



財政部 95 年度委託研究計畫

我國老年人口社會保障服務的財政挑戰
與對策研究

期末報告

委託單位：財政部

研究單位：國立政治大學財政系

研究主持人：徐偉初

研究助理：姚彥成、梁景洋

中華民國 95 年 10 月 15 日

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摘 要

我國官方人口推估預測到 2007 年，臺灣 65 歲以上人口比例即達 10%，到 2026 年，比例上升一倍達 20.44%。在亞太區域中，我國是人口老年化速度最快的國家之一，因應這種變化，政府將面臨哪些挑戰？老年人口又如何能面對所有各種可能的風險？

有關醫療健康風險方面，我國全民健保制度已扮演了一個稱職的工作；就業人口中大約有四分之三已有不同職域保險、退休基金和老年生活福利津貼的服務。政府亦已決定以國民年金保險提供保障予其餘人口。如果一切順利，這項新的退休保障計畫可望於 2007 年正式上路，再加上 2005 年 7 月 1 日已經開辦的勞工退休金新制，相信大部分的退休人口都可以得到基礎的生活保障。最後一項老人福利保障是長期照顧服務，目前選擇的是究竟應採社會保險（收取保費）抑或國民服務（由稅收融通）的方式進行。當然，一個為老年人提供各項服務的福利國家不可能免費提供，本文所討論的各項改革和新計畫的財務安排中，都值得政府和民間特別注意，天下沒有白吃的午餐。在財務規劃中，應特別注意下列原則：

1. 政府財源籌措之妥善規劃；
2. 政府、民間適當的財務責任分攤；
3. 提高受益者之財務責任；
4. 提升服務系統及提供服務機構之財務資訊透明度；
5. 促進生育，以降低老年化速度及因此產生之財務負擔。

關鍵字：老年化、退休所得、健康保險、長期照顧、財務規劃

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壹、導論

一、研究主題

根據行政院經濟建設委員會中華民國台灣地區民國 93 年到 140 年人口推估的中推估估計，到民國 96 年，我國台灣地區 65 歲以上人口比例(老年人口比例)即逾 10%；19 年後，民國 115 年，老年人口比例加倍到 20.44%。台灣這種老化的速度，比起日本(24 年)、芬蘭(48 年)、德國(54 年)、瑞典(85 年)等工業化國家，有過之而無不及。經建會的推估資料顯示到民國 130 年，老年人口比例即達到 30%，民國 138 年幾乎達到 35%，老年人口比例增加，老年人口依賴比(65 歲以上人口與 14 到 64 歲人口的比值)也跟著上升，從今年的 1 比 7 上升到民國 108 年的 1 比 5，到民國 118 年的 1 比 3，民國 130 年的 1 比 2，以致推估期期末的 1 比 1.56，換言之，到民國 140 年，每一個半處於工作年齡的「勞動人口」，就得扶養一位老人。

我國人口老化的速度相當高，隨著人口老化程度上升、生育率減緩導致人口減少、勞動力規模降低等人口變動因素的現象愈來愈明顯，我國政府及整體社會究竟面臨哪些可能的挑戰？與其他同樣面臨人口老年化的國家，台灣是否因為本國特殊的政治、經濟及社會條件，使得我國面臨的問題有異於其他國家之處？人口結構變動、老年人口的相對以及絕對規模擴張，對政府服務需求增加所構成的財務壓力，政府有哪些可行策略？以上等等，都是值得研究分析的問題。

本計畫的研究主題，除分析我國老年化趨勢對經濟發展產生的可能影響外，並就人口老化與全民健康保險、各項社會退休制度、老人福利津貼方式，以及內政部「我國長期照顧制度規劃研究」中的財務規劃研究的關係，分別討論。其中尤以提供各項服務時的財源籌措安排或規劃，以及對政府財政增加壓力，政府的可能選擇方向為研究重心。

社會福利支出過度膨脹既排擠到其他支出項目，也可能增加人民的租稅負擔。但是隨著人口老年化的程度上升，政府在提高老人健康維護、經濟安全及長期照顧上的角色卻又無可推卸。財源的妥善規劃、財政負擔的合理分攤，是政府所必須面對的問題。「二代健保」保費計收方式的修法建議、長期照顧保險的構想、國民年金制度的規劃等，都在財務處理及財源籌措上有相當慎重的分析。本研究的目標在結合健康保險、退休保險及年金、長期照顧等三項與人口老化特別相關政策的財務對策，綜合說明及分析，以供配合籌措財源的財政部參考。

行政院經建會的人口推估已顯示出台灣地區人口老年化的趨勢，事實上我國人口變遷主要反映三種現象：

- (一)、由於健康狀況改善，人民壽命延長。
- (二)、結婚率下降，離婚率上升。
- (三)、生育率降低。

人口老年化對經濟發展產生的影響包括以下各項：

- (一)、勞動人口規模縮減。
- (二)、經濟成長率下降。
- (三)、所得稅收比重降低。
- (四)、政府提供照顧老年人口的支出需求增加。
- (五)、對移民勞工（外籍勞工）的需求上升。

我國的老人社會安全網，現存的及建構中的包括以下四項：

- (一)、全民健康保險。
- (二)、國民年金制度。
- (三)、各種老年津貼。
- (四)、長期照顧服務。

上述四項中的全民健康保險及老年津貼部分，有已經執行的制度和財務資料可供說明。國民年金制度的規劃已完成，可以規劃時的評估資料分析，例如政府的財政負擔計畫由提高營業稅稅率 1 個百分比來籌措等已有相關的設計和評

估，而長期照顧服務則主要以內政部委託研究計畫中提出的社會保險方式來分析。

二、研究方法與步驟

由於研究期間只有三個半月，因此本計畫主要是蒐集現存的各項與研究主題相關的資料、學術研究成果、制度及政策研究的結論進行綜合性評估和分析。

三、預期成果

本計畫研究報告內容可分為以下四個部分：

- (一)、1990 年代之後台灣社經發展環境的變遷。
- (二)、影響台灣人口急速老年化的原因。
- (三)、台灣人口老年化的經濟影響。
- (四)、台灣老人社會安全網的構想及財務議題。

預期研究成果為：

- (一)、分析面對人口老化現象，我國政府在健康保險、退休後生活保障，以及長期照顧上的政策及可能對策。
- (二)、分析上述各項服務的財源籌措方式。
- (三)、政策建議。

貳、民國 80 年以來我國社經趨勢之概述¹

一、經濟成長

自 1990 年以來，臺灣的經濟發展趨緩，雖仍維持一定的經濟成長，不過，與 1980 年代，十年間平均 8.1% 的成長率相比，1990 至 1999 十年間的平均成長率為 6.3%，降幅不小。如果與 1970 年代平均高達 9.4% 的表現相較，降幅更是顯著。更由於新台幣兌美元匯率下降，如果以美元計算我國的平均國民所得，再以此指標作為衡量我國 1990 年代以來的經濟成長表現的話，則自 1992 年新台幣兌美元的貶值趨勢所導致的以美元計算的平均 GNP，成長幅度更低。2001 年我國經濟成長率出現臺灣經濟發展過程中前所未見的 -2.18% 負成長率，其後 2002、2003 年緩慢復甦到 2004 年出現 6% 的成長率。2006 年的預期經濟成長率為 4.1% 到 4.5% 之間。

在國民儲蓄率方面，我國仍屬高儲蓄率國家，不過，由於 1992 年以來出現的政府收支赤字，使政府儲蓄迅速減少，以致國民儲蓄率也逐漸下降。不過，由於投資表現不振，我國民間仍呈現高比率的超額儲蓄。在 1997 年亞洲金融危機爆發前，我國的固定資本形成成長率一度下跌到極低的 1.7%，之後兩年小幅回升，後來又下跌到 1.85%。1999 到 2005 年的七年期間，有四年呈現資本形成成長率為負的現象。2001 年更高達 -29.2%，也是當年總體經濟呈現負成長的主因。2000 年以後的投資不振，一般來說認為受兩項因素影響：其一是製造業的加速西進，其次是國內投資條件始終未見改善。

在同一期間，公共部門的投資水準也一樣未見復甦。包括中央及地方政府對基層設施的投資，以及公營事業對廠房設備的擴充或新生投資水準，都一樣呈現低迷的狀況。這種現象，一方面反映政府財務困難，缺乏資金從事建設工程，另

¹ 表一摘要記錄我國自 1991 年到 2005 年的各項重要經濟發展指標的統計。

一方面，也可能受政府執行交通、運輸、及環保工程時常常面對地方居民抗拒，因而拖延了投資計畫的執行和投資支出所影響。

表一有關政府財政收支的統計數字呈現政府在財政管裡上的表現有待改善。在表列資料的十五年間，國民賦稅負擔在 1992 年維持在 18.83% 的水準，到 2002 年時，下降到 11.7%，成為所有工業國家及新興工業化國家中最低的水準。面對這種偏低的國民賦稅率，雖然政府部門已信誓旦旦必須嚴格管裡支出規模，甚至執行設定支出上限的措施，但對達成財政收支平衡的目標，仍有相當差距。中央及地方政府年度預算中，仍須依賴數百億到高達 4000 億的債務收入，以為挹注。

十五年間政府債務不論是絕對規模或與 GDP 相較，均呈節節上升的趨勢。以未償還政府公債及賒借債務占 GDP 的比例為例，自期初的 5.84% 跳升到期末的 25%，上升高逾四倍。至於年度預算收支缺口於 1999 年度曾高達 GDP 的 6.1%，較歐盟馬斯垂克條約規範的 3% 水準高出一倍。幸好 2000 年以後，由於政府積極採取緊縮支出和加速國營事業民營化的腳步，藉售出官股取得財源，才稍為歇止這種過高的赤字比例。

