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In REIT we trust? Revisiting the trust fund towards the “new normal” of the Philippine built environment sector

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Fast facts about pandemic, PH style

- Aug 31, 2022 – 900 days since lockdown, and counting, still the longest lockdown in the world
- Philippines’ historical lowest economic growth rate (-16.5%)—and lowest in ASEAN; highest unemployment rate (17.1%), with persisting underemployment rate
- Benign to increasing inflation, plus “appreciating” to depreciating exchange rate (not at PHP 57 = USD 1)
- Real Estate Investment Trust (REIT) – fund facility by real estate developers and industry players as coping mechanism for the sector during the pandemic-induced economic recession

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REIT profile, August 2022

REIT name	Price per share* (in PHP)	Estimated dividend per share** (in PHP)	Estimated dividend yield (gross value in percent)	Return vs. offer price (in percent)	REIT sponsor company	REIT type
AREIT	38.85	2.05	5.28	43.89	Ayala Land	Office, Retail, Industrial
CREIT	2.37	0.18	7.59	-7.06	Citicore Renewable Energy	Renewable Energy
DDMPR	1.55	0.12	7.74	-31.11	DoubleDragon Properties	Office
FILRT	6.39	0.46	7.20	-8.71	Filinvest Land	Office
MREIT	15.72	1.02	6.49	-2.36	Megaworld	Office
RCR	6.16	0.39	6.33	-4.50	Robinsons Land	Office
VREIT	1.71	0.10	5.85	-2.29	Vista Land and Lifescapes	Retail

* As of August 24, 2022.

** Latest values for 2022.

*** Difference between price per share (in column 2) and REIT initial public offering (IPO), divided by REIT IPO. Values are authors' calculations given data.

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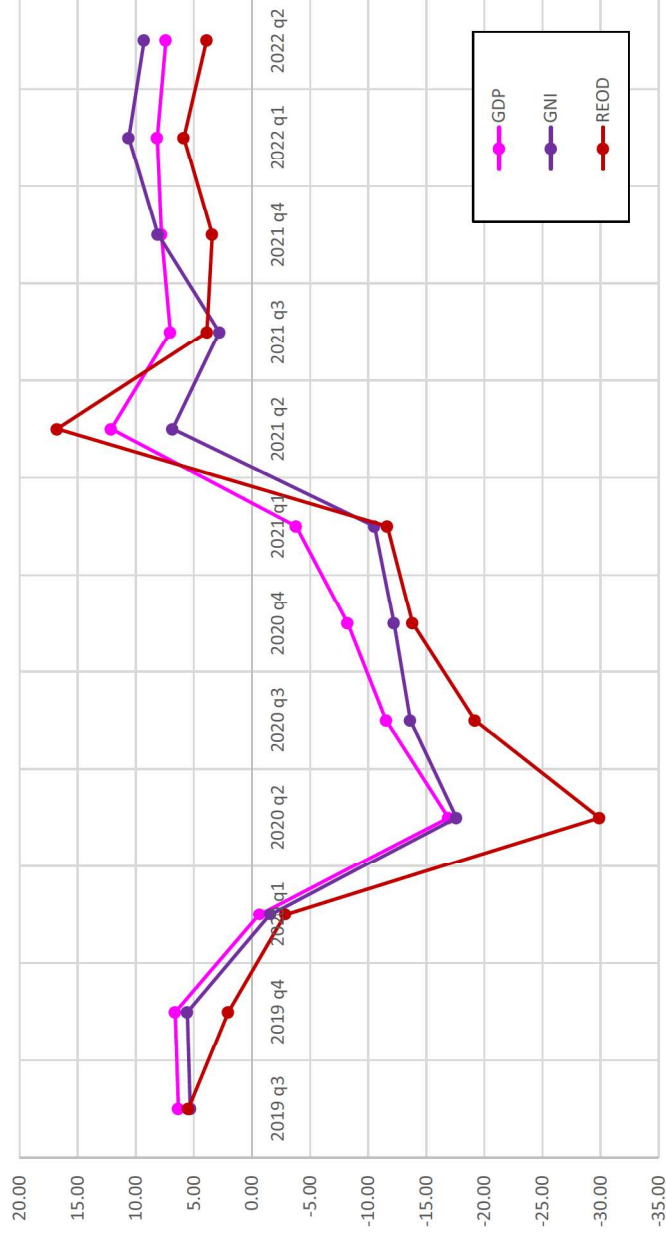
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GNP, GNI, REOD (2019q3-2022q2)



