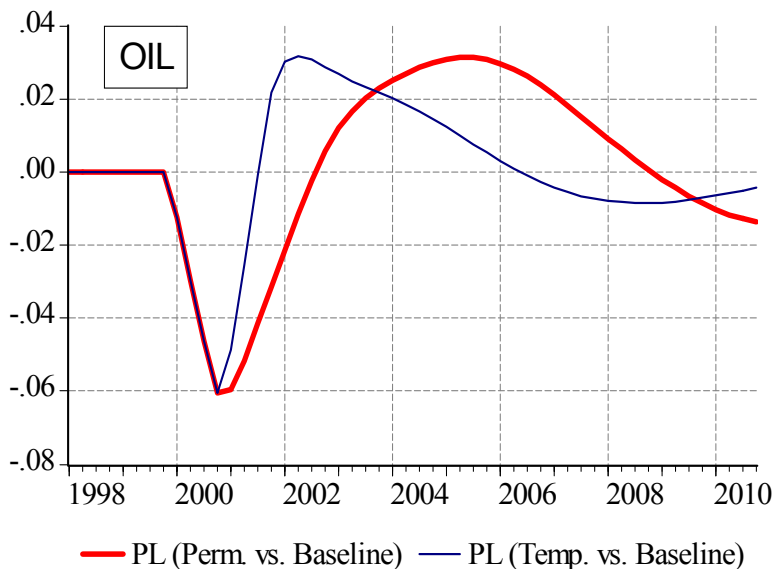


Depreciace CZK/EUR o 5 %



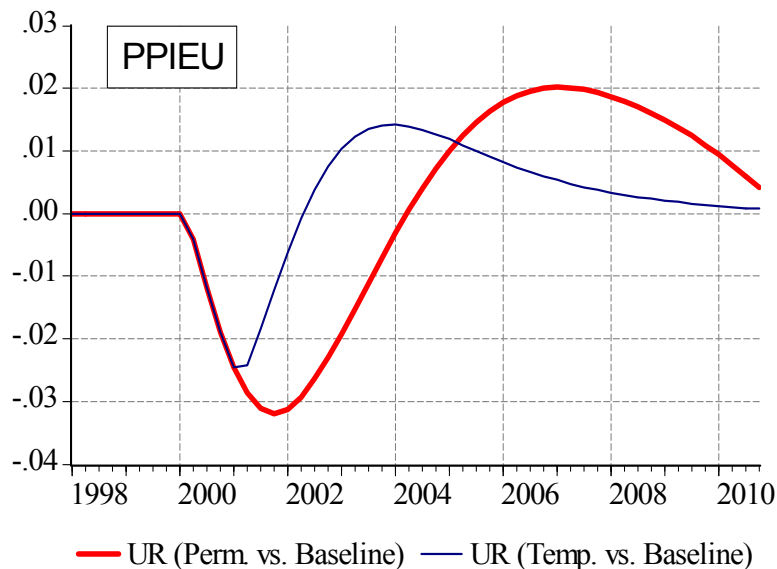
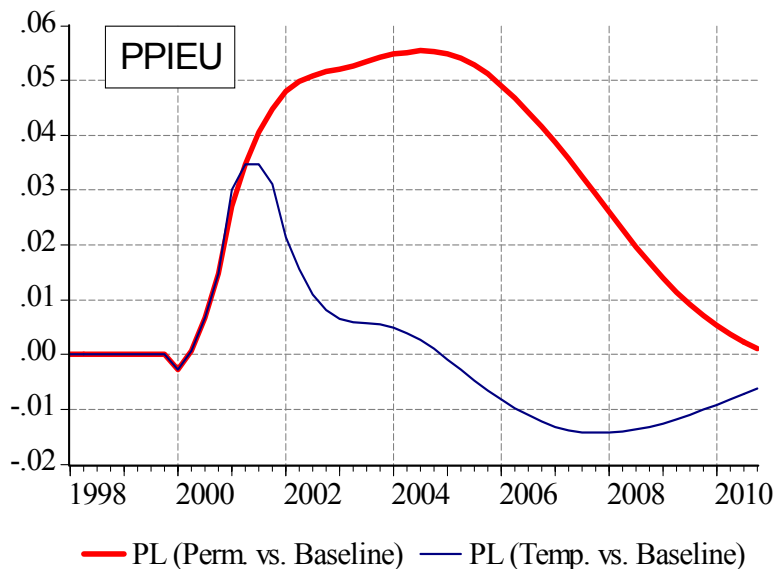


