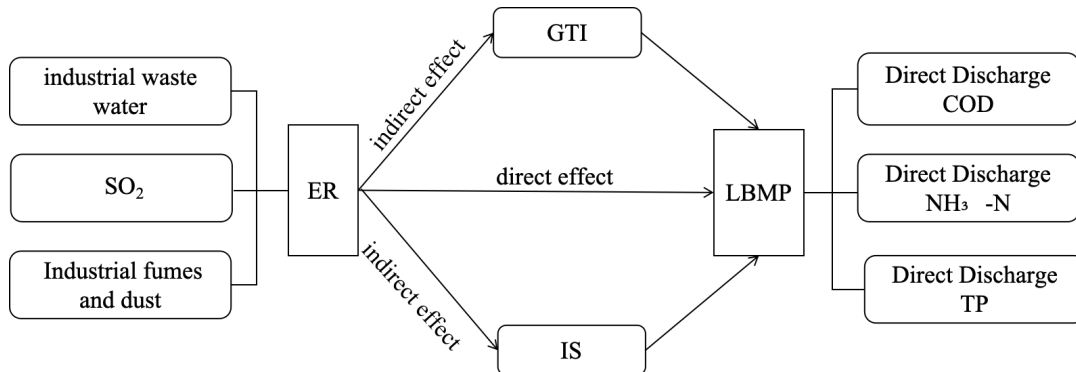


Supplementary Material

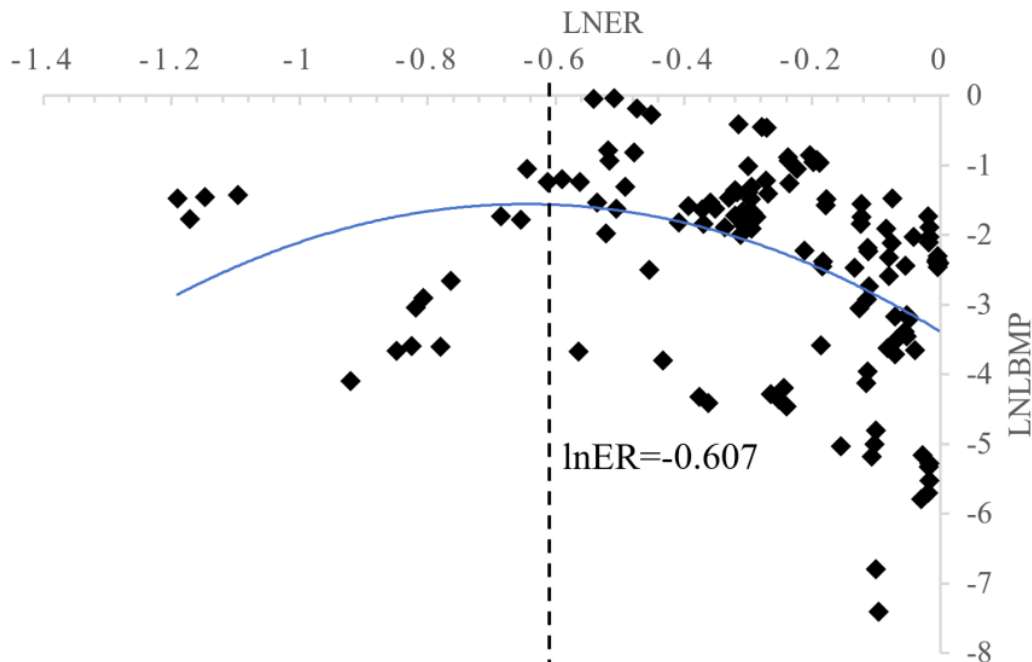
1 Supplementary Figures and Table

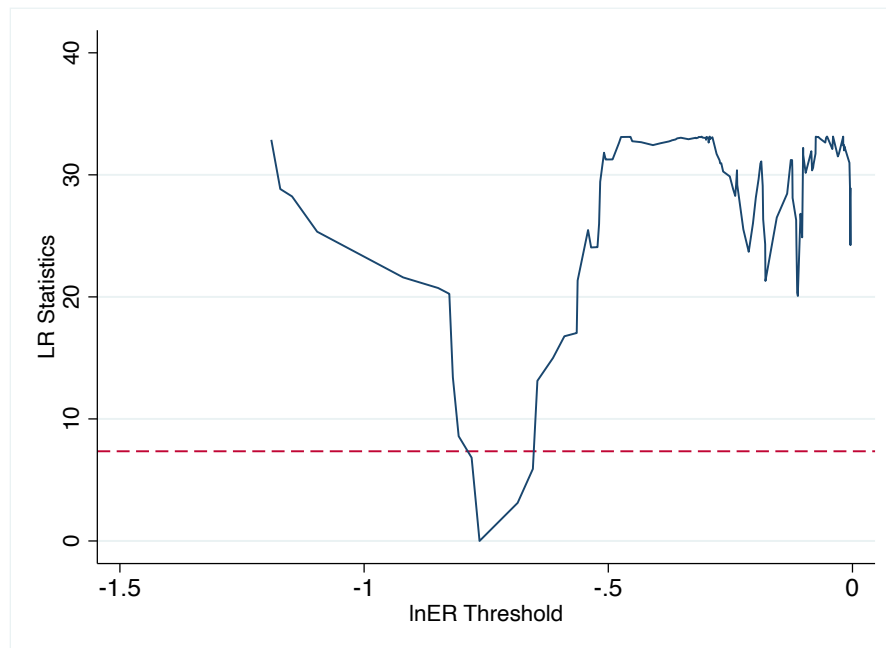
1.1 Supplementary Figures

Supplementary Figure 1. Effect diagram of environmental regulation on LBMP



Supplementary Figure 2. Inverted “U”-shaped relationship between Environmental Regulation and LBMP



Supplementary Figure 3. Threshold estimates and confidence intervals

1.2 Supplementary Table

Supplementary Table 1. Descriptive analysis of variables of LBMP

Variable	Obs	Mean	Std.dev.	Min	Max
<i>lnLBMP</i>	132	-2.430672	1.441938	-7.407238	-0.0378759
<i>lnER</i>	132	-0.2870057	0.2667125	-1.189958	-0.002032
<i>lnER²</i>	132	0.1529689	0.2690733	4.13E-06	1.416001
<i>lnGDP</i>	132	11.202	0.4269014	10.23824	12.15647
<i>lnGDP²</i>	132	125.6656	9.560625	104.8216	147.7797
<i>lnUL</i>	132	4.180867	0.183005	3.770888	4.544907
<i>lnPS</i>	132	8.398782	0.7680976	6.813445	9.44983
<i>lnGTI</i>	132	10.15952	1.557827	6.089045	12.81289
<i>lnIS</i>	132	0.26459	0.3801304	-0.4002231	1.167631

Supplementary Table 2. Panel data LLC test

LLC	LnLBMP	lnER	lnGDP	lnUL	lnPS	lnGTI	lnIS
Statistic	-6.312***	-10.059 ***	-1.953**	-4.345***	-1.993**	-4.717***	-1.909**
P-value	0.000	0.000	0.025	0.000	0.023	0.000	0.028

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Table 3. Panel cointegration test

Test Method	Statistic	P -value	Conclusion
Modified Phillips–Perron t	5.3575***	0.0000	yes
Phillips–Perron t	-23.9943***	0.0000	yes
Augmented Dickey–Fuller t	-14.4150***	0.0000	yes

Supplementary Table 4. Benchmark regression results

