

**Analysis of Private Health Insurance
in Sri Lanka :
Findings and Policy Implications**

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Glossary

Actuarially fair Insurance under which expected payouts equal the premiums paid by beneficiaries.

Adverse selection. A situation resulting from asymmetric information in which individuals are able to purchase insurance at rates which are below actuarially fair rates plus loading costs.

Deductible The amount of health expenses for which a beneficiary is responsible before the insurer begins payment.

Loading costs Administrative and other costs associated with underwriting an insurance policy.

Moral hazard An insurance term which represents the disincentives created by insurance for individuals to take measures which would reduce the amount of care demanded.

Price discrimination The sale of goods or services to different individuals at different prices.

Private health insurance (PHI) Health insurance which is taken up and paid for at the discretion of individuals or employers on behalf of individuals. Private health insurance can be offered by both private and public or quasi-public entities. Also known as voluntary health insurance.

Risk aversion The degree to which a certain income is preferred to a risky alternative with the same expected income.

Social health insurance A term mainly used to denote compulsory or public health insurance, usually part of a social security system, which is funded from specific (mainly payroll) contributions and is managed by autonomous or quasi-autonomous sickness funds, friendly societies or private insurers. Eligibility and premiums are typically determined in some compulsory or mandated manner, and premiums may be subsidized, with an element of redistribution from some segments of the population to others.

Introduction

Private health insurance (also known as voluntary health insurance) has been available in Sri Lanka for three decades. While it has not been of major importance as a financing mechanism in the health sector, the recent development of the insurance sector generally and the expansion of private health services have led to an increased level of interest by policy-makers in private insurance. The 1992 Presidential Task Force on Formulation of a National Health Policy for Sri Lanka (1993) proposed the vigorous promotion of private health insurance as a means both of increasing resource mobilization for the health sector, and reducing the burden on the government's limited health care resources. Subsequently both the government and donors, the latest of which was the Asian Development Bank, have commissioned reports on the potential role of health insurance in Sri Lanka. Much of this analysis has not been based on actual empirical research.

This paper presents some recent empirical analysis of private health insurance schemes in Sri Lanka. It places the findings of this analysis in the context of what is known from the operation of health insurance markets in other countries, and what would be expected from economic theory. It finally discusses the implications of the findings for both public policy, as well as the insurance companies themselves.

Development of Insurance in Sri Lanka

Development of the Sri Lankan insurance industry

The earliest recorded commercial insurance provider in Sri Lanka was Fowlie Richmond & Co., who was appointed as agents to the British Commercial Union Assurance Co., in 1833. During the next 100 years, other British, Australian, Canadian and Indian insurance firms appointed agents or established branch offices. The first locally-based insurance company commenced operations in 1939. In the next 22 years about 10 local companies were established in the market. All the companies transacted life, fire and marine business under the titles of *life* and *general* insurance.¹

Insurance legislation and the nationalization of insurance

By the mid-fifties there were around 100 insurance organizations and there was no insurance law in the country. The lack of legislation led to various problems and to a review of the insurance industry after 1956. This resulted in a major re-structuring of the industry with the passing of the *Insurance Corporation Act No. 2 of 1961*. The Act nationalized the life insurance business, but did not take over the existing insurance companies, who were given the freedom to service existing policy holders. This Act resulted in the incorporation of the government-owned Insurance Corporation of Ceylon, subsequently renamed as Insurance Corporation of Sri Lanka (ICSL). ICSL took over the life business from the 1962. Thereafter, through a Finance Act, general insurance was also taken over in 1964. ICSL thus became the sole insurer in the country. The Act prevented other insurers from transacting any insurance business, and the people from placing their insurance with an organization other than the ICSL. The *Control of Insurance Act No. 25 of 1962* was enacted to carry out the administration of the existing companies, which continued servicing their existing clients.

ICSL's monopoly came to an end in 1980 with the passing of an *Insurance (Special Provision) Act No. 22 of 1979*, which allowed the formation of another State-owned insurer, National Insurance Corporation (NIC). This was the result of agitation by the private sector. Though a government organization, NIC operated through private sector underwriting Principal Agents that handled limited claims subject to NIC supervision. The state remained in control of the funds and the reinsurance activities of NIC. Due to further agitation by the private sector companies, in 1986 the government allowed the private sector to compete with the two State Sector organizations. This was with the enactment of the following amendments: *Control of Insurance (Amendment) Act No. 42 of 1986*, *Insurance Corporation (Amendment) Act No. 43 of 1986* and *Insurance (Special Provision) (Amendment) Act No. 44 of 1986*.

This resulted in the formation of three private sector insurance companies in 1988: Ceylinco Insurance Co. Ltd., Union Assurance Ltd. and CTC Eagle Insurance Co. Ltd. The *Control of Insurance (Amendment) Act No. 42 of 1986* allowed insurance brokers to function in the market, but prohibited the placement of insurance with those not approved by the Controller of Insurance. The only exceptions being insurance of enterprises, approved by the Greater Colombo Economic Commission (now the Board of Investments) under Section 17 of the *Greater Colombo Economic*

¹ Much of this first section of the report reviewing the private health insurance sector is based on a report prepared by Hema Wijeratne, who acted as consultant to IPS. The study itself was carried out by the author together with Nishan de Mel of the IPS Health Policy Programme, using funds from a number of sources, including a research grant made available by USAID through Harvard University.

Commission Law of No. 4 of 1978. A cabinet directive prevented new foreign equity investments in the insurance sector.

From 1991 the government announced privatization plans for all state owned commercial organizations. This was as a result of pressure applied by the World Bank and other donor institutions. As a first step to privatizing the insurance business, ICSL and NIC were registered as limited liability companies in terms of the Company's Act. ICSL was renamed as Sri Lanka Insurance Corporation Ltd. (SLIC). The actual privatization plans relating to the two State sector insurers have not yet been finalized, and so they continue to function as limited liability companies solely owned by the State. In the meantime, again on the insistence of the World Bank, the government under-took to consolidate the legislation relating to insurance. Draft legislation has already been prepared, and it is expected that a new insurance law will be enacted in 1997.

