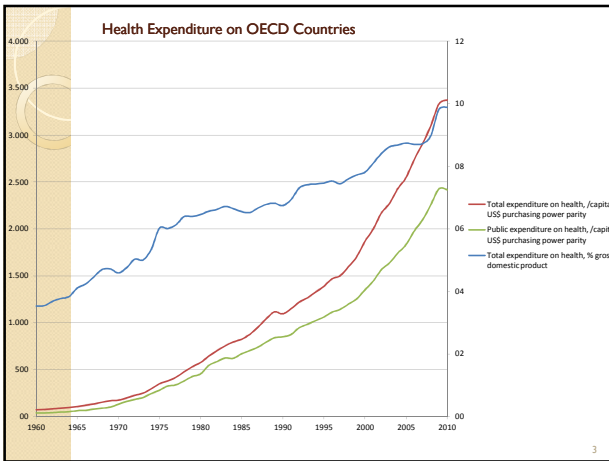**SESRIC**

STATISTICAL, ECONOMIC AND SOCIAL RESEARCH AND
TRAINING CENTRE FOR ISLAMIC COUNTRIES
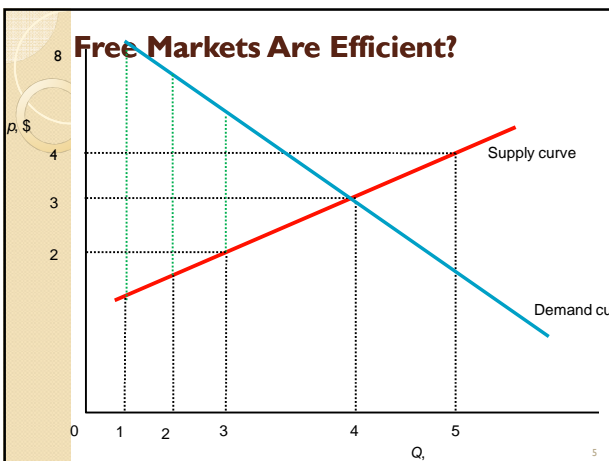
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HEALTH POLICY
AND
HEALTH ECONOMICS

Abdulkadir Civan

Yemen, 2012

- Why do we need health policy?

- Why should and would governments intervene with the health care markets?

- Aren't free markets efficient?

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Health Expenditure on OECD Countries

- Total expenditure on health, /capita US$ purchasing power parity
- Public expenditure on health, /capita US$ purchasing power parity
- Total expenditure on health, % gross domestic product

3

Selected Health Variables in OECD Countries

	Life Expectancy	Total exp. on health / capita	Total exp. on health % GDP	Public exp. on health % TEH	Physicians /1 000 population	Nurses/1 000 population	Hospit. beds /1 000 population	MRI units Per million population	ALOS	Doctors consultat. Per capita
Australia	81.5	2776	8.5	67.5				5.6		6.4
Austria	80.5	3970	10.5	76.9	4.6	6.35	7.7	18	7.9	6.9
Belgium	79.8	3677	10.2	72.6	2.97		6.7			
Canada	80.7	4079	10.4	70.2		7.05				
Chile	78.7	999	6.9	59.4						
Czech Republic	77.3	1781	7.1	82.5	3.6		7.3	5.1	10	11.4
Denmark	78.8	3074	9.7	84.5			3.6		5.1	8.9
Estonia	73.9	1263	6.1	77.8	3.35	6.4	5.7	8.2	7.8	6.5
Finland	79.9	3008	8.4	74.2	2.72		6.5	16.2	9.7	4.3
France	81	3696	11.2	77.8			6.9		12.9	6.9
Germany	80.2	3737	10.5	76.8	3.56	8.34	8.2		9.9	7.8
Greece	80	2316	9.7	60.3		1.84	4.8	19.6		
Hungary	73.8	1437	7.3	71	3.09	4.64	7	2.8	10.5	11.3
Iceland	81.3	3359	9.1	83.2	3.72	8.55		18.8		6.4
Ireland	79.9	3793	8.7	76.9			6.9	9.4		
Israel	81.1	2244	7.8	57	3.56	4.16	3.7	1.8	4.4	
Italy	81.5	2870	9.1	77.2			3.8			
Japan	82.7	2300	8.1	81.9	2.15	6.63	13.8	43.1	33.8	
Korea	79.9	1801	6.5	55.3	1.86	2.2	7.8	17.6	16.7	13
Luxembourg	80.6						5.8	12.7		
Mexico	75.1	852	5.9	46.9	2	1.43	1.7	1.5	3.9	2.8
Netherlands	80.2	4063	9.9				4.3	10.4		5.9
New Zealand	80.4	2683	9.8	80.4	2.46	8.97		9.6		
Norway	80.6	5003	8.5	84.2	4.01	14	3.5		7.3	
Poland	75.6	1213	7	72.2	2.16	5.19	6.6	2.9	6.7	6.8
Portugal	79.3						3.4			
Slovak Republic	74.8	1738	7.8	69			6.6	6.1	8.5	12.1
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Switzerland	82.2	4627	10.7	59.1	3.82	10.15	5.2		10.7	
Turkey	73.6	673	6	67.8			2.3	6.9		6.3
United Kingdom	79.7	3129	8.7	82.6	2.61	7.44	3.4	5.6	8.1	5.9
United States	77.9	7538	16	46.5	2.43		3.1		6.3	
Yemen	62	122	5.2	24.2	0.3	0.7	0.7			
OECD Average	79.2	2887.5	8.8	71.6	3.0	6.1	5.5	11.1	9.8	7.6

