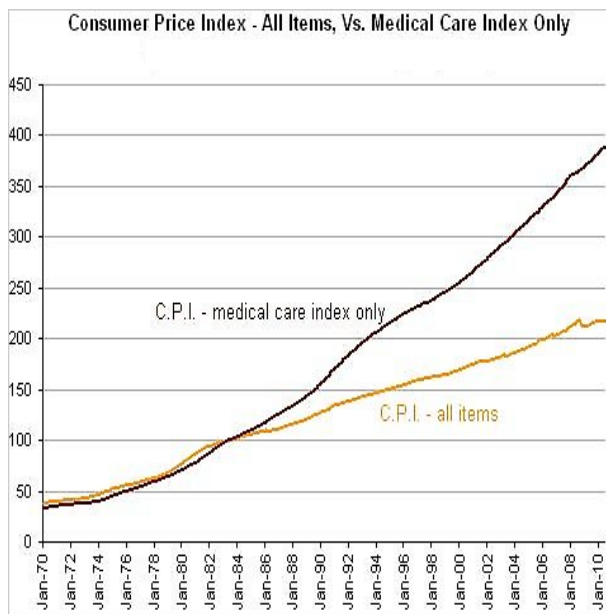
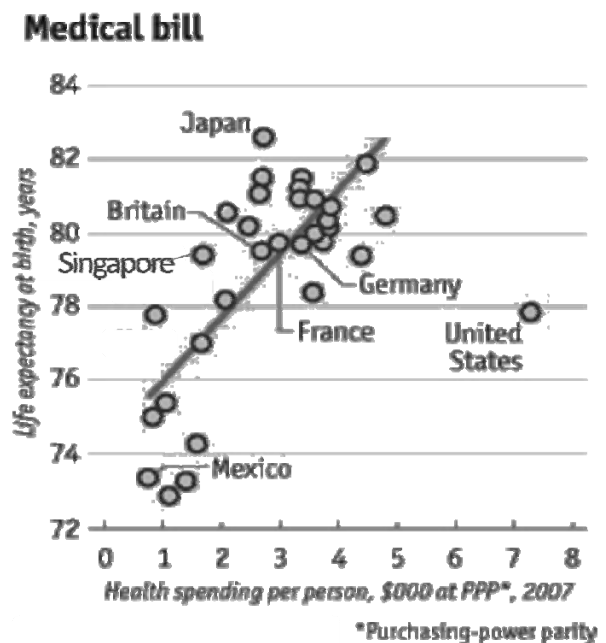


2011 JC2 H1 Economics Prelim 2: Case Study Question 1



Source: US Bureau of Labor Statistics

Figure 1



Source: Kleiner Perkins Caufield & Byers

Figure 2

Extract 1: Challenge to control rising healthcare costs

Touching on the hot topic of healthcare reform in his keynote speech at the Economist Conferences, Health Minister Khaw Boon Wan said politicians bore part of the blame for rising costs.

In Singapore, patients have to shoulder part of the cost for healthcare services, and thus look for value for money and do not over-consume. But when politicians promise free healthcare, they distort the market, causing over-consumption and heavier burden for government amidst slower economic growth globally.

Singapore is not immune to rising costs, especially with its rapidly aging population. However, the government has been keeping its healthcare expenditure at below 4% of its gross domestic product (GDP), or under US\$8 billion. This is a figure that many find "amazing" – compared to 16% of GDP (US\$ 2.4 trillion) for the United States.

When designing the healthcare system, the Singapore government tries to allow the market to function, such as promoting competition among providers, publicising their performance and making sure consumers seek value for money. There is also universal coverage for all our citizens through multiple levels: heavy government subsidy, compulsory health savings account and a low-cost national insurance scheme with deductibles and co-payment. The result is a high standard of healthcare, accessible to all citizens, and among the most cost-effective in the world.

Adapted from The Straits Times, 3 Apr 2010

Extract 2: Globalisation of Healthcare

Cost is a major driver of the rapidly growing medical tourism in Asia, catering to patients who travel across national borders to receive medical treatment, integrated with leisure activities as a package. The price of a medical procedure in Asia is sometimes only 20 to 30% of that in the United States. Besides this cost benefit, other considerations include productivity loss due to untreated medical conditions and long wait times due to the lack of access in constrained healthcare systems in the West. This, together with a sophisticated travel industry ensuring ease and affordability of travel, provides the backbone for Asia medical tourism.

Another critical reason for the growth of Asia medical tourism is the improvement in the healthcare standards. Many hospitals have invested in expensive developmental research on medical technology and prescription drugs. Wealthy individuals in Asia who prefer first-world quality treatment within the region tend to visit Singapore and their inelastic demand represents a more lucrative revenue stream. The tiny island nation of Singapore has emerged as an Asian medical tourism hub in the past decade. With an average of 200,000 patients arriving for treatment annually, it is estimated medical tourism will contribute 1.1% value to Singapore GDP by 2012.

