Figure 3. Ratio of part-time worker

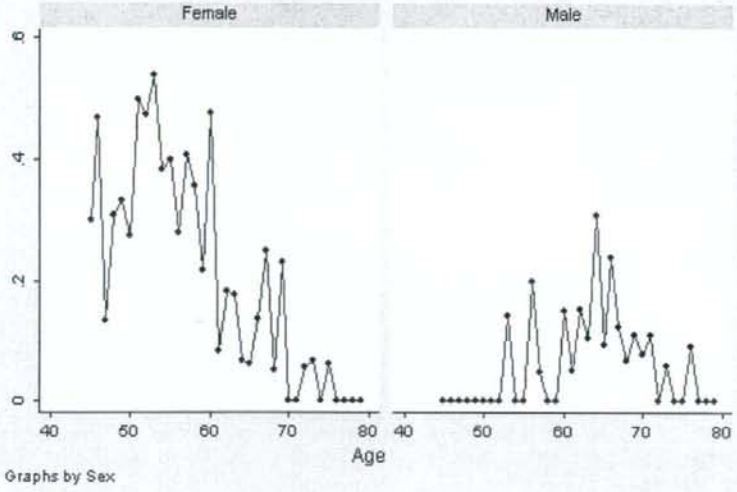


Figure 4. Average working hours

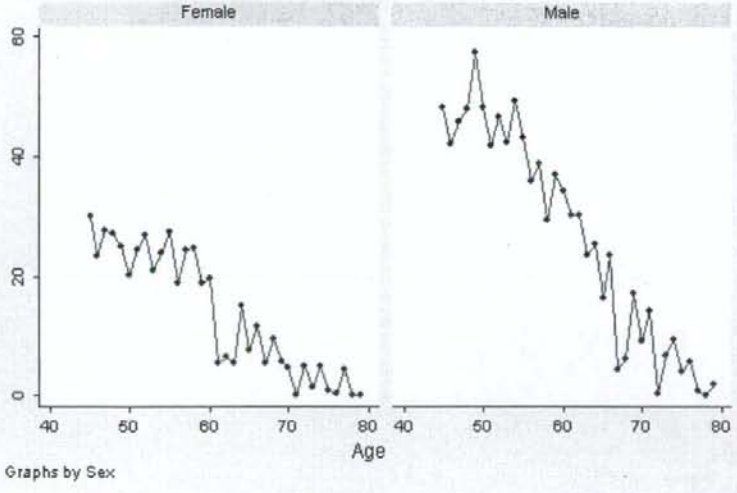


Figure 5. Distributions of the subjective health status by the number of diseases