二千年之後的政府財政情況並未明顯變好。2001 年的經濟負成長，年度投資及國際貿易額都下降逾 10%，年度稅課收入短收（較預算數）達一成，約 700 億的水準，因此財政缺口更為擴大。經濟不景氣使政府訂定財政政策時陷入兩難的問題：一方面執行擴張性的財政政策以寄望能推升經濟景氣復甦，但卻得承擔更重的赤字負擔。而且也就是政府選擇在經濟成長與控制預算赤字中，以擴大赤字的工具刺激景氣，但我國「公共債務法」中各級政府年度舉債額不得超過歲出 15% 的上限，使政府能再擴大舉債規模，執行更積極的「赤字預算」的空間非常有限，另一方面，如果我國景氣低迷的原因主要源自國外因素，例如美國經濟成長趨緩，因此影響我國電腦及周邊設備和 3C 產品的出口需求，則政府的擴張性需求管理工具，能夠發揮的成效極為有限。在這種外生因素導致國內景氣低迷的情境下，不論是增加支出，抑或是降低稅負，實質效果可能都是引起更嚴重的代

際移轉(inter-generational transfer)以及未來政府支出的僵固性。

在物價方面，過去十五年內，臺灣的物價水準維持在一個穩定的水準。尤其是自 1997 年以來，物價水準幾乎平穩不變，通貨膨脹和通貨緊縮的現象都未見發生。平穩的物價也反映在中央銀行重貼現率的年度走勢中，各年來皆呈現下降的趨勢。不過，自 2005 年起，由於國際石油市場的價格飛升，消費者物價指數和央行的重貼現率都反映出物價上升的壓力，增加到超過 2% 的水準。

表一中的其他指標包括勞動情況的勞動參與率、失業率以及衡量所得分配的大島指數(Oshima index)。在 1991 至 2005 年期間，我國婦女勞動參與率呈現微幅上升的趨勢，但男性勞動參與率則稍微下降，整體勞動參與率亦因而呈現微幅減少的現象。另一方面，受經濟成長緩慢及工業、服務業就業人口比例上升的雙重影響，失業率呈現上升的趨勢。2000 年的失業率達 3%，比 1991 年高出一倍。2001 年的失業率高達 4.57%，2002 年更達到 5.17% 的高峰，政府為提供失業援助及其他福利服務，使本來已陷入大幅赤字的政府收支，面臨更大的壓力。

最後，在所得分配方面，表一的大島指數（最高所得的 20% 家庭平均所得與最低所得之 20% 家庭平均所得之比）顯示自 1995 年起至 2001 年，臺灣的所得分配呈現不均程度擴大的趨勢。

表一 我國重要社經指標：1991-2005

項目	單位	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
經濟成長	經濟成長率	%	7.55	7.49	7.01	7.11	6.42	6.10	4.57	5.42	5.86	-2.18	3.94	3.33	6.07	4.09	
	GNP	億美元	1,837	2,170	2,286	2,483	2,691	2,836	2,933	2,692	2,905	3,139	2,868	2,901	3,334	3,350	
	平均 GNP	美元	8,982	10,506	10,964	11,806	12,686	13,260	13,592	12,361	12,325	14,188	12,876	12,884	13,139	14,770	15,676
物價 (年變動率)	毛儲蓄額/GNP	%	29.4	28.9	28.8	27.6	27.0	26.7	26.4	26.0	25.4	24.0	25.2	25.97	26.15		
	消費者物價指數	%	3.6	4.4	2.9	4.1	3.7	3.1	0.9	1.7	0.2	1.3	-0.01	-0.2	-0.3	1.6	2.3
生產比重	農業	%	3.7	3.6	3.6	3.5	3.5	3.2	2.6	2.5	2.6	2.1	2.0	1.8	1.8	1.7	1.8
	工業	%	41	40	39.4	37.7	36.4	35.7	35.3	34.5	33.2	32.4	31.1	31.4	30.6	29.5	24.6
	服務業	%	55.1	56.3	57	58.8	60.1	61.1	62.1	63.0	64.2	65.5	67.0	66.8	67.6	68.7	73.6
投資	固定資本形成成長率	%		18.5	12	7.4	7.3	1.7	8.0	1.8	8.6	-20.6	-1.6	-2.05	17.5	0.5	
	民間部門固定資本形成成長率	%		29.3	16.7	10.3	11.4	3.4	18.6	11.8	15.7	-29.2	3.1	-1.62	31	-1.3	
貿易	匯率	新台幣/ 美元	25.8	25.47	26.63	26.24	27.3	27.5	32.6	32.2	33.0	35.0	34.8	34.02	31.78	32.88	
	各級政府收入/GDP	%	23.58	25.27	24.1	23.9	22.8	21.4	22.1	22.7	20.0	19.2	17.5	17.9	18.3		
各級政府收支(會計年度)	各級政府支出/GDP	%	29.58	28.83	28.3	27.6	27.3	26.5	26.0	26.1	26.0	23.0	22.3	21.4	20.8		
	各級政府收支餘額/GDP	%	-6	-3.7	-4	-3.8	-4.6	-5.3	-4.0	-3.4	-6.1	-3.8	-3.5	-3.5	-2.5		
	未償債務/GDP	%	5.84	11.16	14.2	14.8	16.5	16.8	17.5	16.1	14.8	25.6	31.5	32.2	35.4	37.1	
	賦稅收入/GDP	%	17.76	18.83	17.81	17.98	17	15.3	16.2	15.2	14.2	13.8	13.2	11.7	11.8	12.6	
中央政府收支(會計年度)	中央政府支出(含臺灣省)/GNP	%	16.3	17.3	15.1	14.8	13.5	15.1	15.9	13.2	14.2	17.6	15.7	15.2	14		
	中央政府收支餘額(含臺灣省)/GNP	%					2.2	0.1		1.3	3.4	-1.4	-2.4	-2.8	-1.8		
	中央政府未償債務/GNP	%	5.4	10.4	13.2	13.9	15.5	16.2	16.5	15.3	14.0	16.4	27.7	27.6	29.7	30.5	32.2
金融	外匯存底	億美元	824.1	823.1	835.7	924.5	903.1	880.4	903.4	1,062	1,067	1,222	1,616	2,066	2,417	2,533	
	央行重貼現率	%	6.25	5.62	5.5	5.5	5.5	5,000	5,250	4,750	4,500	4,625	2,125	1,625	1,375	1.75	2.25

項目	單位	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
勞動力參與率	%	59.11	59.34	58.8	59	58.7	58.4	58.3	58.0	57.9	57.7	57.2	57.3	57.3	57.7	57.8	
	男性	73.8	73.7	72.6	72.4	72	71.1	71.1	70.6	69.9	69.4	68.5	68.2	67.8	67.8	67.6	
	女性	44.3	44.8	44.8	45.4	45.3	45.7	45.6	45.6	46.0	46.00	46.10	46.60	47.1	47.7	48.1	
勞動力分配：																	
	農業	12.9	12.3	11.5	10.9	10.5	10.1	9.6	8.9	8.3	7.8	7.5	7.5	6.6	6.6	5.9	
	工業	39.9	39.6	39.1	39.2	38.7	37.5	38.2	37.9	37.2	37.2	36.0	35.2	35.2	35.2	35.8	
	服務業	47.1	48.1	49.4	49.9	50.8	52.4	52.2	53.2	54.5	55.0	56.5	57.3	59.8	59.8	58.2	58.3
	失業率	1.51	1.51	1.45	1.56	1.79	2.60	2.72	2.69	2.92	2.99	4.57	5.17	4.99	4.44	4.13	
社會	所得五分位比	4.97	5.24	5.42	5.38	5.34	5.38	5.41	5.51	5.50	5.55	6.39	6.16	6.07	6.03		

二、政府層級及分權

我國各級政府職能劃分本於中華民國憲法中的相關條文規定。在 1998 年的憲法增修條文通過之前，我國政府共分中央、省（市）以及縣（市）三個層級。中央以下有臺灣省及福建省兩省，臺灣省下轄十六縣以及五省轄市，福建省下轄有連江及金門兩縣，另有台北、高雄兩院轄市，其地位與省同。各地方政府均有地方議會及政府，擔負地方自治任務。1998 年憲法增修條文通過的主旨在臺灣省政府的虛級化，使臺灣省政府及原省議會的權限完全限縮或廢止。因此我國目前的政府層級可以視為一「中央—地方」的二級結構，類似一個單一國家(unitary state)的體系。不過，基於憲法地方自治的精神，地方政府仍享有一定的權力及裁量權，不能以中央政府之派出機構的角色視之。

經濟理論對不同層級政府的支出責任有一套系統性的分析。各級政府在財貨及服務提供的分工上，應與該種財貨或服務的受益範圍相符合。因此，以受益或利益原則來說，利益及於全國的純公共財(pure public goods)就應由中央、聯邦或全國政府所負責，而利益只及於特定地域的非純公共財(impure public goods)就應由地方政府（可能包括省、州、縣市、鄉鎮等不同層級）負責。適當的支出分權(decentralization of expenditures)有助於提升資源配置效率和行政績效。另一方面，經濟穩定和所得重分配的功能，就得由中央政府負擔，才符合有效和效率的目標。

不過，世界上各國政府分權的現況，卻每多與上述理論原則相矛盾。中央政府會提供地方公共財，有時是為了解決外溢效果；而地方政府對轄區內老人、低所得家庭、身心障礙居民提供服務和援助，在開發中或已開發世界中，都有相當多的例子。

在我國，提供社會福利和社會救助是中央與地方政府職能重疊的明顯例子。尤其是 1990 年之後，隨著民主化的速度加快，地方政府似乎陷入一場「福利戰爭」中。地方政府競相對轄區內的老年人口及需照顧者，提供福利援助，例如

不須經資產調查(means-tested)的老人福利津貼，三歲以下嬰兒醫療掛號費補貼等，都被視為地方政府的德政。有些原來已經收支失衡的地方政府，仍然在「同儕」壓力下，實施種種福利和援助政策，使得財政缺口年年擴大，財政態勢(fiscal stance)愈趨不利。

