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Research article

The effects of environmental patents on renewable energy consumption

Mihaela Onofrei[1], Bogdan Narcis Fîrțescu[1], Florin Oprea[1] and Dana Claudia Cojocaru[2,*]

[1] Finance, Money, and Public Administration, Alexandru Ioan Cuza University of Iași, Iași, Romania
[2] Doctoral School of Economics and Business Administration, Alexandru Ioan Cuza University of Iași, Iași, Romania

* **Correspondence:** Email: claudia.cojocaru@uaic.ro.

Appendices

Table A.1. Variance inflation factor results.

	VIF	1/VIF
LOGPEC	1.19	0.84
URB	1.15	0.87
PET	1.05	0.95
FDI	1.01	0.99
MEAN VIF	1.10	

Table A.2. Fixed effects O.L.S. regressions results.

	(1)	(2)	(3)	(4)
Variables	FE	FE	FE	FE
PET	0.3745***	0.3171***	0.3102***	0.2771***
	(0.0414)	(0.0394)	(0.0392)	(0.0381)
LOGPEC		−13.8830***	−13.6156***	-12.6877***
		(1.3861)	(1.3829)	(1.3398)
FDI			-0.0420***	-0.0396***
			(0.0149)	(0.0149)
URB				0.4361***
				(0.0577)
Const.	16.4230***	164.2598***	161.6939***	118.9873***

	(0.4659)	(14.7662)	(14.7265)	(15.2896)
Obs.	792	792	792	792
R-sq.	0.0977	0.2037	0.2120	0.2676
No. of country	36	36	36	36

*Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.*

Table A.3. Random effects O.L.S. regressions results.

	(1)	(2)	(3)	(4)
VARIABLES	RE	RE	RE	RE
PET	0.3743***	0.3233***	0.3160***	0.2811***
	(0.0414)	(0.0397)	(0.0397)	(0.0384)
LOGPEC		-12.0942***	-11.8341***	-11.3893***
		(1.3376)	(1.3341)	(1.2904)
FDI			-0.0437***	-0.0410***
			(0.0150)	(0.0144)
URB				0.4385***
				(0.0564)
Const.	16.4252***	145.2239***	142.7480***	105.0028***
	(2.6711)	(14.4903)	(14.4440)	(14.8608)
Obs.	792	792	792	792
No. of country	36	36	36	36

*Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.*

Table A.4. Number of cross-sectional factors.

REC			
IC	f	IC	f
PC_{p1}	8	IC_{p1}	8
PC_{p2}	8	IC_{p2}	8
PC_{p3}	8	IC_{p3}	8
ER	1	GR	1
GOL	3	ED	2
PEC			
IC	f	IC	f
PC_{p1}	8	IC_{p1}	8
PC_{p2}	8	IC_{p2}	8
PC_{p3}	8	IC_{p3}	8
ER	1	GR	1
GOL	3	ED	3

