

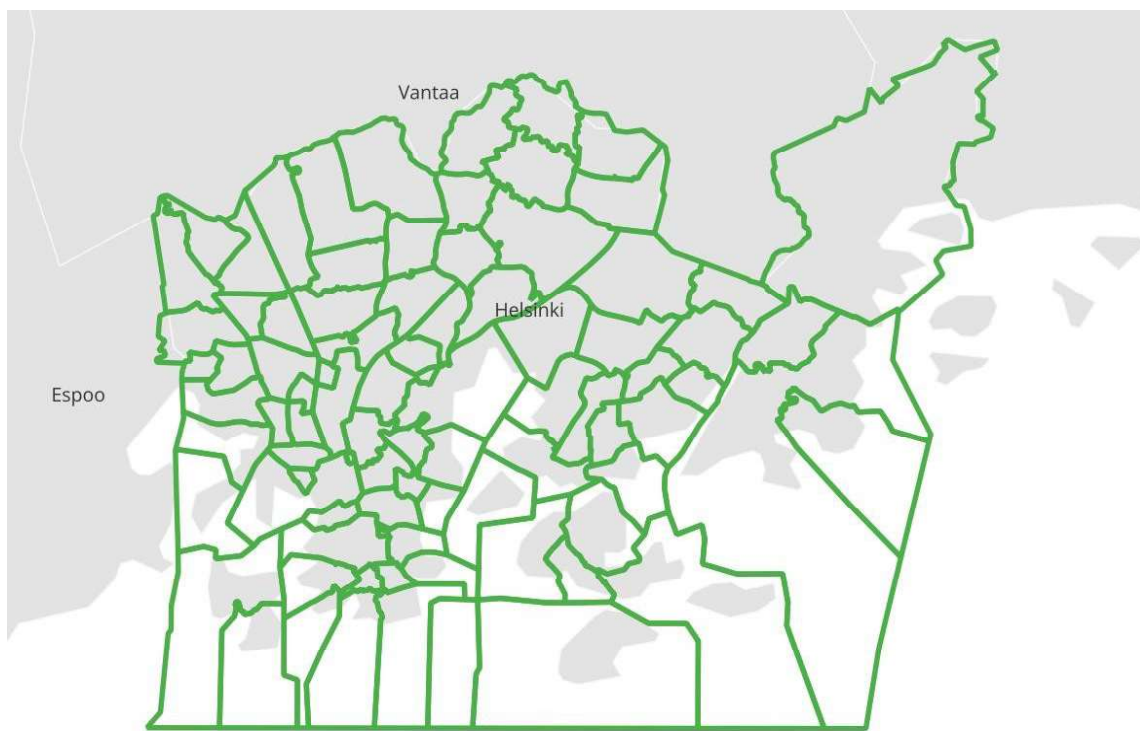
Tax Compliance in the Rental Housing Market: Evidence from a Field Experiment

Online Appendix

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A Additional tables and figures

Figure A1: An illustration of the block design for Helsinki.



Notes: Map shows zip-code areas in Helsinki that are used to create the high-, low-intensity blocks as well as control blocks.