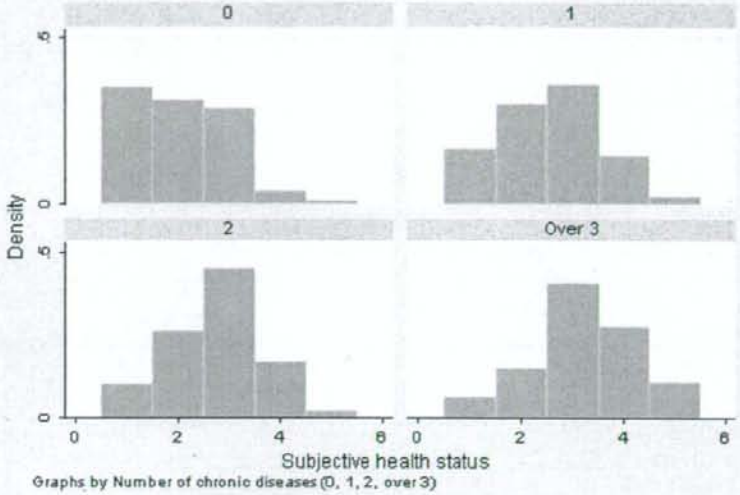


Figure 6. Distributions of the subjective health status by the disease score

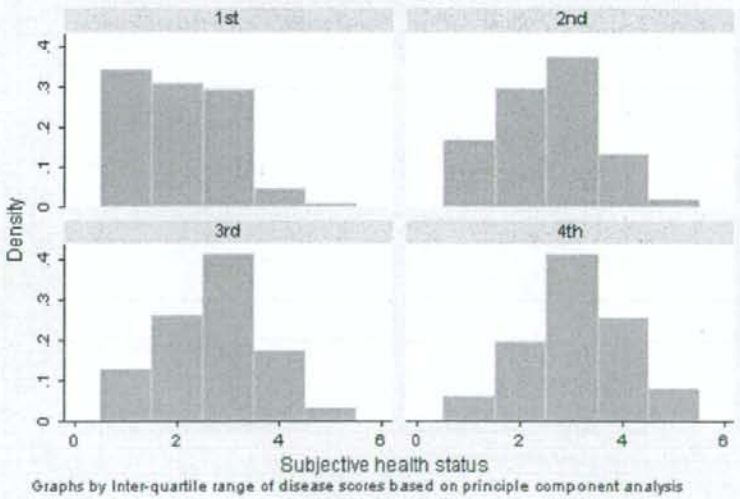


Figure 7-1. Scatter plot of the density of clinics and the ratio of poor health

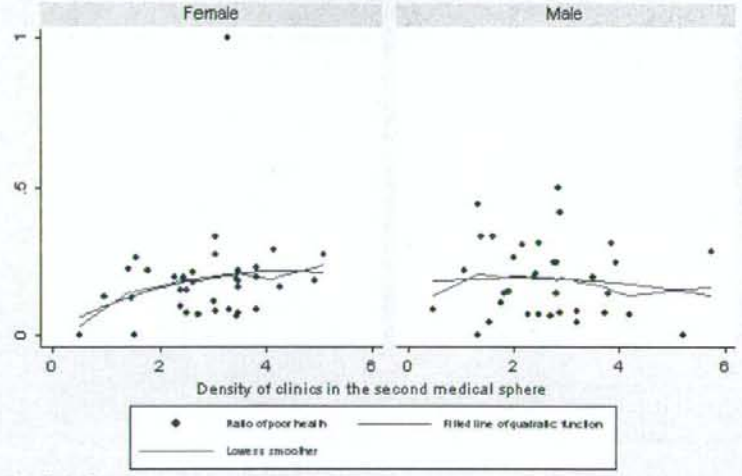


Figure 7-2. Scatter plot of the density of clinics and the number of diseases

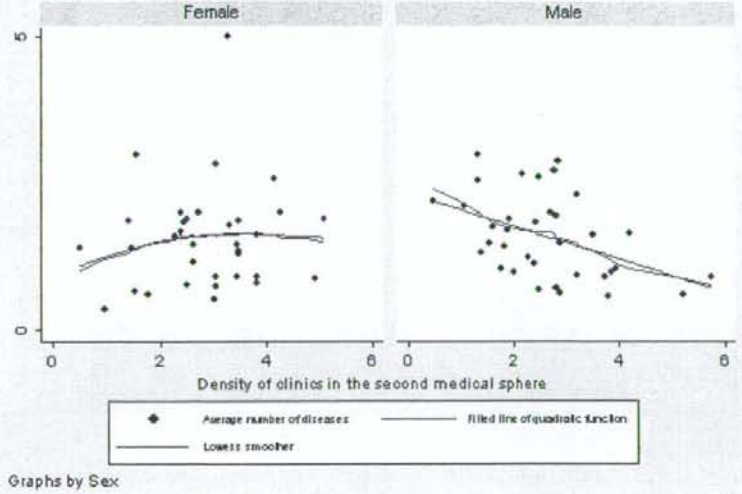


Figure 7-3. Scatter plot of the density of clinics and the disease score

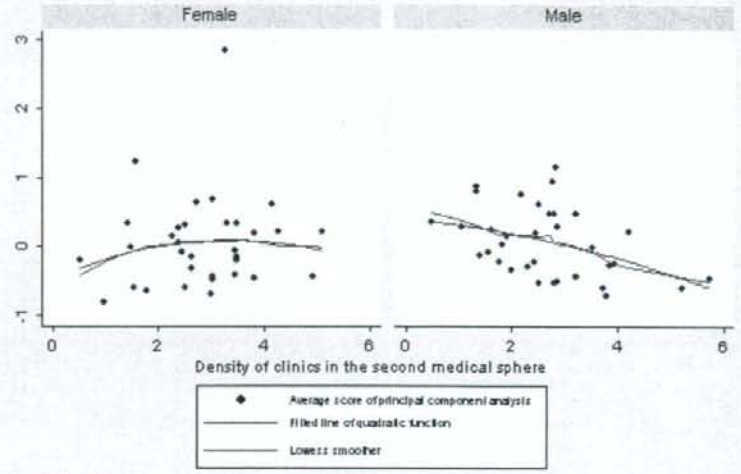


Figure 8-1. Scatter plot of the ratio of experiencing fitness habits and poor health

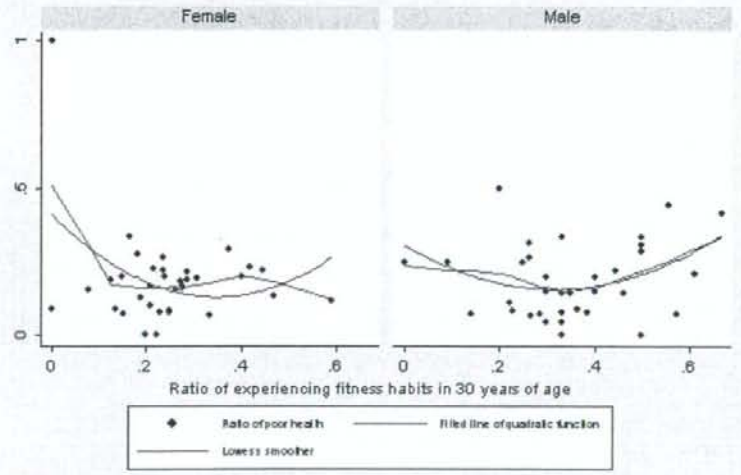


Figure 8-2. Scatter plot of the ratio of experiencing fitness habits and the number of diseases