三、人口變遷

光復之後的嬰兒潮使我國在 1950 年代始終維持著高的生育率，但自 1960 年代起，總生育率(total fertility rate, TFR)即開始慢慢下降，再加上政府成功的計畫生育政策，到 1972 年，生育率已跌破 3.5%。由於婦女勞動參與率的提高，使生育率再進一步降低，到 1983 年，臺灣的總生育率再下跌 1%。此時政府開始評估以降低子女出生數為目標的計畫生育政策是否有改弦易轍的必要。到了 1990 年，政府「兩個恰恰好，一個不嫌少」的口號不再復用，轉而鼓勵國民生育。不過，看來為時已晚。2004 年總生育率只有 1.18%，比 1951 年的 7.04% 下降幅度達 83% 之多。若干縣市政府推出生育子女現金補助政策以鼓勵生育，不過，恐怕成效有限。

我國不斷下降的生育率，一般認為主要受三個因素影響，第一，婦女生育年齡延後。在 1960 年代，懷孕婦女的中位年齡為 25 歲，到 1998 年，上升為 28 歲。婦女延後生育年齡自然可能降低生產的數目；第二，婦女結婚率下降，降低生育的機率。在 1980 年，在 20~24、25~29、30~34、35~39 各年齡組別的單身婦女比例分別為 59.4%、19.6%、7.7% 及 3.9%，而在 2004 年，所有組別內的婦女單身比例都上升，分別上升至 89.5%、59.1%、26.9% 及 14.8%；第三，對已婚婦女來說，理想子女數目下降。一方面因為婦女教育水準上升以及婦女勞動參與率上升，養育子女的機會成本上升，因此降低需求，另一方面，由於對子女男女性別的歧視程度降低，也降低了婦女的生育率。圖一為我國 TFR 的下降趨勢。

圖二及圖三分別為我國人口數及人口成長率的趨勢。在過去五十多年來，臺灣的人口自然成長率（粗出生率與粗死亡率的差異）緩慢下降，1962 年稍高於 3%，1972 年已低於 2%，1993 年為 1%，到 2003 年更低至 0.427%。如果把移民的因素納入考慮，剔除淨移入人口後，我國人口成長率更低至 0.37%。人口成長率下降主要是因為不斷下降的生育率和呈 U 型分配的粗死亡率所影響。

我國人口老化（或高齡化）的過程可以用兩個指標來說明，分別是出生時之

生命預期值(life expectancy in birth))及老年人口比例，兩者都代表數值老化(numerical ageing)及結構老化(structural ageing)的現象。例如在圖四中，以男性人口為例，出生時之生命預期值自 1954 年起即超過 60 歲，1984 年為 70 歲，逾 2003 年則已延長為 73.33 歲。至於女性人口，我國與其他國家一樣，女性人口在存活年齡上有「性別利益」(gender advantage)，在 1950 年代，大約多活 4 歲，到了 2000 年起，壽命比男性長 5.5 到 6 歲。人口壽命愈長，老年人口的比例自然也愈高。

另外一個與年齡有關的指標是人口的中位數年齡(median age)。在 1950 年代初期，臺灣的人口中位數年齡僅 19.5 歲，到 2004 年已上升為 34.2 歲，人口年齡分配整個向右方移動。一方面是人愈來愈長壽，一方面是出生數目下降，老年人口依賴比(65 歲及以上人口與 16~64 歲人口之比例，ODR)自然上升。過去 50 年，老年人口依賴比及少年人口依賴比(14 歲以下人口與 16~64 歲人口之比例，YDR)的趨勢分別顯示於圖五及圖六。上升的 ODR 線指出工作年齡人口須承擔老年化現象的壓力愈來愈重。對老年人口的支持，可能須透過「隨收隨付」(pay-as-you-go)的年金制度，也可能透過社會保險或者社會救助制度。不管政府負擔的是部分的財務或全部的財源，都必須仰賴租稅融通，其中所得稅的負擔就大部分落在薪資所得者—工作年齡人口—的身上。假如養老的負擔主要落在家庭上的話，家庭中的工作成員更是直接的負擔者。至於少年人口依賴比的形狀，在峰頂之前的上升，顯示戰後嬰兒潮的影響，而出生率下降則反映在明顯的 YDR 下跌趨勢中。

根據經建會人口估測的中推估估計假設，在社經環境產生對生育行為有良性改變，而政策鼓勵生育措施又能生效的假設下，我國總人口生育率能回到 1.215% 的水準，且維持 50 年，則臺灣地區的人口數將於 16 年後，也就是 2022 年，達到最大量，有 2.369 千萬人。由於總生育率低於 2.1% 的人口替換率，我國人口會以每年 0.5% 的負成長率減少，到 2051 年，人口數為 1.959 千萬人，回到 1987

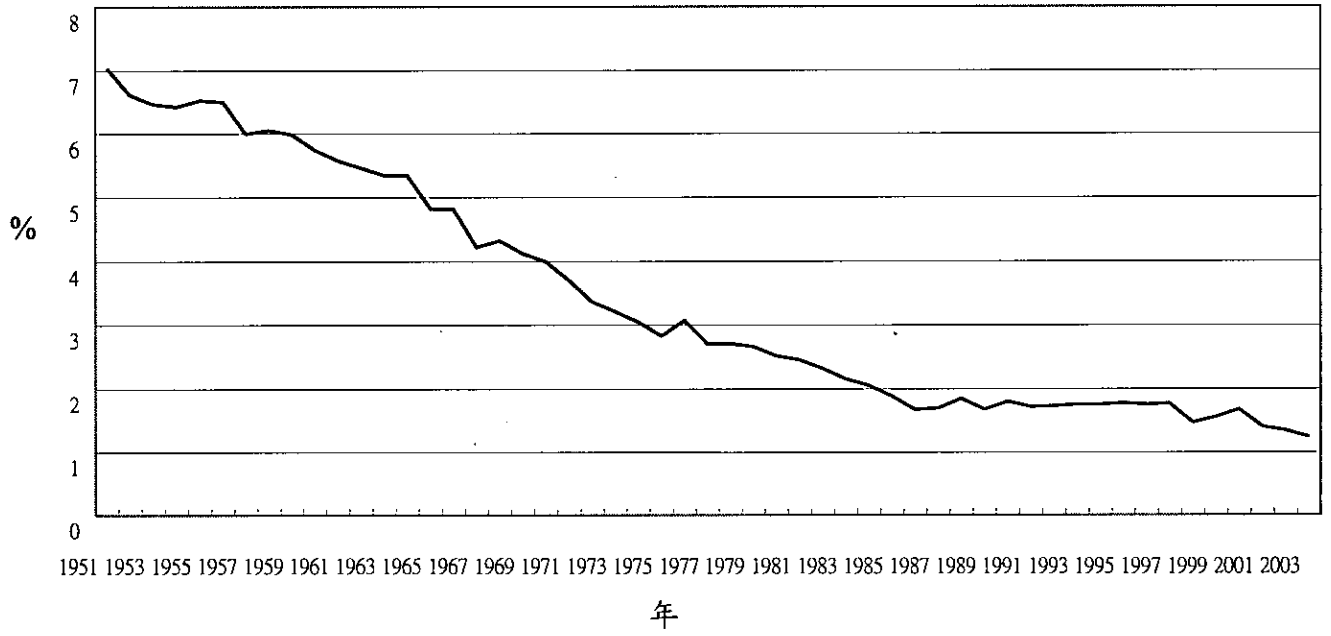
年的水準²。

2007年65歲以上人口比例將超過10%，2020年達15%，到2051年更高達35.47%。有關臺灣人口推估的年度資料，表二與表三摘要記載各項統計的每隔五年數值。到2051年，工作年齡之階層人口僅佔全體人口之55%，比2004年低15%。老年依賴人口比例上升的結果，到2020年，平均少於五名工作年齡階層人口得扶養一名老人。於2045年，平均每兩名工作年齡階層人口得扶養一名老人，到2051年，平均為1.6人工作年齡階層人口得扶養一名老人。而整個依賴比（ODR加YDR）更高達將近80%。

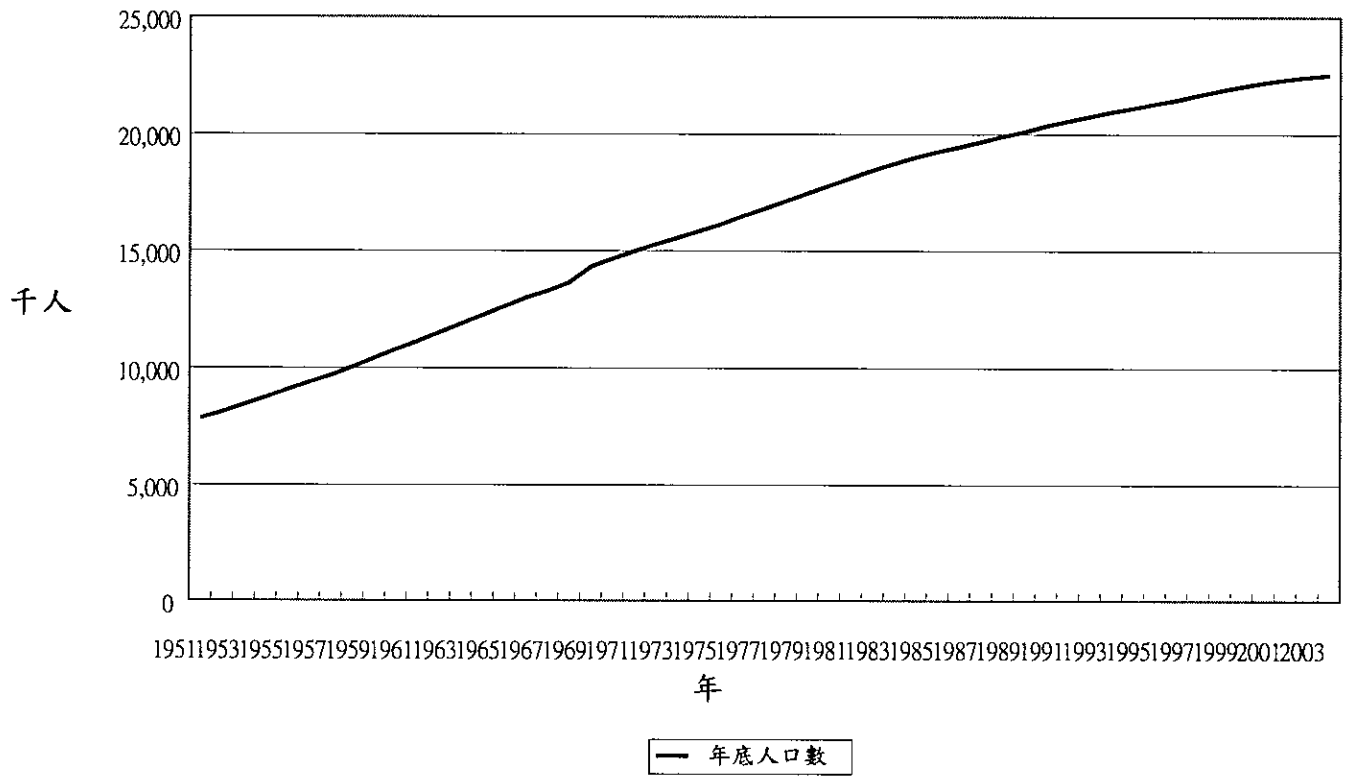
ODR上升的因素是增加的生命預期值和下跌的出生率。有關出生率下降方面，本研究已於上文提供解釋。至於上升的生命預期值，主要受老年人口健康狀況改善所影響。當然，較廣泛和較佳的醫療照顧是健康狀況改善的原因，不過，也可能導致醫療成本的持續上升。根據人口推估統計，2007年的男性生命預期值為75歲，2040年逾79歲；女性於2007年為80.72歲，2018年為85歲。至於人口中位數年齡，分別為2006年的35歲，2016年逾40歲，2034年達50歲以及2051年的55.6歲。