Zvýšení UK Brent o 20 %



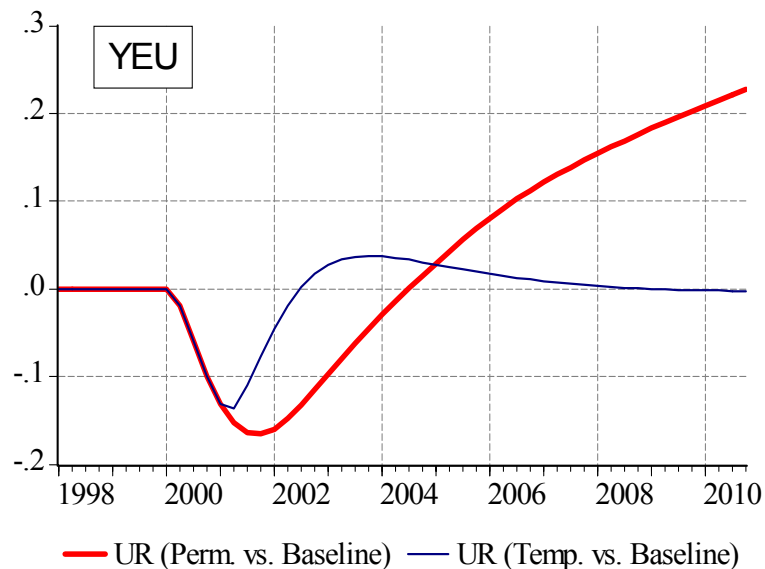
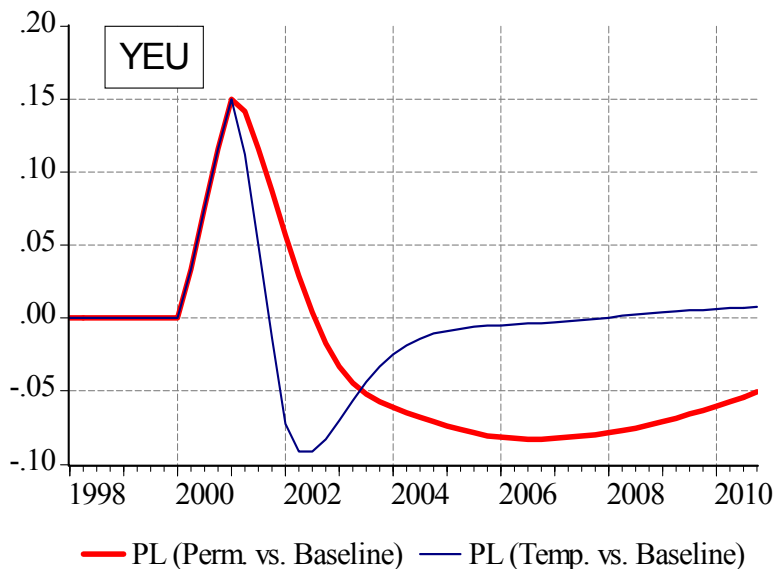