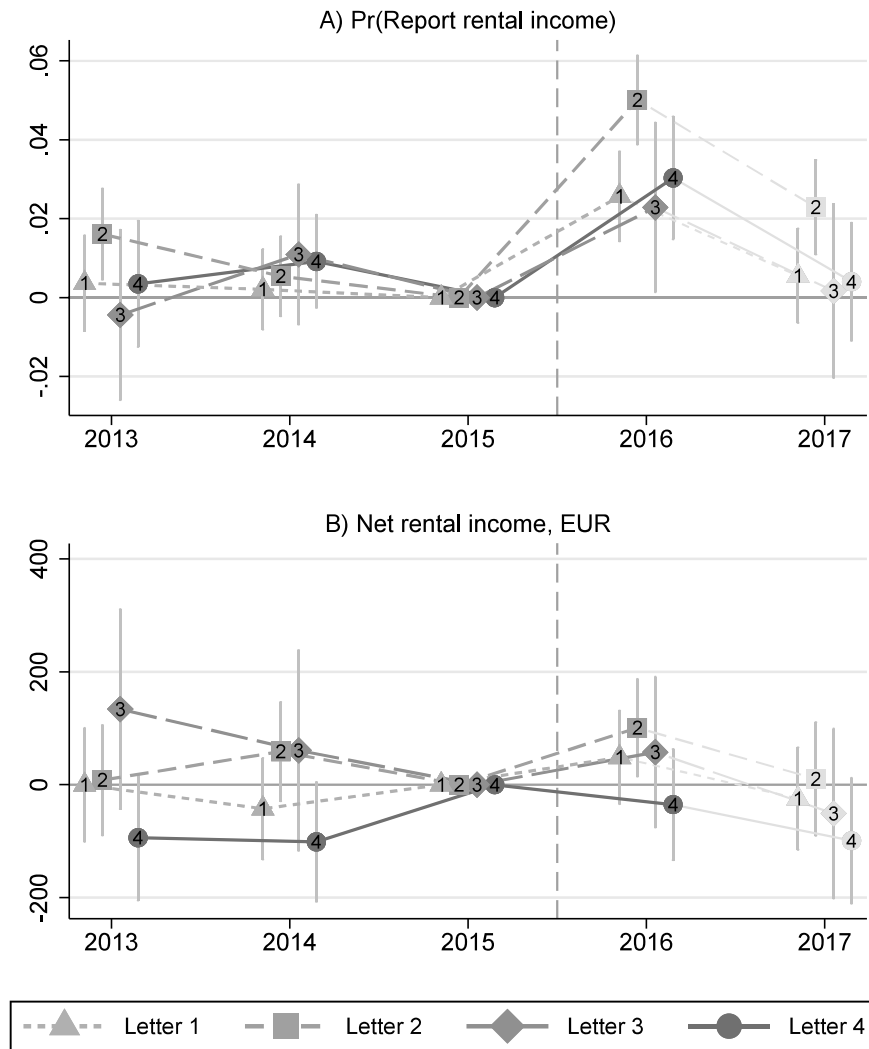
Source: Contains data from the Map Service of the City of Helsinki Regional Divisions database (9/2025) and data from the National Land Survey of Finland Division into Administrative Areas Database (1/2023).

Table A1: Summary statistics for key variables 2013–2017.

	Obs	Mean	Std.Dev.	Median	1st percentile	99th percentile
Reported rental income (0/1)	359699	0.737	0.440	1	0	1
Net rental income	359699	3582.4	4818.3	2410	-2039.4	22998
Gross rental income	359699	6688.3	7809.5	5165	0	38031.0
Deductions	359699	3105.9	4155.0	2080.66	0	20171.5
Apartments bought	356415	0.0745	0.2811	0	0	1
Apartments sold	356415	0.0604	0.2524	0	0	1
Suspected rental apartments in 2015	359699	1.204	0.589	1	1	4
Age	359699	57.9	16.0	59	25	91
Female	359699	0.532	0.499	1	0	1

Notes: Table shows summary statistics for suspected landlords in our control and treatment blocks for years 2013-2017.

Figure A2: Reporting of rental income in letter groups in areas outside the block design.



Notes: Figures show regression coefficients on treatment letter by year dummies (ref. no letter and year 2015) for data outside the block design. Controls include individual fixed effects, year fixed effects and additional enforcement measures related with the treatments. Vertical lines indicate 95% confidence intervals (clustering at postcode level). Data for 2017 is shown in gray to indicate that the experimental design no longer holds in that year.

Table A2: Effects of treatment letters in areas outside the block design.