Free Markets Are Efficient?

Supply curve

Demand curve

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Extensive Government Intervention with Health Care Markets

- Provision of Health Care Services
- Finance of Health Care Services
- Regulation of Health Care Markets
- Taxes and Subsidies

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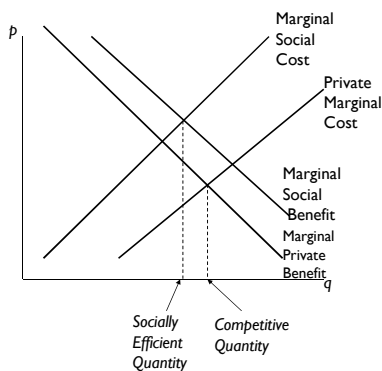## Reasons for Government Intervention 1:Equity

- Health care services are not like other commodities. People care about equity in accessing basic health care services.
  - Rawls (veil of ignorance)
  - Sen

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Reasons for Government Intervention 2: Externalities

- There are both positive and negative externalities in health care markets.
  - Vaccination
  - Infections
  - Smoking

8

p

Marginal Social Cost

Private Marginal Cost

Marginal Social Benefit

Marginal Private Benefit

q

Socially Efficient Quantity

Competitive Quantity

9

Effects of Taxes on Cigarette Consumption

- Estimates of price elasticity of cigarettes range from -0,2 to -1.
- Long run elasticities are higher.
- Youth is more responsive to prices.
- Anti-vaccination campaigns are getting momentum in developed countries.

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Reasons for Government Intervention 3:Information Problems

- In order for free markets to reach efficiency consumers have to be informed. This is almost never true for health care markets.
  - Consumers are not informed about the quality of the service they get even after they get it.
  - I am cured, is it because of the treatment that my doctor did, or I would be cured anyway?
  - I am not cured, is it because my doctor did not treat me well, or there is no treatment for me yet?
  - Is this drug a cure for me or poison?

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Is More Information Good?

- The National Committee for Quality Assurance, a private accreditation body for HMOs, issues report cards based on measures of a plan's performance.

- Tumlinson et al. (1997), Scanlon and colleagues (2002) found that plan ratings do not have impact on consumer choices.

- Chernew and Scanlon (1998), found that plan ratings do not have impact on employee choices.

- However Beaulieu (2002) concluded consumers respond to negative quality ratings.

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Reasons for Government Intervention 4:Uncertainity and Insurance

- There are uncertainties everywhere in life. Insurance markets are created which reduce the magnitude of uncertainty.
- There are also insurances in health care markets.
- However insurance markets are poised with two signicaint problems:
  ◦ **Moral Hazard** (patients use too much health care service)
  ◦ **Adverse Selection** (Lemon Problem, only very sick buys health insurance)