Zvýšení PPI v EU 15 o 1 %



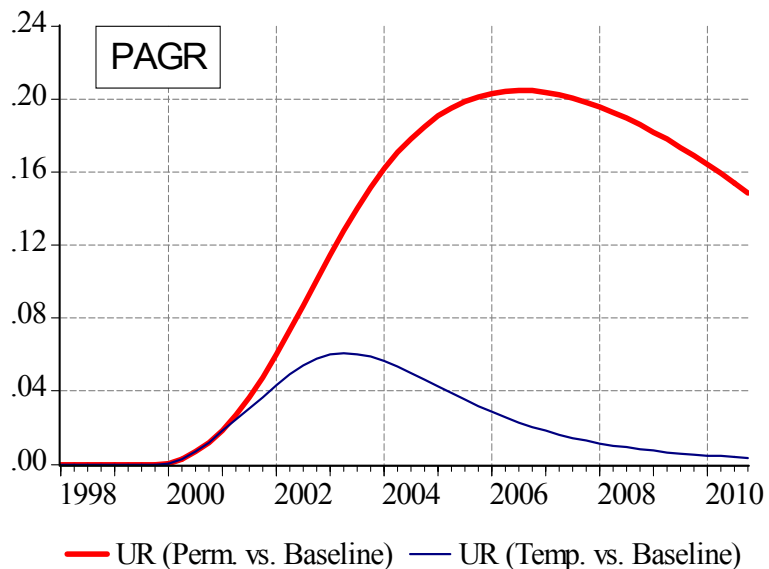
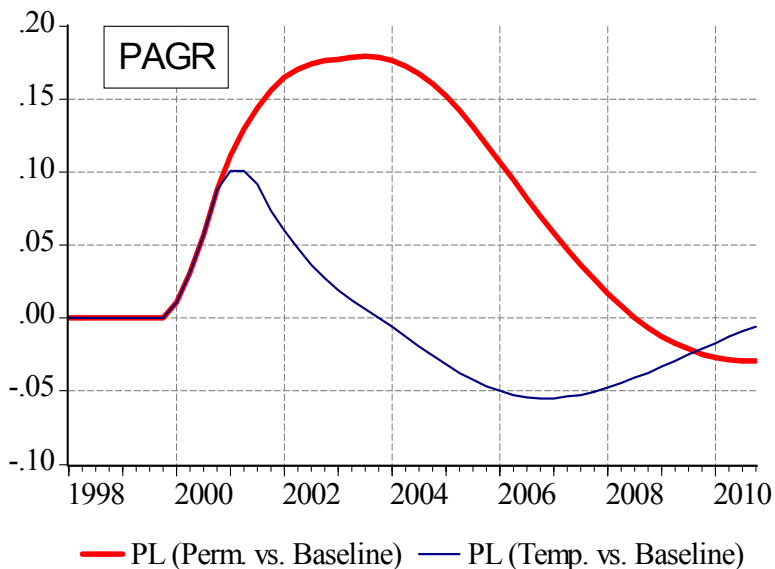


Zvýšení HDP v EU 15 o 1 %



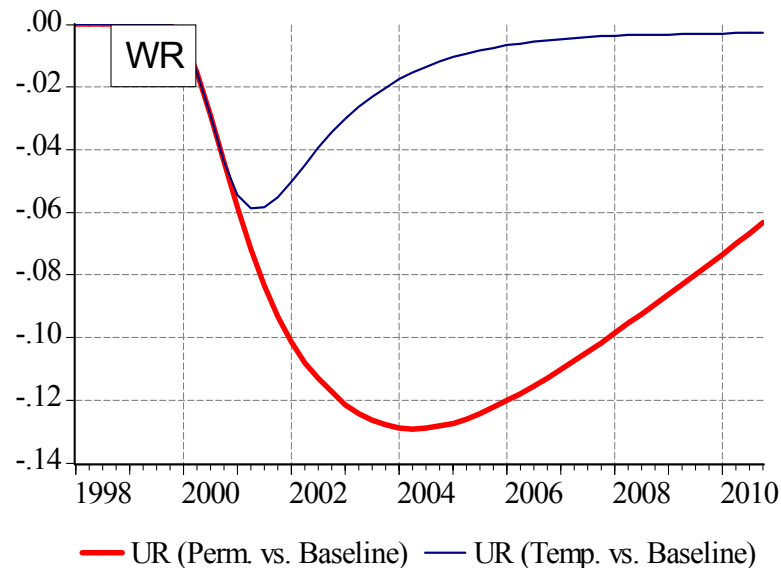
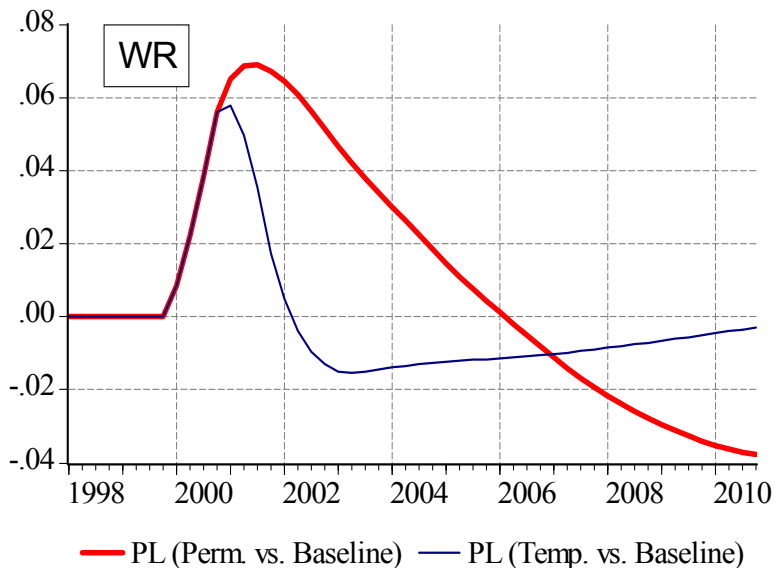