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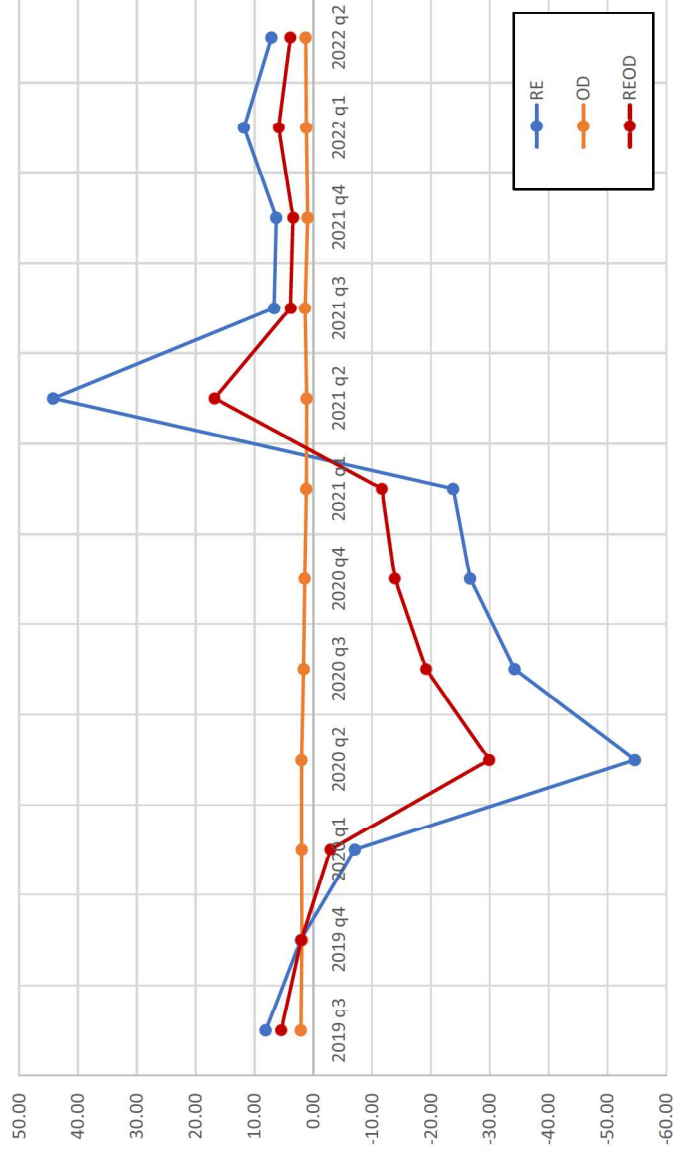
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RE, OD, REOD (2019q3-2022q2)



