IIHMR UNIVERSITY

Dissertation Presentation

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Effect of catastrophic expenditure of elderly healthcare on the household

Introduction

- This shift in the demographic pattern has resulted in the increase of geriatric population.
- The poor understanding of elderly life under the dynamic economic and socio-cultural norms in the country has led to a weak care and support for them.
- Sickness not only results in suffering and death but also has an associated cost and thus creates a huge out of pocket expenditure on the households affecting their overall economic well being.
- This grim situation carries both humanitarian as well as economic aspect.

Literature Review

- Almost one-half (47 percent) of older Indians have at least one chronic disease such as asthma, angina, arthritis, depression, or diabetes. (Chatterji et al., 2008)

- Also the older population account for a higher proportion of hospitalized cases, including multiple admissions. (Sona et al, 2012)

- India has one of the world's highest levels of out of pocket spending of around 89% (The World Bank, 2016)

- Studies reveal that individuals aged 65 years and above had per capita health expenditures that were nearly 1.5 times the per capita expenditures of those between 60 and 64 years of age. (Mahal et al, 2002)

- It is also estimated that households with only elderly members incur a monthly per capita health expense that is 3.8 times that of households with no elderly members. (Mohanty et al, 2014)

- Under the stress and anxiety of disease, to get the ailment cured, most of the people have no choice but to pay the fees requested by health providers even if the cost is more than what they can afford. (Russell, 1996)

- Households accept to compromise the future welfare of all its members for providing health care to one of them. Thus future welfare is put at risk by incurring debts, selling off productive assets, or sacrificing investment in future productivity, for example by curtailing children's education. (Whitehead at al, 2001)

Rationale

- The research is aimed at understanding the impact of expenditure made on elderly population's inpatient healthcare on the households of India. The research will examine the various ways in which these expenditures are financed by the households and whether these expenditures are catastrophic in nature or not for various levels of income. The research will examine the impact of inpatient expenditure on health for that individual who is non-productive for the household.

Objectives

- To understand the availability of financial resources for the inpatient healthcare expenditures needed to be incurred on the elderly population in the country
- To examine whether the inpatient healthcare expenditure on elderly population is catastrophic in nature for different income groups
- To understand the source of finance for the inpatient healthcare expenditure on elderly population in India
- To evaluate the difference in inpatient healthcare expenditure over a period of ten years for various income levels

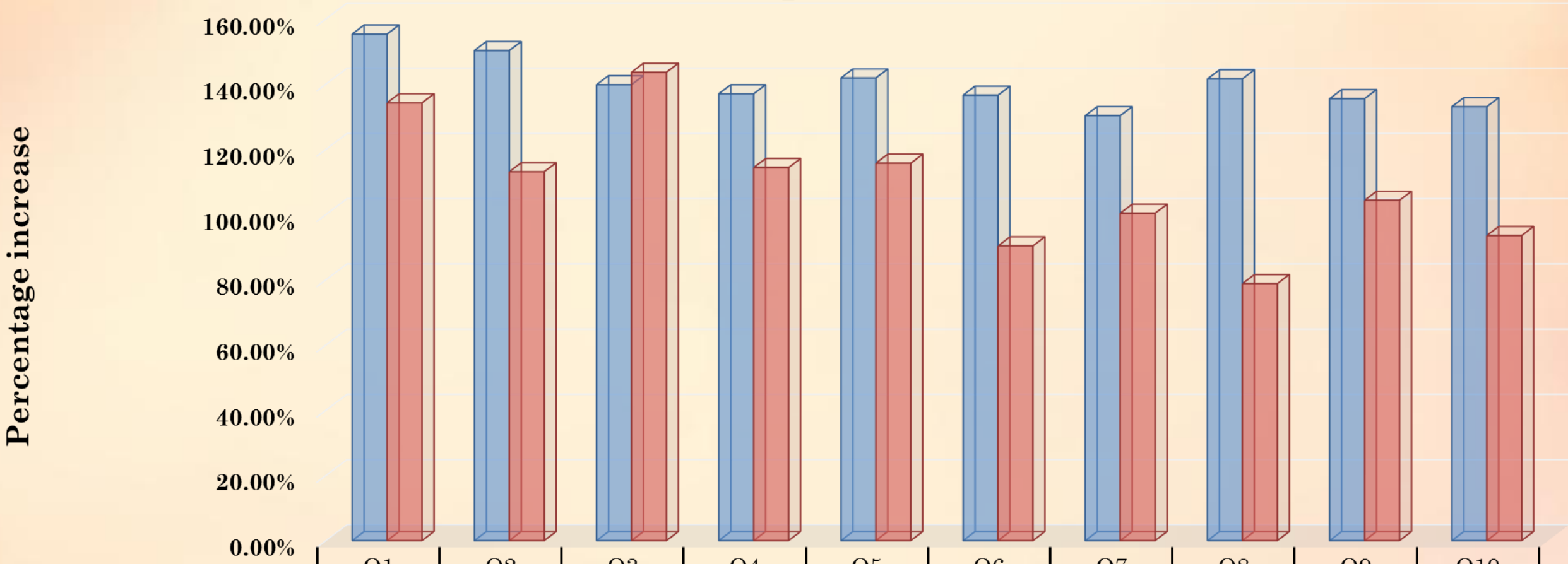
Methodology

Parameters	60th Round	71st Round
Type	National Sample Survey	National Sample Survey
Schedule	25.0	25.0
Title	Morbidity, Health and Condition of the aged	Social Consumption in India: Health
Year	2004	2014
Households Covered	Rural – 47,302 Urban – 26,566	Rural – 36,480 Urban – 29,452
Criteria for Analysis	Elderly member (Above 60 years) having undergone hospitalization in last 365 days prior to start of survey	Elderly member (Above 60 years) having undergone hospitalization in last 365 days prior to start of survey
Households for Analysis	Rural – 2,994 Urban – 2,024	Rural – 3,908 Urban – 3,742

Findings

Percentage distribution of rural and urban geriatric households											
Quantiles		**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**
Rural	**2004**	81.67%	82.27%	77.89%	81.47%	62.7%	58.76%	60.76%	35.06%	31.08%	24.80%
	2014	74.38%	69.02%	64.05%	53.33%	60.92%	55.29%	42.48%	37.52%	34.64%	19.22%
Urban	**2004**	18.33%	17.73%	22.11%	18.53%	37.3%	41.24%	39.24%	64.94%	68.92%	75.20%
	2014	25.62%	30.98%	35.95%	46.67%	39.08%	44.71%	57.52%	62.48%	65.36%	80.78%

Percentage increase in Household expenditure w.r.t Health expenditure



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
%increase in Hhld Exp	155.34%	150.29%	139.81%	137.02%	141.87%	136.59%	130.32%	141.59%	135.52%	133.06%
%increase in Health Exp	134.25%	113.12%	143.62%	114.40%	115.74%	90.36%	100.38%	78.80%	104.35%	93.55%

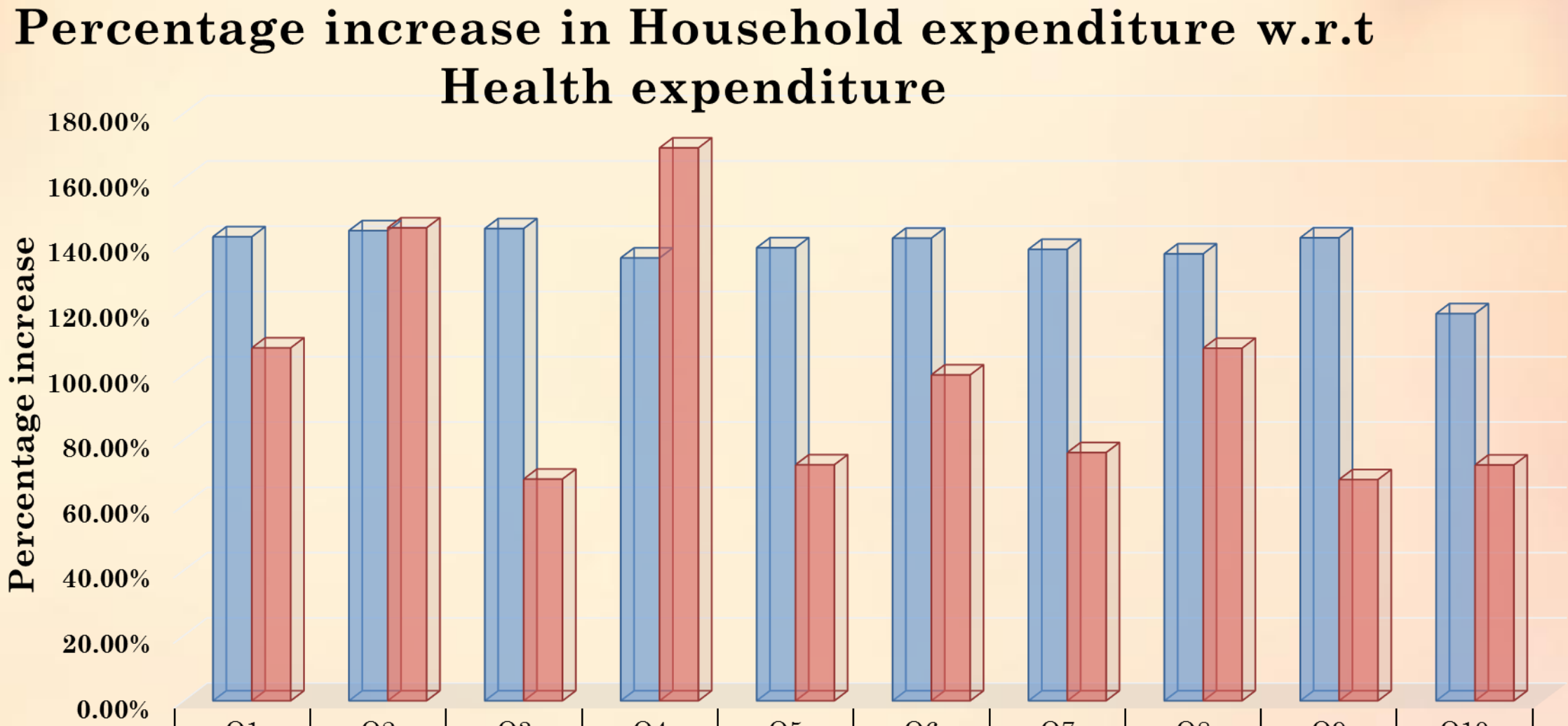
Quantiles

Percentage Expenditure on Health in Households with Geriatric Individuals											
Quantiles		**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**
Mean	**2004**	53.59%	44.86%	33.41%	33.44%	32.43%	30.56%	30.08%	35.23%	28.17%	29.14%
	2014	57.21%	38.31%	34.19%	30.08%	28.64%	24.49%	26.37%	25.47%	24.21%	26.22%
Minimum	**2004**	0.00%	0.01%	0.11%	0.08%	0.06%	0.08%	0.04%	0.04%	0.04%	0.00%
	2014	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Maximum	**2004**	1175.00%	2584.19%	1655.56%	854.90%	819.31%	1039.58%	981.33%	2329.00%	1240.60%	1777.78%
	2014	2318.33%	1121.43%	1092.50%	684.87%	833.54%	619.96%	1139.02%	492.99%	304.17%	323.83%