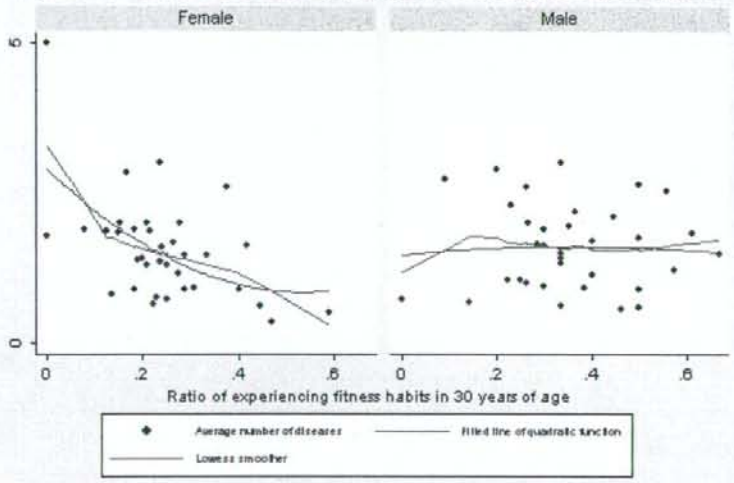


Figure 8-3. Scatter plot of the ratio of experiencing fitness habits and the disease score

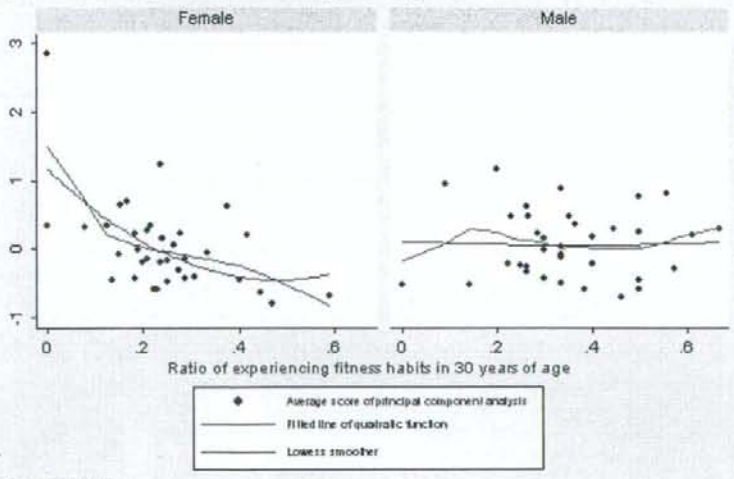


Figure 9-1. Scatter plot of the deviation of past BMI from standard value and the ratio of poor health

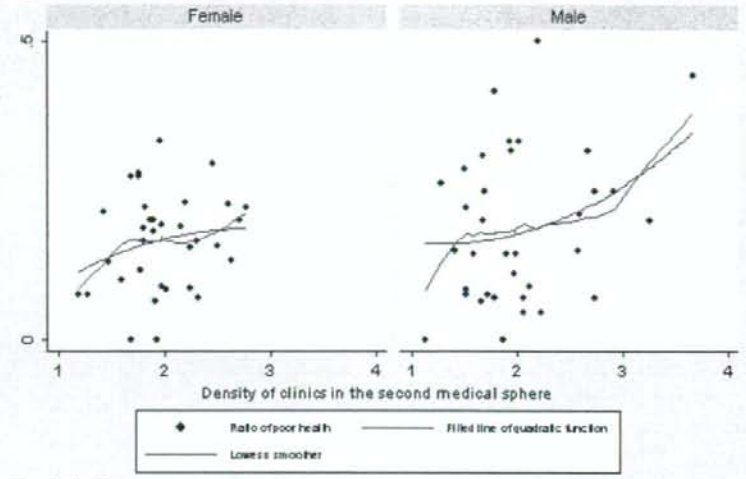


Figure 9-2. Scatter plot of the deviation of past BMI from standard value and the number of diseases

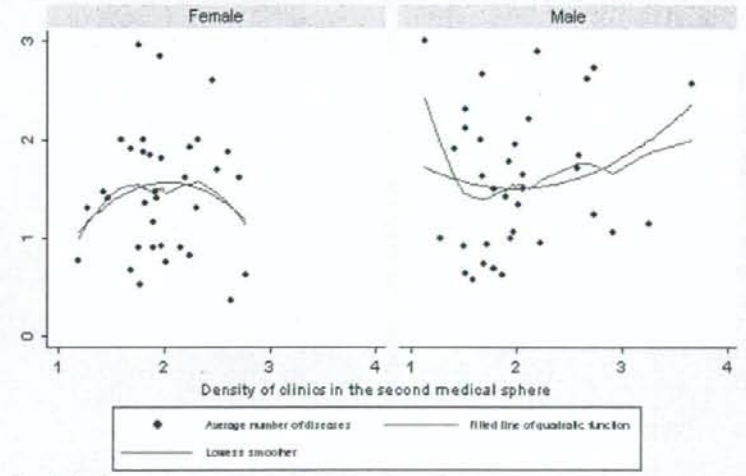


Figure 9-3. Scatter plot of the deviation of past BMI from standard value and the disease score