Zvýšení zemědělských cen o 10 %



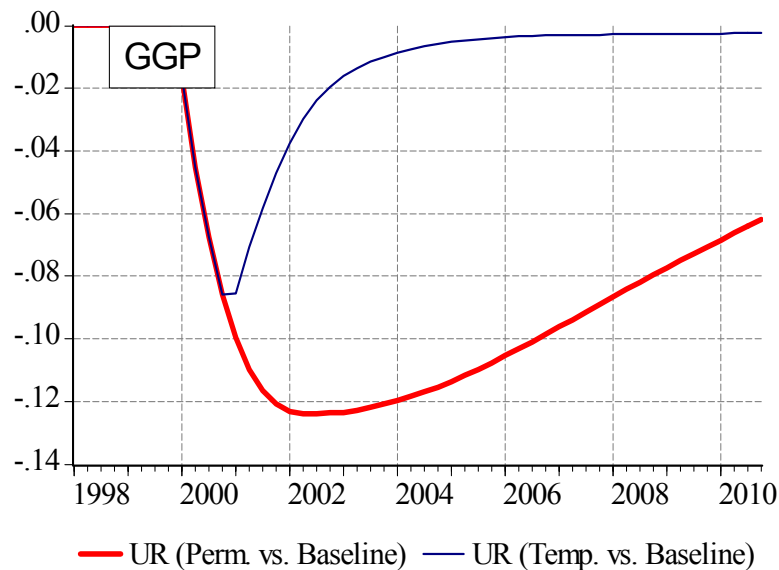
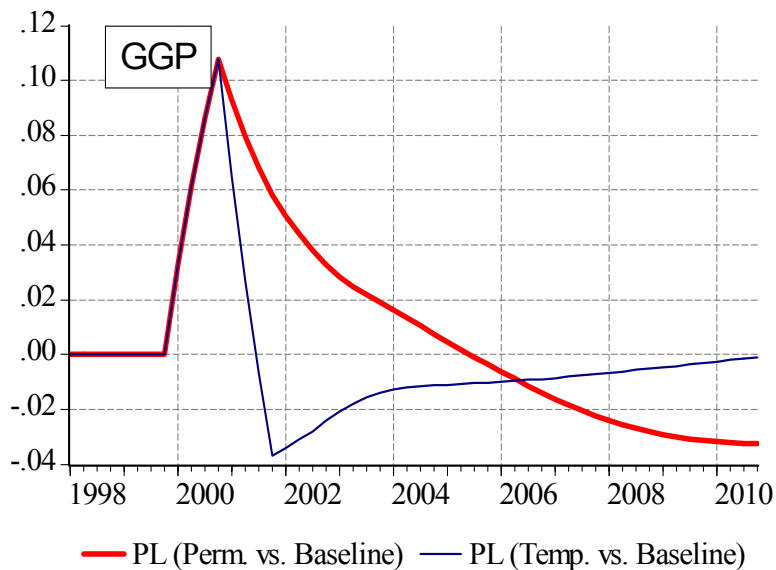