Dep. Var.	Reporting rental income (0/1)	Net rental income
Letter 1	0.0239 (0.00576)	61.75 (43.97)
Letter 2	0.0433 (0.00610)	79.41 (43.84)
Letter 3	0.0210 (0.0107)	2.151 (80.14)
Letter 4	0.0275 (0.00844)	33.03 (54.21)
Baseline mean	0.744	2913.7

Notes: Table shows DiD estimates of the effects of treatment letters (ref. no letter) for data outside the block design using data from years 2013-2016. Sample size is 140,046. Controls include individual fixed effects, year dummies and additional enforcement measures related to the treatment letters. Standard errors clustered at postcode area level (1022 clusters) are in parentheses.

Table A3: Poisson estimates for proportionate effects of treatment letters.

	Gross rental income	Deductions	Net rental income
Letter 1	0.00496 (0.0105)	0.00147 (0.0150)	0.00767 (0.0129)
Letter 2	0.012 (0.0105)	0.00795 (0.0154)	0.00627 (0.0129)
Letter 3	0.0163 (0.00891)	0.000888 (0.0127)	0.0202 (0.0111)
Letter 4	0.0228 (0.00690)	0.0267 (0.00988)	0.0196 (0.00835)
Baseline mean	7307	3304	4002

Notes: Table shows Poisson Pseudo Maximum Likelihood DiD estimates of the proportionate effects of treatment letters (ref. no letter) using data from years 2013–2016. Sample size is 289,363. Controls include individual fixed effects, treatment block by year dummies and additional enforcement measures related to the treatments. Standard errors clustered at postcode area level (263 clusters) are in parentheses.

Table A4: Effects of treatment letters on investment portfolio.

	Apartments bought	Apartments sold	Buy shares 0/1	Sell shares 0/1	Buy shares EUR	Sell shares EUR
Letter 1	-0.00469 (0.00473)	-0.00029 (0.00563)	-0.00267 (0.00591)	-0.00343 (0.00737)	-438.6 (395.2)	-18.31 (575.5)
Letter 2	-0.00185 (0.00502)	0.00371 (0.00607)	0.00111 (0.00600)	-0.00165 (0.00740)	91.08 (432.8)	566.9 (617.1)
Letter 3	0.00369 (0.00438)	0.00049 (0.00519)	-0.00273 (0.00484)	-0.00244 (0.00603)	-523.3 (325.4)	259.9 (487.4)
Letter 4	3.57E-05 (0.00330)	0.0018 (0.00357)	0.000776 (0.00387)	-0.00539 (0.00479)	-182 (281.7)	424.1 (399.0)
Baseline mean	0.0602	0.0718	0.133	0.231	3997.9	7582.4
N	286924	286924	71370	71370	71370	71370

Notes: Columns 1–2 show DiD estimates for the effects of treatment letters (ref. no letter) using data from years 2013–2016. Controls include individual fixed effects, treatment block by year dummies and additional enforcement measures related to the treatment letters. Columns 3–6 show OLS estimates of letter dummies using data from 2016 on transactions of stocks in listed companies and shares in mutual funds. Standard errors clustered at postcode area level (263 clusters) are in parentheses.

Table A5: Effects of treatment letters on investment portfolio – those who did not report rental income in 2015.

	Apartments bought	Apartments sold	Buy shares 0/1	Sell shares 0/1	Buy shares EUR	Sell shares EUR
Letter 1	-0.0106 (0.0108)	0.00673 (0.0117)	-0.0115 (0.00986)	0.00248 (0.0138)	-1031.8 (593.1)	-186.6 (908.1)
Letter 2	-0.00042 (0.00900)	0.00106 (0.0105)	0.00157 (0.0104)	0.0146 (0.0140)	872.5 (1006.0)	1661.3 (1344.3)
Letter 3	0.00138 (0.00881)	-0.00169 (0.0107)	-0.0102 (0.00826)	-0.0117 (0.0110)	-1046.3 (440.4)	-232.3 (775.5)
Letter 4	-0.00768 (0.00582)	-0.00374 (0.00716)	-0.00011 (0.00681)	-0.0044 (0.00900)	51.09 (536.3)	765.5 (710.3)
Baseline mean	0.0529	0.0662	0.0966	0.195	2754.1	5479.4
N	75869	75869	19029	19029	18922	18922