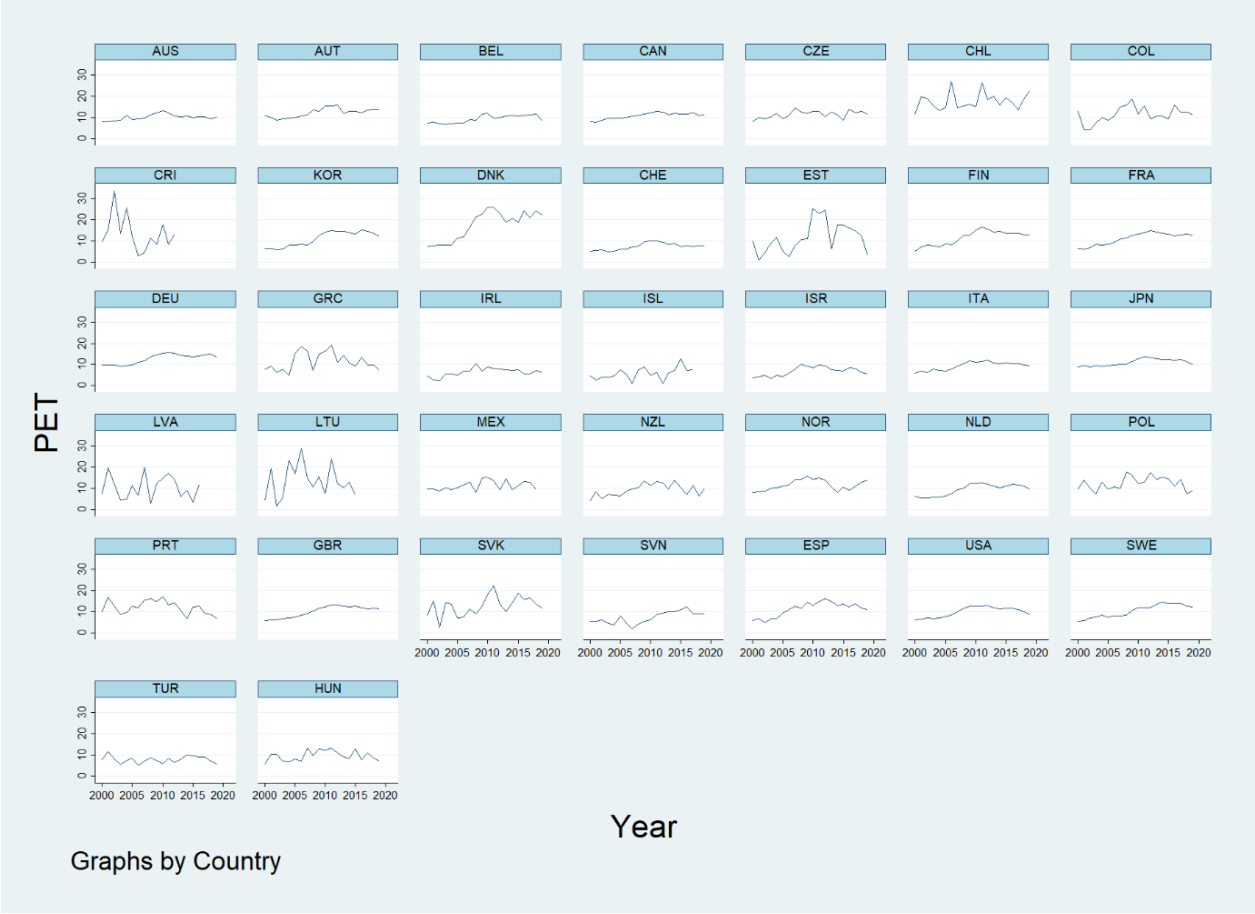

Figure A.1. Evolution of environmental technology patents, 2000–2020, %.

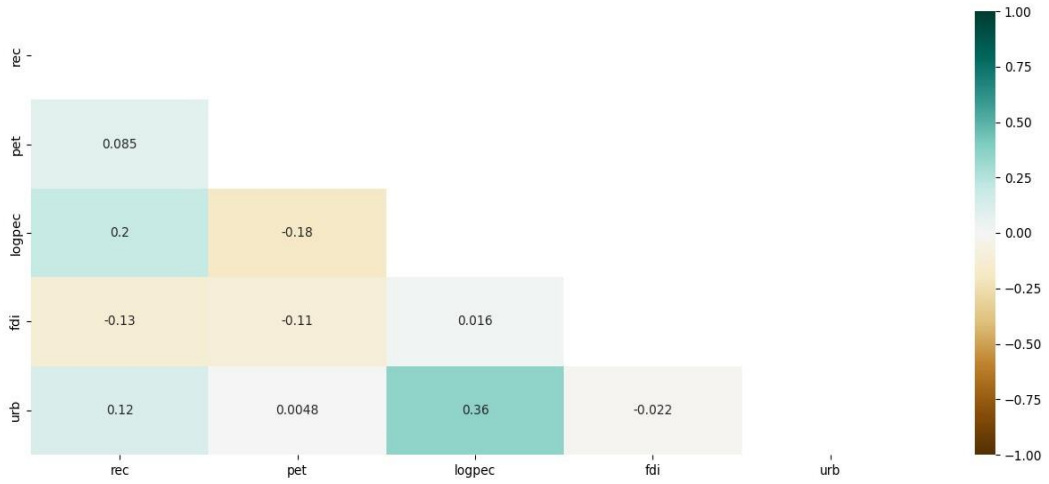

Figure A.2. Correlation matrix - triangle heatmap. The figure shows the correlation coefficients between implied variables, as a graphical view to identify possible high correlated values between the independent proxies.