Zvýšení starobních důchodů o 10 mld



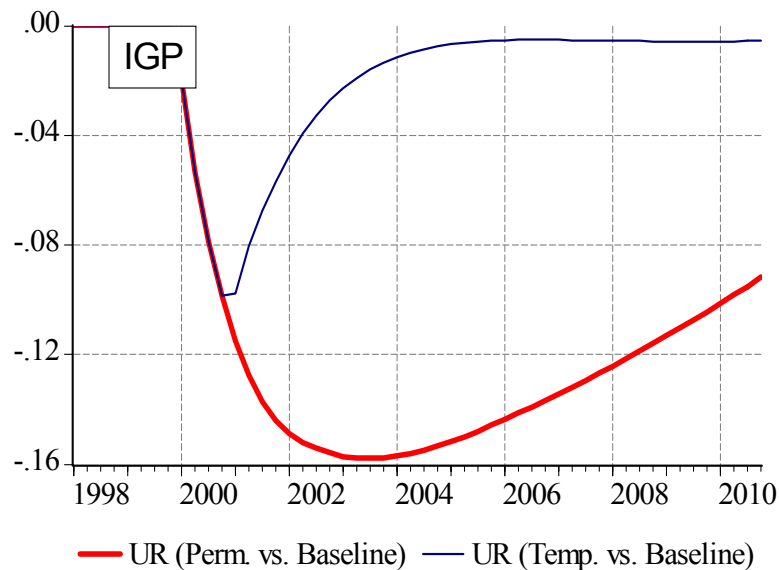
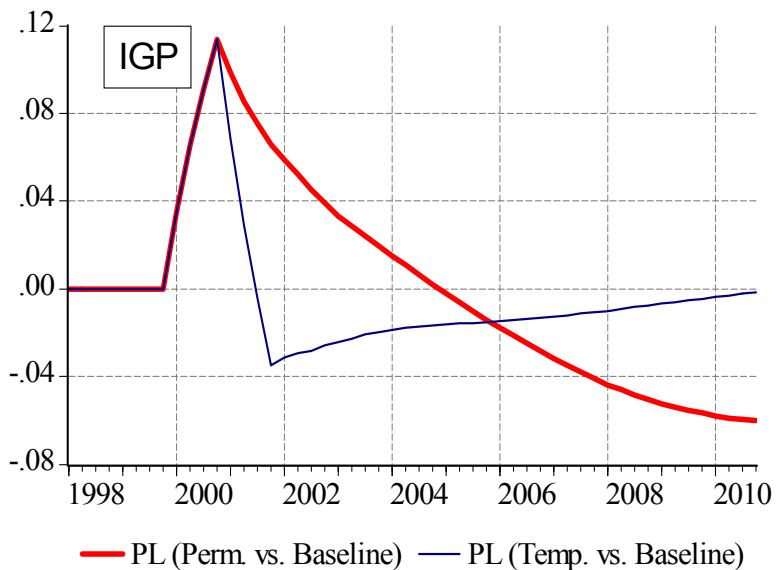


Zvýšení vládních výdajů o 10 mld



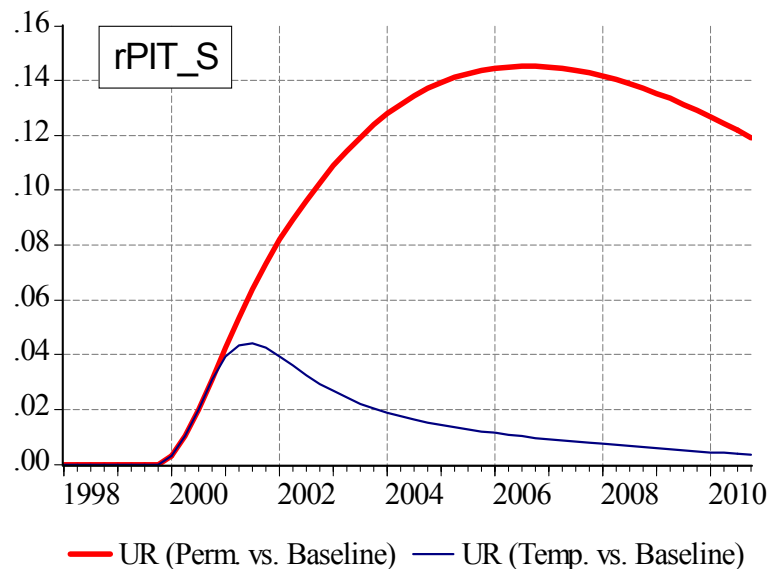
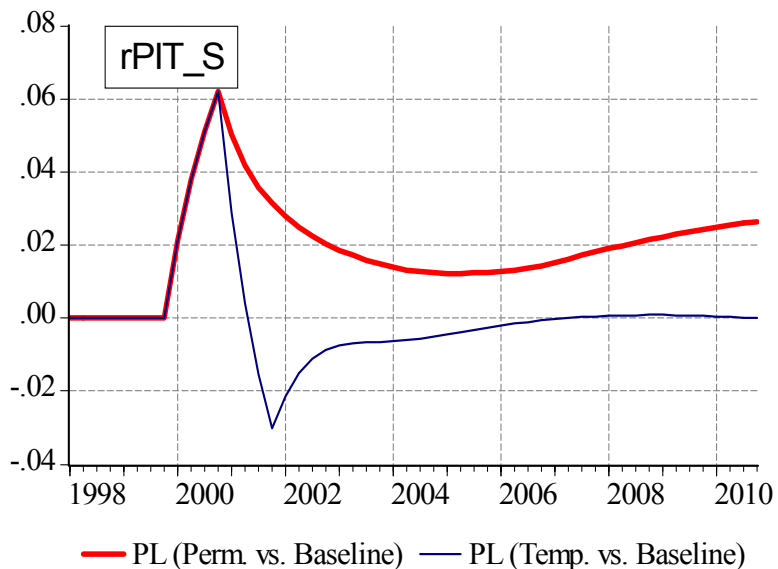


