Appendix (suggested to be published as supplementary online material)

In the Appendix, we first simulate our model by assuming that the consumption tax rate levied on housing purchases remains constant at its initial steady-state level. This enables us to isolate the effects of an increase in the consumption tax rate for regular consumption goods from those resulting from an increase of the tax rate on housing purchases. Second, we perform the same policy experiments conducted in Core in the main text in the periphery countries to show that results are analogous.

Constant tax on consumption goods: The consumption tax rate now has to be increased by a bit more (relative to the baseline simulation in the main text) because its base has now decreased. Figures 6 to 9 are the analogues to Figures 1 to Figure 4 presented in the main text. The long-run outcome of this simulation is presented in brackets in Table 3. We briefly addressed the differences in the main text.

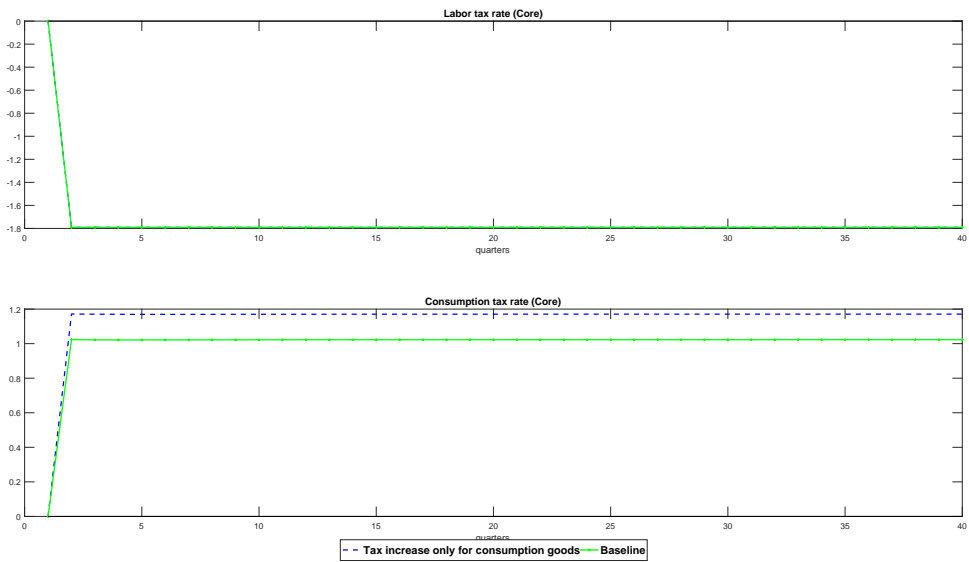Figure 6: Changes in fiscal policy instruments (alternative VAT simulation)

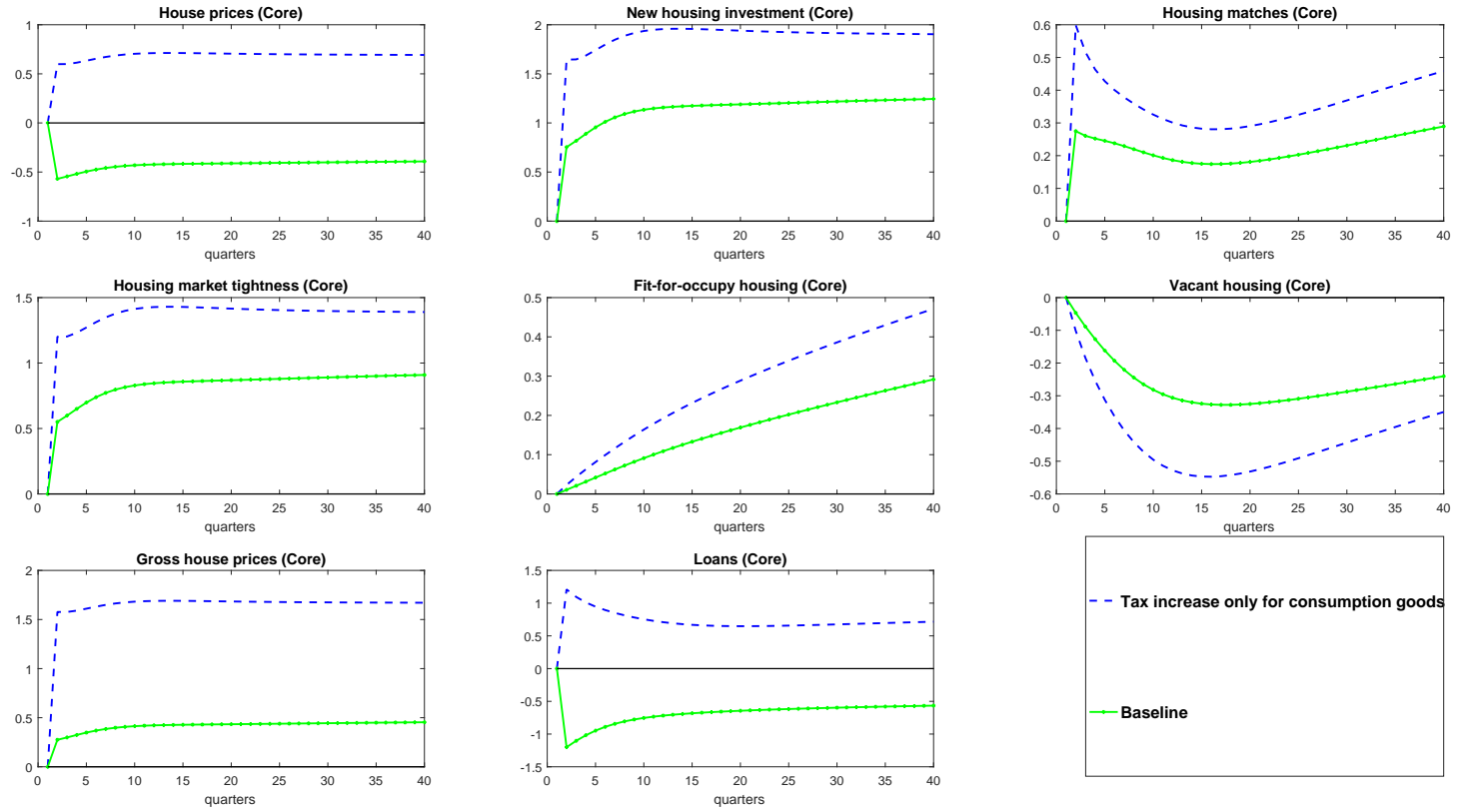Figure 7: Implications on housing market (alternative VAT simulation)