Although cost and quality is prompting increased medical tourists from the West, many factors may temper growth, including supply capacity constraints in Asia, as well as the lack of coverage for offshore medical services by American health plans. This prompted many private hospitals in Asia to expand beyond national borders to tap directly into the pool of foreign patients and balance patient loads against medical resources domestically. Governments should work closely with the private sector to ensure that healthcare costs would not escalate further due to resource constraints, as there is significant outflow of healthcare professionals from the public sector as the private sector grows exponentially with the rise of medical tourism.

The current pace of the growth of the medical tourism industry is reflective of the pace of globalization in general. The issues of outsourcing, infrastructure, talent and global standards play an integral role, for instance hospitals in the United States using more cost effective services provided by medical firms based on India or governments taking steps to attract foreign trained medical professionals.

Adapted from Medical Tourism: The Asian Chapter by Deloitte, 2008

Extract 3: What is driving healthcare costs?

American healthcare system is in trouble today because we have consistently ignored market-oriented solutions and instead sought out policies based on public finance and top-down regulation. Some analysts say an increasing number of U.S. businesses are less competitive globally because of ballooning healthcare costs.

On May 7, the Obama administration revealed that it seeks to set aside more than US\$630 billion for the landmark healthcare reform, which includes the extension of health insurance to 32 million Americans who currently have none. It will also bar insurers to exclude coverage for individuals based on pre-existing medical conditions and expand the Medicaid government health insurance for the poor.

The White House claims that this sum will be raised without increasing the already titanic US\$7 trillion in cumulative budget deficits over the same time period. How will it do so? It is by rebalancing the tax code so that the wealthiest pay more, specifically, raising taxes on households with incomes over US\$250,000.

The Obama plan fails to recognize that the current healthcare system epitomizes the overuse or misuse of insurance, and instead seeks to expand the size and scope of this distorted system. The drivers of high healthcare costs are manifold; however most significantly is the perverse incentives associated with an insurance-based payment system. The United States relies on a third-party payment system whereby individuals and employers purchase insurance that allows patients to receive healthcare services that are in turn paid for by insurance providers. For the elderly and disabled, the government assumes the role of the insurer, using funds from payroll taxes (rather than insurance premiums) from current working force.

With the spread catastrophic risks over a large pool of individuals, most patients would simply select the most convenient hospital and cease to be concerned with the price or the necessity of recommended treatments, because after all, it is being billed to the insurance company. With time, insurers would significantly increase premiums to cover these high medical costs, and soon, poorer Americans would find it difficult to afford the premiums and would become uninsured.

Adapted from The Journal of the American Enterprise Institute, 18 May 2009

Questions

- (a) (i) Compare the change in the price level of medical care with the change in the price level of all items from 1990-2010. [2]

General trend (similar) [1m]

Both price level of medical care and that of all items are generally increasing from 1990 to 2010.

Refinement (difference) [1m]

However, price level of medical care increased at a faster rate than that of all items.

- (ii) Identify one factor that would affect the impact of the change in the price level of medical care upon the overall cost of living in USA. [1]

Possible answers [1m]

1. Weightage of medical care based on the basket of consumer goods and services used to compute the CPI for all items
 2. Extent of price changes of medical care
- (iii) Consider whether the information in Figure 2 suggests that higher health spending per capita results in longer life expectancy. [3]

Suggested answer:

Generally, there is a direct relationship between health spending per capita and life expectancy i.e. higher health spending per capital on average does result in longer life expectancy as reflected by the upwards sloping best fit line or regression line. [1m for general direct relationship]

However, there exists some outliers/exceptions that reflects that this direct relationship may not hold in some countries e.g. United States with highest health spending yet lower life expectancy than many countries, as well as Japan with longest life expectancy but lower health spending than USA , Germany and France. [1m for identifying outliers/exceptions]

This indicates that there are likely to be other factors affecting life expectancy besides the amount of health spending, such as lifestyles, eating patterns, quality of healthcare etc. [1m for possible reason why direct relationship may not hold]

- (b) Using demand and supply analysis,
- (i) Explain whether consumers or producers are more likely to bear the cost of 'expensive developmental research on medical technology and prescription drugs' in the private healthcare market. [4]

Suggested answer:

With the expensive developmental medical research, private healthcare providers will incur a large increase in cost of production, hence likely to pass on the higher cost to their consumers.

Given that consumers who seek private healthcare are of the higher income group, they value the quality of medical treatment with the ability to afford sophisticated medical procedures, since the cost of private healthcare is a smaller percentage of their wealth as compared to the average income individuals. So their demand for private healthcare tends to be price inelastic.