Zvýšení vládních investic o 10 mld



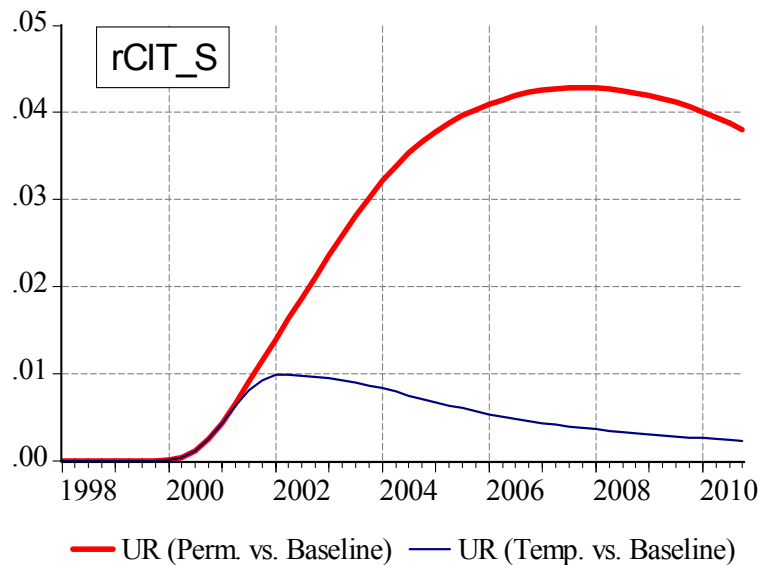
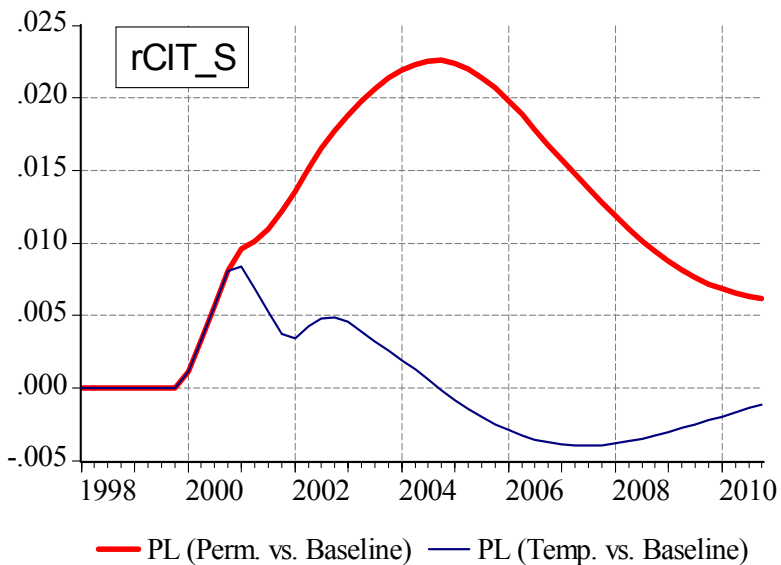


Zvýšení DPFO o 1 p.b.