Notes: Columns 1–2 show DiD estimates for the effects of treatment letters (ref. no letter) using data from years 2013–2016. Controls include individual fixed effects, treatment block by year dummies and additional enforcement measures related to the treatment letters. Columns 3–6 show OLS estimates of letter dummies using data from 2016 on transactions of stocks in listed companies and shares in mutual funds. Standard errors clustered at postcode area level (263 clusters) are in parentheses.

Table A6: Potential exposure to treatment spillovers in ownership network.

	Share of co-owners	Count
Letter 1	0.046	475
Letter 2	0.047	483
Letter 3	0.091	935
Letter 4	0.172	1760
No letter	0.645	6588

Notes: Data includes people who owned apartments in 2015 together with people in our main estimation sample (the block design) but living in a different household. The table shows the proportions and the number of these co-owners potentially exposed to different treatments through their co-owners.

Table A7: Summary statistics for key variables 2013–2017 – co-owners.

	Obs	Mean	Std.Dev.	Median	1st percentile	99th percentile
Reported rental income (0/1)	48982	0.466	0.499	0	0	1
Net rental income	48982	1267.5	1980.7	0	0	8385.6
Gross rental income	48982	2467.9	3957.0	0	0	14880.0
Deductions	48982	1101.3	2456.9	0	0	8590.1
Suspected rental apartments in 2015 (main owner)	48982	0.152	0.433	0	0	2
Suspected rental apartments in 2015	48982	1.195	0.619	1	1	4
Age	48982	53.1	18.9	53	19	111
Female	48982	0.530	0.499	1	0	1

Notes: Table shows summary statistics for individuals in our control and treatment blocks for years 2013–2017 for co-owners of suspected landlords in the main estimation sample (block design).

Table A8: Spillovers in ownership network – WLS with additional controls.

Dep. Var.	Reporting rental income (0/1)	Net Rental income
Letter 1	0.0209 (0.0255)	137.1 (71.10)
Letter 2	0.0248 (0.0246)	-76.2 (76.07)
Letter 3	0.0394 (0.0156)	71.01 (60.37)
Letter 4	0.029 (0.0126)	71.2 (38.60)
Baseline mean	0.528	1308.5