Despite the inaction to date in completing the privatization of the two state insurance companies, the private sector companies have been permitted to expand operations and compete against the state sector. This has led to a substantial decline in the market share of the two state firms. Between 1988 and 1995, private corporations increased their share of the life insurance market from 7% to 54%, and of the general insurance market from 25% to 40%.

The portfolio of the general insurance business of Sri Lanka for the years 1991-1994 is shown in Table 1. In 1994, a specialist life insurance company, Janashakthi Life Insurance Co. Ltd. , was incorporated, and at the end of 1995 Janashakthi General Insurance Co., Ltd. was formed. The Janashakthi Company is the newest entrant to the insurance industry.

Table 1: Premium income for the general insurance business (Rs. millions)

<i>Year</i>	<i>SLIC</i>	<i>NIC</i>	<i>UAL</i>	<i>CTC-E</i>	<i>CIC</i>	<i>Total</i>	<i>Increase</i>
1990	1,434.2	292.2	303.4	193.2	163.6	2,386.6	
1991	1,479.4	243.4	312.8	195.2	230.0	2,460.8	+3.10 %
1992	1,660.5	231.0	383.3	308.0	308.5	2,891.3	+17.5 %
1993	1,836.0	217.3	491.8	366.7	465.9	3,397.4	+17.5 %
1994	2,094.3	232.0	590.4	380.1	681.9	3,978.7	+17.1 %

Source: Company data

Overview of the private health insurance market

The nationalization of the Sri Lankan insurance industry retarded the development of the insurance market, and in turn the development of PHI. ICSL/SLIC introduced their first PHI product in the late 1960s. This was a scheme for surgical and hospitalization expenses, and is still offered in its original unrevised form, although SLIC has gone on to introduce more up to date schemes. NIC on commencing business in 1980 followed SLIC by introducing similar products.

Before insurance liberalization, the number of people covered grew rapidly from between 15,000 - 20,000 in 1980 to about 50,000 in 1986 (Jayasuriya, 1990). Total PHI premiums in 1980 were estimated as Rs. 2.5 millions and total claims as Rs. 1.5 millions (Abel-Smith, 1980). After 1990, there was continued, but less rapid, expansion in the utilization of PHI. During 1991-94 the total number of people covered by PHI is estimated to have increased from 123,000 to 166,000. Of these the overwhelming majority (88%) were covered through group policies paid for by employers. In 1994 the insurance companies supported an estimated 8,473 policies, covering approximately 0.95% of the Sri Lankan population. 98% of the PHI policies are provided by the five market leaders in insurance provision: SLIC, CTC-Eagle, Union Assurance, Ceylinco Insurance, and NIC.

Since the late 1980s, the official policy stance towards PHI has been generally supportive. On the provider side, government policy has encouraged the expansion of private sector health care services. This has been partly because private sector expansion has been seen as a politically acceptable alternative to user fees in the public sector as a means of increasing resource mobilization in the health sector. A major government review in 1993, the Presidential Task Force on National Health Policy (1993), identified PHI as one mechanism to increase health sector financing. The Task Force envisaged government incentives for the expansion of PHI, including tax relief for PHI premiums. The Task Force appears to have supported the expansion of PHI for three primary reasons:

1. PHI expansion was seen as supporting expansion of private health services, and thus reducing the demand on government sector facilities. The providing of tax relief for premiums was thus an indirect way of reducing the government's fiscal burden.
2. PHI was seen as a mechanism which would bring in additional financial resources for the health sector.
3. PHI was expected to support increased cost recovery by MOH facilities, in particular at pay-beds and at Sri Jayewardenapura General Hospital.

An assessment of PHI in Sri Lanka

As in most developing countries, the private health insurance sector in Sri Lanka has not been the subject of previous analysis. It has not therefore been subject to systematic economic evaluation, and most policy recommendations to date appear to have been made on the basis of conjecture or assumption. The major difficulty confronting any examination of the insurance sector is the lack of data on the operation of the various insurance schemes. To deal with this problem, an extensive process of primary data collection and analysis was carried out by IPS during 1995-6, coupled with an external assessment of the various schemes. Additional details of this are given in a forthcoming IPS Health Policy Programme publication. The most pertinent findings are discussed here.

The primary data collection was based on an analysis of a random selection of insurance claims records, collected from four insurance companies, SLIC, CTC-E, UAL and CIC, which account for more than 85% of the total PHI market. The sample consisted of 2,539 individual claims filed during the two year period March 1993 to June 1995. Of these claims, 1,067 were for inpatient episodes, and 1,472 were for outpatient episodes. The value of the claims reimbursed represents approximately 6-7% of the total value of medical claims reimbursed nationally during the same time period by all the insurance companies.² The following sections report the results of this analysis.

Overall market trends

During the period 1991-94, total premiums paid for PHI increased from Rs. 53 millions to 120 millions, while actual claims reimbursed increased from Rs. 37 millions to Rs. 75 millions (Figure 1). Since the increase in premiums was faster during this period than that of claims, the percentage of premiums actually paid out in terms of benefits decreased from 70% to 63%. This implies that in 1994 approximately 37% of premiums were accounted for by loading costs, or administrative costs and profit, which is relatively high by international experience (Table 2).

² The results reported refer to the sample of claims examined. They describe only the characteristics of the beneficiaries who claimed reimbursement and the episodes for which reimbursement was claimed. They do not represent the characteristics of those beneficiaries who did not seek medical care or who received medical care without claiming reimbursement.

The increase in claims was due to an increase in persons insured and an increase in the amount claimed per beneficiary. The latter quantity increased by 34% during this time period, when the general price level in the economy increased by 24%. Thus, there was a 14% real increase in the value of claims per beneficiary. Whether this was due to increase in utilization or an increase in medical prices cannot be determined from the aggregate data

Table 2: Administrative costs and profits in selected insurance systems in 1990s

<i>Country</i>	<i>Type of health insurance</i>	<i>Transaction costs to premiums</i>
Philippines	Unregulated private HMOs	45%
Philippines	Commercial health insurance	49%
Sri Lanka	Commercial health insurance	37%
Chile	Regulated private insurance	>30%
United States	Commercial health insurance	<25%
Zimbabwe	Private medical aid schemes	<10%
Japan	Social health insurance	<10%
Germany	Social health insurance	<10%
Finland	Social health insurance	5%
Canada	Social health insurance	<5%

Source: Griffin et al. (1994), Hsiao (1995), Shaw and Griffin (1995), Elo and Wijeratne (1996), author's estimates.