So when private healthcare providers pass on the higher costs to their consumers in the form of higher prices, as reflected by a leftwards shift of supply curve, the rise in equilibrium price of private healthcare from P to P_1 will cause a less than proportionate fall in its quantity demanded from Q to Q_1 . Hence the total expenditure by consumers of private healthcare will rise while total revenue of private healthcare providers will rise too. This reflects that consumers are more likely to bear the cost while producers gain from the costly investment in medical research.

1-2marks: For an answer lacking in economic analysis without anchoring on demand, supply and elasticity concepts

3-4marks: Well-explained economic analysis based on demand, supply and demand elasticity analysis, supported by a well-drawn diagram (max 3m if no diagram)

- (ii) Explain the key reasons for rising healthcare costs in USA and Singapore. [6]

Key reasons for rising healthcare costs in USA:

Demand factor → government policies → healthcare insurance coverage encourages consumption of healthcare as consumers need not pay for their healthcare expenses → higher demand for both private and public healthcare → increase in equilibrium price of healthcare

Demand increases along an inelastic supply → USA healthcare system lacks spare capacity and faces resource constraints → healthcare providers unable to meet the higher demand → results in significant rise in equilibrium price of healthcare.

Key reasons for rising healthcare costs in Singapore:

Increase in demand factor → aging population → rising demand of both private and public healthcare services related to old-age → increase in equilibrium price of healthcare services

Supply factor → resource constraints in Singapore → both private and public healthcare compete for medical professionals → resulting in higher wages and higher unit cost of production in both private and public healthcare → falling supply of healthcare services + becomes more inelastic due to lack of spare capacity → increase in equilibrium price of healthcare services

3 marks for USA market and 3 marks for Singapore market

For each market, both demand and supply factors need to be explained to score the full credit. If limited to demand or supply analysis, max 2 marks for each market.

- (c) With the globalisation of healthcare, comment on the view that on balance Singapore will benefit from the growth of medical tourism in Asia. [6]

Globalisation – integration of world economies to facilitate greater trade, foreign direct investment and factor mobility (e.g.labour)

Benefits	Costs
Rise in export of medical services and related leisure tourism services e.g. air travel, accommodation, entertainment (X revenue) → Singapore has a comparative advantage in medical tourism with its factor endowment of highly skilled labour and strength in R&D capabilities + infrastructure → cost differentials + advancement in air travel resulted in inflow of medical tourists → expanding the external wing of private healthcare firms by venturing into overseas markets Rise in private investments in healthcare industry (I) → expansion of private healthcare	Competition for medical resources between private and public healthcare market → resulting in higher factor prices e.g. higher wages → further escalation of medical costs → higher CPI and inflationary pressures → in the long-run may lose cost competitiveness as Asia's medical hub if cost pressures persist, especially with intense regional competition for medical tourism in Asia from Thailand, S.Korea and even China Economy might be less globally competitive for businesses → higher healthcare costs for employees, including insurance

<p>of both local and foreign firms due to more promising expected returns with rising global demand for healthcare services</p> <p>Increase government spending (G) to support the growth of medical tourism though the building of R&D infrastructure and subsidizing research collaborations</p> <p>Internal benefits → Increase in net X, I and G → rise in AD → multiplied increase in real national income → resultant increase in employment as economy moves towards full employment</p> <p>External benefits → improvement in BOT and possibly improvement in income balance in the long-run.</p> <p>Evaluation: The extent of economic growth and employment depends on whether Singapore can remain competitive by continuously retain its comparative advantage in medical tourism industry amidst rising global competition and interests among Asia's medical hubs. Also depends on how comprehensive insurance coverage will be to encourage foreigners to seek medical help in Singapore.</p>	<p>+ less attractive for foreign talents → affects potential EG</p> <p>Inequitable allocation of resources → more resources to be allocated to the private sector with higher income consumers → provision of basic healthcare compromised → lowering standard of living</p> <p>Evaluation: These costs have been minimized with the wide-range of government policies used in the healthcare sector. As from the extract, Singapore government has actively sought to overcome resource constraints with the recruitment of foreign labour, facilitated by increase labour mobility with globalisation, as well as promoting competition and efficiency in resource allocation in the public healthcare sector.</p> <p>Moreover, Singapore is well-known for its conducive business environment in terms of low corporate taxes, administrative efficiency etc and hence higher medical costs may not significantly make Singapore less attractive to FDI.</p> <p>There are also means-tested subsidies for low-income group to address the income inequity concerns. The tax revenue generated from the growth of medical tourism can be effectively used to finance these subsidies.</p>
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<p>Lowering cost of production with greater resource mobility, as well as outsourcing of more cost-effective medical services overseas</p> <p>→ recruiting foreign medical professionals such as nurses, doctors which could ease the labour resource constraints and wage cost pressures</p> <p>→ outsourcing of supporting medical services to countries with lower operating costs e.g. computer support services or drug trials to be done in India</p> <p>More affordable healthcare → ensure price competitiveness of private healthcare → pass on cost savings to medical tourists → increase in Qd of medical tourism by more than proportionately (due to many substitutes around the region) → rise in export revenue → boost AD and multiplied increase in real national income and employment.</p> <p>Lowering medical cost → easing rising consumer price index and inflationary pressure.</p>	<p>Development of medical tourism sector may lead to structural unemployment</p> <p>→ Restructuring of the Singapore economy → from manufacturing sectors to knowledge-based service sectors → Singaporeans may not have the relevant skills for the new industry → as reflected by the need to recruit foreign medical professionals especially nurses.</p> <p>Possible income outflow in the long-run</p> <p>→ high proportion of foreign medical professions → repatriation of income back to home countries increases → worsening of income balance</p>
<p>On balance</p> <p>Singapore is likely to benefit as long as remain open and globally competitive to maximize the benefits and minimize the costs of the growth in medical tourism. Government has been providing considerable financial and resource support in the medical tourism industry to build up our comparative advantage for continuous growth, as well as to expand the capacity of the healthcare industry to ease cost pressures.</p>	