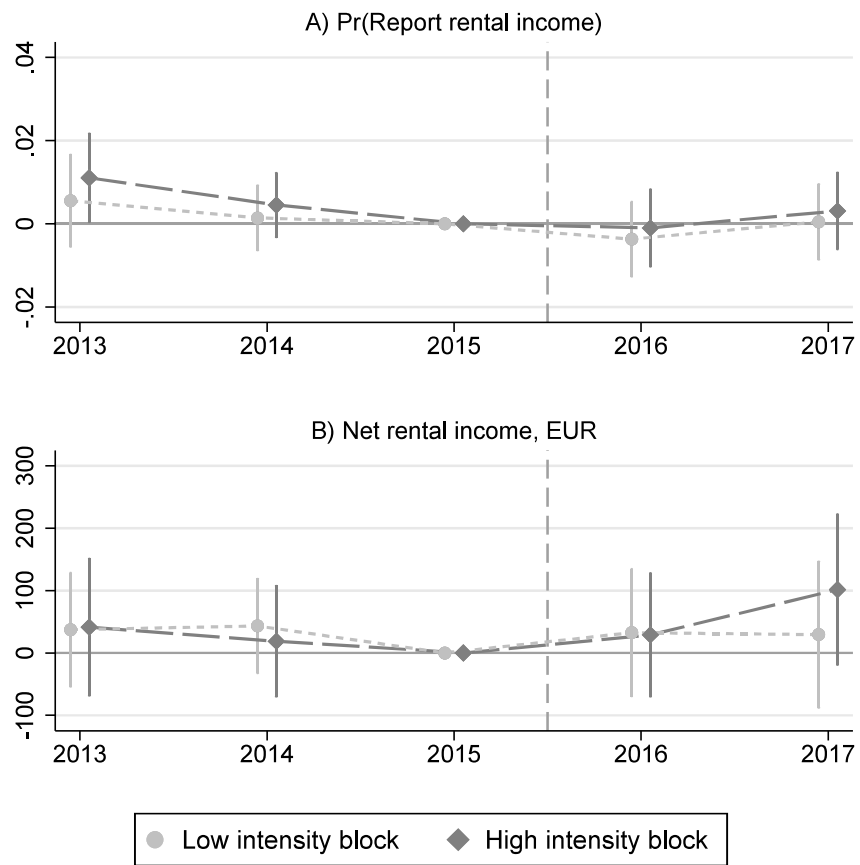
Notes: Table shows DiD estimates for the effects of treatment letters (ref. no letter) using data from years 2013–2016. Sample size is 39,575. Co-owners include individuals who owned apartments together with individuals in our main estimation sample but not living in the same household. Observations are weighted by the inverse of the probability of receiving an indirect treatment. Controls include individual fixed effects and the number co-owners in the base population in 2015 interacted with year dummies. Standard errors clustered at postcode area level (707 clusters) are in parentheses.

Table A9: Overlap between subgroups.

	Share: no reported rental income in 2015	Share: one suspected rental apartment in 2015	Share: age below 40 in 2015	N
All	0.265	0.854	0.168	71,845
<i>Subgroup</i>				
No reported rental income in 2015	1	0.948	0.246	19,029
One suspected rental apartment in 2015	0.294	1	0.181	61,374
Age below 40 in 2015	0.387	0.921	1	12,077

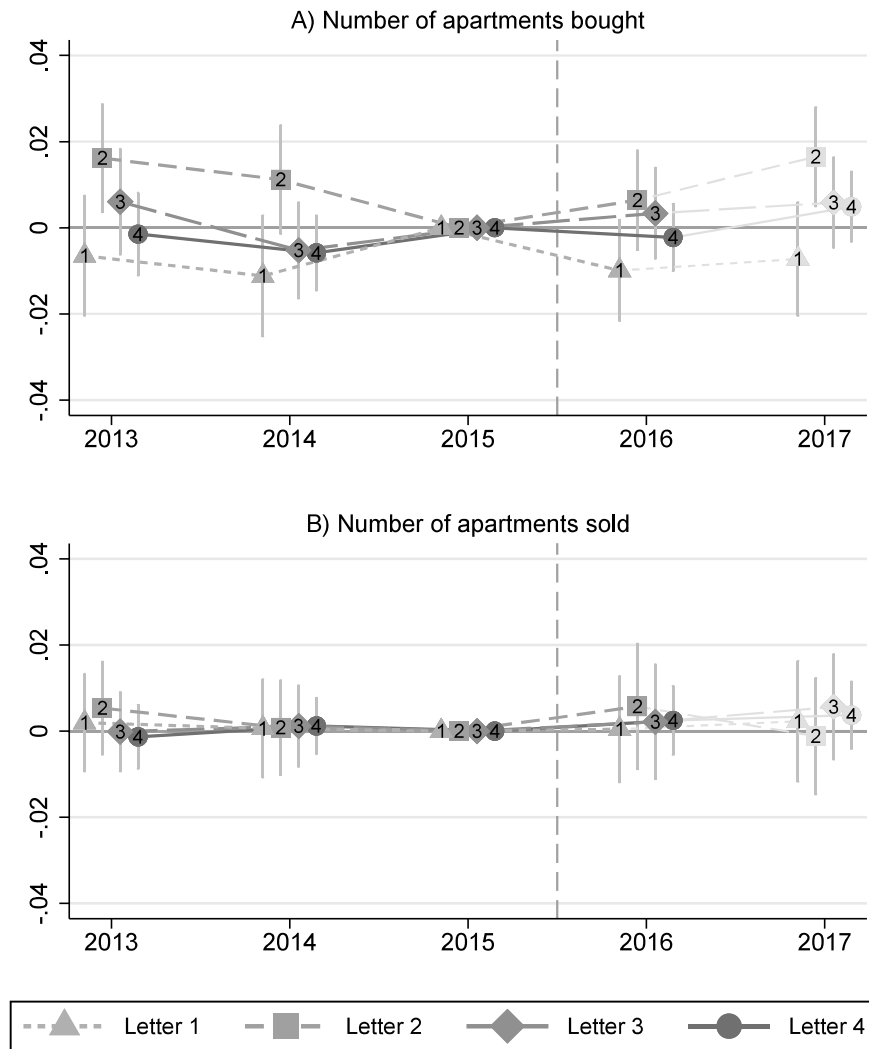
Notes: Table shows the share of suspected landlords belonging to different subgroups in the main estimation sample in 2016. The shares are reported by subgroups to analyze overlap between them.