Characteristics of policies offered

Insurance companies market two types of PHI in Sri Lanka: individual policies and group policies. Group policies are paid for generally by employers on behalf of their employees, and have generally accounted for 80-90% of all persons insured. In most cases, this is provided as an employment benefit, with the employees making no contribution towards the premiums.

Employers are permitted to charge group policies as a deductible expense when arriving at corporate tax liabilities. All the insurance companies offer group policies, and the premium rate is usually negotiated directly between the insurance company and the employer. From what is known, policies do not specify the providers to be used by the insured, and utilization of both public and private providers is permitted. Usual practice is for the patient to pay for the treatment themselves, and then to file for reimbursement either directly or through the employer, who in turn passes on the claims to the insurer. Individual policies are directly marketed by insurance companies to individuals. In general they offer similar terms to the group policies, but the premiums tend to be higher, while terms cannot be negotiated. Individual insurance premiums were a tax deductible expense, but this concession was removed in 1993.

All insurance schemes offer coverage of inpatient treatment. CIC was the first company to offer coverage of outpatient expenses, and the other companies have since followed suit in order to remain competitive. The rules for reimbursement vary considerably between policies, but all cap total reimbursements allowed each year or per episode, as well as specifying sub-limits for categories of expenses, such as drugs, room charges or doctors' fees. Recently in 1995, Janashakthi General Insurance Co., Ltd. introduced three schemes which specify no sub-limits. Deductibles and copayments are also often specified, but the details vary between policy. Typical exclusions include pre-existing conditions, normal child birth, suicide, self-inflicted injury, STDs including AIDS, alcoholism, insanity, and conditions contracted outside Sri Lanka. Some policies cover only the primary beneficiary, but many also cover immediate dependents, in particular spouse, children and parents. Often the deductibles and copayments for dependents are greater than for the primary enrollee. Most policies specify age-limits for new customers, and older individuals are often excluded, or are expected to pay higher premiums.

Administration of PHI schemes

In general, PHI schemes are written under the Miscellaneous Accident Department of each of the companies, except for CIC. CIC has a separate department (Suwa Sampatha) for its PHI business, although it too reports it in its annual accounts under the Miscellaneous Accident portfolio. Table 3 gives an analysis of the contribution of PHI premiums to total miscellaneous accident premiums in 1994. The miscellaneous accident category covers such items as burglary, personal accidents and travel, professional indemnities, etc. With only a small contribution to overall business, insurers (with the exception of CIC) treat PHI as a potential loss-leader for other insurance products.³ For most of the insurers, it is provided in order to accommodate corporate clients and to obtain the balance of their insurance portfolio. These companies in fact would not even accept this class, unless a substantial share of the remaining insurance needs are held with them. CIC does, however, treat PHI separately, and will accept business on its own from its clients.

Table 3: Share of miscellaneous accident business accounted for by PHI (1994)

<i>Company</i>	<i>Miscellaneous Accident Premiums (Rs. millions)</i>	<i>Medical Expenses Premiums (Rs. millions)</i>	<i>Medical Premiums as Share of Total (%)</i>	<i>Market share (% of total premiums)</i>
SLIC	486	24	5.1	20%
NIC	33	13	40.0	11%
UAL	127	19	15.0	16%
CTC-E	59	16	26.4	13%
CIC	237	48	20.3	40%
Total	942	120	12.7	100%

Source: Hema Wijeratne.

PHI premiums are not calculated on any proper basis, actuarial or otherwise. Companies do not routinely review their schemes (except CIC), and none have any detailed financial or management statistics. The companies do not separately track business under the PHI heading, and so it was extremely difficult to obtain even the data given in this paper. They generally introduce new schemes or enhanced benefits merely in response to consumer demand and the rising costs of medical care. Claims experience is not taken into account when developing new products, as there are no available statistics. Competition for general insurance business is quite intense, and so PHI accounts are often subject to premium reductions without any logical reason, since direct profits are not the main objective in supplying this coverage.

Administration of PHI policies is labor intensive; it is not computerized. Companies must know the personal details of all those who are covered, and the claims need to be checked closely in view of sub-limits for room rates and for other specified categories and annual limits. No insurer assigns any employees specifically for this business, or uses special administrative procedures for these portfolios. Normal clerical and managerial staff are used to administer claims and attend to underwriting. They are not specially trained, and if any medical information is required, the papers are referred to the companies' medical officer or an external medical referee.

The lack of dedicated administrative staff to handle medical claims is reflected in the time taken to process claims. There are considerable variations between companies, and the average length of time taken to settle claims is quite long (Table 4).

³ Although premium income is more than claims, PHI can still be loss-making because of high administrative costs.

Table 4: Average length of time in days taken by insurers to settle medical claims

<i>Year</i>	<i>Company A</i>	<i>Company B</i>	<i>Company C</i>	<i>Company D</i>
1993	12	-	-	-
1994	12	15	29	42
1995	21	6	23	74

Note: Estimates not given for all companies for 1993, as sample sizes were too small.

Claims analysis

The following section reports the findings of the analysis of insurance claims conducted by IPS.

Composition of beneficiaries

Tables 5 and 6 give the composition in the sample of beneficiaries filing claims by age group and sex and geographical distribution. With the exception of the under 1 year age group, the distribution of PHI claims is disproportionately from the 16-60 years age group. Children and the elderly are underrepresented. Amongst outpatients, there is a predominantly male distribution at all ages, except for the 16-35 years age group. The larger number of females in the 16-35 years age group is largely explained by gynecological and obstetric cases.

