Econ Thesis Data Analysis

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Disease Incidence vs Road Distance

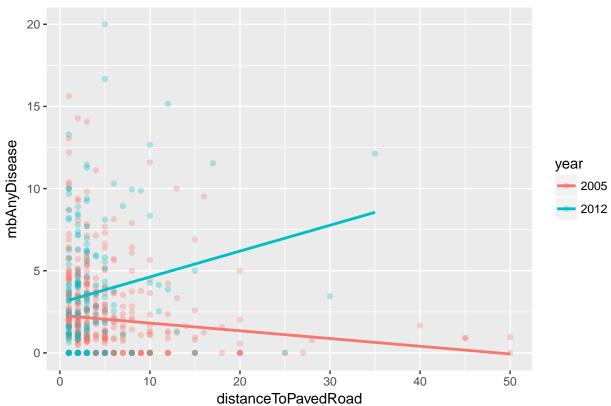


Table 1:

		Table 1:	
		Dependent variable:	
		mbAnyDisease	
	(1)	(2)	(3)
roadPaved	1.486***	0.470^{*}	0.451*
	(0.254)	(0.257)	(0.258)
income		0.00001***	0.00000**
		(0.00000)	(0.00000)
illiterate		3.774***	3.459***
		(1.299)	(1.320)
smokeTobacco		0.965***	0.840***
		(0.143)	(0.152)
ownToilet			0.013**
			(0.006)
electricity			0.006
v			(0.005)
caste.Brahmin			0.001
			(0.026)
Observations	2,800	2,748	2,748
$ m R^2$	0.025	0.140	0.144
Adjusted R ²	-1.081	-0.867	-0.863
F Statistic	$34.265^{***} (df = 1; 1311)$	$51.328^{***} (df = 4; 1266)$	$30.248^{***} (df = 7; 1263)$

Note:

Table 2:

Table 2:					
	Dependent variable:				
		mbAnyDisease			
	(1)	(2)	(3)		
$\overline{ ln Distance To Paved Road}$	-0.661	-0.037	-0.038		
	(0.469)	(0.455)	(0.464)		
income		-0.00001	-0.00001		
		(0.00001)	(0.00001)		
illiterate		0.738	1.185		
		(3.654)	(3.772)		
smokeTobacco		2.385***	2.250***		
		(0.442)	(0.480)		
ownToilet			0.017		
			(0.017)		
electricity			-0.001		
v			(0.013)		
caste.Brahmin			0.040		
			(0.054)		
Observations	658	643	643		
$ m R^2$	0.016	0.283	0.294		
Adjusted R^2	-4.174	-2.967	-3.013		
F Statistic	1.985 (df = 1; 125)	$11.460^{***} (df = 4; 116)$	$6.710^{***} (df = 7; 113)$		

Note:

Table 3:

	Table 5:		
		Dependent variable:	
		mbAnyDisease	
	(1)	(2)	(3)
roadPaved	1.419*** (0.265)	1.439*** (0.254)	1.377*** (0.264)
Immunization Campaigns Number	0.091*** (0.028)		0.088*** (0.028)
${\bf drinking Water Source. Piped}$	0.010^* (0.005)		0.010** (0.005)
healthSubCenter		0.090 (0.171)	0.022 (0.187)
primaryHealthCenter		-1.014^{***} (0.377)	-1.009^{***} (0.388)
community Health Center		0.357 (0.628)	$0.503 \\ (0.638)$
Observations R ²	2,649 0.040	2,788 0.030	2,639 0.046
Adjusted R ² F Statistic	$ \begin{array}{c} -1.185 \\ 16.050^{***} \text{ (df = 3; 1164)} \end{array} $	-1.085 $10.186^{***} (df = 4; 1296)$	$ \begin{array}{c} -1.187 \\ 9.219^{***} \text{ (df = 6; 1151)} \end{array} $

Table 4:

	18510 4.		
		Dependent variable:	
		mbAnyDisease	
	(1)	(2)	(3)
ln Distance To Paved Road	-0.740 (0.489)	-0.722 (0.479)	-0.841^* (0.501)
Immunization Campaigns Number	0.174 (0.117)		0.152 (0.119)
${\bf drinking Water Source. Piped}$	0.054*** (0.020)		0.059*** (0.021)
healthSubCenter		-0.492 (0.842)	-0.788 (0.884)
${\bf primary Health Center}$		-2.499 (2.200)	-2.763 (2.218)
${\bf community Health Center}$		-0.992 (4.992)	-3.410 (5.087)
Observations \mathbb{R}^2	619 0.097	652 0.029	615 0.119
Adjusted R ² F Statistic	-4.118 $3.916^{**} (df = 3; 109)$	-4.266 0.905 (df = 4; 120)	-4.201 $2.343^{**} (df = 6; 104)$

Table 5:

		Dependent variable:	
		mbAnyDisease	
	(1)	(2)	(3)
roadPaved	-0.003	-0.050	-0.018
	(0.164)	(0.164)	(0.163)
${\it mbTreatmentWho1.PublicDoc}$	0.402***		-0.040
	(0.025)		(0.119)
${\it mbTreatmentWho1.PublicDocInPvt}$	0.404***		-0.032
	(0.048)		(0.124)
mbTreatmentWho1.PvtDoc	0.524***		0.086
	(0.014)		(0.115)
mbTreatmentWho1.Pharm	0.764***		0.303*
	(0.104)		(0.158)
${\it mbTreatmentWhere 1. Same Village}$		0.455***	0.405***
		(0.021)	(0.115)
${\it mbTreatmentWhere 1.} Another Village$		0.547***	0.488***
		(0.025)	(0.117)
${\it mbTreatmentWhere 1. Other Town}$		0.493***	0.444***
		(0.021)	(0.115)
mbTreatmentWhere1.DistrictTown		0.464***	0.423***
		(0.028)	(0.117)
Observations	2,800	2,800	2,800
\mathbb{R}^2	0.615	0.613	0.621
Adjusted \mathbb{R}^2	0.176	0.171	0.186
F Statistic	$417.645^{***} (df = 5; 1307)$	$414.140^{***} (df = 5; 1307)$	$237.227^{***} \text{ (df} = 9; 1303)$

Table 6:

		Dependent variable:	
	mbAnyDisease		
	(1)	(2)	(3)
ln Distance To Paved Road	0.261	0.158	0.223
	(0.274)	(0.279)	(0.282)
mbTreatmentWho1.PublicDoc	0.491***		0.194
	(0.069)		(0.270)
mbTreatmentWho1.PublicDocInPvt	0.566***		0.306
	(0.136)		(0.284)
mbTreatmentWho1.PvtDoc	0.620***		0.324
	(0.053)		(0.258)
mbTreatmentWho1.Pharm	0.840***		0.585
	(0.252)		(0.386)
mbTreatmentWhere1.SameVillage		0.537***	0.261
		(0.072)	(0.258)
mbTreatmentWhere1.AnotherVillage		0.613***	0.314
		(0.067)	(0.262)
mbTreatmentWhere1.OtherTown		0.508***	0.293
		(0.075)	(0.238)
mbTreatmentWhere1.DistrictTown		0.482***	0.218
		(0.084)	(0.263)
Observations	658	658	658
\mathbb{R}^2	0.693	0.689	0.699
Adjusted R^2	-0.664	-0.689	-0.692
F Statistic	$54.744^{***} (df = 5; 121)$	$53.613^{***} (df = 5; 121)$	$30.154^{***} (df = 9; 117)$

Table 7:

	Table 7:		
		Dependent variable:	
		${\it mbAnyDisease}$	
	(1)	(2)	(3)
roadPaved	0.014	0.107	0.092
	(0.173)	(0.169)	(0.176)
income	-0.00000***		-0.00000**
	(0.00000)		(0.00000)
Immunization Campaigns Number	0.011		0.008
	(0.018)		(0.017)
${\bf drinking Water Source. Piped}$	-0.003		-0.004
-	(0.003)		(0.003)
primaryHealthCenter	-0.623**		-0.506**
	(0.245)		(0.244)
illiterate		1.178	1.348
		(0.852)	(0.890)
smokeTobacco		-0.232**	-0.101
		(0.095)	(0.105)
ownToilet		-0.001	0.005
		(0.004)	(0.004)
${\bf mbTreatmentWhere 1. Same Village}$	0.466***	0.492***	0.495***
	(0.023)	(0.022)	(0.024)
${\it mbTreatmentWhere 1.} Another Village$	0.584***	0.535***	0.556***
	(0.027)	(0.026)	(0.028)
mbTreatmentWhere1.OtherTown	0.502***	0.516***	0.511***
	(0.023)	(0.022)	(0.023)
${\bf mbTreatmentWhere 1. DistrictTown}$	0.462***	0.472***	0.464***
	(0.031)	(0.028)	(0.030)
Observations	2,643	2,748	2,596
\mathbb{R}^2	0.620	0.628	0.634
Adjusted R ²	0.129	0.189	0.147
F Statistic	$208.887^{***} (df = 9; 1152)$	$265.884^{***} (df = 8; 1262)$	$160.756^{***} (df = 12; 12)$