1-3: For an answer lacking economic analysis to explain the benefits or costs of the growth of medical tourism for Singapore and relating to the globalisation of healthcare.

Max 3 if well-developed, one-sided analysis on benefits.

4-6: For a well-developed analysis to explain the benefits and costs of the growth of medical tourism for Singapore.

Max 5 marks if there is no evaluation or weighing of cost and benefits.

- (d) Discuss whether intervention by the governments of the United States and Singapore in the healthcare industry can be justified in terms of economic theory. [8]

Government intervention → to achieve both microeconomic and macroeconomic goals. Possible social goals e.g. quality of life? Political incentives?

Government goals	Government intervention	Evaluation: Justified?
1. Efficient allocation of resources – healthcare as merit good – positive externality	<p>Provide healthcare subsidies, saving schemes and insurance (full coverage in USA or co-payment for Singapore)</p> <p>→ To encourage consumption of healthcare services → to internalize the positive externality of healthcare services e.g. prevent spread of diseases as well as healthier workforce with higher productivity → increase consumption to socially optimal level Q_s → maximize social welfare by avoiding deadweight loss.</p> <p>Higher productivity workforce → expands productive capacity of Singapore economy and</p>	<p>Government failure in terms of over-subsidies or over-insured → resulting in over-consumption, higher healthcare costs and greater inefficiencies (can draw diagram to show DWL due to over-consumption)</p> <p>High government spending, especially for USA → opportunity costs incurred in terms of funds required for other areas for development</p> <p>→ a concern</p>

	attracts FDI → both actual and potential EG and higher employment	especially with rising budget deficit for USA in the current recessionary period.
2. Income inequity	<p>Lower income group unable to cope with the rising healthcare costs</p> <p>Singapore → provides means-tested subsidized prices and additional Medifund → to ensure lower income group can afford basic healthcare</p> <p>USA → enhance progressive tax structure to increase tax rates on higher income group → to provide transfer payments in terms of healthcare benefits e.g. Medicaid to the poor</p>	<p>Effectiveness depends on the accessibility of information with regards to such healthcare benefits for the lower income group → given than there was previously 32 million of Americans uninsured.</p> <p>Implications → progressive tax likely unpopular with the higher income group → might result in brain drain, outflow of capital and reduced inflow of foreign talents → restrict actual and potential economic growth</p>
3. Higher cost of living	<p>Greater transparency, increasing competition between providers, attracting foreign trained medical professors, outsourcing related services to more cost-effective firms overseas</p> <p>→ to promote greater</p>	<p>Effectiveness depends on the appropriate pacing of resource expansion as well as the rising demand for healthcare services due to</p>

	competition towards lowering costs and prices and expanding resource pool → ease inflationary pressure due to rising medical costs and resource constraints	aging population, rising affluence and medical tourism Possible distortionary government policy e.g. insurance scheme that set the wrong incentive to worsen strong demand for healthcare.
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L1: 1-2 marks

A smattering of valid points, mainly identifying types of government policies

L2: 3-5 marks

An under-developed analysis of at least 2 valid economic cases.

Max 3 marks for very well-developed analysis of market failure problem caused by the positive externalities of healthcare.

L3: 6-8 marks

A well-developed analysis of at least 2 valid economic case, supported with well-explained evaluation and a considered judgment on whether government intervention is justified.