Descriptive data on the private hospital inpatient population in Sri Lanka are not routinely available. One survey of private hospital inpatients carried out in 1990 collected patient demographic data, and it is possible to compare its results with the data on insurance patients. Table 5 gives the age distribution of inpatients from a private hospital survey carried out in 1989-90 (Rannan-Eliya, 1990), and Figure 2 compares the age distribution of the insurance inpatients with that of the same 1989-90 inpatient sample. In the 1990 survey, more than 10% of all inpatients were aged over 60 years, while only 2% of insurance-financed inpatients are over 60 years.⁴ Amongst adults as a whole, the proportion of insured patients who are aged 30 - 55 years is greater than in the reference population. While slightly over half of all private hospital inpatients are female, the opposite is the case with the insured population. PHI appears to disproportionately finance inpatients who are male and in the 30 - 55 years age group, which is what one might expect since private insurance is typically a formal sector employment benefit.

The geographic distribution of claimants is skewed in favor of Colombo district. Over 90% of all claims are filed by individuals from Colombo, which accounts for only 11% of the national population. Even Gampaha and Kalutara districts, which are adjacent to Colombo and have above-average incomes, account for only 3.5% of all cases (Table 6).

Table 5: Age and sex distribution of PHI claimants

<i>Age group (years)</i>	<i>Reference population</i>	<i>Outpatient (%)</i>			<i>Inpatient (%)</i>		
		<i>Female</i>	<i>Male</i>	<i>Total</i>	<i>Female</i>	<i>Male</i>	<i>Total</i>
< 1	1.8 %	25	15	19	4	2	3
1 - 5	0.4 %	0	3	2	5	8	7
6 - 15	2.0 %	2	2	2	4	8	6
16 - 35	55.6 %	35	29	31	52	26	38
36 - 45	15.6 %	15	25	22	21	26	24
46 - 60	14.2 %	21	22	22	13	25	19
> 60	10.3 %	2	3	3	1	4	2

⁴ Approximately 9% of the national population are aged 60 years and over.

N =	465	48	91	139	458	506	964
Total (%)	100%	35%	65%	100%	47.5%	52.5%	100%

Source: See text.

Note: The reference population used for the age distribution is of a private hospital inpatient population surveyed in 1989/90 by Rannan-Eliya (1990). The age distribution given is based on that in the sample of claims examined, weighted by companies' estimated share of total submitted claims.

Table 6: Geographical distribution of household of PHI claimants

District	Percentage distribution of PHI claimants			Population share in 1994 (%)
	Outpatients	Inpatients	Total	
Colombo	92.1	88.8	90.5	11.5
Gampaha	0.9	2.2	1.5	8.8
Kalutara	1.2	2.9	2.0	5.4
Kandy	1.9	2.8	2.3	7.2
Matale	-	0.2	0.1	2.4
Nuwara Eliya	0.1	0.2	0.2	3.1
Galle	0.4	0.2	0.3	5.5
Matara	-	0.4	0.2	4.5
Hambantota	-	-	-	3.0
Jaffna	-	-	-	5.0
Mannar	-	-	-	0.8
Vavuniya	-	-	-	0.7
Mullaitivu	-	-	-	0.5
Batticaloa	-	-	-	2.5
Ampara	-	-	-	2.9
Trincomalee	-	-	-	1.8
Kurunegala	0.7	0.6	0.6	8.3
Puttalam	-	-	-	3.5
Anuradhapura	-	-	-	4.2
Polonnaruwa	-	-	-	1.9
Badulla	0.5	0.6	0.6	4.1
Moneragala	-	-	-	2.1
Ratnapura	1.2	1.3	1.3	5.4
Kegalle	0.7	-	0.4	4.3

Source: See text. Share of national population is provisional estimate for 1994 (Statistics Department, 1995).

Reimbursement of expenditures by insurance

Table 7 gives the breakdown of beneficiaries according to their insurance status and sex. Less than 10% of all claimants are insured as individuals, with the large majority either being covered through employer schemes as employees, or being the dependents of a covered employee. Many women are in fact covered as spouses of covered employees, the majority of whom are male.

A wide range of maximum annual limits, deductibles and copayments are charged by the various schemes. The total limits on reimbursements vary from Rs. 625 to a maximum of Rs. 250,000, with a median of **Rs. 14,750**. For those claimants, whose total expenses were below their maximum limit, the mean amount reimbursed was **92%** of actual medical expenses. In only **7.8%** of cases, was the total of actual expenses greater than the specified maximum reimbursement, and in these cases an average of only **59%** of expenses was reimbursed. For inpatient episodes, where the mean total

expenses is high (Rs. 13,713), 91% of all expenses were reimbursed. For outpatient episodes, on average a high 87% of all expenses were reimbursed.

Table 7: Status of insurance claimants

<i>Status of beneficiary</i>	<i>Female (%)</i>	<i>Male (%)</i>	<i>Number in sample</i>	<i>Percentage of total (%)</i>
Individual	6	11	221	9
Employee	55	65	1,499	61
Spouse	24	5	286	12
Child	11	11	270	11
Others/several	4	8	168	7
Number in sample	871	1,573	2,444	100

Source: See text. Numbers weighted by companies' estimated share of total submitted claims.

Distribution of expenditures financed by insurance

Table 8 summarizes the composition of patient expenditures by type of expense for both inpatients and outpatients separately. This shows that approximately one third of all insurance-reimbursed expenditures are for doctors' fees. Drugs and tests account for almost half of outpatient expenses, but only 37% of inpatient expenses. The high percentage of outpatient expenditures accounted for by drugs is partly explained by the practice of many Sri Lankan clinic doctors to recover the costs of their services from the dispensing of drugs instead of from consultation fees.⁵

Table 8: Composition of patient expenditures financed by insurance (1994)

	<i>Outpatient claims</i>		<i>Inpatient claims</i>		<i>Total claims</i>
Doctors fees	455	43 %	3,765	28 %	31 %
Drugs	361	34 %	3,136	24 %	26 %
Tests	151	14 %	1,287	10 %	11 %
Nursing charges	59	6 %	1,313	10 %	9 %
Hospital charges	0	0 %	3,375	25 %	21 %
Total	1,051	100 %	13,482	100 %	100 %

Source: See text.

Note: Numbers are mean values in rupees of all claims in sample, weighted by each insurer's estimated share of total claims paid for outpatient, inpatient and total separately. Percentages may not sum to 100% because of some expenditures not falling into above categories.