Sources of Finance

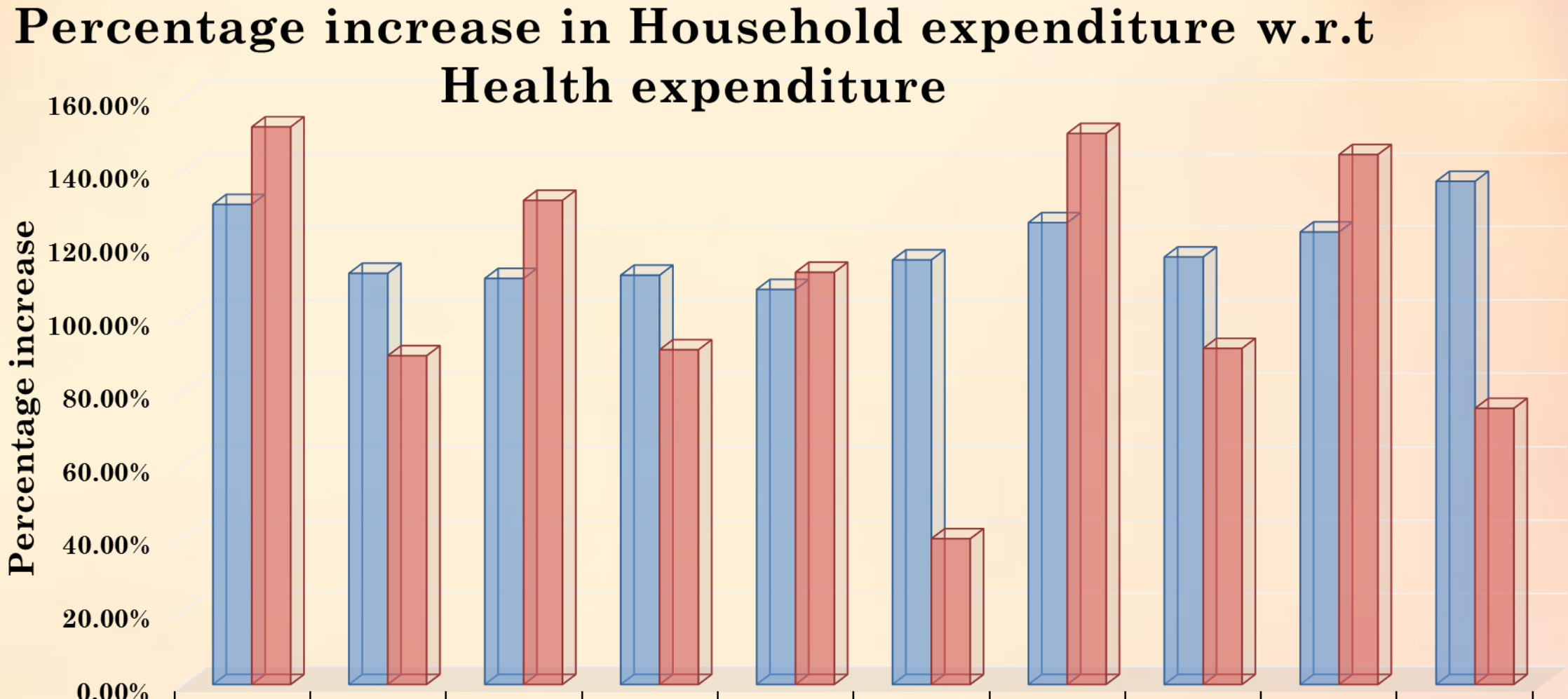
Sources of finance											
Quantiles		**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**
Income/ Savings	**2004**	43.03%	49.20%	55.38%	60.36%	61.0%	61.75%	72.31%	76.49%	76.69%	84.40%
	2014	61.96%	69.28%	72.16%	73.59%	76.34%	78.17%	80.92%	82.48%	86.93%	86.93%
Contributions	**2004**	28.49%	17.13%	12.35%	8.76%	9.8%	7.97%	7.37%	7.77%	6.37%	3.80%
	2014	14.25%	8.76%	6.80%	4.71%	4.18%	4.58%	3.66%	3.79%	2.88%	3.14%
Borrowings	**2004**	24.10%	31.67%	28.49%	27.89%	26.9%	6.37%	16.33%	13.94%	15.34%	10.40%
	2014	21.70%	20.13%	19.22%	20.52%	16.86%	15.95%	13.59%	12.29%	9.54%	7.97%
Other Sources	**2004**	4.38%	1.99%	3.78%	2.99%	2.4%	3.98%	4.18%	1.79%	1.59%	1.40%
	2014	2.09%	1.83%	1.83%	1.18%	2.61%	1.31%	1.83%	1.44%	0.65%	1.96%

Rural Households



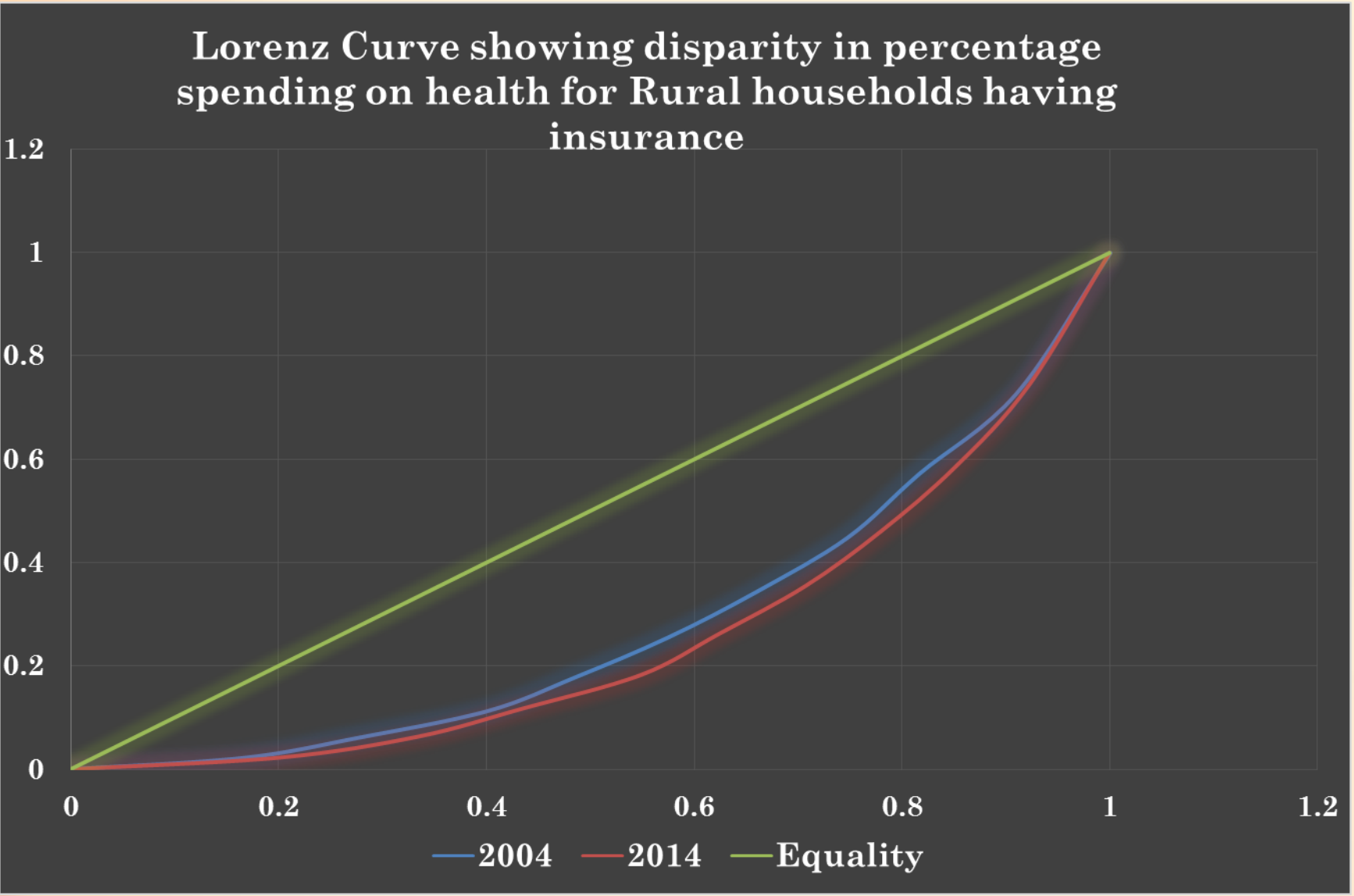
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
%increasse in Hhld Exp	142.18%	144.05%	144.68%	135.68%	138.81%	141.74%	138.33%	136.95%	141.86%	118.62%
%increase in Health Exp	108.12%	144.92%	67.92%	169.40%	72.31%	99.87%	76.06%	108.02%	67.78%	72.26%