VARIABLES	lnLBMP	lnLBMP	lnLBMP
lnER	-9.343*** (1.977)	-5.295*** (1.307)	-6.629*** (1.521)
<i>lnER</i> ²	-7.135*** (1.557)	-4.362*** (0.984)	-5.219*** (1.167)
lnGDP	10.743 (13.610)	-17.88* (9.877)	0.0640 (11.32)
lnGDP ²	-0.498 (0.593)	0.715* (0.427)	0.0160 (0.493)
lnUL	-3.900*** (1.381)	-0.767 (2.018)	1.743 (1.970)
lnPS	-1.245** (0.582)	24.08*** (3.469)	0.973 (0.764)
lnGTI	0.442 (0.352)	-0.784** (0.395)	-0.842** (0.391)
lnIS	0.442* (0.352)	-1.017** (0.474)	-0.954* (0.526)
Constant	-39.74 (77.30)	-83.58 (54.06)	-12.91 (62.56)
Model	OLS	FE	RE
Observations	132	132	132
Number of PROVINCE	11	11	11
R-squared	0.290	0.596	0.4348

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Table 5. Level-by-level regression results

Test Method	P -value	Conclusion
BP	0.0000	Reject OLS
Hausman	0.0012	FE

Supplementary Table 6. Level-by-level regression results

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
lnER	-9.515*** (1.246)	-8.550*** (1.328)	-8.529*** (1.388)	-6.983*** (1.188)	-6.425*** (1.215)	-5.295*** (1.307)
<i>lnER</i> ²	-6.827*** (1.072)	-6.337*** (1.094)	-6.330*** (1.105)	-5.369*** (0.939)	-5.030*** (0.948)	-4.362*** (0.984)
lnGDP		-7.058 (10.33)	-6.782 (11.57)	-22.36** (9.982)	-21.33** (9.897)	-17.88* (9.877)
lnGDP ²		0.280 (0.457)	0.269 (0.505)	0.869** (0.433)	0.851** (0.429)	0.715* (0.427)
lnUL			-0.108 (2.017)	-3.476* (1.763)	-1.672 (2.004)	-0.767 (2.018)
lnPS				24.85*** (3.547)	24.66*** (3.513)	24.08*** (3.469)
lnGTI					-0.733* (0.401)	-0.784** (0.395)
lnIS						-1.017** (0.474)
Constant	-4.117*** (0.220)	39.96 (58.37)	38.76 (62.79)	-56.55 (54.52)	-64.16 (54.13)	-83.58 (54.06)