Table 9 describes the utilization pattern of insurance beneficiaries, as observed from their claims. In general, more than 90% of all episodes involve treatment at private facilities. This is partly to be expected, as most treatment at government facilities is free, and therefore would not result in a claim for reimbursement. Amongst outpatient episodes, private clinics account for almost two-thirds of all episodes, whilst for inpatient episodes private hospitals account for over 90% of all admissions.

When the overall use of funds is examined, it is found that private hospital treatment accounts for more than 90% of all expenditures associated with private health insurance, while private clinics account for only 3%. The low share of funds flowing to private clinics, despite their predominant

⁵ This is the same practice as in Japan and several other South-East Asian countries, such as Thailand.

role in the provision of outpatient care, is due to the comparatively lower mean cost of an outpatient episode relative to an inpatient admission.

Table 9: Distribution of utilization and expenditures by provider type, 1994

	<i>Outpatient</i>		<i>Inpatient</i>		<i>Total expenses (%)</i>
	<i>% of episodes</i>	<i>Mean expense (Rupees)</i>	<i>% of episodes</i>	<i>Mean expense (Rupees)</i>	
Government hospitals	1	452	9	6,946	4.1
Private hospitals	33	1,186	90	13,969	90.5
Private clinics	62	590	0	0	3.2
Ayurvedic hospitals	0	0	1	7,829	0.5
Ayurvedic clinics	1	321	0	0	0.0
Pharmacies	2	301	0	0	0.1
Others	1	691	0	86,439	1.1
Total	100	769	100	13,542	100.0

Source: See text.

Note: The high inpatient cost of the ‘Others’ category is due to the inclusion of two episodes at foreign hospitals.

Trends in medical prices

Using the insurance claims data, it is possible to examine the trends in prices paid by insurance beneficiaries during 1993-95. One would expect on theoretical grounds that insurance will result in increased prices as the price faced by consumers falls, in a situation where prices are set by the market and are unregulated. In addition, moral hazard can act to reduce the restraints on provider behavior.

Moral hazard refers to the disincentives created by insurance for individuals to take measures which would reduce the amount of care demanded, as well as for providers to curtail the volume of services provided. Moral hazard is a recognized problem in insurance markets, and most insurance schemes rely on co-payments, deductibles, and co-insurance to reduce its impact on the demand side. However, the experience of developed countries is that moral hazard on the supply side is of greater impact than that on the demand side. Physicians and other providers have a tendency to increase supply of services to patients in the presence of insurance, as bills are no longer being paid for by their patients, but by impersonal third-party agencies. Insurance tends to remove the moral and social constraints that act to reduce the full exercise of their market power.

Table 9 gives the mean cost per episode for inpatients and outpatients of the major reimbursable items of medical care each year.⁶ This shows that for doctors fees, drugs, tests and hospital beds, the mean price paid per episode by insurance beneficiaries rose during the period under study by more than the general price level in the economy.⁷ Outpatient charges show the greatest increases for all items, with doctors fees for outpatient episodes rising by more than 192% compared with a 21% increase in doctors fees charged for inpatient episodes. Outpatient drug costs increased at approximately the same rate as outpatient doctors fees. The correlation between the latter two may not be coincidental, and might be explained by the fact that the price paid for drugs at many private

⁶ The figures given are the mean price paid by insured patients, and not the amount actually reimbursed.

⁷ Authorities do not compile a separate medical price index in Sri Lanka, so the Central Bank GDP deflator is used as the best available inflation measure. The data underestimate the real price changes, as the 1993 and 1995 samples are drawn mostly from the second half and first half of each year respectively, thus leading to overestimates and underestimates respectively for 1993 and 1995 prices.

clinics does not represent a charge for the drugs themselves, but is more a charge for the doctor's time.

Why doctors fees for outpatient visits in particular increased considerably more than for inpatient episodes is not at all clear. It is possible that the results may be partly explained by sampling biases, but the large difference observed cannot be explained solely on those grounds. The most likely explanations are (i) that real prices for outpatient medical consultations did increase considerably during this time, (ii) the price charged for outpatient consultations by insured patients increased relative to that charged to other patients, and (iii) a combination of both factors. The latter might have occurred as doctors in private clinics became more aware of the existence of PHI during this time period, which would be consistent with the increased population coverage and the intensified marketing of PHI by the insurance companies. It implies that doctors in the outpatient setting are more likely to engage in price discrimination when patients are insured than doctors in hospital and hospitals themselves. It is not possible to verify this, without conducting a survey of prices paid by both insured and non-insured patients at the same providers, but it would be consistent with results reported from The Philippines (Gertler and Solon, 1995).⁸ Doctors working in outpatient clinics tend to do by themselves, and away from public scrutiny, unlike in the larger private hospitals. They may thus be in a better position to price discriminate than hospital specialists, whose prices tend to be better known.

These trends in prices paid by insured patients provide strong confirmation of moral hazard effects on the demand side. There is other anecdotal evidence of this from the insurance industry and the medical profession. Several practices are known to occur in addition to a general inflation in prices charged, which are clearly attempts to exploit the insurers. Some hospitals have been reported to raise their prices when the patients are insured, with the connivance of the patients, who then receive back as cash a share of price difference. Some providers are known who will hand out without question receipts for submission to the insurers, for payment of a small fee. There is also anecdotal evidence that some physicians will sign insurance claims for treatment which was not provided, or will misreport the nature of the treatment given in order to circumvent the restrictions on which types of care can be reimbursed.

However, in the face of what appear to be widely prevalent practices designed to exploit the insurers, the companies appear largely powerless to control the abuses. In certain cases, certain hospitals and nursing homes known to be bad offenders are black-listed by insurers, and claims from them will not be entertained. However, more detailed audit of claims from all providers is not possible because of lack of trained staff, the inevitable cost that this will entail, and the general difficulty in establishing proof of abuses.

⁸ There are no laws restricting price discrimination by doctors in Sri Lanka.