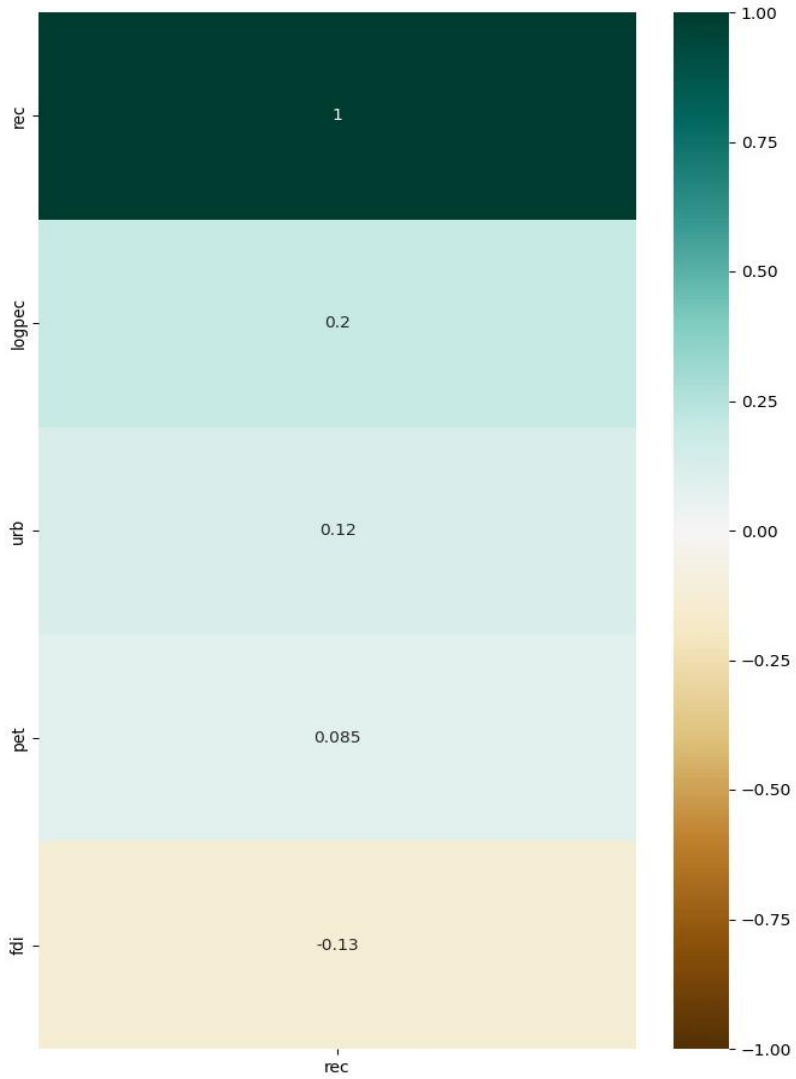

Figure A.3. Dependent variable heatmap. The figure shows the correlation values between the dependent variable and independent variables, in order, as a graphical view to identify the largest correlation coefficients of explanatory variables, e.g. the primary energy consumption *(LOGPEC)* is highly correlated with renewable energy *(REC)*, being though the most important explanatory factor.

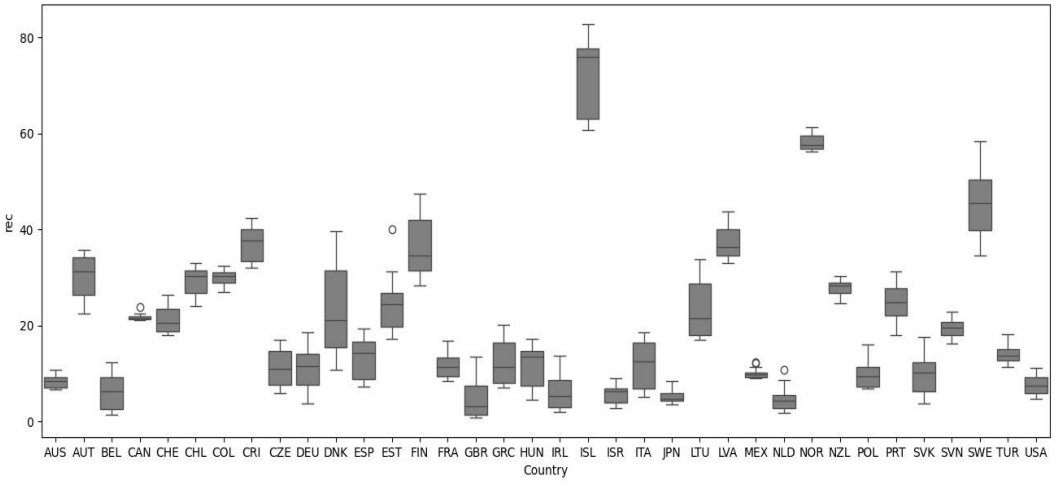

Figure A.4. Heterogeneity by country. The figure shows the heterogeneity by countries, as a base for use panel data analysis, e.g. fixed effects instead of pooled OLS.