Standard errors in parentheses* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Table 7. Robustness test results

VARIABLES	(1)	(2)	(3)
lnER	-4.594*** (0.487)		-6.374*** (1.284)
$\ln ER^2$	-2.743*** (0.366)		-4.918*** (0.951)
$\ln ER_{(t-1)}$		-7.982*** (1.487)	
$\ln ER_{(t-1)}^2$		-5.810*** (0.366)	
lnGDP	-19.49*** (3.677)	-5.339 (12.47)	-16.02 (11.44)
lnGDP ²	0.813*** (0.159)	0.257 (0.542)	0.585 (0.506)
lnUL	-0.404 (0.751)	3.073 (2.054)	0.894 (2.343)
lnPS	1.619 (1.291)	1.028 (0.865)	22.07*** (3.729)
lnGTI	1.000*** (0.147)	-0.913** (0.423)	-0.624 (0.393)
lnIS	-0.395** (0.177)	-1.116** (0.545)	-0.233 (0.659)
Constant	104.3*** (20.12)	11.69 (69.53)	-84.60 (70.62)

Standard errors in parentheses* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Table 8. Endogeneity test

lnY	Coefficient	std.	z	P> z
lnER	-11.55334***	4.272818	-2.88	0.010
$\ln ER^2$	-10.26434**	3.574479	-2.85	0.013
lnGDP	5.703101	22.37007	1.23	0.218
lnGDP ²	-0.2659579	0.9567177	-1.17	0.243
lnUL	-4.349091**	2.247815	-1.77	0.050
lnPS	-1.350569	0.8858378	0.88	0.251
lnGTI	0.452703	0.5831602	-2.08	0.541
lnIS	1.074722	2.304375	2.1	0.229
_cons	-10.12245	134.9011	-1.11	0.931

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Table 9. Threshold effect test results

Model	F-Statistic	P-Value	1%	5%	10%
Single Threshold	31.62**	0.0267	21.2035	25.6699	35.2850
Double Threshold	11.25	0.4367	25.5919	32.5634	44.1350
Triple Threshold	8.20	0.5800	23.7930	29.7806	43.6402

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Table 10. Regression results of the single-threshold effects model

lnLBMP	Coefficient	std.	err.	P> t
lnGDP	-22.64058**	9.77313	-2.32	0.022
lnGDP ²	0.8723255**	0.4197262	2.08	0.040
lnPS	27.15818***	3.211867	8.46	0.000
lnUL	-3.907865**	1.937888	-2.02	0.046
lnGTI	-0.185632	0.474312	-0.39	0.696
lnIS	-0.1791819	0.3765747	-0.48	0.635
lnER<-0.7636	-0.4595759	0.4646224	-1.08	0.281
lnER≥-0.7636	-3.082159***	0.737019	-4.67	0.000
_cons	-69.29317	54.10743	-1.28	0.203

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Table 11. Green Technology Innovation indirectly affects regression results

VARIABLES	(1) lnLBMP	(2) lnGTI	(3) lnLBMP
lnGTI			-0.784** (0.395)
lnER	-5.953*** (1.281)	0.840*** (0.300)	-5.295*** (1.307)
lnER ²	-4.761*** (0.976)	0.508** (0.228)	-4.362*** (0.984)
Constant	-74.37 (54.55)	-11.75 (12.77)	-83.58 (54.06)
Control	yes	yes	yes
Observations	132	132	132
Number of PROVINCE	11	11	11
R-squared	0.581	0.855	0.596

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Table 12. Industrial Structure indirectly affects regression results

VARIABLES	(1) lnLBMP	(2) lnIS	(3) lnLBMP
lnIS			-1.017** (0.474)
lnER	-6.425*** (1.215)	1.112*** (0.236)	-5.295*** (1.307)
lnER ²	-5.030*** (0.948)	0.657*** (0.184)	-4.362*** (0.984)
Constant	-64.16 (54.13)	-19.10* (10.52)	-83.58 (54.06)
Control	yes	yes	
Observations	132	132	132
Number of PROVINCE	11	11	11
R-squared	0.579	0.654	0.596

Standard errors in parentheses* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$