Urban Households



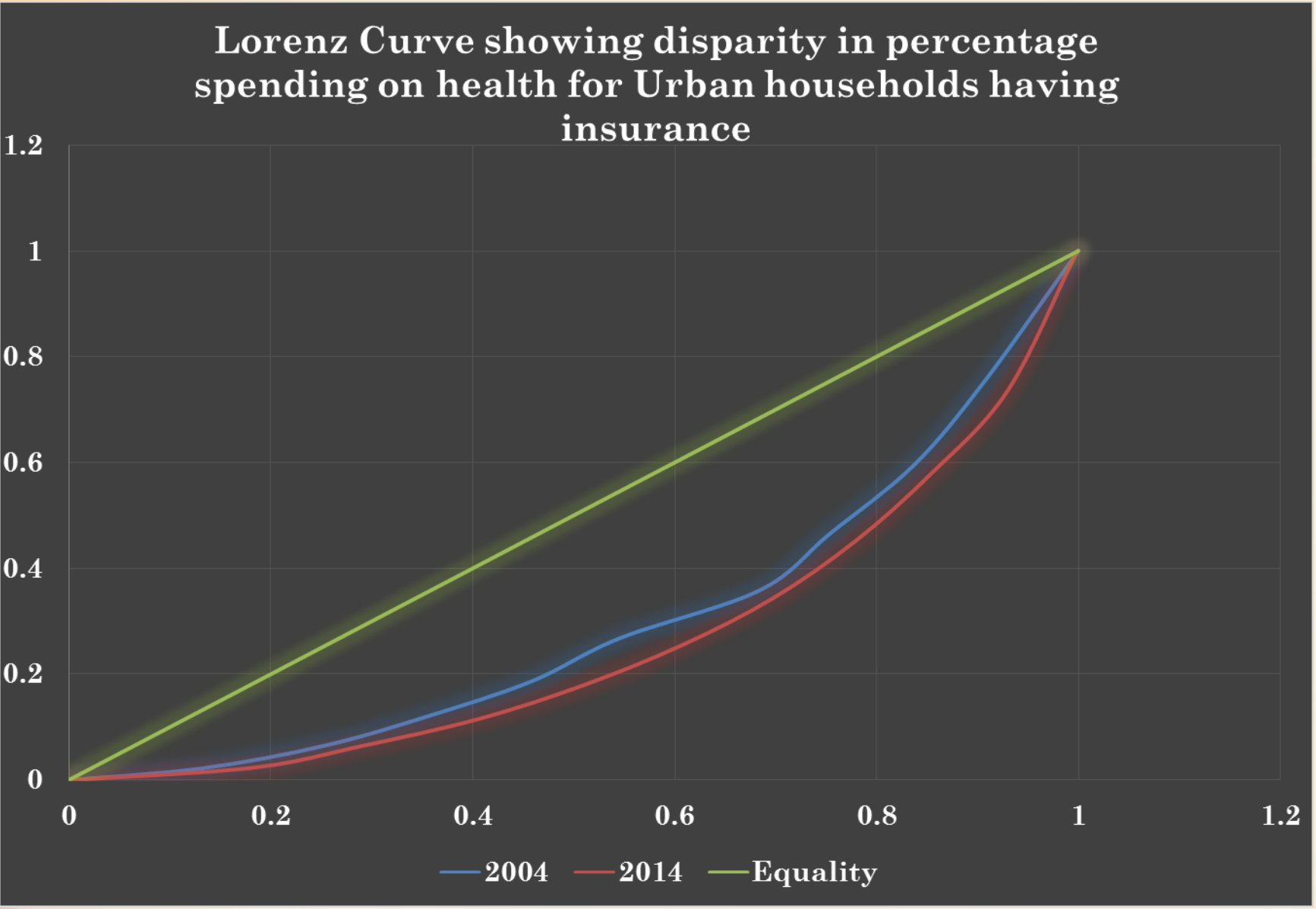
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
%increase in Hhld Exp	130.81%	112.04%	110.64%	111.52%	107.63%	115.69%	125.84%	116.48%	123.29%	137.10%
%increase in Health Exp	151.94%	89.57%	131.92%	91.20%	112.31%	39.71%	150.15%	91.57%	144.38%	75.24%

Rural Households with insurance



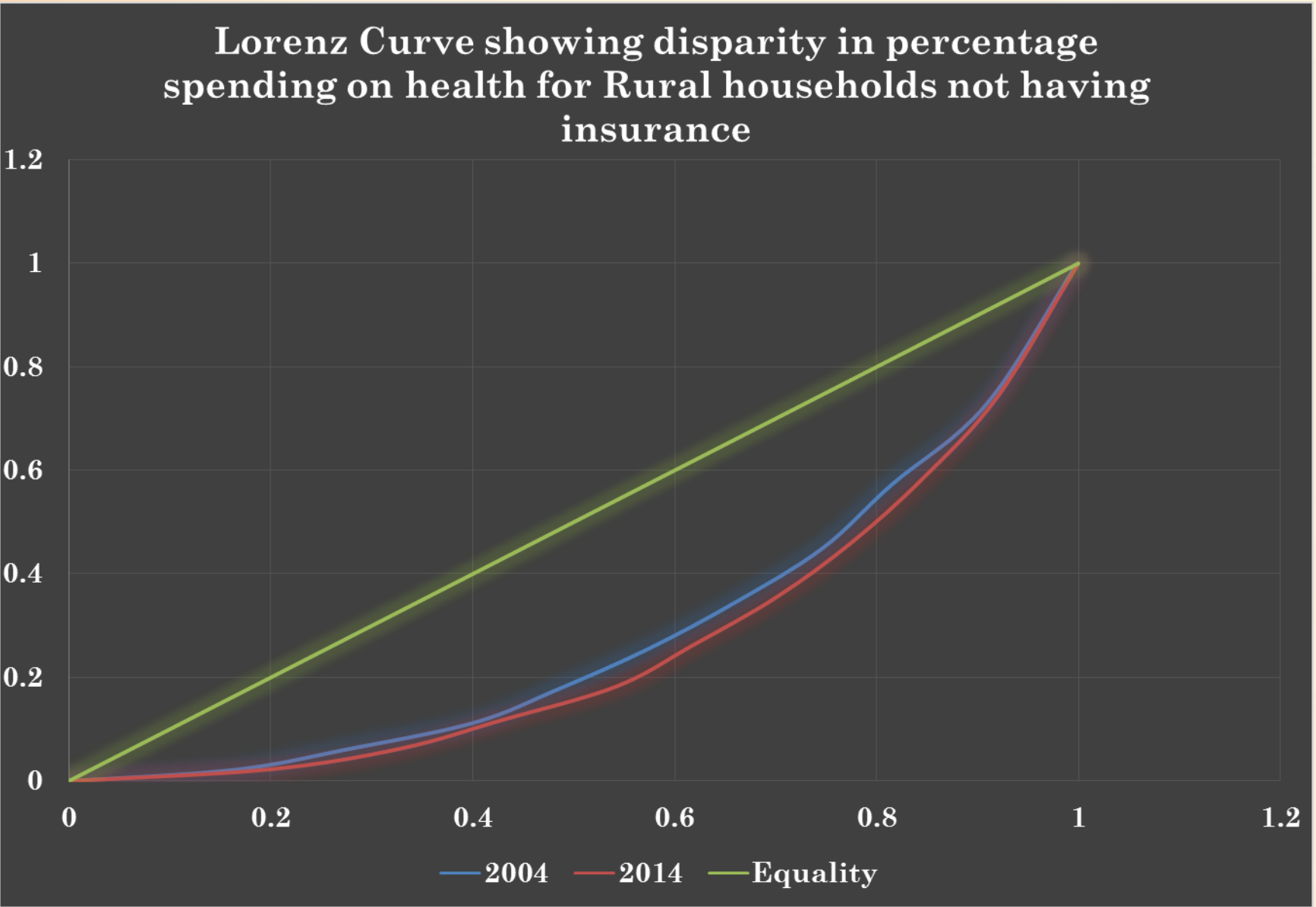
2004		2014	
% exp on health	Annual Exp	% exp on health	Annual Exp
0.00%	0.00%	0.00%	0.00%
16.58%	2.20%	20.16%	2.28%
27.71%	6.10%	33.49%	6.34%
40.16%	11.28%	43.52%	11.75%
48.56%	17.78%	54.96%	18.30%
57.51%	25.52%	62.40%	26.19%
66.16%	34.50%	70.74%	35.47%
74.83%	44.89%	78.00%	46.04%
81.71%	57.23%	85.16%	58.53%
91.03%	72.70%	92.32%	74.51%
100.10%	100.00%	100.03%	100.00%

Urban Households with insurance



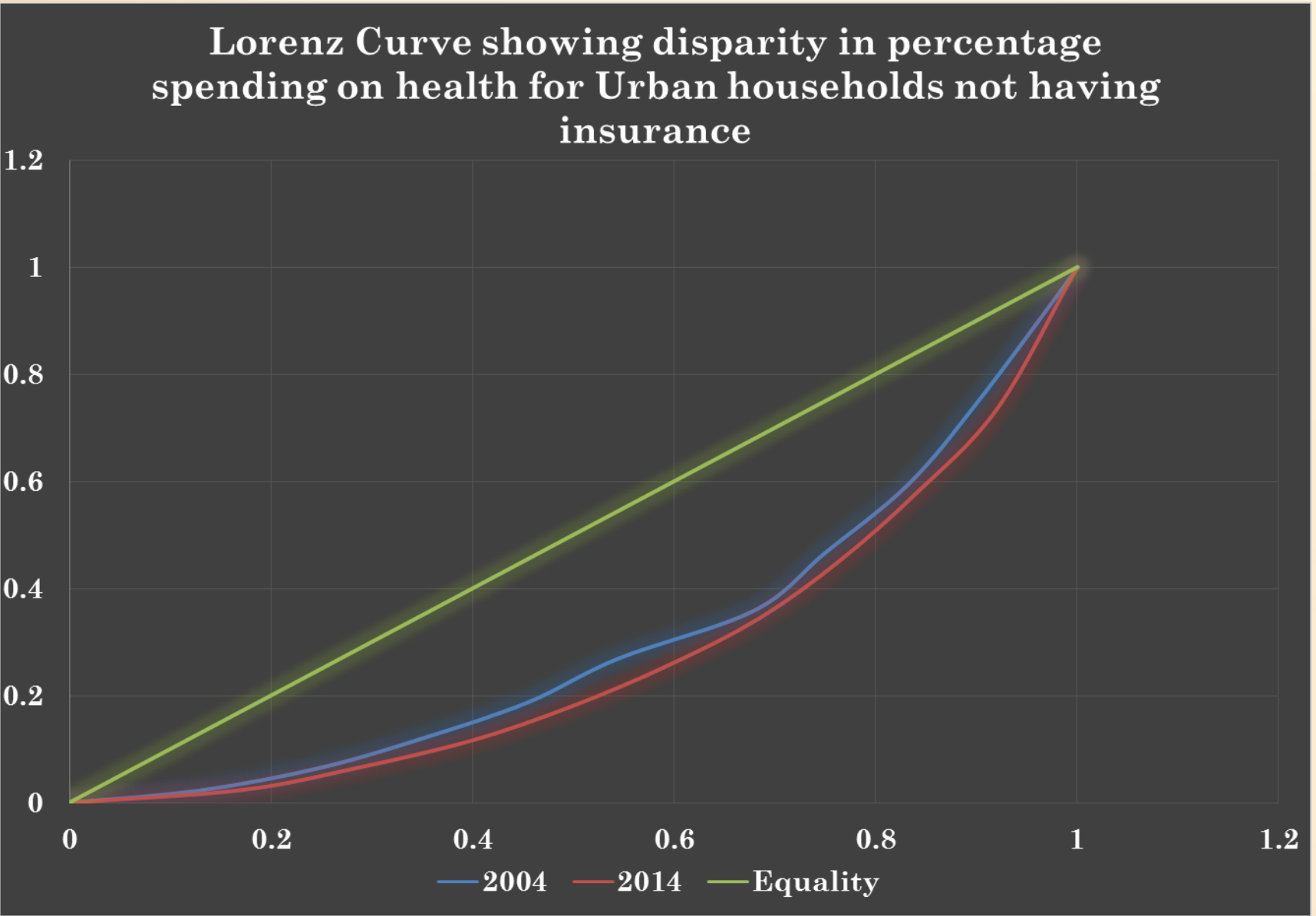
2004		2014	
% exp on health	Annual Exp	% exp on health	Annual Exp
0.00%	0.00%	0.00%	0.00%
13.30%	2.25%	18.15%	2.34%
25.29%	6.48%	28.83%	6.37%
35.41%	11.98%	40.63%	11.58%
45.86%	18.68%	50.99%	17.95%
54.61%	26.83%	60.80%	25.57%
68.47%	35.88%	69.71%	34.35%
75.39%	46.53%	77.89%	45.16%
83.72%	59.50%	85.32%	57.79%
90.70%	75.28%	92.99%	73.64%
100.03%	100.00%	99.88%	100.00%

