Housing Vacancy, Structural Decline, and Voter Turnout in South Korea

Table A1. Dependent variables for district level analysis

	Variable	Description	Source	Website
1	2016 National Assembly Election	$\frac{\text{Votes}}{\text{Elligible people to vote}}$	National Election Commission	http://info.nec.go.kr/
2	2017 Presidential Election			
3	2020 National Assembly Election			
4	2022 Presidential Election			

Table A2. Explanatory variables for district level analysis

	Variable	Description	Source	Website
1	Vacancy rate	$\frac{\text{Unoccupied housing units}}{\text{Total housing stock}}$	Korean Statistical Information Service	https://kosis.kr/statHtml/statHtml.do?sso=ok&returnurl=https%3A%2F%2Fkosis.kr%3A443%2FstatHtml%2FstatHtml.do%3Flist_id%3DH21_2015_1_10%26obj_var_id%3D%26seqNo%3D%26query%3D%EB%B9%88%EC%A7%91%26tblId%3DDT_1JU1512%26vw_cd%3DMT_ZTITLE%26language%3Dkor%26orgId%3D101%26c

				onn_path%3DMT_ZTITLE%26itm_id%3D%26lang_mode%3Dko%26
2	Long-term vacancy rate	$\frac{\text{Uunoccupi for more than six months}}{\text{Unoccupied housing units}}$)	Korean Statistical Information Service	https://kosis.kr/statHtml/statHtml.do?sso=ok&returnurl=https%3A%2F%2Fkosis.kr%3A443%2FstatHtml%2FstatHtml.do%3Flist_id%3DH21_2015_1_10%26obj_var_id%3D%26seqNo%3D%26query%3D%EB%B9%88%EC%A7%91%26tblId%3DDT_1JU1512%26vw_cd%3DMT_ZTITLE%26language%3Dkor%26orgId%3D101%26conn_path%3DMT_ZTITLE%26itm_id%3D%26lang_mode%3Dko%26
3	Population density	$\frac{\text{Number of people}}{\text{km}^2}$	Korean Statistical Information Service	https://kosis.kr/statHtml/statHtml.do?sso=ok&returnurl=https%3A%2F%2Fkosis.kr%3A443%2FstatHtml%2FstatHtml.do%3Flist_id%3D110_11001_006_01%26obj_var_id%3D%26seqNo%3D%26query%3D%EC%9D%B8%EA%B5%AC%EB%B0%80%EB%8F%84%26tblId%3DDT_11001N_2013_A001%26vw_cd%3DMT_ZTITLE%26language%3Dkor%26orgId%3D110%26conn_path%3DMT_ZTITLE%26itm_id%3D%26lang_mode%3Dko%26
4	Economic inequality	$p^d = \frac{\sum_{h \in d(R_{10})} I_{R10}}{\sum_{h \in d(P_{40})} I_{P40}}$	National Health Insurance Service	https://www.nhis.or.kr/nhis/together/wbhaec06900m01.do
5	Economic status	Average Health Insurance Premiums	National Health Insurance Service	https://www.nhis.or.kr/nhis/together/wbhaec06900m01.do
6	Home ownership	$\frac{\text{Households with their own houses}}{\text{Households without their own house}}$	Korean Statistical Information Service	https://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1PE1509

7	Education	$\frac{\text{High education}}{\text{Low education}}$	Korean Statistical Information Service	https://kosis.kr/statHtml/statHtml.do?sso=ok&returnurl=https%3A%2F%2Fkosis.kr%3A443%2FstatHtml%2FstatHtml.do%3FtblId%3DDT_1IN0504%26orgId%3D101%26
8	Age	- Average age of population	Ministry of the Interior and Safety of South Korea	https://jumin.mois.go.kr/etcStatAvgAge.do
9	Sex	$\frac{\text{Male population}}{\text{Female population}}$	Korean Statistical Information Service	https://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1YL20701
10	Urbanization	$\frac{\text{Population living in urban area}}{\text{Population}}$	Ministry of Land, Infrastructure and Transport of South Korea	https://kosis.kr/statHtml/statHtml.do?orgId=315&tblId=TX_315_2009_H1001
11	Presidential election	Presidential election = 1 Otherwise = 0	National Election Commission	http://info.nec.go.kr/
12	Vote margin	Vote margin between the two major parties as a measure of competitiveness	National Election Commission	http://info.nec.go.kr/
13	Capital Region	Capital region dummy = 1 - Seoul city -Incheon city -Gyeonggi province		
14	Honam Region	Honam region dummy = 1 - Gwangju city - Jeollabuk province - Jeollanam province -Jeju island		
15	Youngnam Region	Youngnam region dummy = 1 - Busan city - Daegu city - Ulsan city		

		- Gyeongsangbuk province - Gyeongsangnam province		
16	Gangwon Region	Gangwon region dummy = 1 - Gangwon province		
17	Chungcheong Region	Chungcheong region dummy = 1 - Daejeon city - Chungcheongbuk province - Chungcheongnam province		