Figure 8: Implications on disaggregated housing market (alternative VAT simulation)
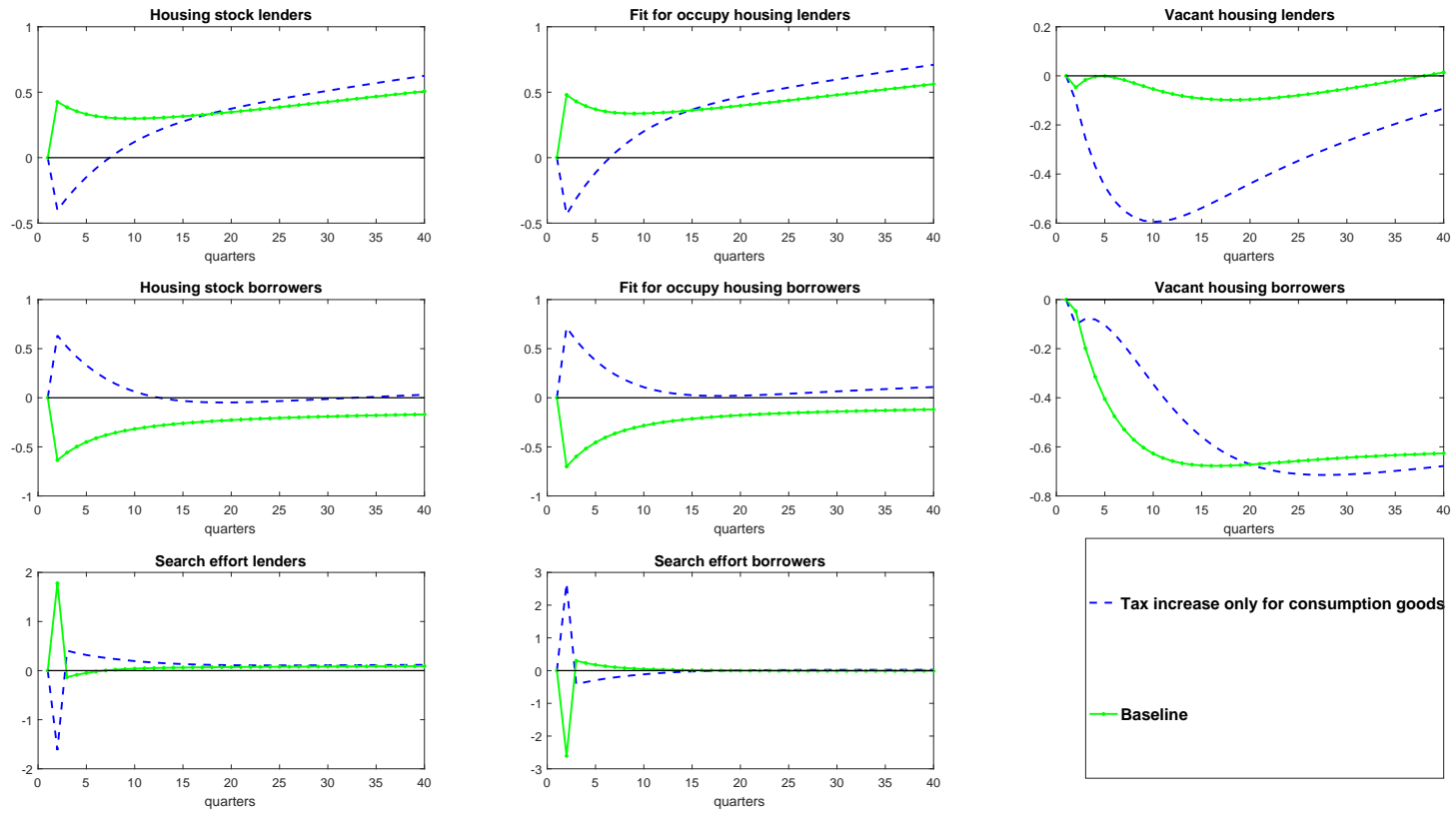