Rural Households without insurance



2004		2014	
% exp on health	Annual Exp	% exp on health	Annual Exp
0.00%	0.00%	0.00%	0.00%
16.44%	2.20%	19.88%	2.28%
27.48%	6.10%	32.99%	6.34%
40.13%	11.28%	42.84%	11.75%
48.49%	17.78%	54.25%	18.30%
57.38%	25.52%	61.76%	26.19%
65.98%	34.50%	70.04%	35.47%
74.59%	44.89%	77.50%	46.04%
81.47%	57.23%	84.62%	58.53%
90.83%	72.70%	92.09%	74.51%
99.88%	100.00%	100.00%	100.00%

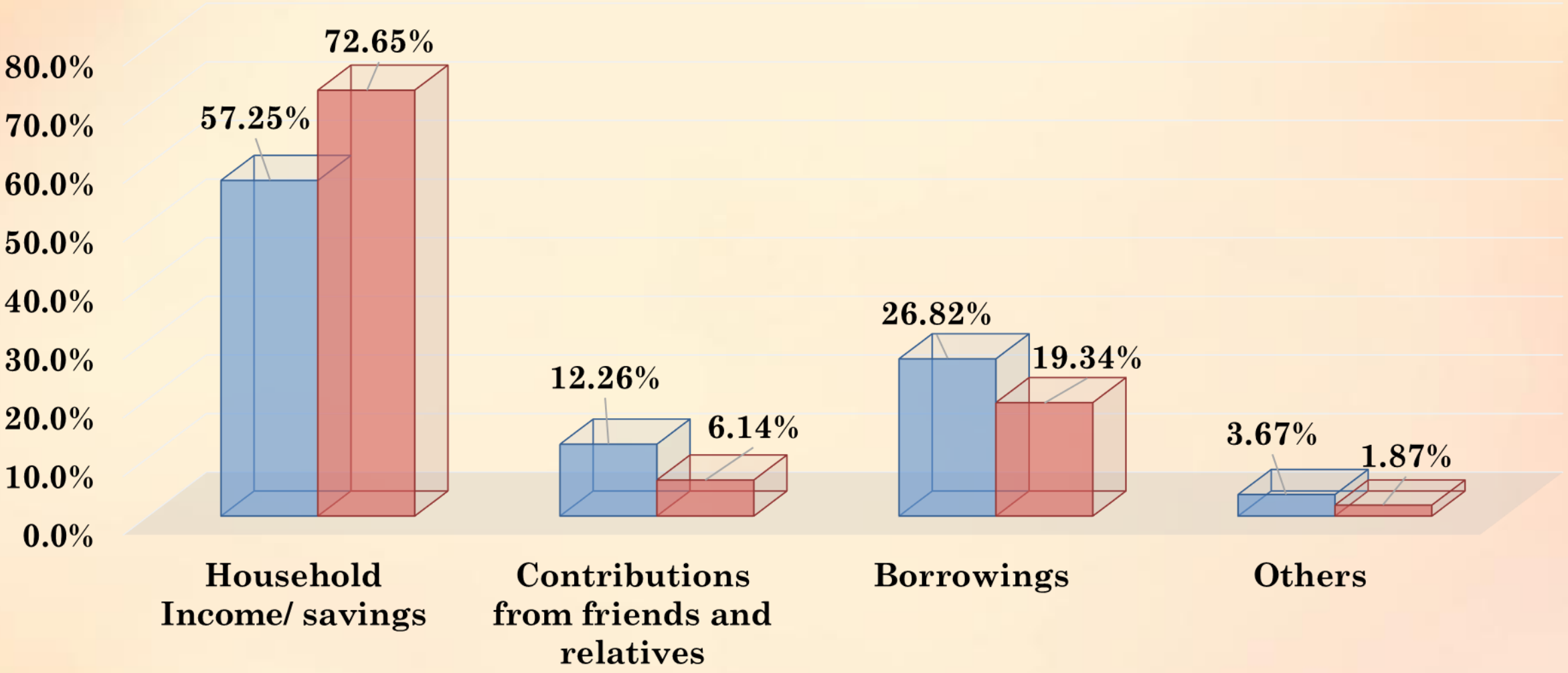
Urban Households without insurance



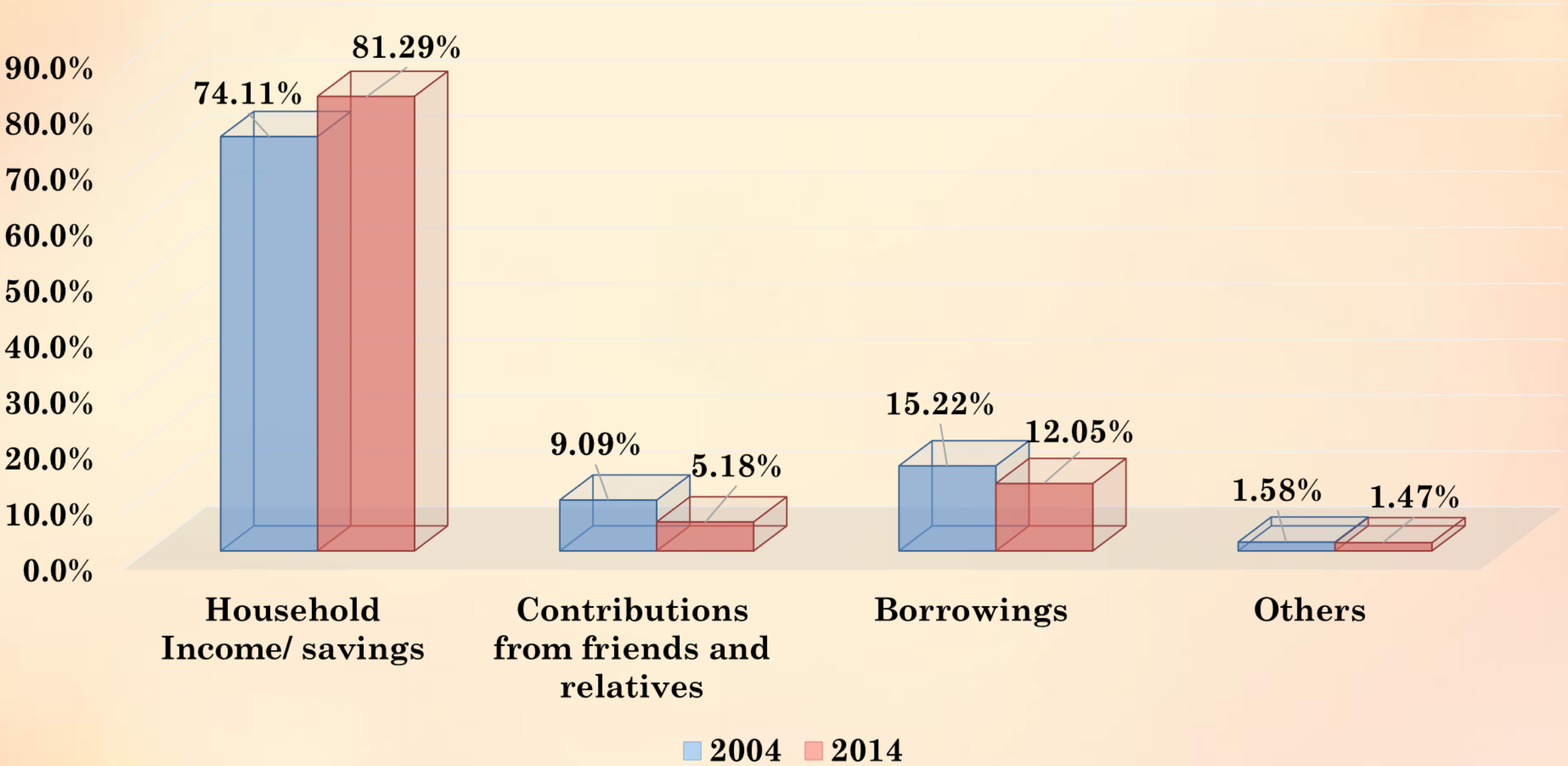
2004		2014	
% exp on health	Annual Exp	% exp on health	Annual Exp
0.00%	0.00%	0.00%	0.00%
12.86%	2.25%	16.99%	2.34%
24.85%	6.48%	28.27%	6.37%
34.99%	11.98%	39.87%	11.58%
45.43%	18.68%	49.80%	17.95%
54.37%	26.83%	59.33%	25.57%
67.97%	35.88%	68.39%	34.35%
74.91%	46.53%	76.41%	45.16%
83.27%	59.50%	84.01%	57.79%
90.30%	75.28%	92.07%	73.64%
100.10%	100.00%	100.00%	100.00%

Percentage Expenditure on health with respect to population (Sector wise)								
Sector	Rural				Urban			
Population	Insured		Non-insured		Insured		Non-insured	
	2004	2014	2004	2014	2004	2014	2004	2014
10%	16.58%	20.16%	16.44%	19.88%	13.30%	18.15%	12.86%	16.99%
20%	27.71%	33.49%	27.48%	32.99%	25.29%	28.83%	24.85%	28.27%
30%	40.16%	43.52%	40.13%	42.84%	35.41%	40.63%	34.99%	39.87%
40%	48.56%	54.96%	48.49%	54.25%	45.86%	50.99%	45.43%	49.80%
50%	57.51%	62.40%	57.38%	61.76%	54.61%	60.80%	54.37%	59.33%
60%	66.16%	70.74%	65.98%	70.04%	68.47%	69.71%	67.97%	68.39%
70%	74.83%	78.00%	74.59%	77.50%	75.39%	77.89%	74.91%	76.41%
80%	81.71%	85.16%	81.47%	84.62%	83.72%	85.32%	83.27%	84.01%
90%	91.03%	92.32%	90.83%	92.09%	90.70%	92.99%	90.30%	92.07%
100%	100.10%	100.03%	99.88%	100.00%	100.03%	99.88%	100.10%	100.00%