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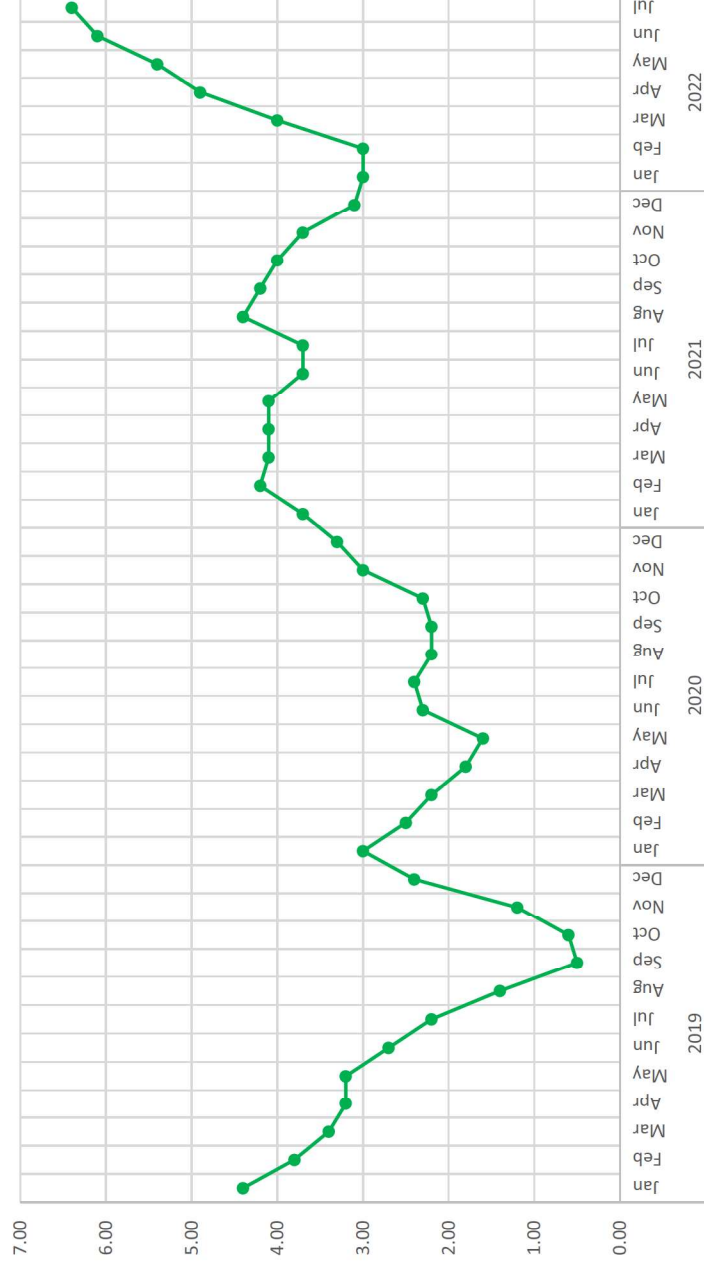
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Headline inflation (2019m1-2022m7)



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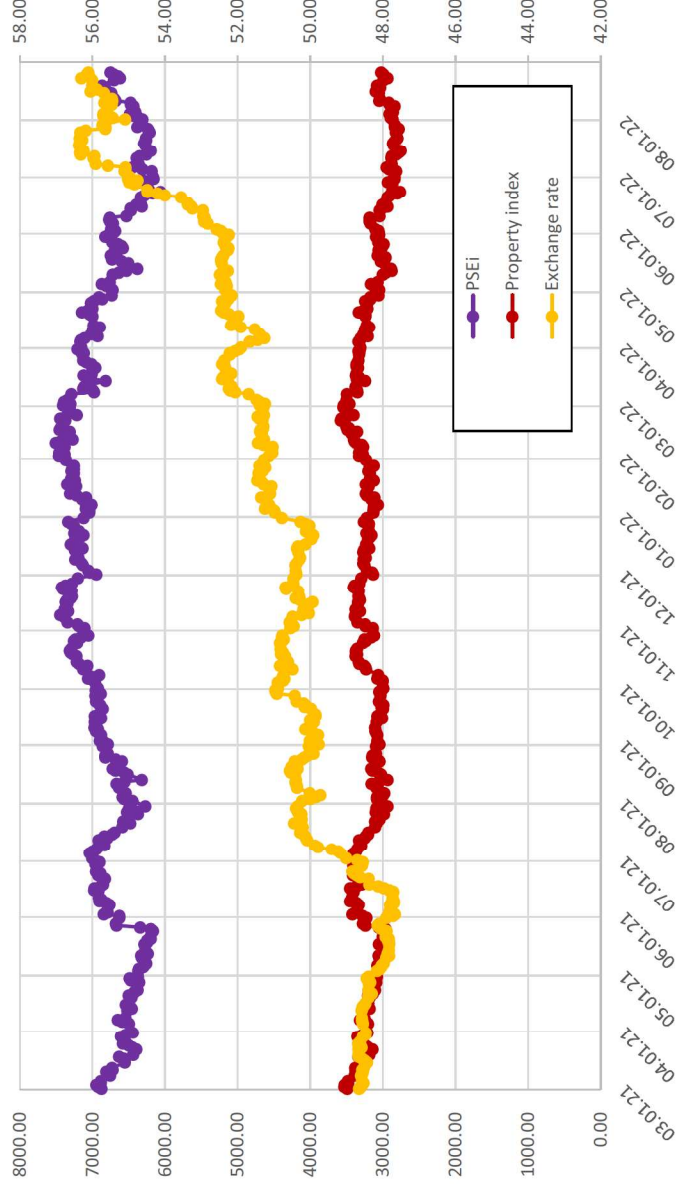
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PSEI, PSE Prop, ER (03/01/21-08/26/22)