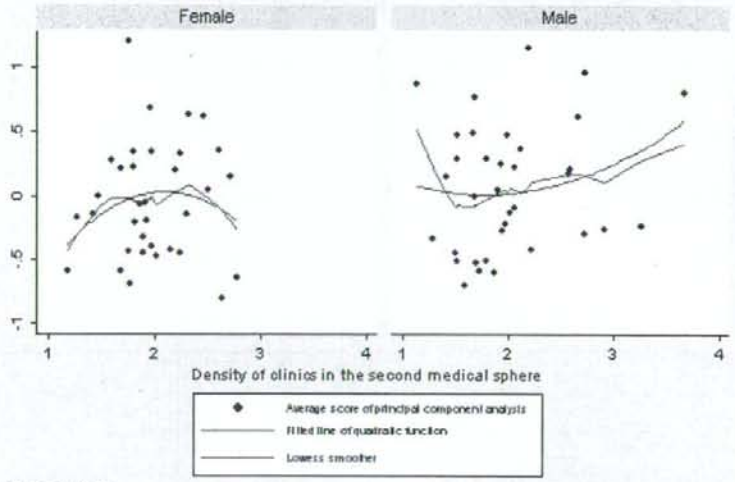


Table 1. Ratio of retiree and no-job person by age for males

Age	50-59	60-69	70-79
Subjective health			
Good	7.0%	36.1%	69.0%
Poor	9.7%	71.4%	68.8%
Number of chronic diseases			
=0	4.1%	33.3%	66.7%
=1	10.6%	38.9%	52.6%
=2	12.9%	36.4%	75.0%
=Over 3	0.0%	60.0%	81.8%
Disease score of principal component analysis			
1st inter-quartile	4.1%	31.3%	66.7%
2nd inter-quartile	5.4%	39.0%	48.0%
3rd inter-quartile	12.8%	37.5%	76.9%
4th inter-quartile	10.0%	53.3%	76.5%

Table 2. Average Working hours by age for males

Age	50-59	60-69	70-79
Subjective health			
Good	41.7	24.3	7.0
Poor	39.9	10.0	5.3
Number of chronic diseases			
=0	42.8	27.7	7.9
=1	41.8	22.1	10.9
=2	37.4	22.6	5.8
=Over 3	41.6	15.3	2.5
Disease score of principal component analysis			
1st inter-quartile	42.8	27.5	7.9
2nd inter-quartile	43.8	24.5	11.0
3rd inter-quartile	38.0	21.5	5.8
4th inter-quartile	38.6	16.3	4.2

Table 3. The estimates of the health effect on labour force participation

	LPM (A)			2SLS (B)			Univariate probit (C)			IV probit (D)		
	Coeff.	Std. Err.		Coeff.	Std. Err.		M.E.	Std. Err.		M.E.	Std. Err.	
Binary subjective health	0.068	0.048		−0.181	0.587		0.079	0.064		0.579	0.148	***
(Pseudo) R^2	0.35						0.35					
Test of exogentiy (H_0: ρ =0 for IV probit, p−value)				0.712						0.111		
F/Wald test of the excluded instruments (p−value)				0.185						0.244		
Hansen's J statistic (p−value)				0.682								
Number of diseases	0.041	0.013	***	−0.034	0.082		0.045	0.016	***	−0.053	0.108	
(Pseudo) R^2	0.36						0.36					
Test of exogentiy (H_0: ρ =0 for IV probit, p−value)				0.346						0.362		
F/Wald test of the excluded instruments (p−value)				0.013						0.009		
Hansen's J statistic (p−value)				0.725								
Disease score	0.066	0.019	***	0.004	0.154		0.070	0.023	***	0.046	0.239	
(Pseudo) R^2	0.37						0.36					
Test of exogentiy (H_0: ρ =0 for IV probit, p−value)				0.672						0.921		
F/Wald test of the excluded instruments (p−value)				0.083						0.103		
Hansen's J statistic (p−value)				0.647								