² 行政院經濟建設委員會於8月份公佈新的人口推估估計。新的估計顯示，我國人口老化的速度較原先公告的為高，因此我國出現人口縮減(depopulation)的時間更快，也較原先推估劇烈。

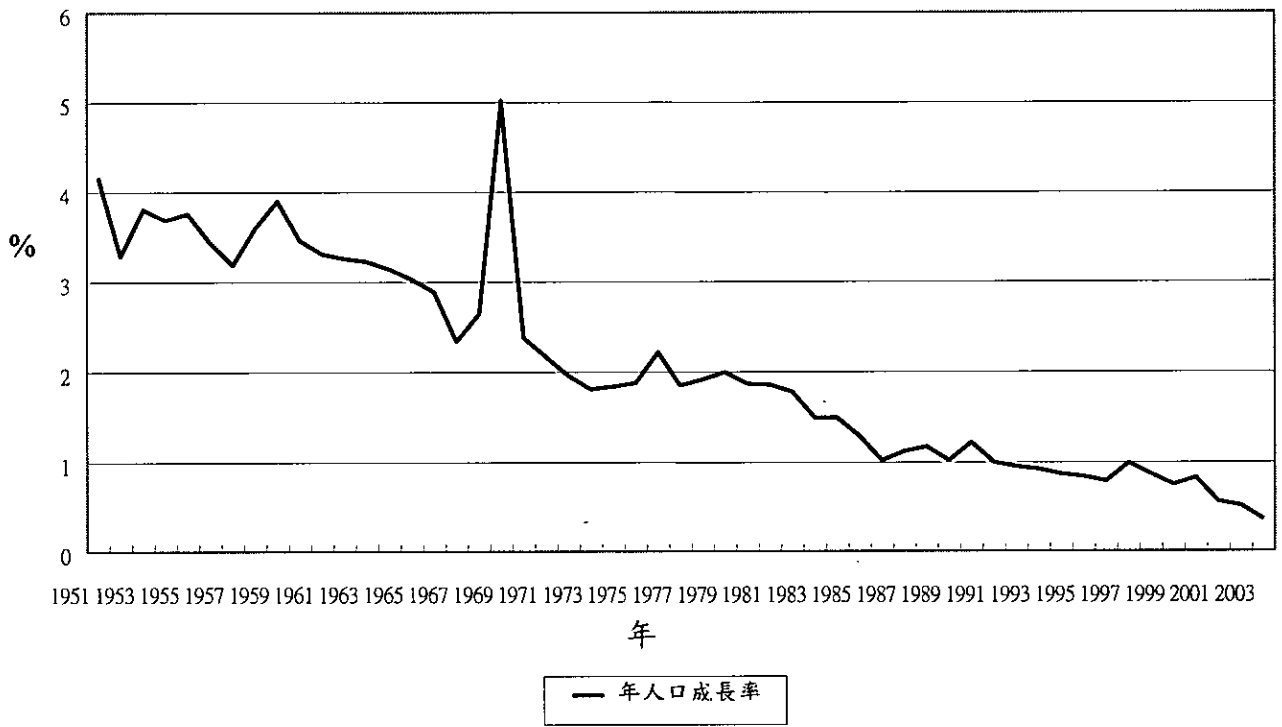
圖一 總生育率



圖二 我國人口趨勢



圖三 人口成長率



表二 我國人口推估

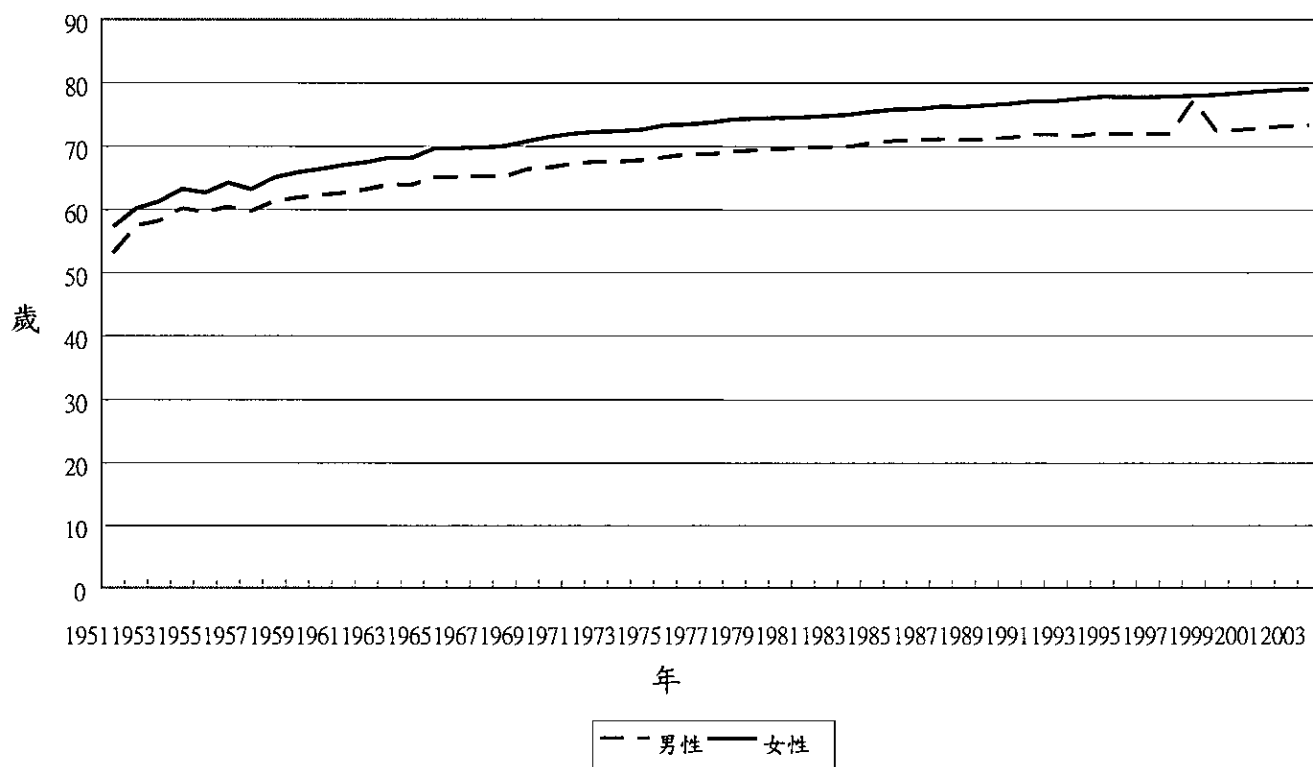
單位：千人，%

年度	年底人口				人口變動率	
	總人口數	年成長率	男性	女性	出生率	死亡率
2004	22,762	0.43	50.6	49.4	1.01	0.58
2005	22,858	0.42	50.5	49.5	1.01	0.59
2010	23,258	0.31	50.3	49.7	0.95	0.65
2020	23,687	0.07	49.7	50.3	0.79	0.72
2025	23,644	-0.11	49.4	50.6	0.72	0.83
2030	23,367	-0.32	49.2	50.8	0.65	0.97
2035	22,830	-0.56	48.9	51.1	0.59	1.16
2040	22,040	-0.8	48.6	51.4	0.56	1.37
2045	21,028	-1.03	48.3	51.7	0.55	1.59
2050	19,841	-1.23	48.1	51.9	0.53	1.78
2051	19,589	-1.27	48.1	51.9	0.53	1.82