Housing stock lenders

Fit for occupy housing lenders

Vacant housing lenders

Housing stock borrowers

Fit for occupy housing borrowers

Vacant housing borrowers

Search effort lenders

Search effort borrowers

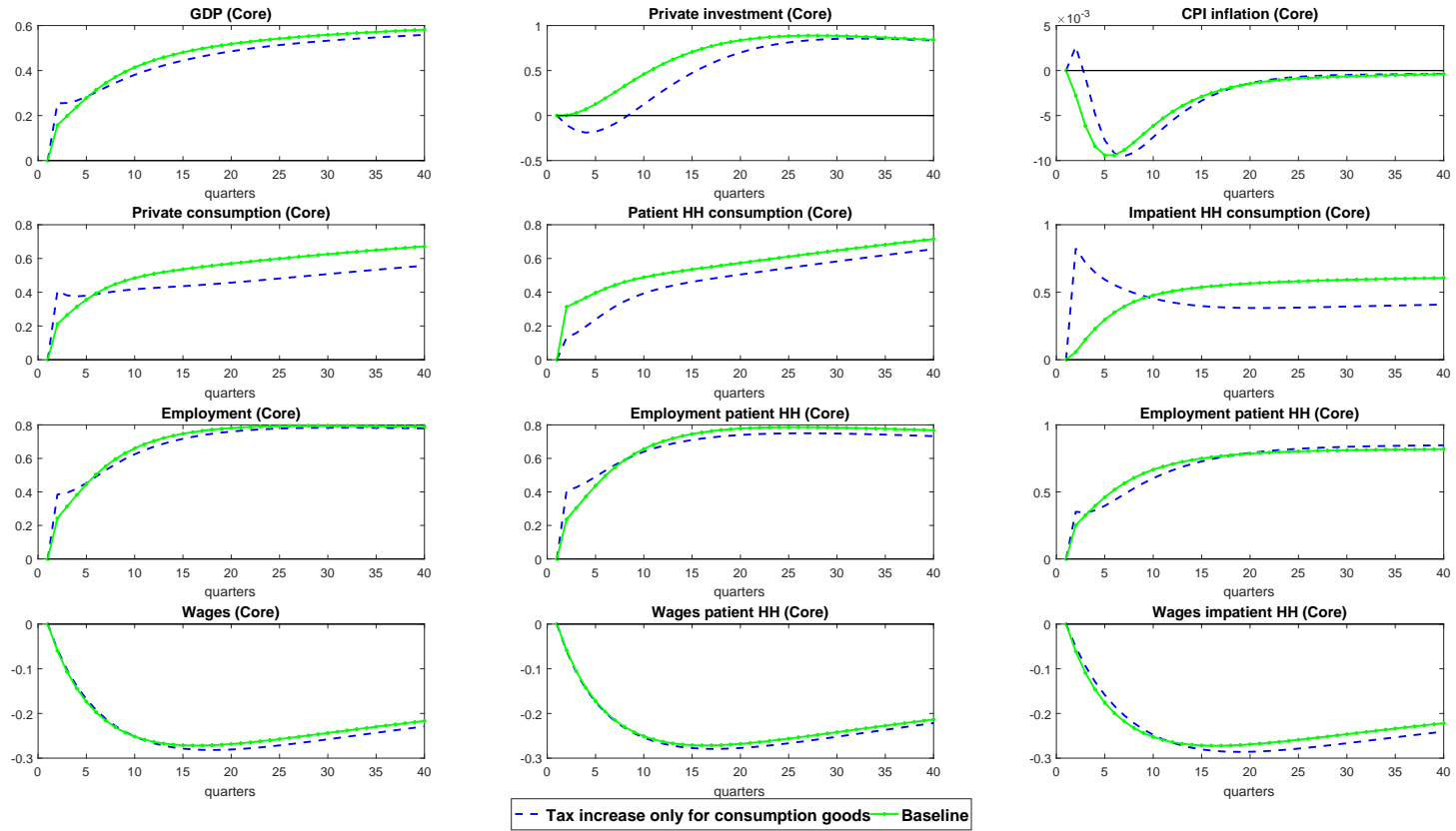- - - Tax increase only for consumption goods

—— Baseline

Figure 9: Implications on Core macro variables (alternative VAT simulation)

Policy experiment in Periphery When conducting the same policy experiments that we have simulated for Core in the main text in Periphery, the results are analogous. As we can see in Figure 10, the changes in the tax instruments are somewhat larger because of different parametrization of Periphery and, thus, the resulting positive effects are muted relative to conducting the simulations in Core (see Figures 11 to 13 as well as Table 7). Nevertheless, this also translates into analogous welfare effects and the same welfare ranking (see Table 8).

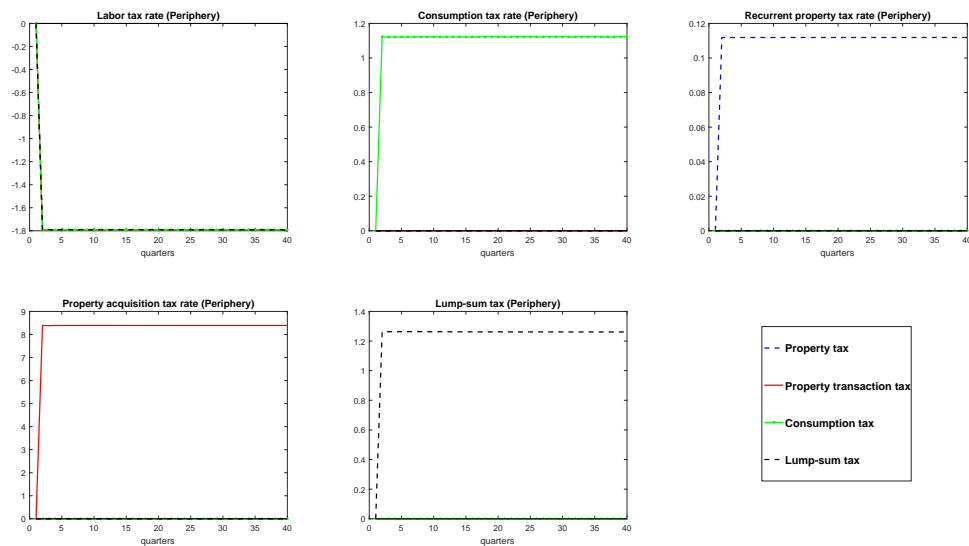Figure 10: Changes in fiscal policy instruments in Periphery