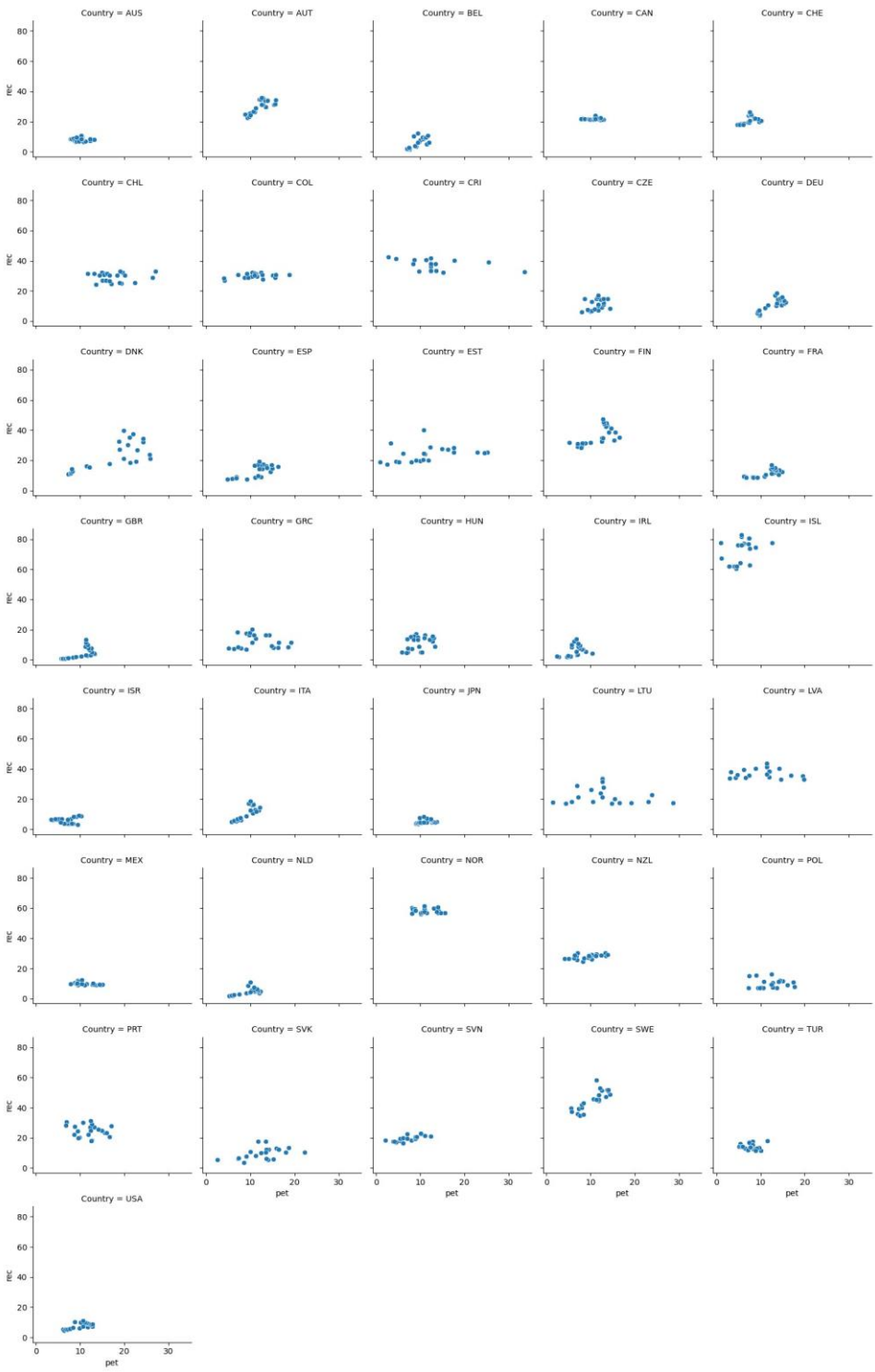

Figure A.5. Relationship between primary energy consumption (PEC) and renewable energy consumption (REC) by countries. The graphical figure shows the effects of the primary energy consumption – *PEC,* on 0X axis on the renewable energy – *REC,* plotted on 0Y axis, by countries, as a base for the graphical demonstration of linear relation between the implied variables.

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