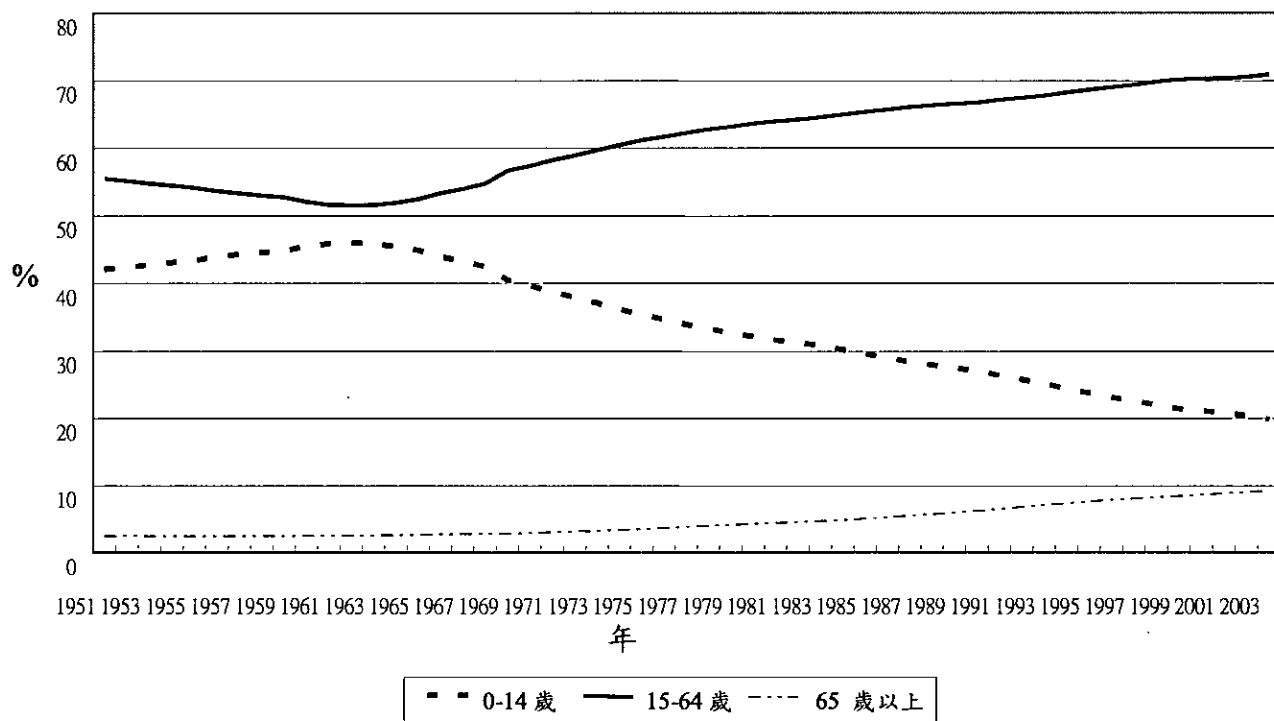
表三 我國人口推估：年齡結構及依賴率

年度	年齡結構比(%)			依賴率(%)		年齡中位數 (歲)	出生時生命期望值(歲)	
	0-14 歲	15-64 歲	65 歲及以上	未成年	老年		男性	女性
2004	19.32	71.3	9.39	27.09	13.17	34.0	73.46	79.17
2005	18.77	71.6	9.62	26.22	13.44	34.6	73.71	79.25
2010	16.35	73.21	10.44	22.33	14.26	37.1	76.54	83.04
2015	14.22	73.61	12.17	19.32	16.53	39.7	77.75	84.53
2020	13.18	71.08	15.74	18.55	22.14	42.5	78.29	85.20
2025	12.21	68.16	19.63	17.91	28.81	45.3	78.53	85.44
2030	11.29	65.16	23.56	17.32	36.16	48.0	78.75	85.66
2035	10.44	62.67	26.89	16.65	42.91	50.4	78.92	85.83
2040	9.7	60.79	29.52	15.95	48.56	52.3	79.05	85.96
2045	9.19	58.02	32.79	15.84	56.51	53.9	79.13	86.04
2050	8.94	55.75	35.31	16.04	63.33	55.3	79.16	86.07
2051	8.91	55.62	35.47	16.02	63.76	55.6	79.16	86.07

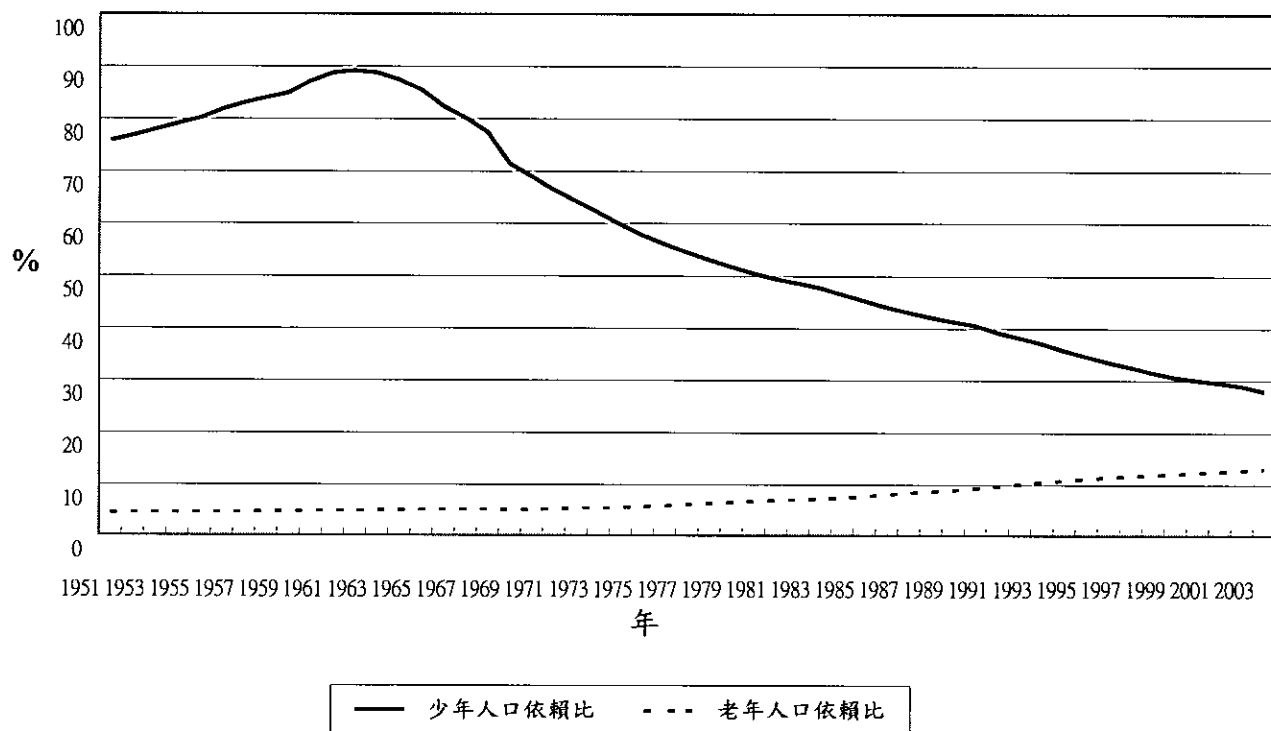
圖四 生命期望值



圖五 人口年齡結構



圖六 人口依賴比



四、老年化福利服務的財務負擔

由上述我國老齡化程度的說明，可見為提供老年人口的各项福利服務，必須涉及重大的財務負擔。就以退休後生活保障來說，不論是以國民年金制度或老年生活津貼的方式進行，其財務負擔都與納稅人息息相關。財務負擔率可視為一個分數，分子與老年人的退休保障、醫療保障及例如長期照護服務的水準有關，而分母則為國家的稅基。假設每位老年人口的受益程度不變，則隨著 ODR 的上升，納稅者的財務負擔率一定會連動上升，才能籌措到足夠的財源。

進入 1990 年代，我國經濟成長速度開始減緩，加上其他因素，使我國政府收支情況開始出現顯著的短差。隨著政治上加速民主化的發展，政府對長久以來未被充分重視的社會福利服務需求不能再採取相應不理的態度，但是，我國的租稅制度卻無法取得更多的收入，以支應政府支出的需求。中央政府依賴債務收入，而地方政府則依賴上級政府補助，提供政府運作的經費需求。在這種中央也窮、地方也窮的局面下，要因應社會「高齡化、少子化」趨勢所帶來老年人口照顧的問題，財源的合理規劃，是維持老人福利服務永續發展的先決條件。

有關我國老年人口的福利服務，在健康照顧方面，1995 年實施的全民健康保險制度，提供了基本上充分的保障，所有老年人都可以得到疾病以及若干保健和預防上的照顧。因此目前最急切要解決的是如何為缺乏任何老年所得保障服務的人口設計一套合理且能負擔的退休後所得計畫。經過多年研擬的國民年金制度，終於在 2005 年底完成行政部門的規劃階段，並在 2006 年的經濟發展永續會議中達成共識，期望能於 2007 年完成立法程序，早日正式實施。

事實上，國民年金制度的正式規劃始於 1998 年 6 月，由行政院設立專責小組負責規劃和設計的工作。當時的設計目標是由國民年金制度提供社會安全制度中的第一層(first pillar)保障，並結合已存在的公務人員保險和退撫基金中的基本保障部分，至於已投保勞工保險的被保險勞工，則可自由選擇參加國民年金制度或留在原來的勞工保險計畫中。國民年金制度的主要照顧對象是並未納入軍保、

公保以及勞保的人口，估計約四百餘萬人，為他們提供退休後的基本所得保障。

全民健康保險開辦後的高支持率，部分解除了對由政府主辦社會保險計畫的疑慮和反對。政府早已在 1970 年代中期宣示要在臺灣建立健康、退休及失業期服務的社會安全網。在 1990 年末期，失業仍未成為一個值得特別重視的問題，因此，改革退休保障制度自然就成為在施政目標上的優先項目。但是，當時的政府財政已開始呈現危機，因此對任何會造成支出長期負擔的計畫都謹慎評估，仔細討論財源籌措的方式，以免更加重政府的債務負擔。

國民年金制度規劃小組於 1998 年完成規劃報告提交行政院審查，當時的預定實施期為 2000 年。逾 2000 年三月大選後，新內閣接位，國民年金規劃案的財源分為兩個方案，其一是採保險制，被保險人需支付保費；另一案為稅負制，所有保險財務都由政府（主要為中央政府）負擔，並且由提高營業稅稅率一到二個百分點所取得財源來支應。國民年金制度草案在行政院擱置了五年，到 2005 年底，才開始解凍，準備提交立法院審查相關法律案件。

另外一方面，對現存退休金制度的改革，亦同步進行。2005 年 6 月起實施的勞工退休金制度，加入可攜式利益和個人退休金帳戶的特性，以為退休勞工提供更安全和更多的保障；公務人員保險老年給付優惠存款利率的檢討；退撫基金提撥率的提高以彌補或縮減未來收支之間的差距等等，都是改革現制的政策。