Table 7: Permanent effects of labor tax reduction with different financing instruments in Periphery

| | Financing instrument | | | |
	Property taxes	Property transaction taxes	Consumption taxes	Lump-sum taxes
Long-run changes in				
GDP	0.48	0.45	0.39	0.54
Consumption	1.42	1.51	0.81	1.16
...of lenders	1.52	0.80	1.01	0.80
...of borrowers	1.33	2.12	0.63	1.48
Investment	0.66	0.63	0.54	0.75
Ivestment in housing	-2.13	-3.16	0.85	0.85
Net labor income P	3.97	4.26	3.82	4.25
Net labor income I	4.05	3.74	3.97	3.98
Wages	-0.19	-0.18	-0.15	-0.21
...of lenders	-0.18	-0.23	-0.14	-0.24
...of borrowers	-0.19	-0.13	-0.17	-0.19
Employment	0.85	0.81	0.70	0.96
...of lenders	0.80	1.13	0.60	1.13
...of borrowers	0.89	0.53	0.78	0.82
Loans	-2.40	-11.09	-0.68	0.92
Housing (lenders)	-1.17	-1.39	1.19	0.52

| | **Financing instrument** | | | |
	Property taxes	Property transaction taxes	Consumption taxes	Lump-sum taxes
Housing (borrowers)	-1.71	-2.78	0.05	0.64
Net house prices	-0.58	-8.35	-0.71	0.23

Notes: Table shows deviations of final relative to initial steady-state values in per cent (percentage points for rates and ratios). In brackets, we report the simulation results when assuming consumption tax rates on housing purchases to be fixed (as explained in the main text).

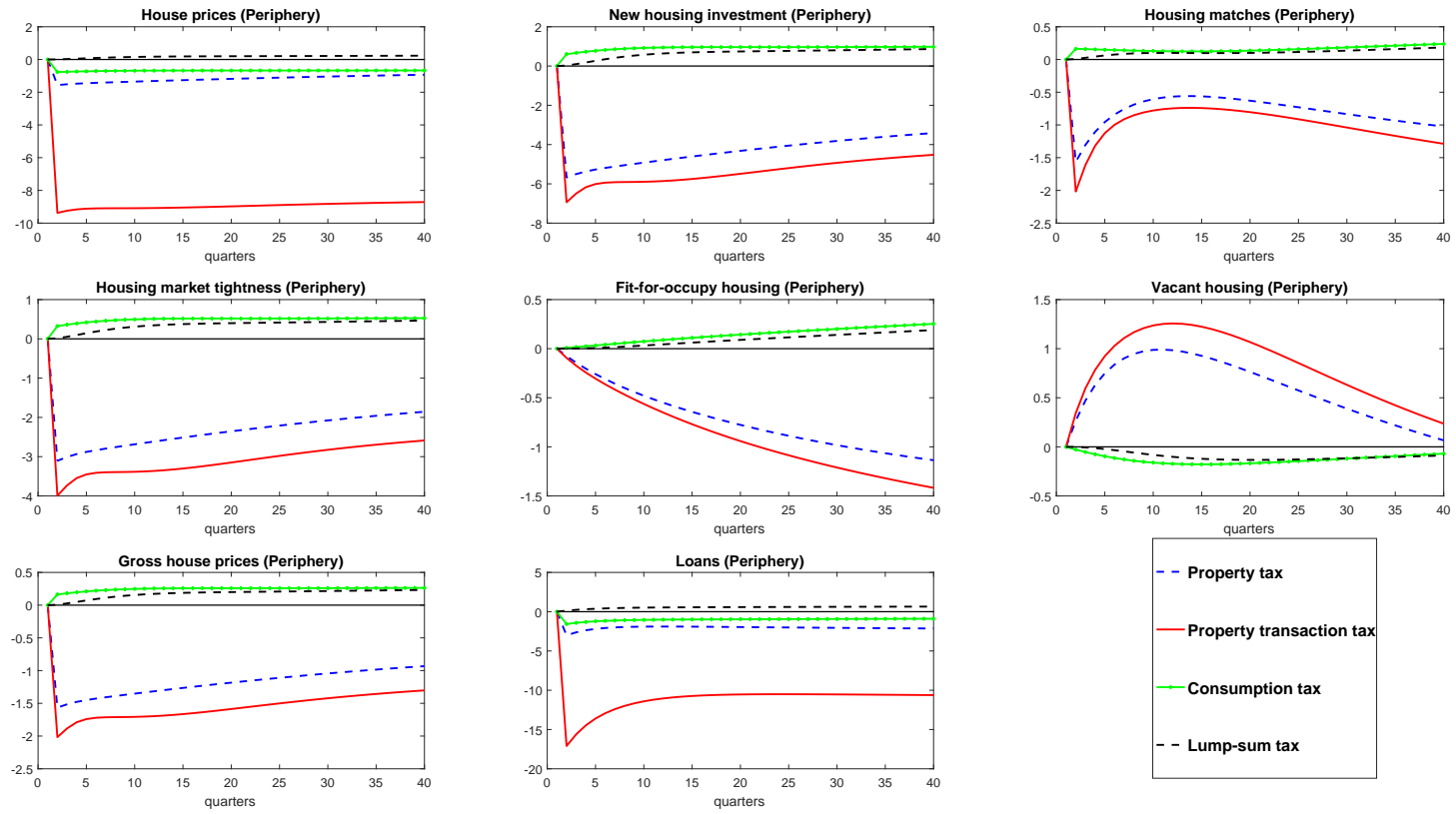Figure 11: Implications on housing market in Periphery