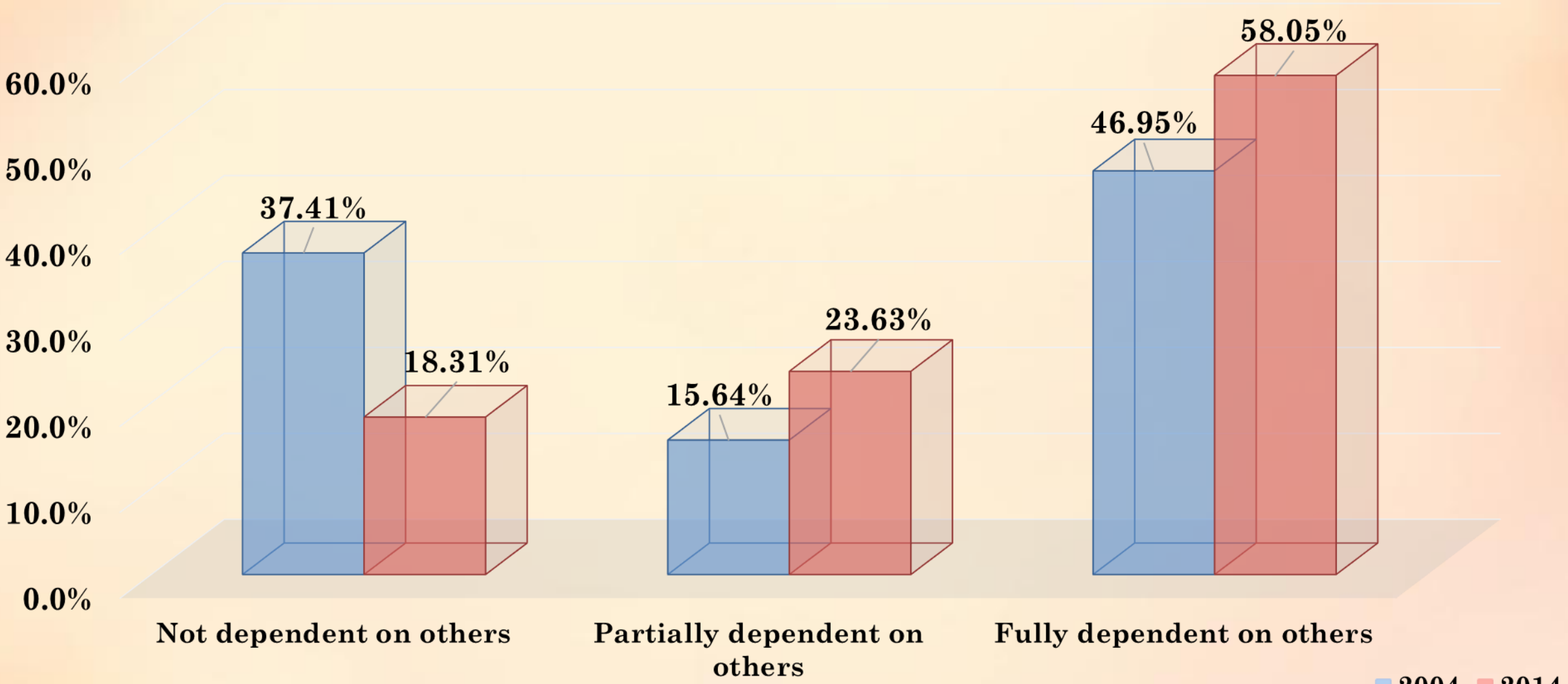
Sources of Finance for Rural Areas



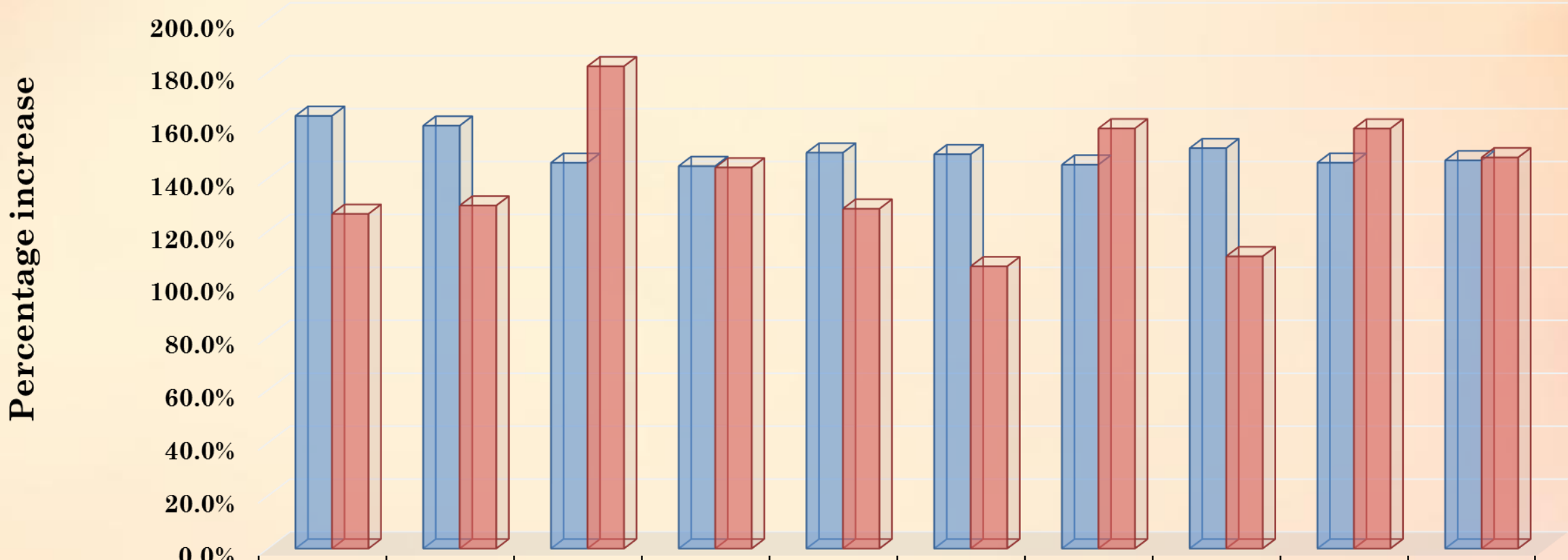
Sources of Finance for Urban Areas



Economic Independence of Geriatric Individuals



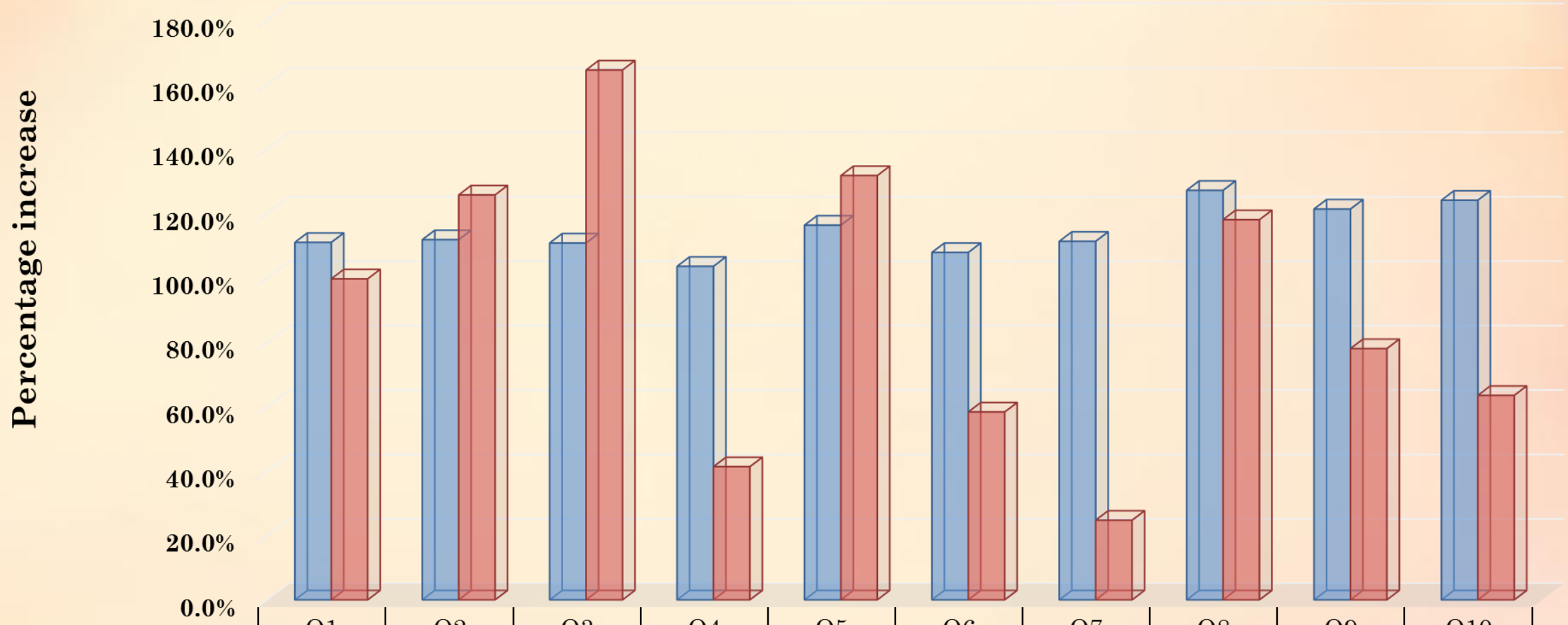
Percentage increase in Household expenditure w.r.t Health expenditure (Dependent)



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
%increase in Hhld Exp	163.53%	159.83%	145.81%	144.56%	149.62%	149.03%	145.09%	151.32%	145.83%	146.70%
%increase in Health Exp	126.49%	129.63%	182.27%	144.03%	128.44%	106.67%	158.78%	110.45%	158.74%	147.85%

Quantiles

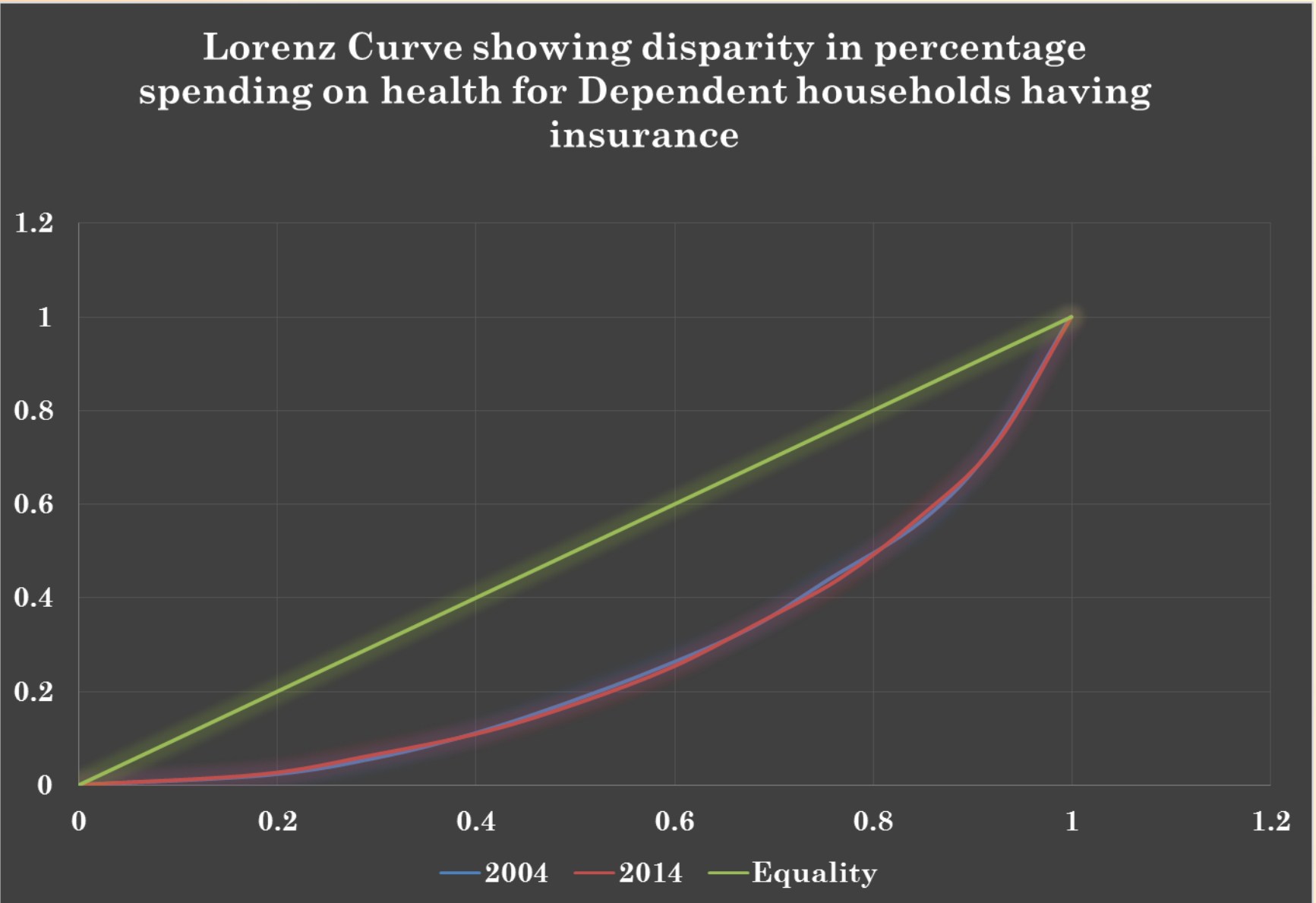
Percentage increase in Household expenditure w.r.t Health expenditure (Independent)