為面對開辦不久即困擾全民健康保險制度的財務問題，行政院成立「二代健保規劃小組」來尋求財源和其他問題的解決辦法。「二代健保」規劃報告提出後，行政院衛生署即展開準備修法草案的工作，並且已於立法院前二會期結束前提交「全民健康保險法」修正草案送交立法院審議。其中有關保費的計算和分攤上，有相當程度的改革，主要是本於「究責」(accountability)的精神，使被保險對象對自己的保險給付需求，負起財務上的責任。隨著老年人口比例上升，如果保險醫療費用也上漲的話，除了政府要負起部分責任外，主要的財務負擔會由受益者共同分擔。另外一項在研議中，特別與老年人口相關的服務是長期照護服務(long-term care service, LTC)。對長期失能人口的生活照顧，這項需求，一定會隨

著老年人口比例上升而增加，行政院已列入重點規劃項目，並由內政部委託學術及專案部門針對 LTC 之各層面進行分析規劃。2007 年的中央政府總預算中，並且把 LTC 列入政府年度施政重點之一。如果在退休後的經濟安全、健康維護和長期照護需求上皆能得到保障，我國老年人口的福利應可獲得基本滿足，進而邁向福利國家的境界。

參、我國人口老年化之經濟影響³

根據陳森(2004)的分析，我國與其他已進入或者正要邁入老年化或高齡化社會的國家相同，老年依賴人口逐年增加，對國家總體經濟會產生兩項直接影響，第一是生產力降低，人口中可工作的勞動人口比例降低，勞動要素存量相對下降，因此總體經濟成長會受到不利的影響；其次是為提供缺乏工作能力或者已退出職場的退休老年人口的照顧及福利，國家財政可能面臨沈重的壓力。而對於以所得稅為政府租稅收入最主要財源的已開發國家來說，工作人口的稅負一定必須增加，才能支應支出增加的需求。然而稅負的上升，尤其是所得稅稅負的提高，又會對工作和投資意願產生衝擊，反而會拖累經濟成長。

臺灣人口的老化速度太快，導致政府及社會面對老年化現象的準備時間不足，因此不論是政府財政收支結構的調整、社會經濟制度和結構的變動等，都來不及規劃和完成，因此只能面對問題已經發生，才思考解決途徑的現象。

面對已可預見的高齡社會，我國面臨的主要挑戰可以分為以下三個層面：

- (一)、老人社會所需求的醫療資源特別龐大，全民健康保險和老人家庭的財源籌措，構成日益增加的負擔。尤其是對全民健康保險制度來說，雖然法律明文規定應採行均衡費率，支出上漲就得提高費率以保護健保的財務安全。不過現實執行面表現卻悖離法律規範，十一年的健保制度中，最能發揮平衡財務功能的費率調整，只發生過一次，於 2002 年時費率由 4.25% 上調為 4.55%，之後再未調整。收入少於支出的結果，健保的現金流量不足，必須靠借款來支應財務調度的需求，而安全準備亦隨時會下降為零，更不用說早已低於法律規定應有健保一個月給付水準的需求。隨著人口老化速度加快，我

³ 本章內容主要根據臺灣經濟研究院臺灣經濟月刊(93年11月)「高齡化社會的衝擊與對策」，專題探討內之各篇研究結果摘要撰寫。

國健保制度的改革面臨更大的迫切性。另一方面，社會少子化的現象，又使老年人口的家庭成員面對老人疾病時的負擔壓力更加沉重，未來能分攤健康保險照顧責任的能力更低，因此健康保險制度的改革，是刻不容緩的工作。

(二)、我國照顧老年人口的勞動力短缺，致使外勞大量移入，擔任幫傭及看護，預估未來外國移入人口將占我國總人口數 20% 以上。人口結構的改變，對我國政府支出結構會產生相當程度的影響，而外勞在臺灣的所得若大部分都匯回其母國，不在臺灣消費或儲蓄，對總體經濟的消費面以及投資活動都會產生負面的衝擊，進而影響政府租稅收入，導致債務上升，或者限縮政府支出的能力。

(三)、老年人口比例提高，整體人口中的勞動力相對下降，所得成長的動力衰減，對以所得稅為最主要稅收來源的我國來說，會產生稅收減少或者最少稅收成長率下降的效果，再加上老年人口的特殊消費結構（例如僅滿足基本生活所需，對收入成長呈惰性反應等），也就是消費稅稅率提高，也不可能同比例的增加消費稅收入。因此，在支出面，老年化社會需要更高的政府支出水準，而在收入面，老年化社會卻逼使政府面對租稅收入萎縮的困境，雙重交逼，使政府財政收支產生缺口，對我國早已債臺高築的政府財政態勢產生更大的壓力。

事實上，與我國經濟發展階段相似的韓國（南韓），也是世界上人口老化速度最快的國家之一。陳志強(2004)對韓國人口老化的原因和人口老化對總體經濟的影響，有概括性分析。比較我國以及韓國兩國的情形，幾乎完全相似。

陳志強轉述韓國統計廳 2003 年發表「韓國對居家老人之家族照顧狀況」研究報告，指出韓國人口快速老化的原因包括：

- (一)、女性婚後社會活動不斷增加；
- (二)、初婚年齡延後，未婚比率上升；

(三)、離婚率上升；

(四)、平均壽命提高。

至於韓國人口急速老化對經濟與政府財政收支的影響包括：

(一)、老年化導致勞動力供給下降、勞動生產力滑落、儲蓄率降低、消費與投資活動萎縮，在在都影響國家經濟成長。依韓國官方估計，在 2000 年到 2050 年的 50 年間，韓國平均實質 GDP 成長率只有 2.9%，遠低於目前的 5% 潛在成長率。老年化是構成經濟成長率趨緩的主要原因。

(二)、政府在國民退休金等公共年金、醫療保險、老人福利等支出不斷增加，但由於具有生產能力的工作年齡階層人口相對減少，政府能課徵到的國民退休金、租稅以及醫療保險費等收入卻未見成長，導致收支愈趨失衡。如果為因應退休金支付以及醫療保險支付的需求，則工作人口所得中 30% 到 40% 得支付這兩項經費，對工作和投資意願產生極大的衝擊。

(三)、政府財政收支轉盈為虧，可能於 2020 年起，開始出現赤字。

比較中、韓兩國老年化的原因，可以說是完全相同，而老年化對總體經濟的影響也幾乎完全一樣。不過韓國政府收支近幾年來都呈現有賸餘的局面，政府債務水準亦在不斷降低中。因此，能夠支撐到 2020 年才必須面臨收支缺口的問題，而有較長的準備時間。相較之下，我國已累積了十多年的收支差短所形成的鉅額債務，老年化的財政衝擊必須立即籌劃妥善的解決方案。

肆、我國老人經濟安全制度

根據行政院經濟建設委員會的分析（劉玉蘭 2004），我國目前的退休及老年經濟安全制度，可以劃分為如表四所說明的三大部分。其中就業者退休金計畫包括軍公教人員退撫制度、私校教職員工退撫制度以及最近才施行的勞工退休金制度。上述三項有涵蓋在不同退休金計畫的就業人口，事實上也同時納入軍人保險、公教人員保險、勞工保險等社會保險計畫，退休時可以領取各自的養老給付。已送立法院審議的國民年金保險法，旨在成立一項補充性的保險計畫，把所有未納入上述三項社會保險的國民納入保障，同時取代目前在施行中的生活津貼和救助措施。表五為我國目前各項公共退休金計畫的納保人數及費率，而表六則為各項主要老年生活津貼的發放規定及支出經費需求。

又根據行政院經濟建設委員會對 2001 年 12 月底的估計（表七），我國 25 歲到 64 歲的工作年齡人口中，有 110 萬農民，19 萬雇主，4 萬名學生及 230 萬名家庭主婦，21 萬身心障礙人士，共計 384 萬人口未納入任何包含老年生活保障的各項社會保險中，連同 65 歲以上人口中有約 45 萬人缺乏任何保障（為國民年金保險開辦時需發放每月三千元老人福利生活津貼之對象），共有將近 430 萬人可以獲得老年生活的基礎保障。以下即將我國目前針對不同職業人口開辦的社會保險和退休金制度，以及有關國民年金保險的規劃內容，扼要說明。

一、公教人員保險及軍公教人員退撫制度

（一）、公教人員保險

我國公教人員保險於 1958 年 9 月開辦，其保險對象涵蓋：法定機關編制內之有給專任人員、公立學校編制內之有給專任教職員、法定機關編制內有給之公職人員、及依私立學校法規定，辦妥財團法人登記，並經主管教育行政機關核准立案之私立學校編制內之有給專任教職員。保險項目包含：殘廢給付、養老給付、

死亡給付、眷屬喪葬津貼。

以下分別說明保費與給付的規定。保險費按公務人員及公立學校教職員俸（薪）給 4.5%到 9%之費率計算（現行費率為 7.15%），其中公務人員部分，被保險人負擔 35%，政府負擔 65%；私立學校教職員部分，被保險人負擔 35%，政府負擔 32.5%，私立學校負擔 32.5%。在保險給付項目中，有關保障老年生活及遺屬生活的有兩項：養老給付與死亡給付。領取養老給付的資格為，被保險人依法退休、資遣或繳付保險費滿 15 年並年滿 55 歲而離職退保者。其給付標準為，1999 年修法前之保險年資依原公務人員保險法或原私立學校教職員保險條例規定標準計算，其未滿 5 年者，每滿一年給付一個月，未滿一年之畸零月數，按比例發給；修法後之保險年資每滿一年給付一點二個月，畸零月數按比例發給。被保險人於本法修正施行前後之保險年資應合併計算發給養老給付，最高以 36 個月為限。被保險人於本法修正施行前後保險年資合計十二年六個月以上者，如其平均養老給付月數未達一年一點二個月時，以一年一點二個月計算；其保險年資合計未滿十二年六個月者，如其養老給付月數未達原公務人員保險法或原私立學校教職員保險條例規定標準時，補其差額月數。領取死亡給付的資格為，被保險人發生死亡事故時。其給付標準為，因公死亡者，給付 36 個月；病故或意外死亡者，給付 30 個月。但繳付保險費 20 年以上者，給付 36 個月。被保險人如曾領取本保險或公務人員保險或私立學校教職員保險之養老給付，應扣除已領養老給付月數。