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REIT players

REIT	REIT sponsor company	Starting date of trading	Closing price on first day in PSE, in PHP
AREIT	Ayala Land	2020 August 14	24.10
DDMPR	DoubleDragon Properties	2021 March 25	2.24
FILRT	Filinvest Land	2021 August 21	7.16
RCR	Robinsons Land	2021 September 15	6.44
MREIT	Megaworld	2021 October 04	17.40
CREIT	Citicore Renewable Energy	2022 February 23	2.84
VREIT	Vista Land and Lifescapes	2022 June 16	1.72

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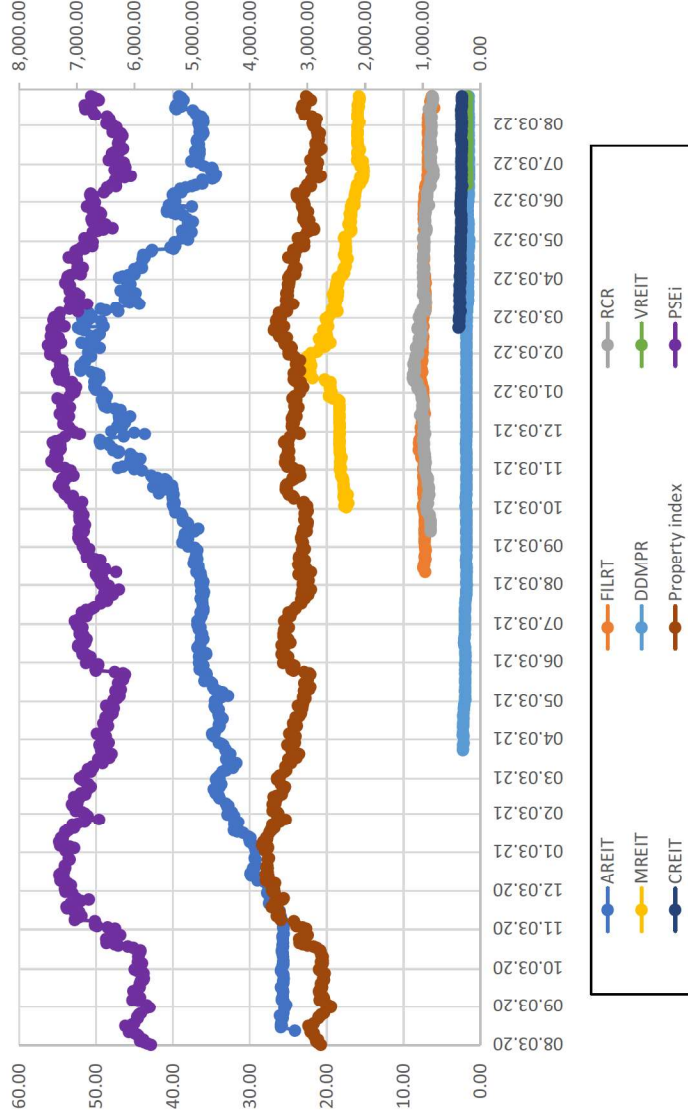
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PSEI, PSE Prop, REIT (08/03/21-08/26/22)