Table 10: Price trends of insured medical items

	1993	1994	1995	Overall real price change (1993-95)
Outpatient				
Doctors fees	166 (100)	356 (196)	484 (243)	+143%
Drugs	193 (100)	400 (190)	526 (227)	+127%
Tests	74 (100)	119 (147)	242 (273)	+173%
Inpatient				
Doctors fees	3,395 (100)	4,124 (111)	4,098 (101)	+1%
Drugs	1,710 (100)	3,509 (188)	3,825 (186)	+86%
Tests	711 (100)	1,301 (167)	1,381 (162)	+62%
Daily bed cost	452 (100)	697 (141)	680 (125)	+25%
GDP deflator (1990=100)	133.6	146.1	160.3	+20%

Source: IPS insurance survey data.

Note: Prices are in rupees, and are the average price of each item per insured episode. These results are based on only the data for three companies, as the fourth company's claims were not distributed sufficiently across the time period analyzed. Tests refers to laboratory tests. Daily bed cost is the mean cost per day of the combined hospital admission charges and daily bed charges for each episode. GDP deflator is the implied Central Bank GDP deflator. The figures given in parentheses are the real prices for each service relative to that in 1993, having adjusted for inflation as measured by the GDP deflator.

Impact of corporate tax exemptions for PHI premiums

Payment of PHI premiums by employers is deductible as an expense for the purposes of corporate taxation. This concession is supposed to reduce the burden on government finances by encouraging people to shift from free public hospitals to private providers, and thus reduce the need for government funding of health services, or allow reallocation of government health spending towards poorer patients. Currently, the rate of corporate tax is 35%. Using the data collected, it is possible to evaluate the net impact of this tax incentive on the government's finances.

Let:

- P = Price of PHI premium per covered beneficiary
R % = Percentage of premiums paid out in claims on average
U₁ = Utilization of public hospitals without health insurance coverage
U₂ = Utilization of public hospitals with health insurance coverage
MC_{PUB} = Average marginal cost of visits at public hospitals
AC_{PRIV} = Average price of visits at private hospitals (assume = average price paid)

The fiscal cost to the government of giving the exemption is 0.35P, or Rs. 253 per beneficiary in 1994. This results in reimbursement of the following amount of medical expenditures: RP, or Rs. 451 in 1994, since $R = 62.5\%$.

The savings to the government from reducing utilization at public hospitals is given by:

$$\text{Savings, } S = (U_1 - U_2) \cdot MC_{\text{PUB}}$$

We know that the average reimbursed expenditure per visit at private hospitals under PHI is several times greater than the average marginal costs of visits at public hospitals. Data collected in 1992 as part of the MOH/IDA Facility Study indicate that the ratios of average costs in private hospitals to marginal costs in public hospitals were as follows:

Table 11: Cost ratios between public and private hospitals, 1992

	<i>Average marginal cost in MOH hospitals (=1)</i>	<i>Average marginal cost in private hospitals</i>	<i>Average unit costs in private hospitals</i>
Inpatient admission	1	20 - 25	30
Outpatient visit	1	2	20 - 25

Source: Unpublished results of ongoing IPS analysis of MOH/IDA 1992 Facility Survey data.

To simplify, we can make a conservative assumption that the cost difference is only ten fold, i.e., $AC_{\text{PRIV}} = 10 \cdot MC_{\text{PUB}}$

This implies that savings, S, to the government are associated with a resulting expenditure reimbursed by PHI at private hospitals of $10 \cdot (U_1 - U_2) \cdot MC_{\text{PUB}}$, or 10S.

This expenditure which is reimbursed by PHI is equivalent to RP. That is:

$$RP = 10 \cdot (U_1 - U_2) \cdot MC_{\text{PUB}} = 10S$$

We can make the simplifying assumption that $(U_1 / U_2) = 1.00$, which is that all insured beneficiaries would have used only government hospitals without insurance, and that they use only private providers once they are insured. This assumption is not realistic, given that many of those with insurance would have used private providers anyway, and it has the effect of leading to an overestimate of any savings to the government.

This implies that the savings to MOH is given by (RP/10)

In 1994, this would have been equivalent to Rs. 45 per beneficiary, compared with the fiscal cost to the government in terms of foregone tax revenues of Rs. 253 per beneficiary. As noted, because of the various assumptions made in this calculation, this estimate of the amount of resources saved by the government is a gross overestimate.

It is evident that instead of reducing the fiscal burden on the government, this policy of tax exemptions on PHI premiums actually increases the fiscal pressures. The revenue foregone through this policy is at least five times greater than the net savings to the government in terms of reduced utilization and expenditures at public hospitals, or the amount of resources released for spending on other patients.

Conclusions

Private health insurance in Sri Lanka clearly remains a very minor financing mechanism in the health sector, despite the recommendations by the 1992 Presidential Task Force to vigorously promote it. Nevertheless, there are several important conclusions that can be drawn with the very limited data that is now available for the sector. Some relate to the private health insurance market itself, and the related role of public policy, and others relate generically to health insurance in general.

The contribution of PHI to health sector resource mobilization is minimal, and is likely to remain so.

Despite impressive growth in the PHI market in recent years, and vigorous innovation and competition between local companies, the overall contribution of PHI to resource mobilization is minimal. In 1995, PHI covered only 1% of the Sri Lankan population, and financed less than 1% of total national health expenditures.

This finding is not markedly different with the situation in other countries. Other than two high income economies, USA and Switzerland, in no country in the world is private health insurance a major financing mechanism. Table 12 presents the extent to which PHI contributes to health sector resource mobilization in several developing or Asian countries. As can be seen, PHI is a mechanism which typically contributes less than 1% of total national health expenditures, and covers less than 1% of the population, even in middle income developing countries with large formal sectors and vigorous private sectors.

Table 12: Private health insurance coverage in several countries (early 1990s)

<i>Country</i>	<i>Per capita GNP (1995)</i>	<i>Percentage of population covered (%)</i>	<i>Contribution to total national health expenditures (%)</i>
Bangladesh	240	0.01	<0.1
India	340	<0.5	<0.5
Zambia	400	<0.1	<0.2
Sri Lanka	700	1.0	<0.9
Egypt	790	0.07	<0.3
Bolivia	800	<0.5	1.5
Indonesia	980	<1.0	<0.5
Philippines	1,050	<1.0	<1.0
Thailand	2,740	1.6	0.5
Hong Kong	22,990	16.0	1.7

Source: World Bank (1992), Berman et al. (1994), Hsiao (1993), Chawla and Rannan-Eliya (1997), Rannan-Eliya and de Mel (1997), Rannan-Eliya et al. (Forthcoming), Griffin et al. (1994), Robles et al., (1996), NERA (1996), Indaratna and Hutubessy (1997).