（二）、退撫基金

我國公務人員退休撫卹制度，創立於 1943 年，實施迄今已歷半個世紀，其間經過四次修正，但整體構與原則均維持由政府負擔退撫經費之「恩給制」；隨著政治、經濟、社會環境急遽變遷，早期所設的退撫制度，面臨多方的挑戰，政府於 1971 年組成專案小組進行研究，歷時多年方完成改革方案，確定退撫制度改為「儲金制」。而辦理此基金的基本目標有：保障退撫所得，加強安老卹孤、依法提撥基金，確保退撫經費來源、及充分照顧退休人員，兼顧現職人員福利。

退撫基金費用之撥繳，按軍公教人員本俸加一倍 8%至 12%之費率計算(2006 年 1 日 1 日起調整為 12%)，其中由政府撥繳 65%、軍公教人員自繳 35%。撥繳期滿後免再撥繳，並由政府負最後支付責任。基金的給付可分為三大類：退休金、離職退費、及撫卹金。退休金的領取有可分為四種：

- 1、一次退休金：最高 53 個基數；
- 2、月退休金：每月最高發給基數之 70%，每半年發放一次；
- 3、「兼領月退休金」計有三種：兼領二分之一之一次退休金與二分之一之月退休金、兼領三分之一之一次退休金與三分之二之月退休金、兼領四分之一之一次退休金與四分之三之月退休金。
- 4、撫慰金：領月退休金人員死亡，其遺族可領撫慰金。領取離職退費的資格為，年滿 35 歲或 45 歲時自願離職者與不合退休資遣規定而中途離職因案免職者。領取撫卹金的資格為，任職未滿 15 年者，發給一次撫卹金；任職滿 15 年以上者，依規定同時發給一次撫卹金及年撫卹金。

二、勞工保險及勞工退休金制度

(一)、勞保老年給付

我國勞工保險於 1950 年開辦時，其保障範圍包括傷害、殘廢、生育、死亡、及老年五種給付。其中有關保障老年生活的有兩項：老年及遺屬給付與死亡給付。領取老年給付的資格為：

- 1、被保險人參加保險之年資合計滿 1 年，男性年滿 60 歲或女性年滿 55 歲退職者；
- 2、被保險人參加保險之年資合計滿 15 年，年滿 55 歲退職者；
- 3、被保險人在同一投保單位參加保險之年資合計滿 25 年退職者；
- 4、被保險人參加保險之年資合計滿 25 年，年滿 50 歲退職者；
- 5、被保險人擔任經中央主管機關核定具有危險、堅強體力等特殊性的

質之工作合計滿 5 年，年滿 55 歲退職者。

勞保老年給付為一次性給付，按被保險人退休之當月（包括當月）起前 3 年之平均月投保薪資計算；參加保險未滿 3 年者，按其實際投保年資之平均月投保薪資計算、保險年資合計每滿一年按其平均月投保薪資，發給一個月老年給付；其保險年資合計超過 15 年者，其超過部分，每滿一年發給二個月老年給付。但最高以 45 個月為限，滿半年者以一年計、被保險人年逾 60 歲繼續工作者，其逾 60 歲以後之保險年資最多以 5 年計，於退職時依上述兩項規定核給老年給付。但合併 60 歲以前之老年給付，最高以 50 個月為限。

領取死亡給付的資格為，被保險人死亡，其遺屬或負責埋葬者得請領喪葬津貼、被保險人死亡，遺有配偶、子女及父母、祖父母或專受其扶養之孫子女及兄弟、姐妹者得請領遺屬津貼。其給付標準為，被保險人死亡，按其死亡當月起前 6 個月（含事故當月）平均月投保薪資發給 5 個月喪葬津貼、被保險人因普通傷病死亡，按其死亡當月起前 6 個月（含事故當月）平均月投保薪資發給遺屬津貼，其給付標準如下：

- 1、參加保險年資合計未滿一年者發給 10 個月；
- 2、參加保險年資合計滿一年而未滿二年者，發給 20 個月；
- 3、參加保險年資合計已滿二年者，發給 30 個月。被保險人因職業傷害或職業病死亡者，不論其保險年資，一律發給 40 個月遺屬津貼。

（二）、勞工退休金制度

1984 年通過的勞動基準法中，規定達一定條件以上的雇主必須提撥勞工退休準備金，提存到勞工保險局的專戶之中。提撥率為投保薪資之 2% 到 15%。勞工退休時，若符合以下兩條件之一，即可申領一次性的勞工退休金，因此，除可領取勞保老年給付外，勞工退休金可視為退休所得的第一層保障。不過，政府部門在執行此項規定時，強制及檢查程度不強，有相當數目的雇主並未足額提撥。而申領的兩項條件為：

1、年過 55 歲，且受雇於同一雇主達 15 年；

2、受雇於同一雇主達 28 年。

申請條件中受雇於同一雇主的規定，使轉換工作者必須承擔損失以前工作年資的成本，對勞工相當不利。

經過多年研議，政府逾 2005 年 7 月 1 日起另訂勞工退休金法，強調可攜性，勞工不會因轉換工作而喪失退休金。強調個別責任，勞工退休後退休金水準與工作期間投入數額多少相關；強調自助人助，除規定雇主最少得提撥員工月薪之 6%於員工個人退休帳戶內，另有特別帳戶，勞工可自願提存不超過月薪 6%的金額於該帳戶中，所提存經費可享有不計入個人綜合所得稅所得總額的租稅優惠；強調透明性，個別勞工對自己的個人退休帳戶中的退休準備金數目完全瞭解，雇主不可能不提撥或不足額提撥。

不過，勞工退休金制度把強制性的退休金財務負擔，完全積壓在企業及雇主身上，無異是提高國內投資的勞動成本，也許部分企業或雇主能夠轉嫁部分負擔到勞工報酬上，形成勞工經常所得下降。是否也可能因勞動成本上升，加速我國企業外派的情形，亦是一個必須評估的現象。

(三)、現有制度的主要問題⁴

1、退休金方面

- (1). 「勞工退休金條例」方通過，勞雇雙方對制度均不甚熟悉。
- (2). 軍公教人員領取月退休金之所得替代率偏高。
- (3). 軍公教退撫制度可領取月退休金的年齡偏低，在長期將產生財務問題。

2、社會保險方面

- (1). 國民年金尚未開辦，唯開辦後可能面臨無繳費能力與意願之問題，如何在加保、繳費或制度面與其他社會保險制度整

⁴ 以下討論引自劉玉蘭(2004), p8。

合？

- (2). 公教、軍、勞保仍為一次性給付，無法提供長期穩定之保障⁵。
- (3). 老年給付之計算，以退休前之薪資為基礎，引發公平與否及財務負擔增加之問題。
- (4). 各保險未落實財務責任，保險費無法根據財務狀況彈性調整。
- (5). 各保險體系缺乏年資轉換機制，致轉換保險者之保險年資受損。
- (6). 老年給付準備金之投資報酬率較低，未來勞保年金給付改採年金制，可能增加勞保負擔，應加強基金資產的投資與管理績效以為因應。

3、津貼及救助服務

- (1). 各項津貼由不同部會主管，既有公平與否之爭議，且造成行政成本之浪費。
- (2). 現行申請中低收入老人生活津貼給付之審查過於嚴格，部分特殊境遇家庭無法獲得救助，新修正之「社會救助法」將使政府財政負擔大幅增加。

三、國民年金保險

我國國民年金制度規劃研究於 1998 年完成，涵蓋對象為未納入軍人保險、公教人員保險及勞工保險保障之人口，提供老年生活基礎保障。當時以 2000 年為目標開辦年，後因 1999 年「九二一」地震發生，政府因而延後開辦時期。兩千年政府改組後，新閣接任，重新檢視國民年金制度規劃之內容後，即有社會保

⁵ 不過政府又提供該類保險老年給付之優惠存款，因此，退休給付之利益尚高於退休金額之名目報酬及年金化之收入。

險制度及國民服務制度兩種不同的方案，前者以社會保險的方式執行，強制符合資格者必須納保，保險費由被保險人及政府共同分攤；後者則視國民年金為一國民服務項目，所有經費都由政府支付，符合領受年金資格者，毋須先行加保才可以領取年金。在 2002 年的全國社會福利會議中，達成一項共同意見，國民年金應採「社會保險」模式為基礎，內政部即草提「國民年金法」，提交行政院審議。以下有關國民年金保險制度之介紹，即根據行政院經濟建設委員會 2002 年 6 月所提的國民年金規劃及簡報內容為基礎。

1. 納保對象：並未納入公教軍勞農保的民眾，年屆 24 歲到 65 歲，強制加保；至於曾領取公教軍勞保老年給付者，可自願參加。具農保資格的民眾，可選擇留在農保或參加國民年金保險，擇一參加⁶。
2. 給付內容：國民年金保險給付採確定給付制，給付項目共分四項，即老年年金、障礙年金、遺屬給付、及喪葬給付。各項都有給付資格之規定。目前全額年金為第一年每月 7,500 元，實際金額視開辦時期再確定。全額年金以後並隨物價及實質薪資之變動率之平均調整。全額年金為各項給付項目的基準，實際的給付金額為：
 - (1) 障礙年金：極重度障礙，一次發放全額年金之 40%；重度障礙，全額年金之 20%；
 - (2) 遺屬給付：加保一年為全額年金之 5 個月，每滿 2 年加發一個月；
 - (3) 喪葬給付：一次給付全額年金 5 個月；
 - (4) 老年年金：原則上每月給付，給付水準為全額年金乘以(保險年資 / 全額年金所需年資)。其中所謂全額年金所需年

⁶ 表七為我國各項老年生活基礎保障之分類及人口分佈情形（經建會 2002）。

資依被保險人於開辦時強制納保或以後自願加保時之年齡計算，例如當時 25 歲，則須投保 40 年方可領取全額年金，若為 30 歲，則只須等待 20 年。任何年逾 40 歲者，則得加保 25 年後方可享有全額年金之老年年金給付。