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Moral Hazard

Supply curve

Demand curve,

p, $\$$
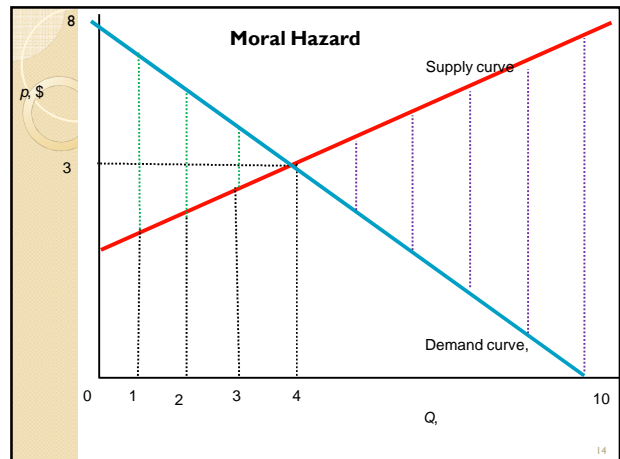
14

Empirical Estimates on Moral Hazard

- Feldstein found that increasing coinsurance rate from 0,33 to 0,50 increase social welfare by $27.8 billion per year.
- Feldman and Dowd (1991) found the welfare losses due to moral hazard between $33 billion per year and $109 billion per year..
- Manning and Marquis (1996) estimated the optimum coinsurance rate to be 45 percent.

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Reasons for Government Intervention 5:Monopoly

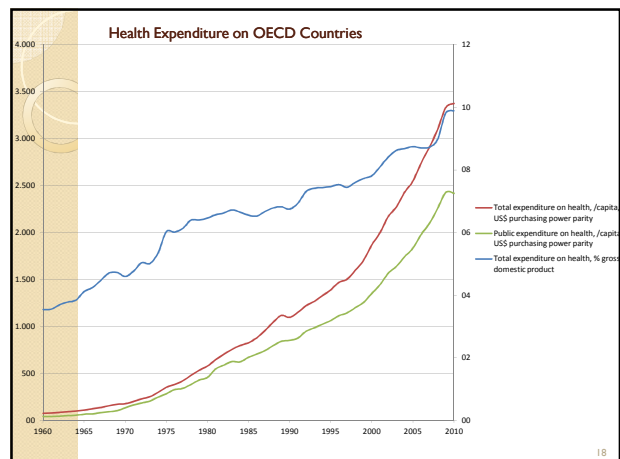- Brand name drugs can exert monopoly power in the markets especially if there are no alternatives.

  High drug prices.

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Practical Reasons for Government Intervention

- Health Care costs are rising.
- Significant portion of health care is financed by the government.
- There is a huge variation among health care spending between countries. (Can all countries do health care right?
- There is a huge variation among health care utilization of different technologies within the countries. (Can all regions do health care right?)

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Different Rate of Utilization of Various Health Care Procedures within US
(Cited from Folland 2012)

Surgical Procedure	No. of Cases	Coefficient of Variation	Extremal Ratio
Colectomy	3,190	.116	1.47
Open heart surgery	1,439	.232	2.29
Appendectomy	5,381	.305	2.86
Thyroidectomy	949	.342	3.35
Total hip replacement	1,717	.353	2.99
Diaphragmatic hernia	2,178	.369	3.45
Coronary bypass surgery	3,744	.383	3.62
Mastoidectomy	569	.461	4.03
Spinal fusion w/wo disc excision	1,234	.520	5.20
Total knee replacement	998	.525	7.42

Source: Based on information from Wennberg (1990).

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Reasons for Different Utization?

- Is it an indication of inappropriate (inefficient) care.
- Or is it a appropriate result of different supply and demand conditions (demographic, environmental, economic, social) in different regions?
- Wennberg and Fowler (1977), (Folland and Stano, 1990, Phelps and Parente (1990), Escarce (1993)
    There is an inappropriate provision of health care services?
    Government intervention is needed.

According to Phelps and Parente welfare loss due to variations from "true" practice is $33 billion in US.

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However ? Government Failure

- The fact that there is market failure in the health care markets does not mean that government interventions would indeed social welfare? Because:
- Are the policy makers benevolent?
- Are the policy makers all-knowing?
- Peltzman effect.

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Cost Containment Policies

- Reimbursement through social security system.
1) Fee for service.
    Might cause too much health care service. (information problem)
    Nassiri and Rochaix (2006) for physcians .
    Sloan, Morrisey, and Valvona (1988) for hospitals

2) Per patient payment.
    Patient dumping
    Too little health care service.
    Upcoding.

3) Lottery.
    Civan and Onemli (2012)

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Other Policies

- Drug Formularies.
- Internal and External Reference Pricing for Drugs.
  ◦ Effects on drug R&D (Civan and Maloney 2009)
  ◦ Effects on drug launch (Lanjouw 2006)
  ◦ Effects of newer drugs on health care costs (Lichtenberg 2010, Civan and Koksal 2010)
- Cost-Effectiveness Studies.
  ◦ Value of human life is calculated by
    • Human capital
    • Willingness to pay
    • Contingent valuation

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