PHI is unlikely to extend beyond a small urban formal sector workforce, who tend to be both young and generally well

In Sri Lanka, coverage by the PHI schemes is restricted to a small and relatively affluent section of the population, who work in the formal sector, and who live in the major urban center of Colombo. More than 80% of all covered persons are insured through their employer, and less than 10% of claims submitted are from individual policy holders. 90% of beneficiaries are residents of Colombo district, which accounts for only 12% of the national population. When claims are examined by

demographic characteristics, the majority are filed on behalf of adults in the working age groups, in particular ages 20-45 years. PHI as a mechanism benefits predominantly the young and relatively healthy sections of the workforce, and is of no significance to the very young, the elderly, rural and chronically sick persons. Yet it is precisely the latter groups that policy makers are presumably most interested in reaching or extending access to medical services.

This finding of limited coverage of generally healthy formal sector workers is not surprising, and stems from two fundamental characteristics of all unregulated private health insurance markets: *adverse selection* by consumers and *risk selection* by insurance companies.

Adverse selection

Adverse selection arises from consumers having more complete knowledge about their own health status and likely propensity to use health services. Informed consumers will therefore tend to select the insurance plan that gives them the greatest net benefits. Consumers who expect to use a high volume of inpatient services will buy insurance that offers full coverage of hospitalization. If the insurer then raises the price of premiums to cover the expected higher risks, consumers who expect to use fewer hospital services, and therefore might expect to have no net benefit from enrollment will then abandon the insurance scheme. This leaves only the high risk beneficiaries in the scheme, and forces the insurer to raise premiums even more. This in turn creates a spiral effect so that no stable insurance market can exist, unless the insurers screen for risks, or the government subsidizes the scheme by reinsuring poor risks (Hsiao, 1995).

Adverse selection by individuals undermines risk pooling, and in effect defeats the whole purpose of insurance. Each consumer will tend to select an insurance scheme, whose premiums most closely match their risk status. In order to remain competitive, insurers will therefore not voluntarily pool the health and unhealthy, and instead attempt to offer differential premiums. This in turn will price insurance schemes beyond the purchasing capacity of the bulk of the higher risk population, who tend to be the aged, disabled, chronically sick and child-bearing women.

Private health insurers may attempt to counteract adverse selection by consumers by restricting access to large employee groups, and refusing enrollment to individuals. Although Sri Lankan insurers do not refuse individuals, they charge them significantly higher premiums than for those enrolled through their employer, and this must be partly responsible for the low percentage of policies issued to individuals. Premiums for individual policies are age-adjusted, and in certain policies targeted at the more elderly population, total reimbursements are capped at fairly low levels.

Risk selection

Risk selection by insurers is the counterpart of adverse selection. Given that a minority of people generally account for the bulk of health care expenditures (1% of the under-65 population accounts for 27% of total health expenditures by that age group in USA), insurers can profit by excluding high-risk individuals through underwriting rules or by careful targeting of products. The exclusion of the chronically sick, those with a history of mental illness, alcoholism, STDs and normal child birth by Sri Lankan health insurance schemes is therefore to be expected.

In theory, risk selection by private insurers can be dealt with using risk-adjusted premiums. If every individual's premium corresponds to his or her expected health expenses, insurers would have little incentive to engage in risk selection. However, even in the USA, it is recognized that the field of actuarial science still lacks the tools and data to assess risk accurately on an individual basis (Hsiao, 1995).

The combined effects of adverse selection and risk selection are that PHI coverage will not extend significantly beyond large employee groups. A few individuals will be covered by PHI, but they will tend to be high-worth individuals, probably working in the formal sector, who are sufficiently risk-averse to be willing to pay the high premiums that will be required.

PHI in Sri Lanka is associated with large transaction costs

An estimated 37% of premiums are accounted for by administrative costs of PHI schemes and profits in Sri Lanka. This level is not unusually high, as even in USA, where there are significant economies of scale, PHI schemes have transaction costs as high as 25%. However, it should be noted that in Sri Lanka's case, the insurers do not yet exert significant efforts in the auditing of claims. Neither specially trained staff are used to handle PHI claims, nor is any special effort made to collect managerially useful information on the operation of these schemes. Even when prices are set for premiums, companies are not able to rely on claims experience, as the data do not exist.

This apparent lack of effort to professionalize reimbursement procedures or the operation of schemes is not surprising. Firstly, it reflects the fact that PHI operations are not seen as profit centers by most insurers, and are often only offered to existing insurance customers in association with other more profitable insurance products. This treatment of health insurance as a loss leader is quite consistent with behavior by insurers in several other middle-income Asian countries, such as Indonesia, the Philippines, and Thailand, and stems from the same problems of adverse selection. The insurers attempt to keep their losses low by not aggressively marketing the various schemes, with few exceptions, and by imposing annual limits on reimbursement under each policy. Given that PHI business accounts for only a small proportion of total income, there are few incentives to direct significant management attention to these activities.

Secondly, it is an indication of the lack of skilled expertise in this field of insurance. Sri Lanka lacks personnel trained in health insurance operations, in addition to there being a scarcity of the more general insurance skills which are also relevant, such as those of trained actuaries.

Moral hazard effects on the part of providers appear to be significant

Moral hazard is a recognized problem in all health insurance markets. It can occur with both consumers and providers. In developed countries, the traditional concern was always with moral hazard on the part of consumers, and this is usually countered through application of co-payments, deductibles and co-insurance. However, experience in advanced economies has established that the major problem of moral hazard in health insurance markets concerns providers. In Sri Lanka's case, the available data suggests that moral hazard effects on the part of consumers are not yet substantial. Using the data collected in the IPS study, it is possible to estimate the likely level of utilization rates by insured beneficiaries, and these do not appear to be particularly high.