Figure A3: Reporting spillovers in the local rental market



Notes: Figures show regression coefficients on treatment block by year dummies (ref. control block and year 2015). Controls include individual fixed effects, treatment letter by year dummies and additional enforcement measures related to the treatments. Vertical lines indicate 95% confidence intervals (clustering at postcode level).

Figure A4: Housing transactions in letter groups



Notes: Figures show regression coefficients on treatment letter by year dummies (ref. no letter and year 2015). Controls include individual fixed effects, treatment block by year dummies and additional enforcement measures related to the treatments. Vertical lines indicate 95% confidence intervals (clustering at postcode level).

B Rental income form and treatment letters



Tax Administration
P.O. Box 700
00052 VERO

e-File
tax.fi/mytax



7H RENTAL INCOME
RENTAL APARTMENTS

Use this form to report any rental income earned from renting out an apartment in a housing company. If you are a co-owner of the apartment, report only your portion of the rental income and the related expenses.

Do not deduct interest on this form; report it as interest on expenses incurred in acquiring or maintaining income. More information is available in the instructions for filling in the form.

Do not attach any receipts to the form; place them somewhere for safekeeping. The Tax Administration will ask you for them, if necessary. For further tax instructions concerning rental income, go to tax.fi.

Report rental income from real estate rented out on form 7K and rental income from other property on form 7L. Use form 16B to report rental income earned abroad.

1 Personal details and tax year

Name	Personal identity code or business ID	Tax year

2 Apartment in a housing company I

Name of housing company or real estate holding company		Business ID	Apartment number
Personal identity code or business ID of the tenant	Name of tenant		
Tenancy period (ddmmyyyy-ddmmyyyy)		Share of ownership in apartment	(%)
—			
		€	c
2.1 Your share of gross rental income per year			
2.2 Monthly maintenance charges and water charges paid per year (only your share)			
2.3 Other costs per year (only your share)			
2.4 Net taxable rental income per year (positive difference between income and expenses)		+	
2.5 Net taxable loss from rental operations per year (negative difference between income and expenses)		-	

2 Apartment in a housing company II

Name of housing company or real estate holding company		Business ID	Apartment number
Personal identity code or business ID of the tenant	Name of tenant		
Tenancy period (ddmmyyyy-ddmmyyyy)		Share of ownership in apartment	(%)
—			
		€	c
2.1 Your share of gross rental income per year			
2.2 Monthly maintenance charges and water charges paid per year (only your share)			
2.3 Other costs per year (only your share)			
2.4 Net taxable rental income per year (positive difference between income and expenses)		+	
2.5 Net taxable loss from rental operations per year (negative difference between income and expenses)		-	

Date	Signature	Telephone number

The information entered on this form will be read by computer, by optical character recognition. The computer system does not process anything you may have written outside the spaces. Only fill in forms printed out from tax.fi, do not use photocopies. Photocopies may have inferior quality, making optical character recognition difficult.