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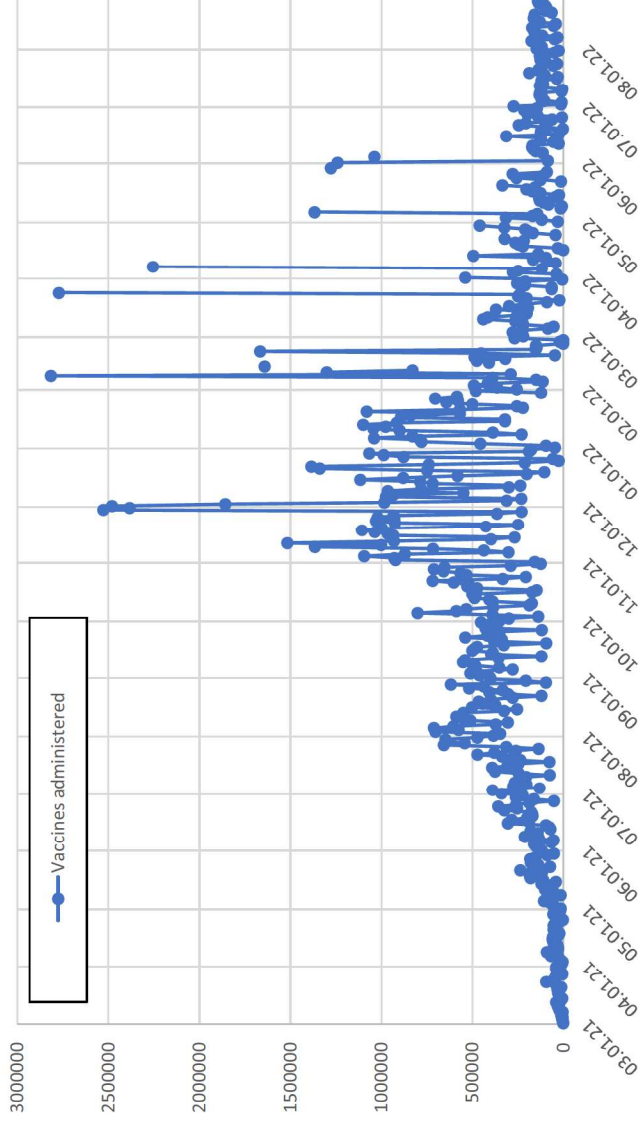
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Covid-19 vaccinations (03/01/21-08/26/22)



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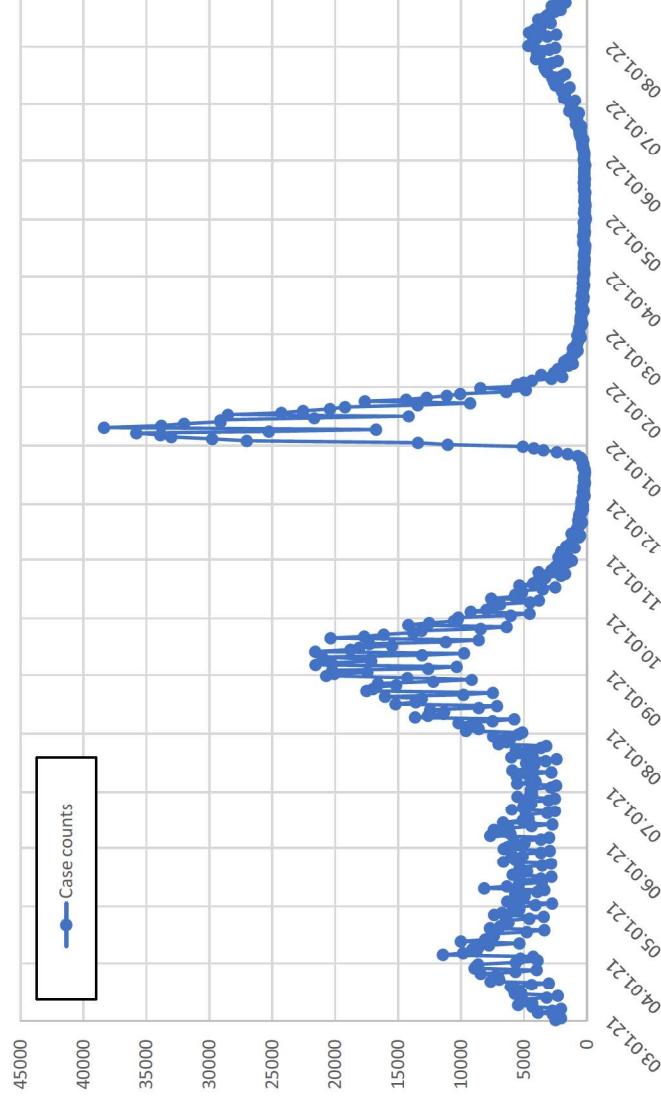
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Covid-19 vaccinations (03/01/21-08/26/22)