In health care markets, there are significant incentives for providers to either raise prices in the face of insurance, or provide more than the appropriate amount of care. Insurance or third-party payment in health care markets generally has the effect of reducing any moral or psychological constraints on the prices charged or volumes of services delivered by providers. In the case of Sri Lanka, there is strong evidence of significant moral hazard on the supply side, with substantial price inflation in the insured market during the early 1990s, and considerable anecdotal evidence of questionable practices or abuses by individual providers.⁹

⁹ Analysis of the IPS claims data is suggestive that the frequency of births by Cesarean Section or Forceps delivery is higher for insured women than in the normal population. However, it is not possible to confirm this, as no data available on the exact age distributions and fertility patterns of the insured population.

However, in the face of this problem, the insurers are largely powerless, because of lack of trained staff, the cost of controlling such abuses, and the difficulty in establishing proof of abuses. The major mechanism available to private insurers to control moral hazard effects by providers is detailed monitoring and claims reviews. However, the experience from other countries, including the USA, which has developed the most sophisticated monitoring procedures, is that this is ultimately ineffective, as providers can always think up ways of circumventing controls. In addition, monitoring systems tend to be very costly to administer, and any savings gained are unlikely to justify the cost of monitoring.

As it is, unlike in developed countries, medical practice in Sri Lanka tends to be done without substantial record keeping, either of medical notes or financial records. In the absence of these record systems, and a general reluctance on the part of Sri Lankan physicians to testify against one another or criticize each other's clinical decisions, providers have a virtual *carte blanche* to charge and treat as they wish. The usual practices on the part of insurers to control moral hazard on the part of consumers are not relevant to providers.

There is general agreement on the part of health experts today in developed countries that moral hazard effects by providers can be controlled, but only through imposition of global budgets. Global budgeting involves setting a total limit on the amount paid to providers in a given time period. If providers choose to over-provide services, this results in a reduction in prices paid, and no net increase in the amounts finally reimbursed. However, global budgets are only relevant in situations where the insurer or insurers control most if not all the income received by providers. This is generally only the case with social insurance systems, and so global budgeting mechanisms are not feasible in pure PHI systems. In Sri Lanka, where PHI accounts for less than 15% of private hospital revenues, and less than 5% of private doctors' income, insurers lack the market power to be able to impose any controls on provider behavior.

Implications

Implications for public policy

1. Despite the hopes expressed by the Presidential Task Force of 1993, the potential for expansion of PHI is inherently limited. Given the problems of adverse selection and moral hazard, PHI is unlikely to make a significant contribution to private health sector growth, or to increasing cost recovery in government facilities. PHI coverage will tend to be limited to the healthy working population living in urban areas, and PHI will not significantly reduce the burden on government health services. Policy makers must realize that PHI cannot act as a significant resource mobilization mechanism in support of public policy goals in the health sector. Insurance can act as a significant resource mobilization mechanism for health services, but it requires substantial government intervention to counteract the problems of moral hazard and adverse selection. Such intervention is feasible only under systems of social insurance, and this is the major reason why only two countries in the world rely on PHI as the major source of health care financing.¹⁰
2. The government should not provide tax relief for PHI premiums. The Task Force's recommendation in this regard is flawed. In practice, the government loses several times more in

¹⁰ The two exceptions are USA and Switzerland. In both cases, policy-makers have attempted on several occasions to shift from PHI to social insurance type systems, but this has always failed, for reasons to do with the inherent institutional and political difficulties of implementing major changes in social welfare policy in highly developed democratic federations.

foregone tax revenues by providing such tax relief than it might save in terms of reduced utilization at public sector facilities. Not only does such a policy add to the government's fiscal burden, but it is also inequitable in that it benefits primarily doctors and hospitals, who are able to extract most of the benefits in terms of increased prices, and to a lesser extent the insured themselves, who tend to be of above-average income.

3. The market for PHI services displays all the features and market failures that one would expect in such a market. However, if the tax incentives for insurance are removed, such problems will not involve public funds, and as long as PHI expenditures remain such a small fraction of overall national health expenditures, the operation of PHI schemes are unlikely to have significant externalities for the rest of the health sector. In this situation there is no justification for government intervention.
4. While PHI expenditures are small, the government should institute measures to at least perform its information role, by requiring insurers to collect and provide basic statistics on the operation of their schemes, and making these available publicly. This would perform a function which would should support better management of their operations by the insurers, but one which the government is best capable of carrying out. Such information would also allow policy makers to monitor trends in the PHI market, and to be alerted to when intervention may be necessary.
5. The operation of PHI schemes illustrates that Sri Lankan providers behave no differently to other providers in other countries under the influence of insurance. This is of some relevance to various policy proposals to explore alternatives to facility budgeting in MOH services, and to encourage governmental agencies such as EPF/ETF to provide health services on a contract basis. Given the potential of providers to engage in price discrimination and the problems of moral hazard (also termed supplier-induced demand), many of these proposals carry significant risks for cost-escalation. In addition, such payment mechanisms are likely to be associated with significant administrative and transaction costs, as observed with PHI, and these costs need to be taken into account when considering such options.

Implications for insurers

1. The available evidence indicates significant problems with moral hazard, primarily on the part of providers. In addition to over-supply of services, there is evidence of substantial cost-escalation in the insured market. Cost-escalation should be of concern as it will act in the long-run to push premiums beyond the willingness of employers and individuals to pay, and this will reduce the overall demand for PHI.
2. There are a few measures that insurers can take to deal with these problems, although they are inherently limited in their effectiveness. Most of these measures will involve closer monitoring of claims. Such monitoring of claims will be expensive to administer, and there may be some economies of scale if insurers are able to pool their administrative resources or share scarce technical resources.
3. Administrative costs are relatively high for most schemes. Some of these are inevitable given the existence of competition, but some might be reduced. In particular, adoption of uniform claims handling procedures or even joint processing of all claims might provide some savings through economies of scale.
4. The market power of insurers will always be weak in the market for clinical services. This makes it impossible for insurers to effectively deal with moral hazard by providers. However, closer collaboration by insurers in terms of sharing information and uniform payment practices might increase their limited market power, and improve their ability to control costs. Closer collaboration might make it feasible to explore the feasibility of uniform price schedules for

providers, although the evidence from other countries is that such schedules are difficult to maintain unless the insurers control the bulk of providers' income.

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