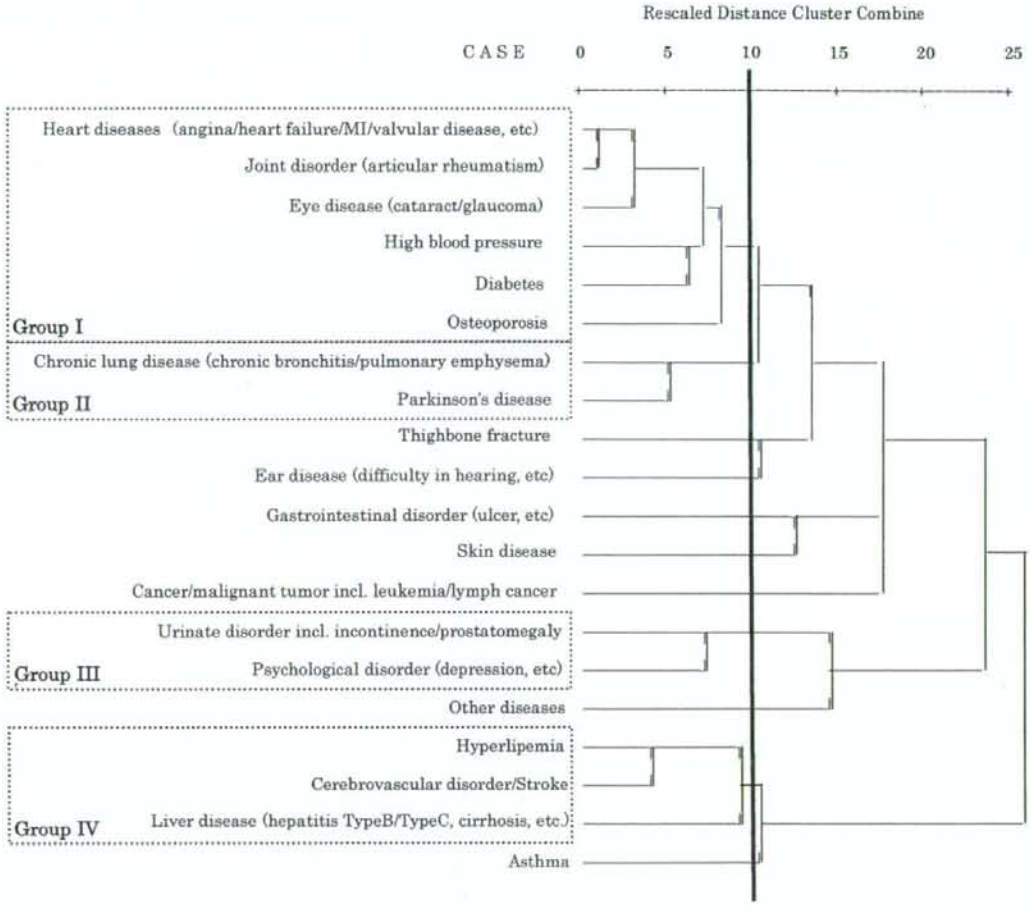
Note: Standard errors for LPM and 2SLS are the heteroskedasticity−robust standard error. The marginal effect is calculated as $\partial \Pr(y=1)/\partial x$ evaluated at mean of other covariates. For binary subjective health, the marginal effect corresponds to $\Pr(y=1|x=1)-\Pr(y=1|x=0)$. The asterisks indicate statistical significance at the 1 % (***), 5 % (**), and 10 % (*) significance levels. The dependent variable is a dummy variable indicating whether being employed or not. Other covariates that control married status, age, education, income, and household wealth are not reported in this table. Only male observations are used. Number of observations is 469. R^2 for LPM is adjusted by degree of freedom.

Table 4. The estimates of the health effect on hours worked

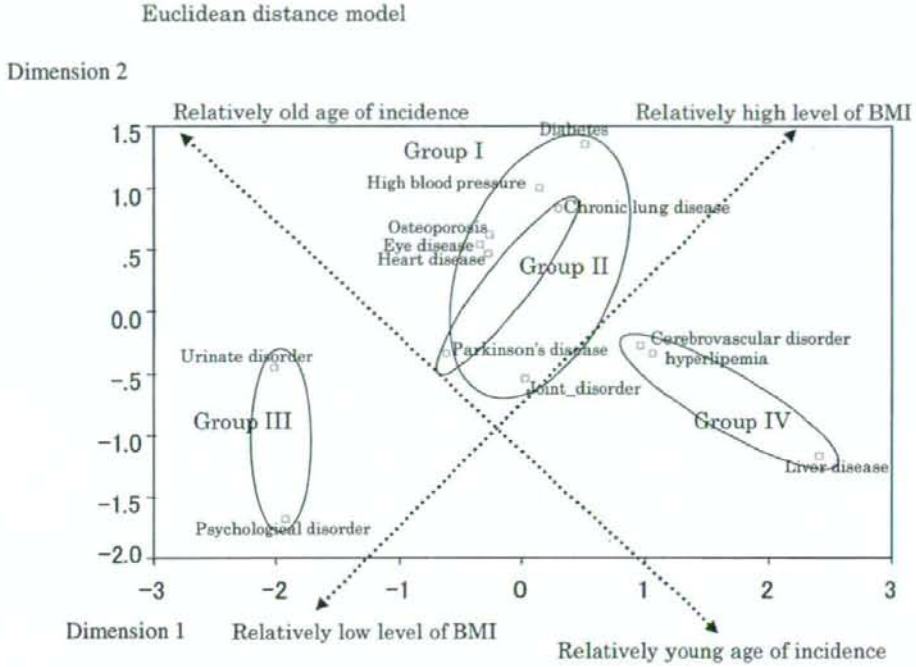
	Tobit				IV Tobit			
	(A)		(B)		(C)		(D)	
	Maginal effect on E(y|y>0)		Maginal effect on E(y)		Maginal effect on E(y|y>0)		Maginal effect on E(y)	
	M.E.	Std. Err.	M.E.	Std. Err.	M.E.	Std. Err.	M.E.	Std. Err.
Binary subjective health	−4.64	1.78 ***	−6.41	2.49 ***	−5.09	19.25	−7.04	26.96
Pseudo R^2		0.08						
LR test of exogentiy (H_0: ρ =0)						0.981		
Wald test of instruments						0.272		
Number of diseases	−2.37	0.57 ***	−3.22	0.77 ***	0.21	3.17	0.28	4.34
Pseudo R^2		0.09						
Wald test of exogentiy (H_0: ρ =0)						0.415		
Wald test of instruments						0.002		
Disease score	−3.57	0.82 ***	−4.86	1.12 ***	1.19	5.82	1.63	7.98
Pseudo R^2		0.09						
Wald test of exogentiy (H_0: ρ =0)						0.416		
Wald test of instruments						0.038		

Note: The marginal effects on E(y|y>0) and E(y) are calculated as $\partial E(y|y>0)/\partial x$ and $\partial E(y)/\partial x$ evaluated at mean of other covariates, respectively. For binary subjective health, the marginal effect corresponds to E(y|y>0, x=1)−E(y|y>0, x=0) and E(y|x=1)−E(y|x=0). The asterisks indicate statistical significance at the 1 % (***), 5 % (**), and 10 % (*) significance levels. The dependent variable is hours worked. Other covariates that control married status, age, education, income, and household wealth are not reported in this table. Only male observations are used. Number of observations is 472.