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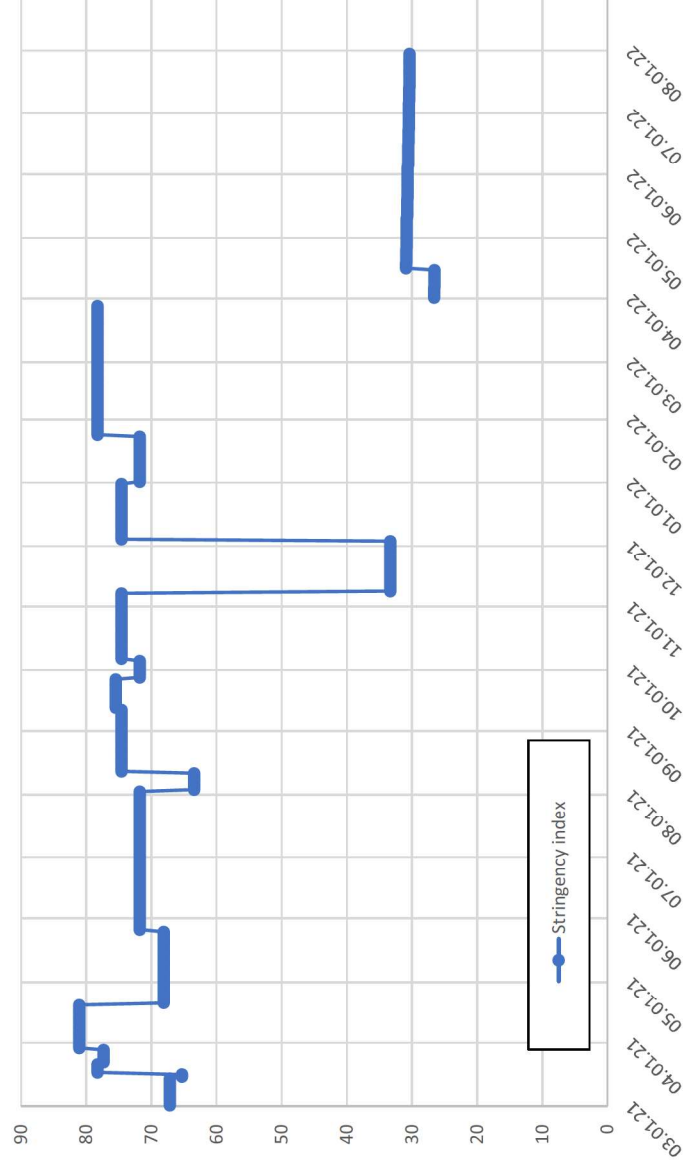
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Stringency index (03/01/21-08/26/22)



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Econometric models

- Ordinary least squares (OLS) regression

$$psei_t = \alpha + b_1 prop_t + b_2 exch_t + b_3 vacc_t + b_4 case_t + b_5 strn_t + b_6 dumm_t + b_7 time_t + u_t$$

- Autoregressive distributed lag (ARDL) regression

$$\begin{aligned} psei_t = & \alpha + \beta_{11} psei_{t-1} + \beta_{20} prop_t + \beta_{21} prop_{t-1} + \beta_{22} prop_{t-2} + \beta_{23} prop_{t-3} + \beta_{30} exch_t \\ & + \beta_{31} exch_{t-1} + \beta_{32} exch_{t-2} + \beta_{40} vacc_t + \beta_{41} vacc_{t-1} + \beta_{42} vacc_{t-2} + \beta_{43} vacc_{t-3} \\ & + \beta_{44} vacc_{t-4} + \beta_{50} case_t + \beta_{51} case_{t-1} + \beta_{52} case_{t-2} + \beta_{60} strn_t + \beta_{61} strn_{t-1} \\ & + \gamma_1 dumm_t + \gamma_2 time_t + \mu_t \end{aligned}$$