Table 8:

	Table 8:		
		Dependent variable:	
	(1)	(2)	(3)
lnDistanceToPavedRoad	0.069 (0.287)	0.236 (0.303)	0.231 (0.326)
income	$0.00000 \\ (0.00000)$		-0.00000 (0.00001)
${\bf Immunization Campaigns Number}$	$0.005 \\ (0.066)$		-0.003 (0.068)
drinkingWaterSource.Piped	0.020^* (0.012)		0.022^* (0.012)
primaryHealthCenter	-1.264 (1.258)		-1.012 (1.381)
illiterate		$2.718 \\ (2.425)$	2.563 (2.476)
$\operatorname{smokeTobacco}$		0.253 (0.284)	0.439 (0.353)
ownToilet		-0.003 (0.011)	-0.003 (0.012)
${\bf mbTreatmentWhere 1. Same Village}$	0.553*** (0.076)	0.505*** (0.081)	0.524*** (0.081)
${\bf mbTreatmentWhere 1. Another Village}$	$0.635^{***} (0.069)$	0.595^{***} (0.073)	0.600*** (0.075)
${\it mbTreatmentWhere 1. Other Town}$	0.485*** (0.078)	$0.497^{***} $ (0.079)	0.486*** (0.080)
${\bf mbTreatmentWhere 1. DistrictTown}$	0.406*** (0.087)	0.440*** (0.090)	0.378*** (0.091)
Observations R ² Adjusted R ² F Statistic	617 0.740 -0.568 32.311*** (df = 9; 102)	643 0.701 -0.712 32.882*** (df = 8; 112)	603 0.751 -0.576 23.908*** (df = 12; 95)

Table 9:

	Table 9:		
		Dependent variable:	
	mbComDisease		
	(1)	(2)	(3)
roadPaved	-0.010 (0.052)	0.007 (0.050)	$0.014 \\ (0.054)$
income	-0.00000^* (0.00000)		-0.00000 (0.00000)
Immunization Campaigns Number	-0.007 (0.005)		-0.007 (0.005)
${\bf drinking Water Source. Piped}$	-0.0004 (0.001)		-0.001 (0.001)
primaryHealthCenter	-0.070 (0.073)		-0.066 (0.075)
illiterate		-0.409 (0.253)	-0.383 (0.274)
smokeTobacco		-0.054^* (0.028)	-0.034 (0.032)
ownToilet		$0.001 \\ (0.001)$	$0.002 \\ (0.001)$
${\bf mbTreatmentWhere 1. Same Village}$	$0.006 \\ (0.007)$	0.011* (0.007)	$0.008 \\ (0.007)$
${\bf mbTreatmentWhere 1. Another Village}$	0.030*** (0.008)	0.034*** (0.008)	0.034^{***} (0.009)
${\bf mbTreatmentWhere 1. Other Town}$	0.011 (0.007)	0.013^* (0.007)	0.013^* (0.007)
${\bf mbTreatmentWhere 1. DistrictTown}$	0.045*** (0.009)	0.040*** (0.008)	0.047^{***} (0.009)
Observations R^2 Adjusted R^2 F Statistic	2,643 0.036 -1.211 4.766*** (df = 9; 1152)	2,748 0.039 -1.092 6.370*** (df = 8; 1262)	2,596 0.043 -1.230 4.148*** (df = 12; 1114)

Table 10:

	Table 10:		
	(1)	(2)	(3)
${\rm lnDistance ToPaved Road}$	-0.068	-0.068	-0.065
	(0.091)	(0.085)	(0.096)
income	0.00000		-0.00000
	(0.00000)		(0.00000)
${\bf Immunization Campaigns Number}$	0.027		0.019
	(0.021)		(0.020)
drinkingWaterSource.Piped	-0.004		-0.004
	(0.004)		(0.004)
primaryHealthCenter	0.435		0.428
	(0.399)		(0.408)
illiterate		0.158	-0.061
		(0.679)	(0.731)
smokeTobacco		0.091	0.120
		(0.080)	(0.104)
ownToilet		-0.004	-0.003
		(0.003)	(0.004)
${\it mbTreatmentWhere1.SameVillage}$	-0.024	-0.030	-0.032
	(0.024)	(0.023)	(0.024)
${ m mbTreatmentWhere 1. Another Village}$	0.050**	0.047**	0.047**
	(0.022)	(0.021)	(0.022)
mbTreatmentWhere1.OtherTown	0.003	-0.006	-0.003
	(0.025)	(0.022)	(0.024)
mbTreatmentWhere1.DistrictTown	0.006	-0.006	-0.002
	(0.028)	(0.025)	(0.027)
Observations	617	643	603
\mathbb{R}^2	0.103	0.092	0.136
Adjusted R^2	-4.419	-4.205	-4.472
F Statistic	1.298 (df = 9; 102)	1.417 (df = 8; 112)	1.251 (df = 12; 95)

Table 11:

	Table 11:		
		Dependent variable:	
	${\bf mbNonComDisease}$		
	(1)	(2)	(3)
roadPaved	$0.056 \\ (0.053)$	$0.002 \\ (0.052)$	$0.015 \\ (0.055)$
income	0.00000^* (0.00000)		0.00000 (0.00000)
Immunization Campaigns Number	-0.006 (0.005)		-0.006 (0.005)
${\bf drinking Water Source. Piped}$	$0.0001 \\ (0.001)$		$0.001 \\ (0.001)$
primaryHealthCenter	$0.105 \\ (0.075)$		0.116 (0.076)
illiterate		0.248 (0.262)	0.463^* (0.277)
smokeTobacco		0.057** (0.029)	$0.055^* \ (0.033)$
ownToilet		-0.0001 (0.001)	-0.0003 (0.001)
${\bf mbTreatmentWhere 1. Same Village}$	0.014** (0.007)	0.020*** (0.007)	$0.013^* \ (0.007)$
${\bf mbTreatmentWhere 1. Another Village}$	0.017** (0.008)	0.019** (0.008)	$0.015^* \ (0.009)$
${\it mbTreatmentWhere 1. Other Town}$	0.024*** (0.007)	0.030*** (0.007)	0.025*** (0.007)
${\bf mbTreatmentWhere 1. DistrictTown}$	0.028*** (0.009)	0.018** (0.009)	0.026*** (0.009)
Observations R^2 Adjusted R^2	2,643 0.049 -1.180	$ \begin{array}{c} 2,748 \\ 0.062 \\ -1.042 \end{array} $	2,596 0.061 -1.187
F Statistic	$6.638^{***} (df = 9; 1152)$	$10.381^{***} (df = 8; 1262)$	$6.038^{***} (df = 12; 1114)$

Table 12:

	14010 12.		
	Dependent variable:		
		mbNonComDisease	
	(1)	(2)	(3)
${ m lnDistance To Paved Road}$	-0.023	-0.020	0.002
	(0.069)	(0.076)	(0.080)
income	0.00000		-0.00000
	(0.00000)		(0.00000)
${\bf Immunization Campaigns Number}$	-0.018		-0.018
	(0.016)		(0.017)
drinkingWaterSource.Piped	0.0003		0.0003
	(0.003)		(0.003)
primaryHealthCenter	0.381		0.465
	(0.303)		(0.337)
illiterate		0.147	0.444
		(0.608)	(0.605)
smokeTobacco		-0.006	0.014
		(0.071)	(0.086)
ownToilet		0.001	0.002
		(0.003)	(0.003)
mbTreatmentWhere1.SameVillage	0.017	0.029	0.017
	(0.018)	(0.020)	(0.020)
${ m mbTreatmentWhere 1. Another Village}$	0.005	0.006	0.001
	(0.017)	(0.018)	(0.018)
mbTreatmentWhere1.OtherTown	0.038**	0.040**	0.037^{*}
	(0.019)	(0.020)	(0.020)
mbTreatmentWhere1.DistrictTown	0.017	0.003	0.017
	(0.021)	(0.023)	(0.022)
Observations	617	643	603
\mathbb{R}^2	0.099	0.086	0.110
Adjusted R^2	-4.442	-4.238	-4.642
F Statistic	1.244 (df = 9; 102)	1.320 (df = 8; 112)	0.976 (df = 12; 95)