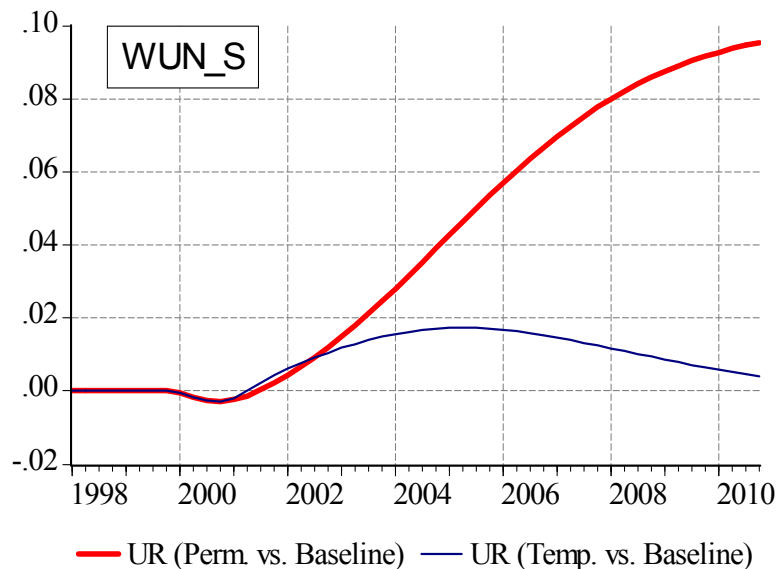
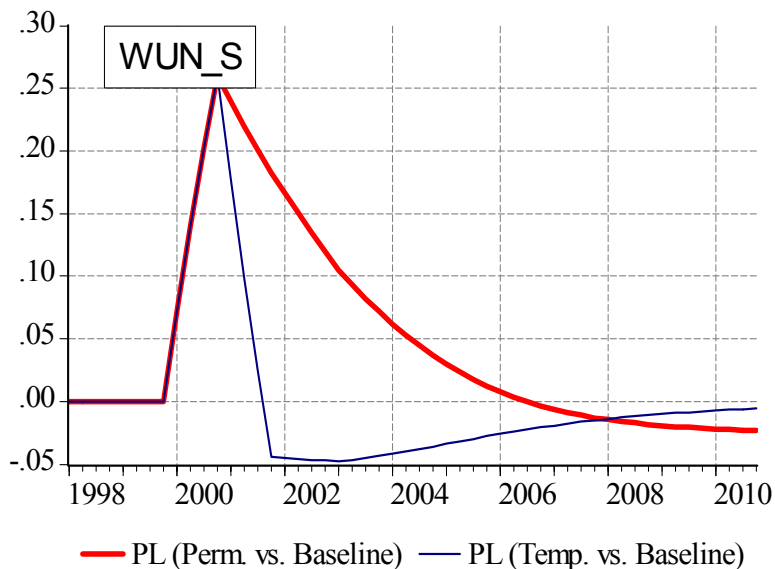


Zvýšení DPPPO o 1 p.b.



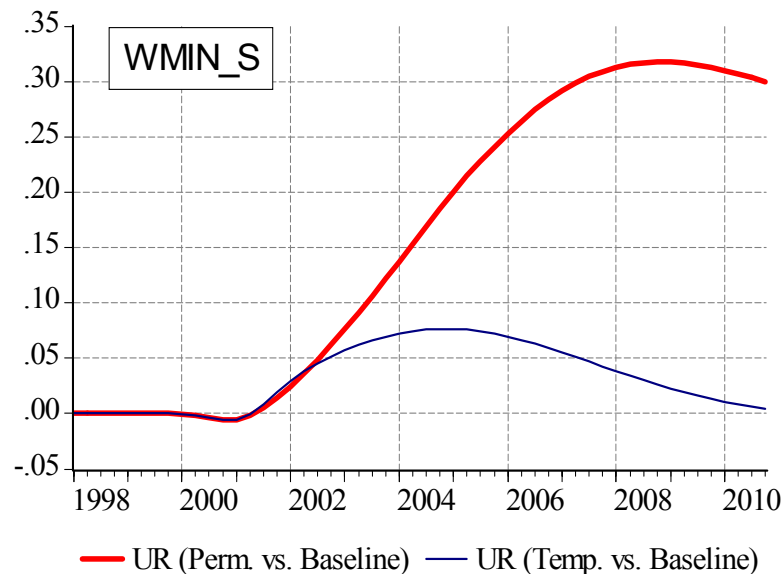
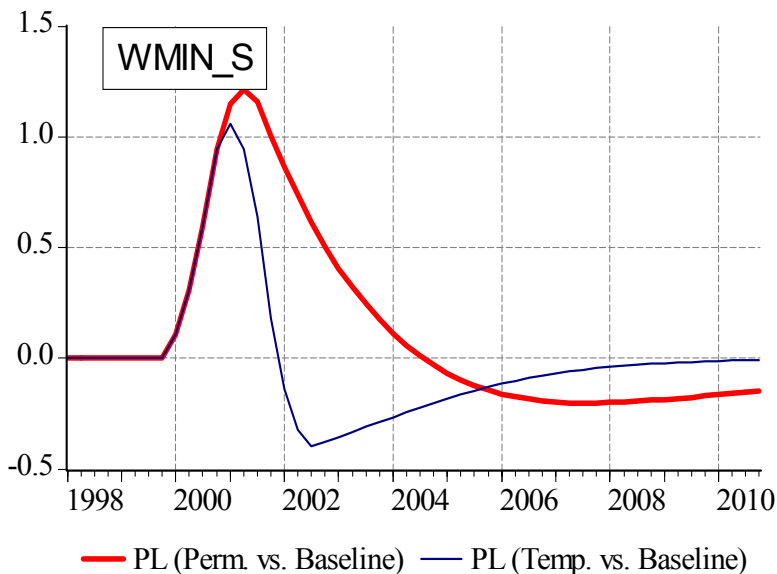