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OLS

Source	SS	df	MS	Number of obs	=	361
Model	39075186.8	7	5582169.55	F (7, 353)	=	258.74
Residual	7615921.32	353	21574.8479	Prob > F	=	0.0000
				R-squared	=	0.8369
				Adj R-squared	=	0.8337
Total	46691108.1	360	129697.523	Root MSE	=	146.88

psei	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
prop	1.477136	.0603826	24.46	0.000	1.358381 1.595891
exch	-62.22772	11.17892	-5.57	0.000	-84.21338 -40.24206
vacc	.000231	.0000203	11.37	0.000	.000191 .0002709
case	.0100168	.0013815	7.25	0.000	.0072998 .0127339
strn	2.927699	.6007245	4.87	0.000	1.74625 4.109148
dumm	60.61706	51.51501	1.18	0.240	-40.69787 161.932
time	2.857637	.227556	12.56	0.000	2.410101 3.305172
_cons	4468.196	638.1539	7.00	0.000	3213.134 5723.258

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ARDL



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Source	SS	df	MS	Number of obs	
Model	45947875.7	20	2297393.79	F(20, 336)	= 1079.24
Residual	715248.338	336	2128.71529	Prob > F	= 0.0000
				R-squared	= 0.9847
Total	46663124.1	356	131076.191	Adj R-squared	= 0.9838
				Root MSE	= 46.138

pseil	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
pseil	.9232133	.0200884	45.96	0.000	.8836984 .9627281
prop	1.269723	.0479428	26.48	0.000	1.175418 1.364029
prop1	-1.182502	.0677137	-17.46	0.000	-1.315699 -1.049306
prop2	.0156481	.0633169	0.25	0.805	-.1068995 .1401956
prop3	-.0042556	.0474258	-0.09	0.929	-.0975446 .0890333
exch	-22.94144	17.46524	-1.31	0.190	-57.29642 11.41355
exch1	27.64998	26.1457	1.06	0.291	-23.77799 79.07987
exch2	-6.592828	17.71091	-0.37	0.710	-41.43106 28.2454
vacc	9.96e-06	8.03e-06	1.24	0.216	-5.84e-06 .0000258
vacc1	8.02e-06	8.06e-06	0.99	0.321	-7.84e-06 .0000239
vacc2	-1.34e-06	8.47e-06	-0.16	0.874	-.000018 .0000153
vacc3	3.49e-06	8.19e-06	0.43	0.671	-.0000126 .0000196
vacc4	.0000126	8.14e-06	1.55	0.123	-3.42e-06 .0000286
case	.0005509	.0017106	0.32	0.748	-.002814 .0039157
case1	.0008021	.0026372	0.30	0.761	-.0043854 .0059896
case2	-.0001796	.0016973	-0.11	0.916	-.0035183 .0031591
strn	-.3256337	.60843	-0.54	0.593	-1.522446 .8711781
strn1	.5599697	.614565	0.91	0.363	-.64891 1.768849
dumm	23.43501	16.43355	1.43	0.155	-8.890595 55.76061
time	.1405221	.0902764	1.56	0.121	-.037056 .3181003
_cons	248.8779	227.7556	1.09	0.275	-199.1286 696.8844

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From the models:

- Earlier work shows different results, given shorter time series data (on OLS and ARDL, and variables)—further remodelling
- Redefinition of property index is not yet felt by PSEi (only beginning Aug 8), but significance levels arguably close to 10% levels in both models
- Time trend regressor also reports significance close to 10% level albeit nonsignificant
- Reported high degrees of collinearity among regressors, plus nature of ARDL as an econometric model

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Moving forward:

- Looking further at PSEi and PSE Prop Index (with redefinition), also looking at the PSE DivY index
- Detailed checks on ARDL, and pursuing other models on time series
- Checking time trend variable if shoes similar results with future developments (i.e., longer time series data)
- Investigating individual players' behavior on REIT, and documenting entrants to the REIT sector and respective performance

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