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
%increase in Hhld Exp	110.95%	111.77%	110.75%	103.52%	116.29%	107.82%	111.27%	127.10%	121.31%	124.03%
%increase in Health Exp	99.63%	125.67%	164.44%	41.33%	131.67%	58.31%	24.72%	117.99%	77.99%	63.46%

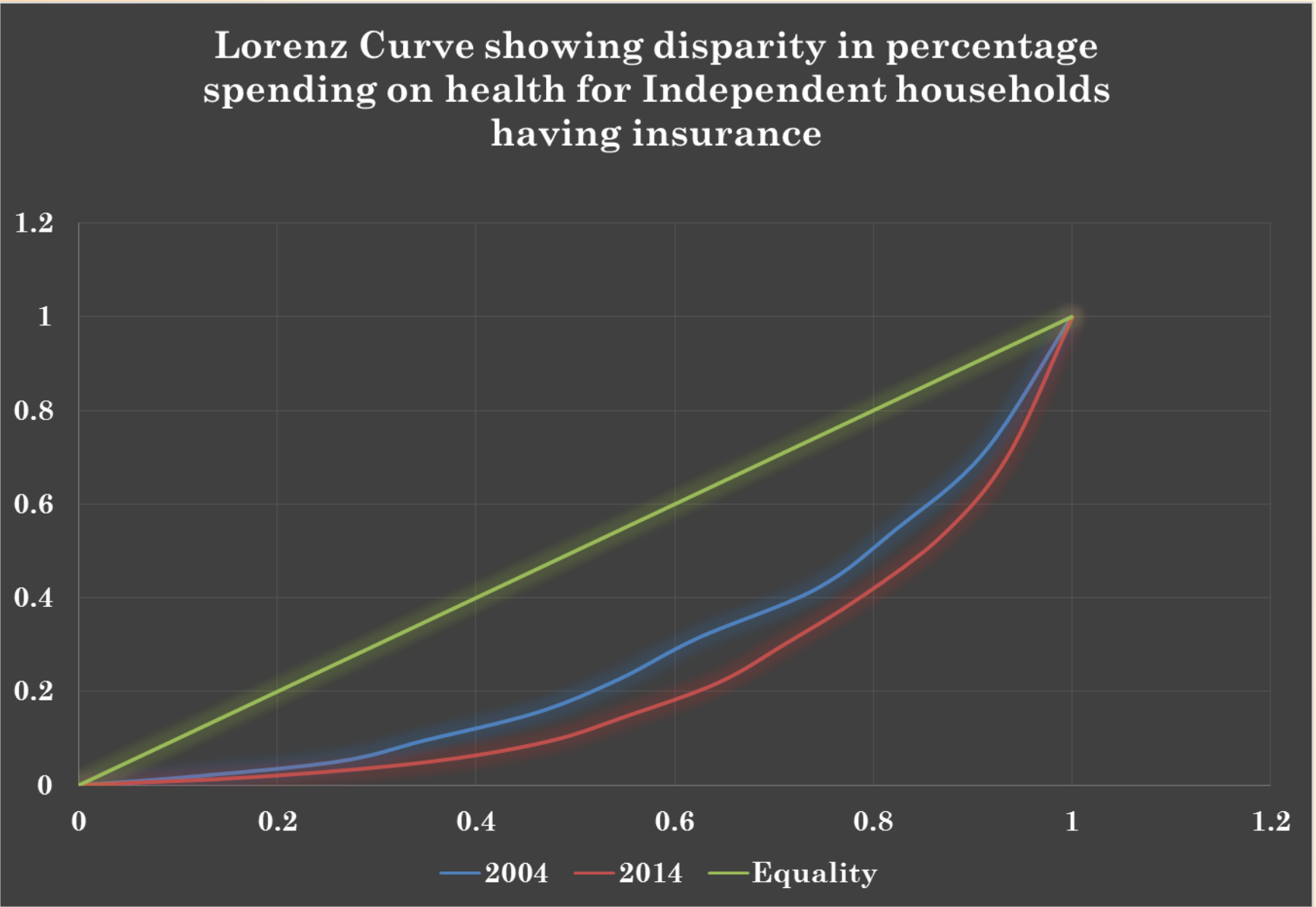
Quantiles

Households with Dependent elderly (with insurance)



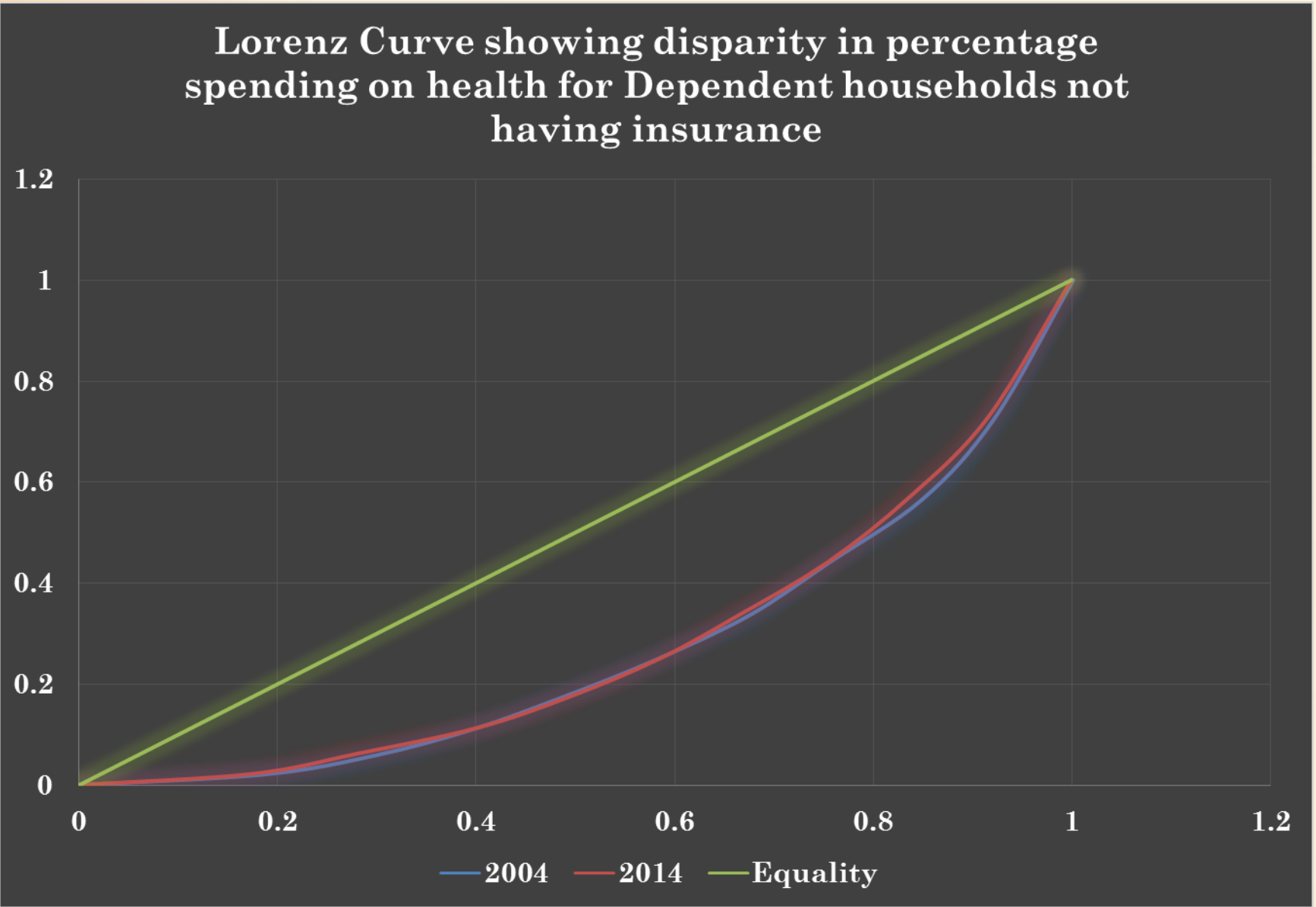
2004		2014	
% exp on health	Annual Exp	% exp on health	Annual Exp
0.00%	0.00%	0.00%	0.00%
18.87%	2.10%	18.18%	2.23%
30.14%	5.88%	29.14%	6.19%
39.92%	11.08%	40.83%	11.35%
49.05%	17.45%	50.45%	17.63%
58.34%	24.89%	59.68%	25.11%
67.72%	33.62%	67.78%	33.87%
75.55%	43.97%	76.61%	44.10%
84.97%	56.59%	84.46%	56.89%
92.16%	72.76%	92.38%	72.91%
99.87%	100.00%	99.97%	100.00%

Households with Independent elderly (with insurance)