Table 13:

	Table 13:		
	Dependent variable: mbSTDorAIDS		
	(1)	(2)	(3)
roadPaved	-0.040 (0.025)	-0.027 (0.023)	-0.034 (0.025)
income	$-0.00000^{***} $ (0.00000)		-0.00000 (0.00000)
Immunization Campaigns Number	0.001 (0.003)		0.001 (0.002)
${\bf drinking Water Source. Piped}$	0.0001 (0.0005)		-0.0001 (0.0005)
primaryHealthCenter	-0.024 (0.035)		-0.027 (0.034)
illiterate		-0.229^{**} (0.115)	-0.246* (0.126)
smokeTobacco		-0.017 (0.013)	-0.014 (0.015)
ownToilet		-0.0002 (0.001)	-0.0005 (0.001)
${\bf mbTreatmentWhere 1. Same Village}$	0.010^{***} (0.003)	0.012^{***} (0.003)	0.011*** (0.003)
${\bf mbTreatmentWhere 1. Another Village}$	$0.015^{***} $ (0.004)	0.011*** (0.004)	0.014*** (0.004)
${\bf mbTreatmentWhere 1. Other Town}$	0.004 (0.003)	0.001 (0.003)	0.002 (0.003)
${\bf mbTreatmentWhere 1. DistrictTown}$	0.014*** (0.004)	0.008** (0.004)	0.011** (0.004)
Observations R^2 Adjusted R^2 F Statistic	2,643 0.034 -1.216 4.494*** (df = 9; 1152)	2,748 0.028 -1.115 4.574*** (df = 8; 1262)	2,596 0.032 -1.255 3.069*** (df = 12; 1114)

Note:

Table 14:

	14010 14.		
	Dependent variable:		
		${\rm mbSTDorAIDS}$	
	(1)	(2)	(3)
lnDistanceToPavedRoad	0.031	-0.016	-0.001
	(0.053)	(0.054)	(0.059)
income	-0.00000^*		-0.00000
	(0.00000)		(0.00000)
${\bf Immunization Campaigns Number}$	-0.010		-0.009
	(0.012)		(0.012)
drinkingWaterSource.Piped	-0.005**		-0.005**
	(0.002)		(0.002)
primaryHealthCenter	-0.501**		-0.560**
	(0.230)		(0.252)
illiterate		-0.712	-0.816*
		(0.433)	(0.451)
smokeTobacco		-0.047	-0.045
		(0.051)	(0.064)
$\operatorname{own} \operatorname{Toilet}$		-0.0003	-0.001
		(0.002)	(0.002)
${\bf mbTreatmentWhere 1. Same Village}$	0.020	0.013	0.022
	(0.014)	(0.014)	(0.015)
${\bf mbTreatmentWhere 1. Another Village}$	0.055***	0.062***	0.061***
	(0.013)	(0.013)	(0.014)
${\bf mbTreatmentWhere 1. Other Town}$	0.025*	0.014	0.027^{*}
	(0.014)	(0.014)	(0.015)
${\bf mbTreatmentWhere 1. DistrictTown}$	0.022	0.017	0.026
	(0.016)	(0.016)	(0.017)
Observations	617	643	603
\mathbb{R}^2	0.297	0.209	0.333
Adjusted R ²	-3.245	-3.533	-3.228
F Statistic	$4.789^{***} (df = 9; 102)$	$3.705^{***} (df = 8; 112)$	$3.950^{***} (df = 12; 95)$

Any Disease
Personal Controls
Village Controls
Medical TreatmentWhere and TreatmentWho Controls
Combined Controls
Communicable Disease
Non Communicable Disease
STD or AIDS

Notes

- Regression
 - Controls:
 - \ast Need to control for how often in dividuals go to hospital (more people sick in 2005 then in 2012 –> increased diagnosis?)

To Do:

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Questions

- If using state-fixed and time-fixed effects for each village, do I really need all these controls?
- Can I do a differences-in-differences? $<\!\!-$ potentially do for paved vs unpaved
- What controls should I include and what shouldn't? Should I be worried about "controlling away" the actual effect?