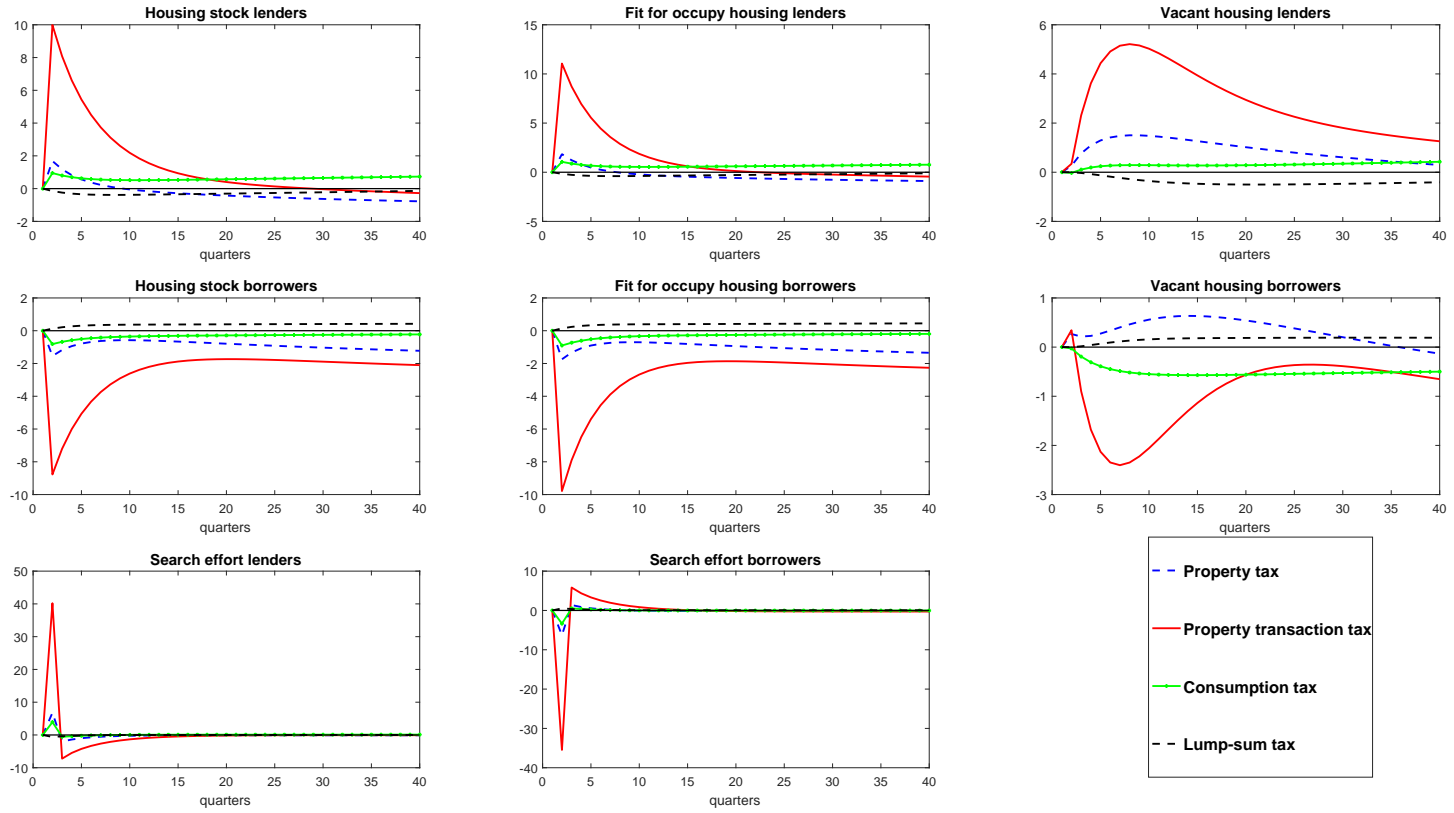# Figure 12: Disaggregation on housing market in Periphery