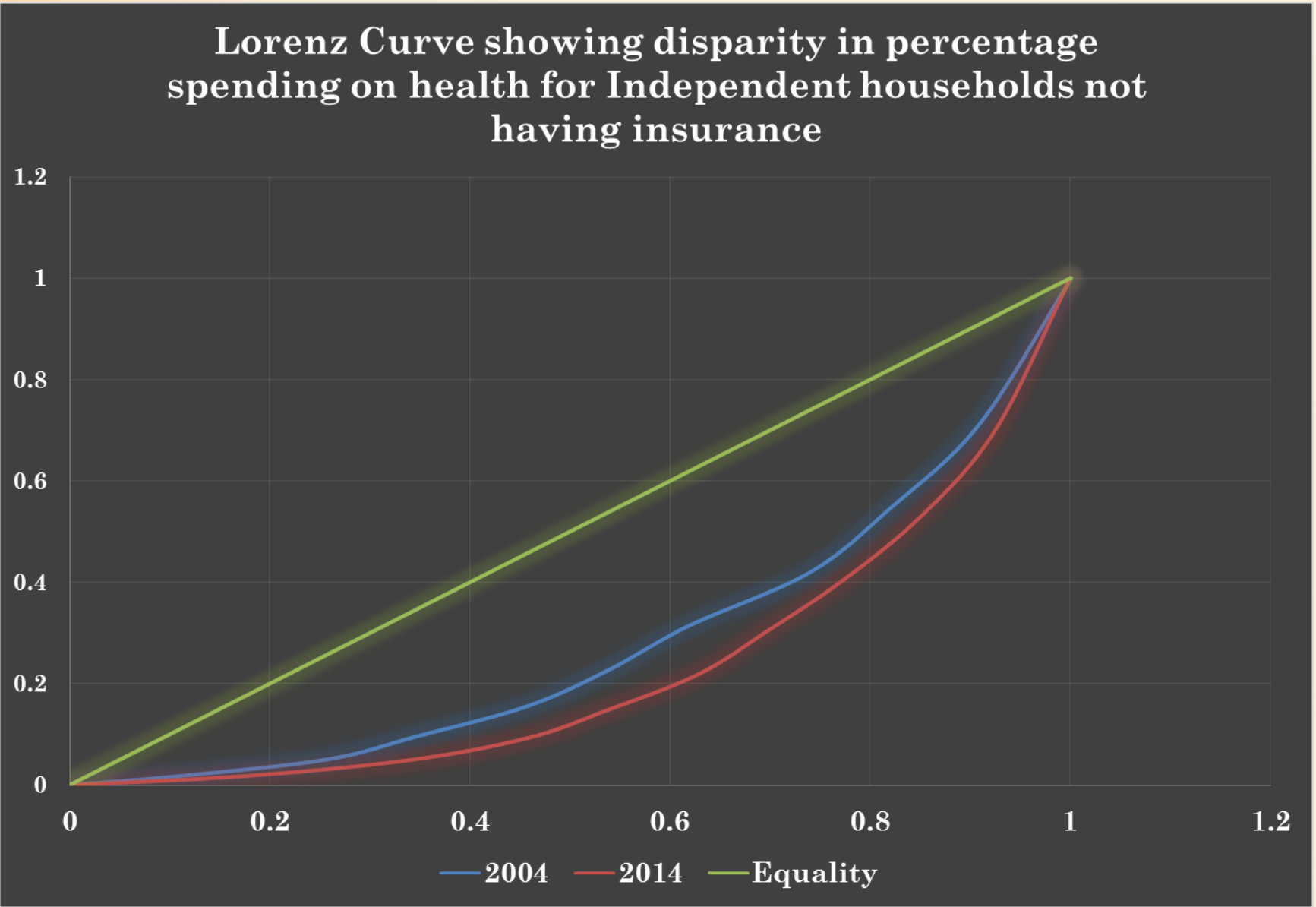
2004		2014	
% exp on health	Annual Exp	% exp on health	Annual Exp
0.00%	0.00%	0.00%	0.00%
11.21%	1.78%	17.71%	1.72%
26.17%	5.06%	35.00%	4.90%
34.85%	9.57%	47.11%	9.26%
46.11%	15.50%	55.24%	14.80%
54.40%	22.66%	64.41%	21.89%
62.35%	31.46%	71.22%	30.27%
74.28%	41.98%	78.97%	40.46%
82.24%	54.62%	87.11%	53.61%
91.21%	71.26%	93.63%	70.49%
99.93%	100.00%	100.09%	100.00%

Households with Dependent elderly (without insurance)



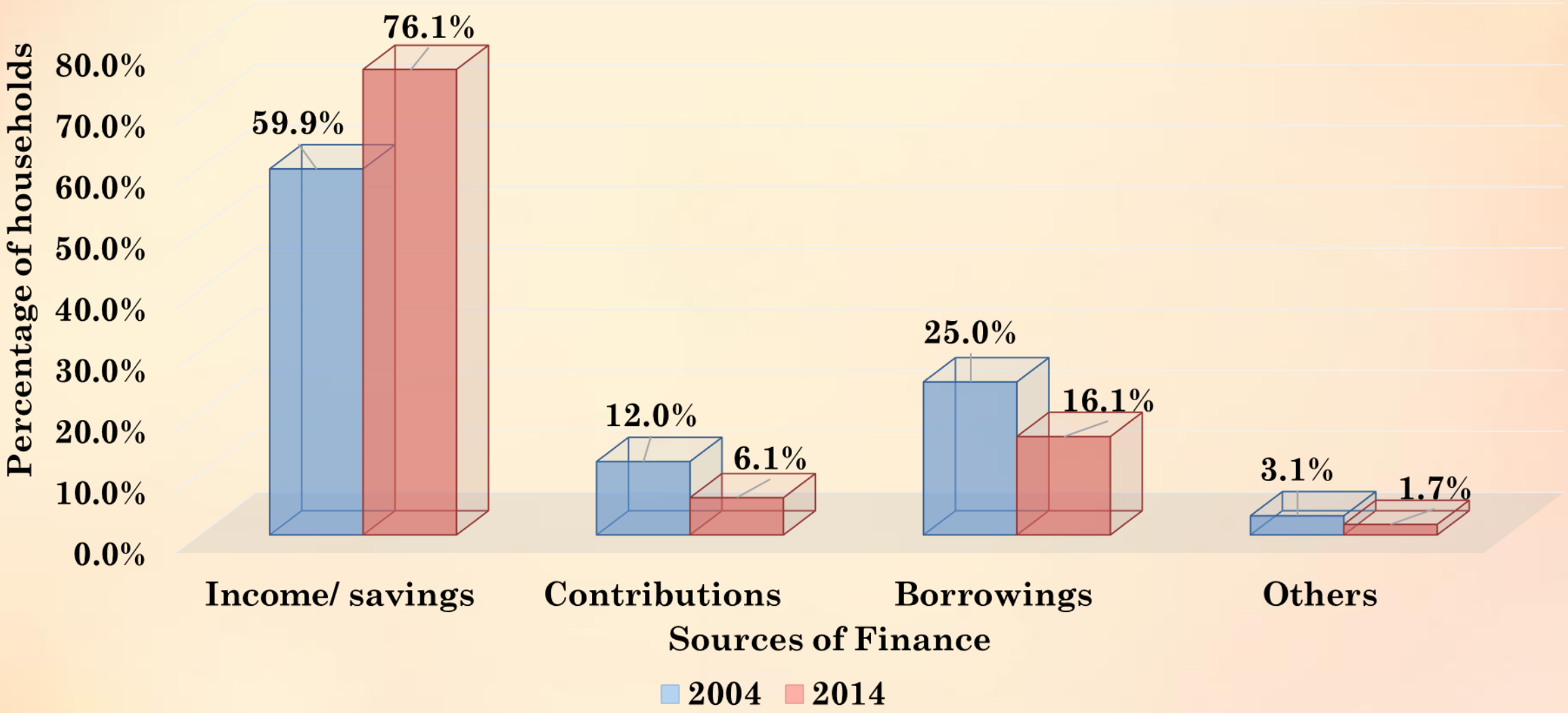
2004		2014	
% exp on health	Annual Exp	% exp on health	Annual Exp
0.00%	0.00%	0.00%	0.00%
18.63%	2.10%	17.49%	2.23%
29.85%	5.88%	27.99%	6.19%
39.73%	11.08%	40.16%	11.35%
48.77%	17.45%	49.60%	17.63%
58.17%	24.89%	58.60%	25.11%
67.51%	33.62%	66.69%	33.87%
75.48%	43.97%	75.42%	44.10%
84.93%	56.59%	83.61%	56.89%
92.24%	72.76%	91.64%	72.91%
100.15%	100.00%	100.03%	100.00%

Households with Independent elderly (without insurance)

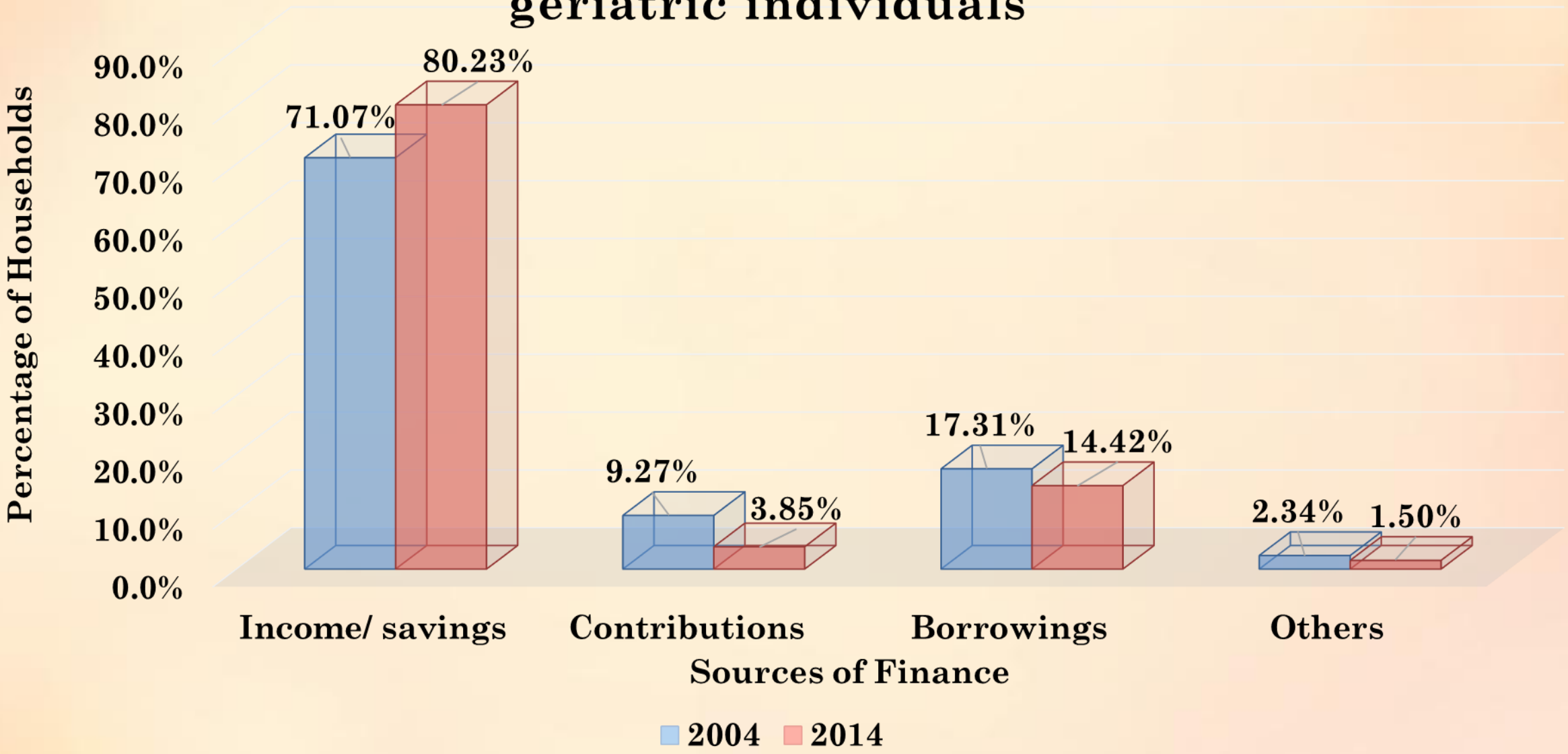


2004		2014	
% exp on health	Annual Exp	% exp on health	Annual Exp
0.00%	0.00%	0.00%	0.00%
11.00%	1.78%	17.18%	1.72%
25.76%	5.06%	33.90%	4.90%
34.62%	9.57%	45.79%	9.26%
45.66%	15.50%	53.81%	14.80%
53.81%	22.66%	62.92%	21.89%
61.91%	31.46%	69.68%	30.27%
73.99%	41.98%	77.39%	40.46%
82.00%	54.62%	85.46%	53.61%
90.92%	71.26%	92.71%	70.49%
100.09%	100.00%	100.09%	100.00%