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NOTICE

Finnish Tax Administration PO Box 325 FI-
00052 Vero, Finland

Ref.

Check your pre-completed tax return

You have received a pre-completed tax return containing information on your earnings and deductions in 2015. Review the tax return with care. If the information is correct and nothing is missing, you need not do anything. If the information is incorrect, or some pieces of information are missing, you must correct or supplement the tax return. Information to be supplemented may include rental income, travel expenses between your home and place of work, or tax credit for household expenses, for example.

You can supplement and correct the information in the pre-completed tax return in the *Tax return online* service (vero.fi/veroilmoitus). The service will remain open until the tax return deadline indicated on your tax return. If you supplement your tax return online, you need not use the tax return form or its appendix forms.

If you use a paper form to submit your tax return by regular post, you must also send the required appendix forms. For example, you must use form 7H to announce your rental income from a unit in a housing company and form 14A to get your tax credit for household expenses. The required appendix forms are listed in the instructions on how to complete the tax return. Don't forget to enter the required pieces of information in the correct part of the tax return form in addition to the appendix forms.

For more information, please visit vero.fi/henkilöasiakkaat > Veroilmoitus (Individual taxpayers > Tax return) or call the service number specified in your pre-completed tax return.

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If you received rental income in 2015, announce the rental income and related expenses. The most common expenses to be deducted from rental income include maintenance charges, annual repair costs and real estate tax. If you received rental income from several sources (such as a unit in a housing company and a summer home), you must separately announce the income and expenses of each property. If you own a unit in a housing company with another person, you must only announce the share of rental income and expenses corresponding to your share of ownership. Calculate the amount of taxable rental income by deducting the expenses from the rental income.

Example of calculating rental income

The taxpayer owns one unit in a housing company, which they rented out for the entire year of 2015, with the rent being EUR 1,000 per month. The taxpayer/landlord paid a maintenance charge of EUR 250 per month. Other expenses related to the renting of the apartment totalled EUR 1,500. The taxable rental income is the difference between the rental income and expenses, or $12 \times \text{EUR } 1,000 - 12 \times \text{EUR } 250 - \text{EUR } 1,500 = \text{EUR } 7,500$. Hence, the taxable rental income is **EUR 7,500**.

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The Finnish Tax Administration is boosting the monitoring of tax to be paid for rental income. Hence, additional information on rental income and related expenses will be requested more often than before. The additional information is needed for the Tax Administration to verify that the rental income and expenses specified in your tax return are correct.

If you received rental income in 2015, you must announce all rental income you received and related expenses. If necessary, the Tax Administration can request receipts or other additional information on your rental income and expenses. If we need additional information on your rental income, you will receive a request to supplement your tax return after the tax return deadline. Do not enclose your receipts with your tax return, however; the Tax Administration will separately request them if necessary.

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The additional information is needed for the Tax Administration to verify that the rental income and expenses specified in your tax return are correct.

The rental income information for 2015 will be compared to information on landlords' property ownership more comprehensively than before. Special attention will be paid to tax returns where the rental income information is not consistent with the property ownership information. According to the information available to the Tax Administration, you own at least one unit in a housing company, and the apartment may have been rented out in 2015.

If you received rental income in 2015, you must announce all rental income you received and related expenses. If necessary, the Tax Administration can request receipts or other additional information on your rental income and expenses. If we need additional information on your rental income, you will receive a request to supplement your tax return after the tax return deadline. Do not enclose your receipts with your tax return, however; the Tax Administration will separately request them if necessary.

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