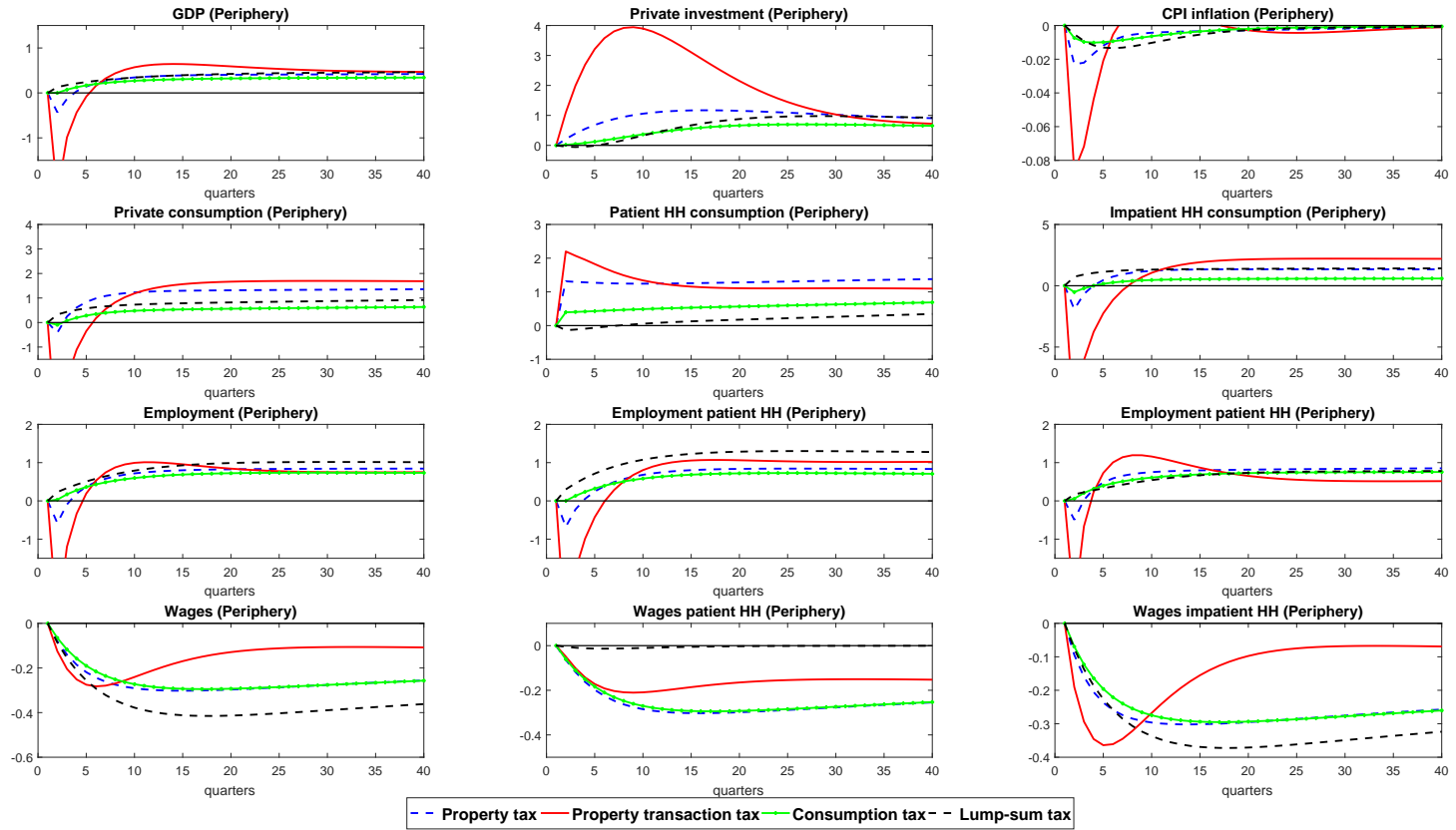Figure 13: Implications on Core macro variables in Periphery

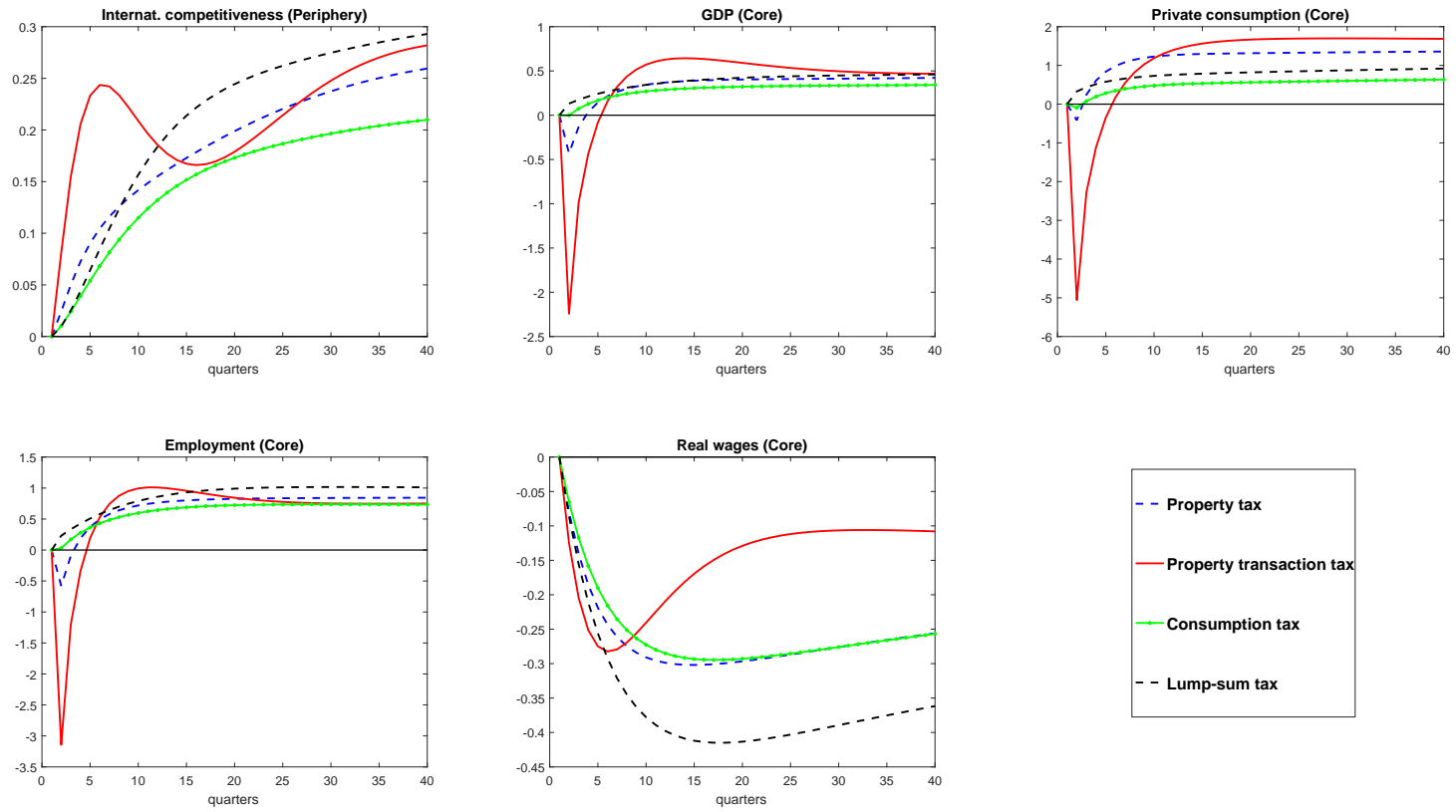Figure 14: Implications on Periphery macro variables in Periphery