Appendix Figure 1: Classification of diseases using hierarchical cluster analysis (Ward Method)

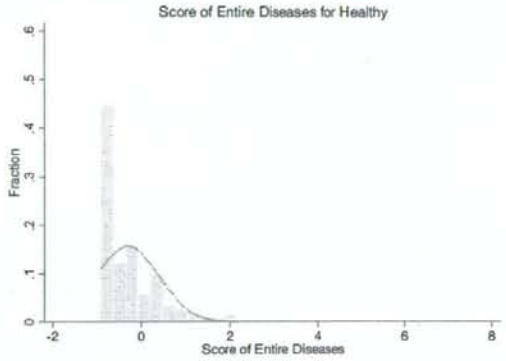


Appendix Figure 2: Classification of diseases using multi dimensional scaling

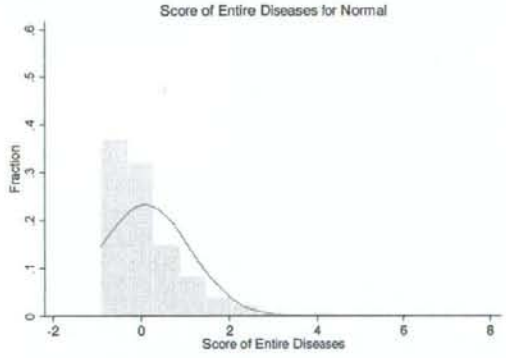


Appendix Figure 3: Distribution of principal components score for all diseases by subjective health status

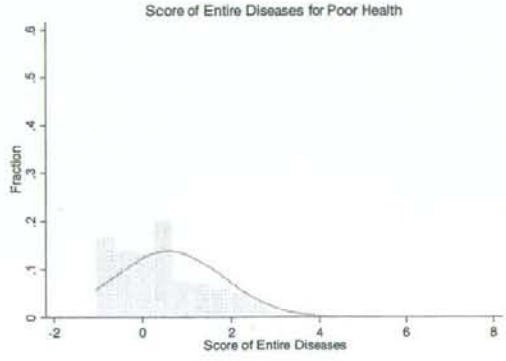
1. Subjective health status: "Good" or "Fairly Good"



2. Subjective health status: "Neither good nor poor"

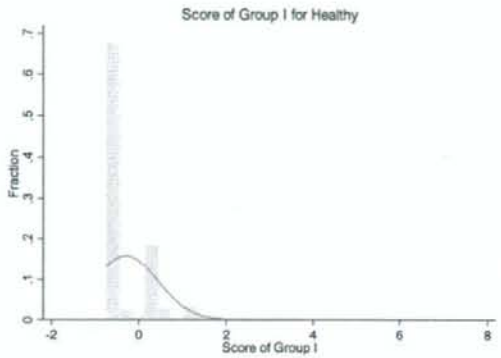


3. Subjective health status: "Not so good" or "Not good"

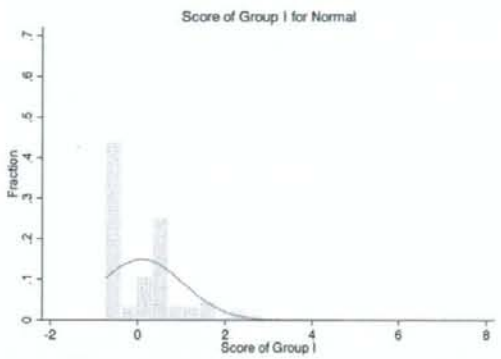


Appendix Figure 4-1: Distribution of principal components score for Group I (heart diseases, joint disorder, eye disease, high blood pressure, diabetes, and osteoporosis) by subjective health status

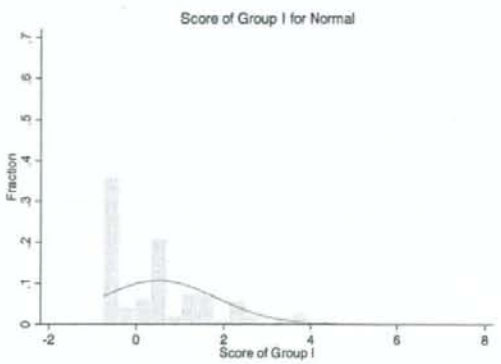
1. Subjective health status: "Good" or "Fairly Good"