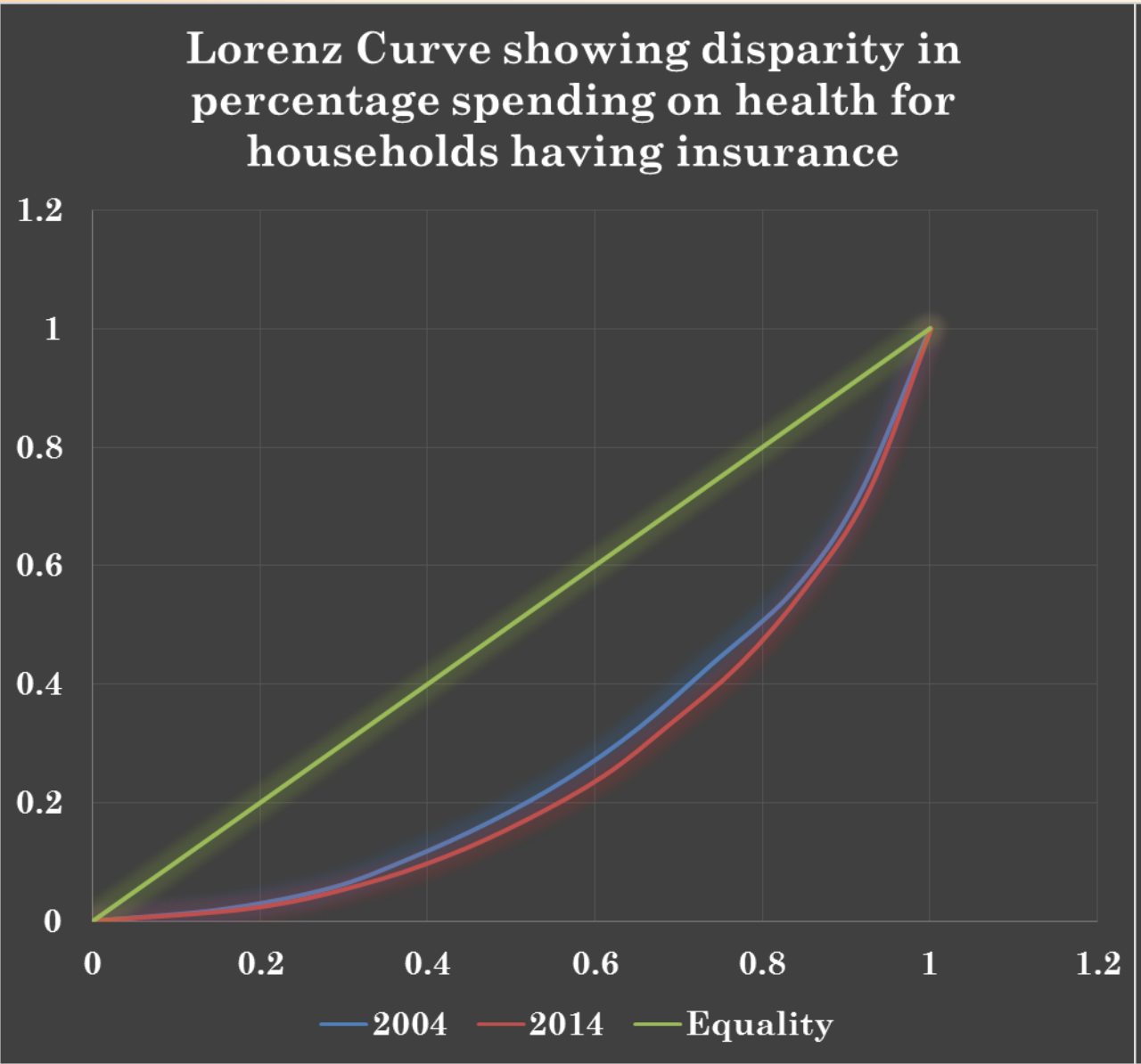
Sources of Finance for households with Dependent geriatric individuals

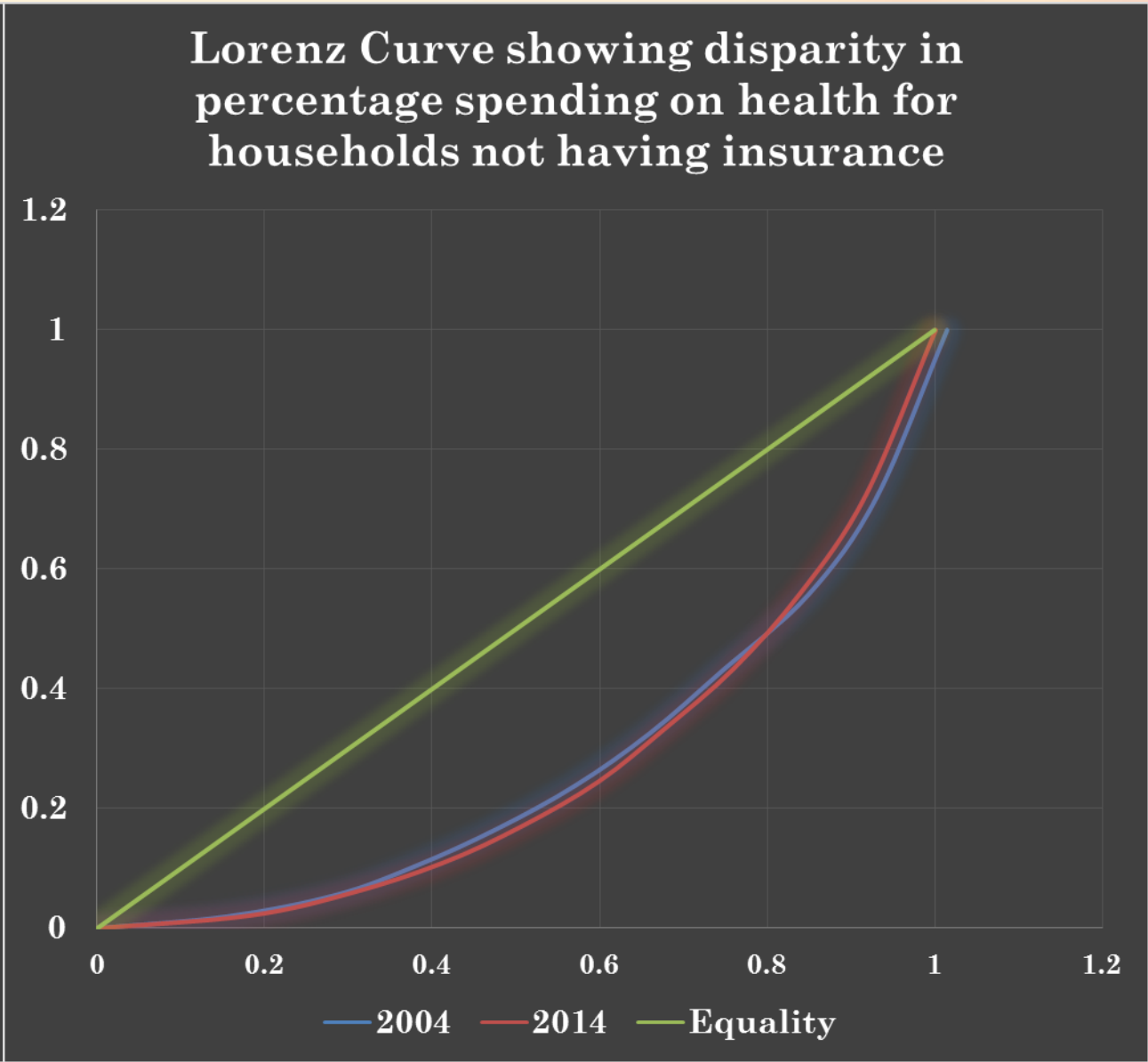


Sources of Finance for households with Independent geriatric individuals



Insured Vs Non-insured Households





Conclusion

- The life span has increased but the population is spending more of unhealthy years.
- The increase in the disease burden will not only affect the health of the elderly individuals, but also the productivity and economic growth of the nation.
- The impact of catastrophic expenditures incurred on the unhealthy geriatric population is worst in the lowest quintile
- It also results in negating the developmental effect of increase in income.

- Unhealthy geriatric population does not seem to be benefitted by insurance schemes in the last ten years.

- The weakest section of the society does not seem to be benefited by the interventions taken in last ten years.

Recommendations

- Comprehensive care facilities for the independent elderly can be be designed for public as well private health facility.
- Community-based health insurance schemes shall be promoted to allow pooling of resources to cover the costs of unpredictable health-related events
- Special Policy such as Cancer Insurance, Insurance to hospitalization under Personal Accident policies etc. should be promoted.
- A social security net for the geriatric population, irrespective of their income. It will improve their condition and will have a developmental impact on the overall household economy.

- ‘Reach the poor programs’ with the help of non-governmental organization or community based organizations.
- Public private partnerships for developing geriatric care facilities.
- Business models for healthcare based on delivering high quality care at a low cost must be promoted.
- Schemes like free- drug distribution and free diagnostics for underprivileged and elderly should be made a part of social security net.

- A robust comprehensive system for the development of the capacities aimed at providing an early screening, primary prevention and effective management at every level.

- Constant monitoring and evaluation of the interventions.

- Well-designed mechanisms for data collection, sharing and knowledge management to help in mapping the health situations of the geriatric group.

- Collaboration amongst public, private sector and civil society should be promoted

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