Table 8: Welfare effects of labor tax reduction with different financing instruments in Periphery

| | Financing instrument | | |
	Property taxes	Property transaction taxes	Consumption taxes
Long-run welfare effects...			
ce^l	0.78	-0.13	1.24
ce^b	0.34	0.82	0.36
ce	0.54	0.38	0.77
...including transition			
ce^l	0.81	0.60	0.86
ce^b	0.41	0.09	0.18
ce	0.60	0.33	0.49

Notes: Table presents steady-state welfare gains/losses after the reform measures in terms of how much of initial steady-state consumption (in per cent) a household of type $i = l, b$ would be willing to give up in order to be indifferent between living in the original or in the alternative regime. We also calculate the welfare gains/losses including the transition paths. Total economy-wide welfare gains/losses are define as $ce = (1 - \mu)ce^l + \mu ce^b$, where μ is the share or borrowers.

Simulations in a singe-country model without nominal frictions: As mentioned in the main text, it could be argued that the qualitative results regarding the (domestic) effects of property taxation we derive in this paper could very well be obtained by using a simpler model of a single (closed) economy with no nominal rigidities and no financial intermediaries. In order to check the differences that we get from the more complicated model, we re-ran all the simulations in a closed-economy model without

these frictions. As we can see in Figure 15 and 16, the effects on the housing market are indeed basically the same.

This also holds for most macro variables, with some exceptions, however (see Figure 17). Because there is no price and wage stickiness in this model, there is no CPI inflation in this model. In addition, wages for both, patient and impatient households drop immediately. They do so sufficiently to have no short to medium-term negative employment effects, which is different from the model in which wages adjust sluggishly. Furthermore, the absence of investment adjustment costs makes private investment (in the regular sector) jump immediately and strongly. This overcompensates for the negative output effect we observe in our full model on impact resulting from the (relatively strong) decrease in private consumption. Hence, GDP is affected positively immediately in the simplified real model.