Zvýšení podpora v nezam. o 10 %



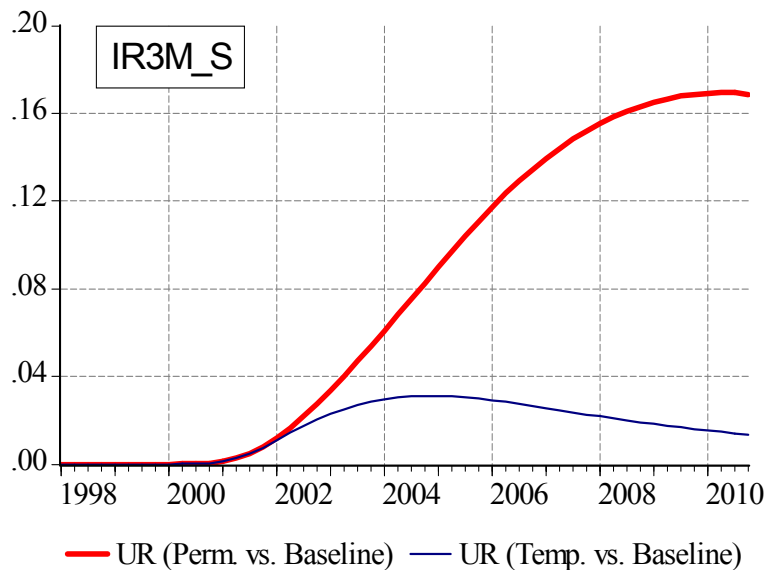
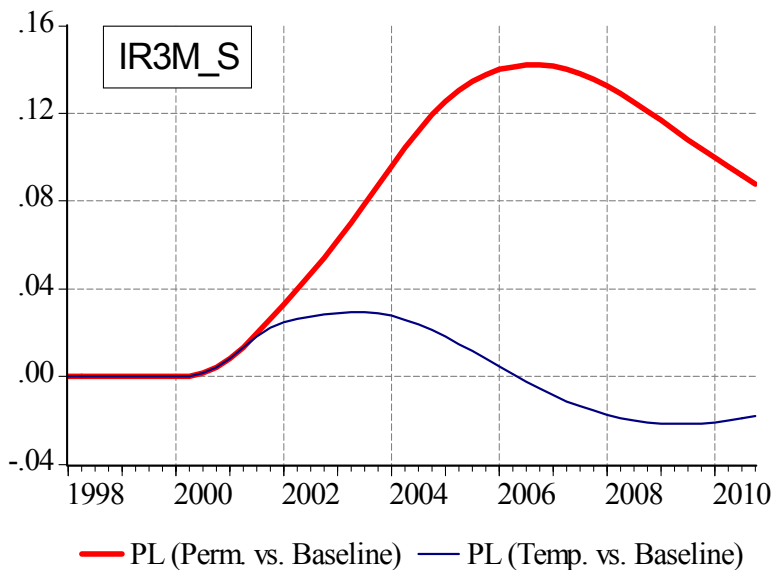


Zvýšení minimální mzdy o 10 %





Zvýšení krátkých sazeb o 1 p.b.





Trh práce a ekonomický růst

$$\Delta ur_t = \Delta lf_t - \Delta l_t$$

$$\Delta l_t = \Delta y_t - \sigma (\Delta p_t^L - \Delta c_t^Y) + (\sigma - 1) \kappa_2 \approx 0$$

$$\Delta y_t = \sigma (1 - \theta) \Delta p_t^L + \kappa_2 \dots = 2.25$$

$$\sigma = 0.3, \theta = 0.5, \Delta p_t^L = 5\%, \kappa_2 = 1.5\%$$



Děkuji za pozornost