2. Subjective health status: "Neither good nor poor"

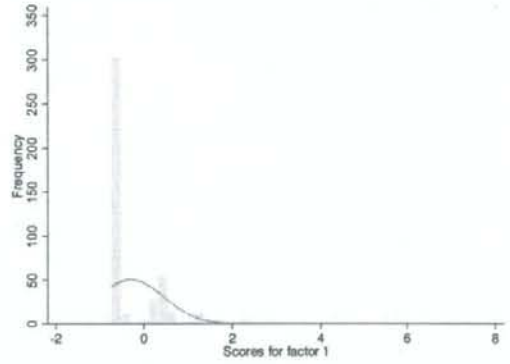


3. Subjective health status: "Not so good" or "Not good"

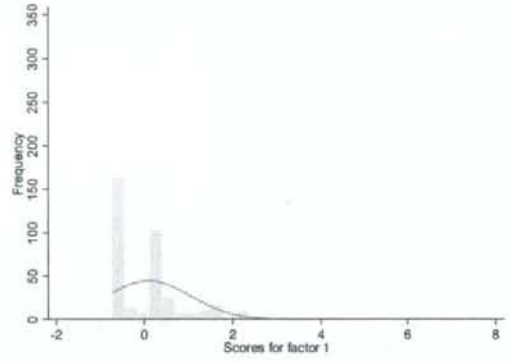


Appendix Figure 4-2: Distribution of principal components score for Group II (chronic lung disease and Parkinson's disease) by subjective health status

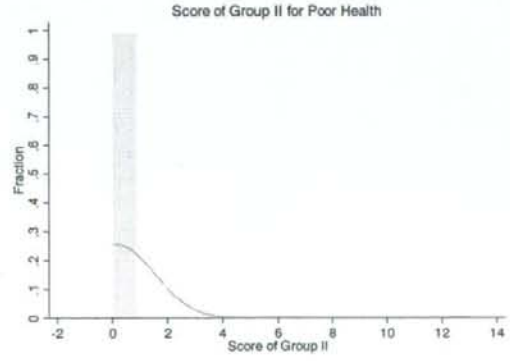
1. Subjective health status: "Good" or "Fairly Good"



2. Subjective health status: "Neither good nor poor"



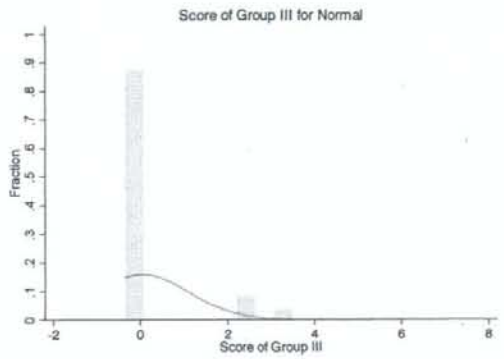
3. Subjective health status: "Not so good" or "Not good"



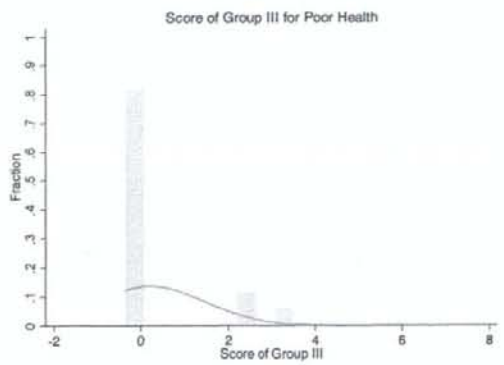
Appendix Figure 4-3: Distribution of principal components score for Group III (urinate disorder incl. incontinence/prostatomegaly and psychological disorder) by subjective health status

1. Subjective health status: "Good" or "Fairly Good"

2. Subjective health status: "Neither good nor poor"

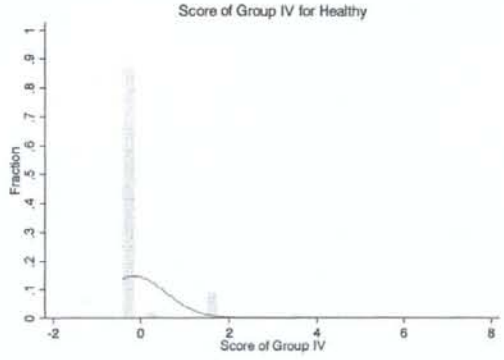


3. Subjective health status: "Not so good" or "Not good"

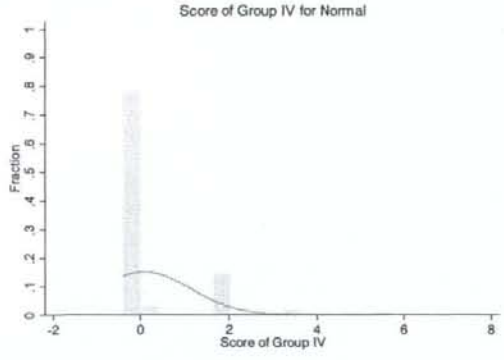


Appendix Figure 4-4: Distribution of principal components score for Group IV (hyperlipemia, cerebrovascular disorder/stroke, and liver disease) by subjective health status

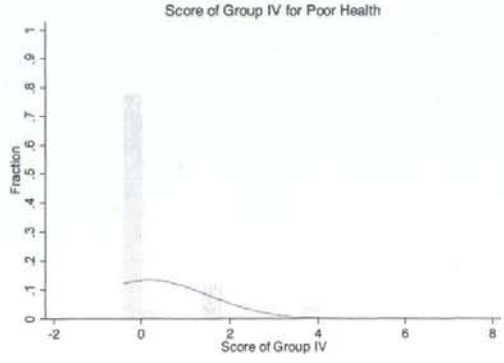
1. Subjective health status: "Good" or "Fairly Good"