Figure 15: Implications on housing market in a real closed-economy framework
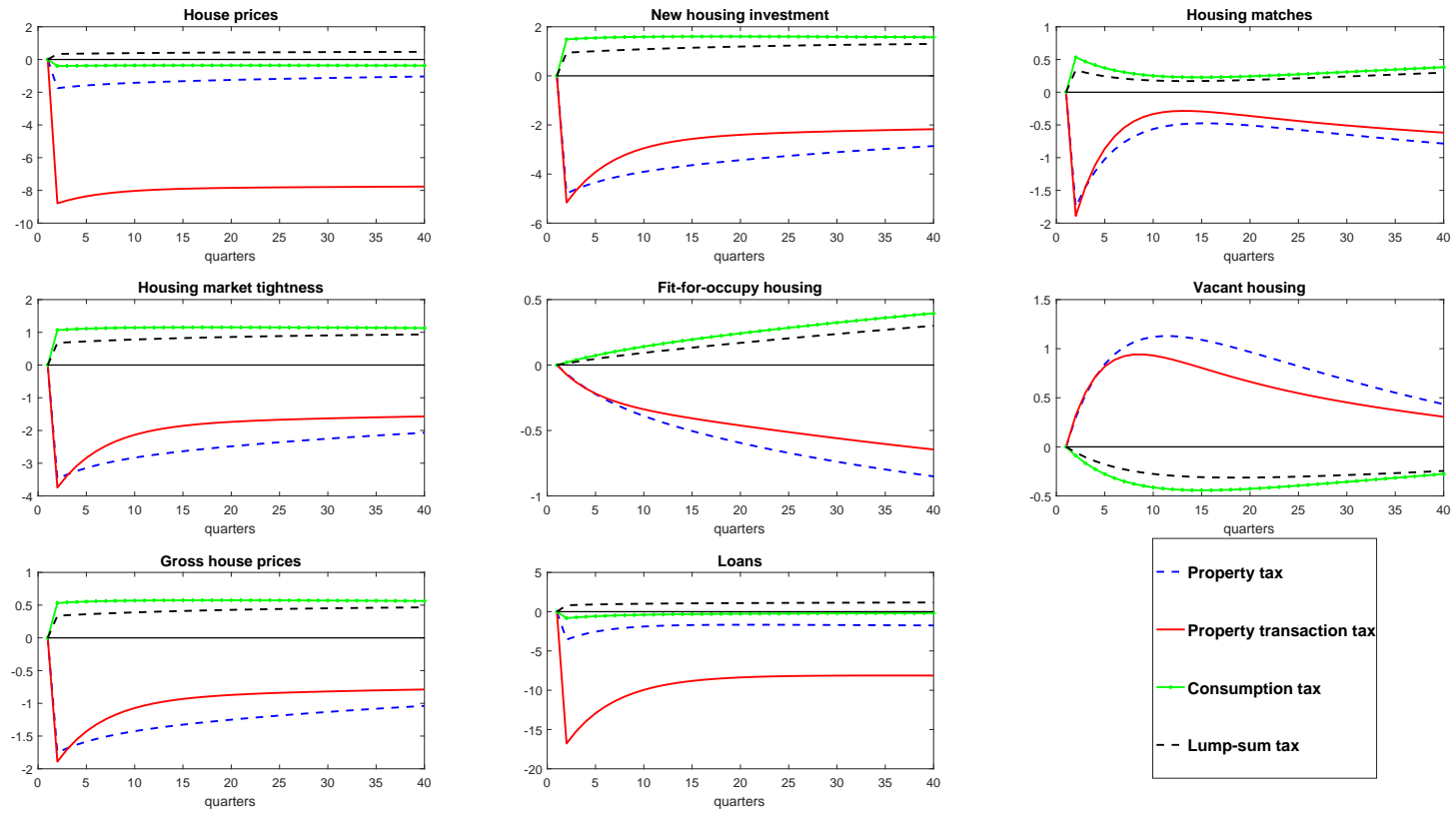
Figure 16: Disaggregation on housing market in a real closed-economy framework
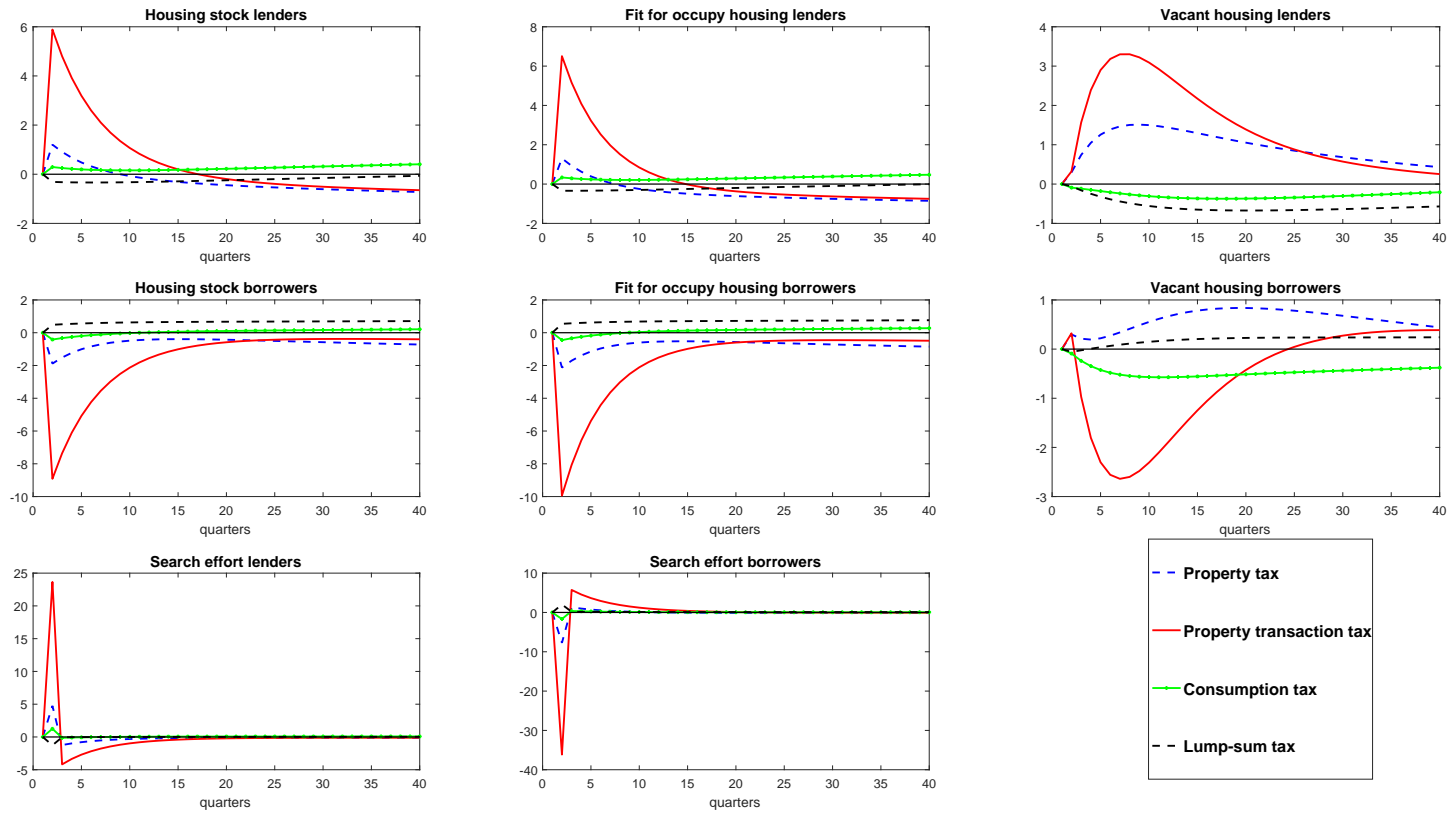
Figure 17: Implications on macro variables in a real closed-economy framework

GDP · **Private investment** · **Private consumption** · **Patient HH consumption** · **Impatient HH consumption** · **Employment** · **Employment patient HH** · **Employment patient HH** · **Wages** · **Wages patient HH** · **Wages impatient HH**

- - Property tax — Property transaction tax — Consumption tax - - Lump-sum tax