2. Subjective health status: "Neither good nor poor"

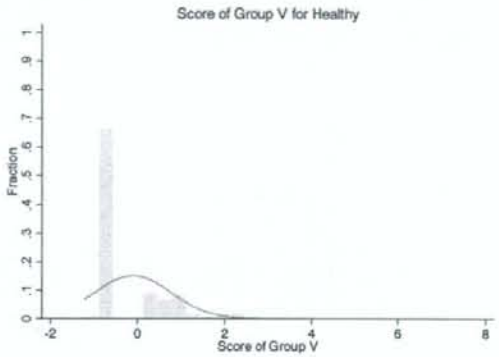


3. Subjective health status: "Not so good" or "Not good"

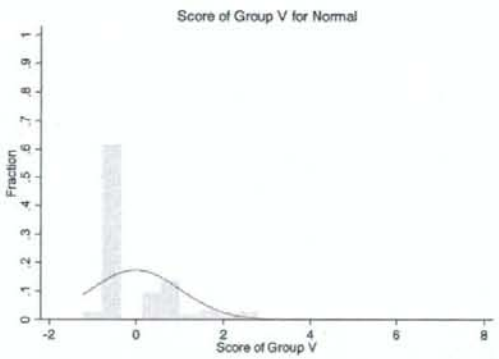


Appendix Figure 4-5: Distribution of principal components score for Group V (other diseases which cannot be categorized into any groups) by subjective health status

1. Subjective health status: "Good" or "Fairly Good"



2. Subjective health status: "Neither good nor poor"



3. Subjective health status: "Not so good" or "Not good"

Appendix Table 1. The estimation results of the just-identified case

	2SLS		IV Tobit			
			Maginal effect on E(y|y>0)		Maginal effect on E(y)	
	Coeff.	Std. Err.	M.E.	Std. Err.	M.E.	Std. Err.
Binary subjective health	−0.388	0.712	−6.77	19.48	−9.41	27.38
Test of exogentiy (H_0: ρ =0 for IV probit, p−value)		0.507		0.915		
F/Wald test of the excluded instruments (p−value)		0.048		0.066		
Number of diseases	−0.001	0.089	0.54	3.46	0.74	4.73
Test of exogentiy (H_0: ρ =0 for IV probit, p−value)		0.625		0.400		
F/Wald test of the excluded instruments (p−value)		0.002		0.001		
Disease score	−0.001	0.154	1.19	5.81	1.63	7.97
Test of exogentiy (H_0: ρ =0 for IV probit, p−value)		0.655		0.415		
F/Wald test of the excluded instruments (p−value)		0.011		0.004		

Note: Standard errors for 2SLS are the heteroskedasticity-robust standard error. The marginal effects on E(y|y>0) and E(y) are calculated as $\partial E(y|y>0)/\partial x$ and $\partial E(y)/\partial x$ evaluated at mean of other covariates, respectively. For binary subjective health, the marginal effect corresponds to E(y|y>0, x=1)−E(y|y>0, x=0) and E(y|x=1)−E(y|x=0). The asterisks indicate statistical significance at the 1 % (***), 5 % (**), and 10 % (*) significance levels. The dependent variable is hours worked. Other covariates that control married status, age, education, income, and household wealth are not reported in this table. Only male observations are used. Number of observations is 469 for 2SLS and 472 for IV Tobit.

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「所得・資産・消費と社会保険料・税の関係に着目した
社会保障の給付と負担の在り方に関する研究」
分担研究報告書

「公立病院の経済分析」

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研究要旨

合併を推進するために、国は様々な支援措置を講じたが、合併した市町村における公立病院の在り方についてまでじっくりと検討されては来なかった。実際には市町村合併の議論に際して、あえて議論を困難にしないためにも様々な問題は先送りにされ、特に公立病院の在り方についても触れないでいたというのが本音であろう。公立病院の経営に関しては“甘い”としか言いようがない側面がある。これは、公立病院の会計上、収益の中に他会計からの補助金が入っていること、資本構成に置いても他会計からの補助が大きな位置を占めていることから分かることである。その他、市町村合併時には起債の機会があり、さらに基準は存在するが病院債の起債も認めている。無駄な公立病院を適切に処分する方法としてこれで良いのかは再検討の必要がある。一方で、中頓別町等のいわゆるへき地の公立病院である。これは、住民がいる限り（あまりに減ってしまえば診療所化もありうる）、国の責任で赤字を補填する必要があるし、また、医師の確保にも国がもっと関与すべきではないだろうか。しかし、その他の公立病院は地域住民と自治体に任せた方がよい。住民自治の意識を芽生えさせる意味でも、公立病院の運営に住民がどのように関わっていくかが試されている。

A. 研究目的

市町村合併後の、公立病院の動向をケーススタディによって分類し、その対応策を検討すること。

B. 研究方法

総務省の「公立病院改革ガイドライン」や北海道庁の「公立病院等広域化・連携構想（素案）」を参考に、総務省「地方公営企業年鑑各年版」を用いたデータ分析や、4つのタイプの公立病院を選択してヒアリングを行うという方法をとった。

（倫理面への配慮）

ヒアリングを行ったので、そのプライバシー保護には注意した。