3. 保費計算：第一年保費為全額年金之 10%，即月繳 750 元。其中政府最少補助 20%（對一般被保險人）。中低收入者補助率為 40%，列冊的低收入戶全額補助，障礙者補助 40%到 100%。當然，反應人口老化及保險財務的狀況，保費金額會因應調整。
4. 老人福利津貼：對國民年金保險開辦時已逾 65 歲以上的人口，國民年金保險另提供每月 3,000 元之老人福利津貼，不過此項津貼之發放須經資產調整，並抵扣已領有其他養老給付。
5. 政府財務需求：依經建會的估計，如果國民年金保險於 2003 年開辦，第一年估計增加 154 億元之經費支出，其中包含保險補助 123 億元，行政事務費及開辦費 31 億元，同時得繼續支付已發放支各項敬老生活福利津貼 160 億元。不過，到 2018 年，辦理國民年金保險之政府財務負擔，已較不辦理國民年金保險，而維持目前各項老人生活津貼的經費需求為低。到 2031 年時，開辦較未開辦減輕 385 億元的年度經費負擔。
6. 國民年金保險基金：國民年金保險基金為開辦國民年金保險之專戶，收入包括保險費及孳息、基金運用收益、公益彩券盈餘供政府補助或負擔款項、滯納金、利息及罰鍰，及其他收入等。至於政府新增的財務負擔，原來規劃是以提高加值型營業稅稅率一個百分點來支應，在最新規劃中則未再確定說明。

2006 年 7 月底的臺灣經濟永續發展會議中達成共識，加速推動國民年金保險制度的執行時程，以 2007 年為目標年，為為數逾 400 萬未有任何退休後或老年經濟生活保障的國民，提供了一個基礎保障。

表四 我國老人經濟安全制度之現況

退休金	就業者退休金	<ol style="list-style-type: none"> 1. 軍公教人員退撫制度 2. 私校教職員工退撫制度 3. 勞工退休制度
社會保險	就業者保險	<ol style="list-style-type: none"> 1. 軍人保險 2. 公教人員保險 3. 勞工保險
	未納保者保險	<ol style="list-style-type: none"> 4. 國民年金保險（立法審議中）
津貼	國民年金開辦前之過渡措施	<ol style="list-style-type: none"> 1. 老年農民福利津貼 2. 敬老福利生活津貼 3. 原住民敬老福利生活津貼
救助		<ol style="list-style-type: none"> 1. 中低收入老人生活津貼 2. 榮民就養給與

資料來源：劉玉蘭(2004), p.4

表五 我國各類退休金制度 (2003 年底)

類別	項目	人數	費率(%)		保險費分擔(%)	基金餘額 (億元)
			法定	現行		
公教人員保險		622,851	4.5%—9%	7.15	本人：雇主：政府 公務人員(35:65)* 私校教職員(35:32.5:32.5)	515.8
勞工保險		8,102,570	6.5%—11%	5.5	有一定雇主(20:70:10) 無一定雇主(60:40) 漁會會員(20:80)	4,459.2
公教人員退撫基金		617,113	8%—12%	8.8	35：65	2,396.2
勞工退休金(舊制)		2,952,468	2%—15%	雇主自定	雇主全額負擔	3,143.8

說明：

1. 自 1999 年 5 月 31 日起，「公保」與「私校保」合併為「公教人員保險」，*表政府以雇主身份負擔保險費。
2. 勞保基金為普通事故保險 4,309.2 億元及職業災害保險 149.9 億元之總合。
3. 勞工退休金人數為提存廠商開戶時員工人數，家數提存率為 10.10%，受益員工率為 44.74%其提撥費率由雇主在法定範圍內自定。
4. (*)表政府以雇主身份負擔保險費。

資料來源：劉玉蘭(2004), p.6

表六 我國目前各項老人救助與津貼措施（2004年3月）

津貼類別	發放人數	發放總額 / 年	發放規定
榮民就養給與	約 10 萬人 (月領 13,550 元)	約 185 億元	退除役官兵傷殘或年老無工作能力未接受公費安養者
中低收入老人生活津貼	約 16 萬人 月領 3 千元：5.8 萬人 月領 6 千元：10.3 萬人	約 99 億元	家庭平均收入在最低生活費標準 1.5 倍以下：每人每月 6,000 元 1.5—2.5 倍：每人每月 3,000 元
老年農民福利津貼	約 60 萬人 (月領 4 千元)	約 316 億元	65 歲以上，參加農保或漁會甲類會員年資合計 6 個月以上者
敬老福利生活津貼	約 68 萬人 (月領 3 千元)	約 242 億元	65 歲以上，未有下列各款情事者： 1. 政府補助收容安置者 2. 已領取軍、公教月退休金或一次退休金 3. 已領取中低收入老人生活津貼、身心障礙者生活補助費、老年農民福利津貼或榮民就養給與者 4. 所得 50 萬元以上，不動產 500 萬元以上 5. 入獄服刑、因案羈押或拘禁

資料來源：劉玉蘭(2004), p.5

表七 我國老年基礎保障範圍

25~64 歲		65 歲以上	
保障類別	人數及比例	保障類別	人數及比例
未參加公教、軍、勞保	約 384 萬人 (32%)	無任何保障	約 45 萬人 (22%)
已領取公教、軍、勞保老年給付	約 60 萬人 (5%)	已領取公教、軍、勞保老年給付	約 65 萬人 (31%)
		重複領取保險及津貼	約 35 萬人 (17%)
參加公教、軍、勞保	約 757 萬人 (63%)	已領取各項老人津貼	約 61 萬人 (30%)
		合計	206 萬人
合計	1,201 萬人	合計	206 萬人

註：此表為 2001 年 12 月之靜態資料

表八 勞工退休金與勞保老年給付的比較

項目	勞工退休金		勞保老年給付
	舊制	新制	
法源依據	勞動基準法	勞工退休金條例	勞工保險條例
適用對象	適用勞基法之勞工	適用勞基法之本國籍勞工	符合勞工保險條例規定者
收支保管	中央信託局	勞工保險局	勞工保險局
請領條件及方式	於服務單位退休並符合請領退休金條件時，由雇主給付退休金	年滿 60 歲時向勞保局請領個人帳戶累積金額	符合勞工保險條例請領老年給付條件時向勞保局請領
給付方式	退休金一次付清	月退或一次給付	一次給付(未來將朝年金化方式規劃)
給付標準	前 15 年每一年給 2 個基數，第 16 年起每一年給 1 個基數，最高總數以 45 個基數為限(按退休前 6 個月平均工資計算)	個人帳戶累積金額及收益	前 15 年每一年給一個月，第 16 年起每一年給二個月，最高以 45 個月為限，加計 60 歲以後年資，最高總數以 50 個月為限(按退休前三年平均月投保薪資計算)

表九 新舊勞工退休制度比較

法律	現行勞動基準法	勞工退休金條例
制度	採行確定給付制，由雇主於平時提存勞工退休準備金，並以事業單位勞工退休準備金監督委員會之名義，專戶存儲	採行確定提撥制，由雇主於平時為勞工提存退休金或保險費，以個人退休金專戶制（個人帳戶制）為主、年金保險制為輔
年資採計	工作年資採計以同一事業單位為限，因離職或事業單位關廠、歇業而就新職，工作年資重新計算	工作年資不以同一事業單位為限，年資不因轉換工作或因事業單位關廠、歇業而受影響
退休要件	勞工工作 15 年以上年滿 55 歲者或工作 25 年以上，得自請退休；符合勞動基準法第五十四條強制退休要件時，亦得請領退休金	新制實施後， 1. 適用舊制年資之退休金：勞工須符合勞動基準法第五十三條（自請退休）或第五十四條（強制退休）規定之退休要件時，得向雇主請領退休金 2. 適用新制年資之退休金：選擇適用勞工個人退休金專戶制之勞工於年滿 60 歲，且適用新制年資 15 年以上，得自請退休，向勞保局請領月退休金；適用新制年資未滿 15 年時應請領一次退休金。另，選擇適用年金保險制之勞工，領取保險金之要件，依保險契約之約定而定
領取方式	一次領退休金	領月退休金或一次退休金
退休金計算	按工作年資，每滿一年給與 2 個基數。但超過 15 年之工作年資，每滿一年給與 1 個基數，最高總數以 45 個基數為限。未滿半年者以半年計；滿半年者以一年計	個人退休金專戶制： 1. 月退休金：勞工個人之退休金專戶本金及累積收益，依據年金生命表，以平均餘命及利率等基礎計算所得之金額，作為定期發給之退休金 2. 一次退休金：一次領取勞工個人退休金專戶之本金及累積收益。 年金保險制： 領取金額，依保險契約之約定而定
雇主負擔	採彈性費率，以勞工每月工資總額之 2% 至 15% 作為提撥基準，應提撥多少退休準備金，難以估算	退休金提撥率採固定費率，雇主負擔成本明確。提撥率不得低於 6%
勞工負擔	勞工毋需提撥	勞工在工資 6% 範圍內可以自願提撥，享有稅負優惠

法律	現行勞動基準法	勞工退休金條例
優點	<ol style="list-style-type: none"> 1. 鼓勵勞工久任 2. 單一制度，較易理解 	<ol style="list-style-type: none"> 1. 年資採計不受同一事業單位之限制，讓每一個勞工都領得到退休金 2. 提撥率固定，避免企業經營之不確定感 3. 促成公平的就業機會
缺點	<ol style="list-style-type: none"> 1. 勞工難以符合領取退休金要件 2. 退休金提撥率採彈性費率，造成雇主不確定的成本負擔 3. 僱用中高齡勞工成本相對偏高，造成中高齡勞工之就業障礙 	勞工必須擇優適用

伍、全民健康保險制度之改革

我國在 1995 年實施全民健康保險制度之前，社會醫療保險服務包括軍人保險、公教人員保險、勞工保險中的醫療保險及中低收入家庭健康保險等，大概為 59% 的人口提供醫療保險照顧。全民健康保險為強制納保，承辦全民健康保險的中央健康保險局也是保險人，負責納保支付和保費收取等行政職責。到 2004 年時，全民健康保險納保人數已逾 2 千 2 百萬人，達全國人口 98.6%。由於全民健保有整合及擴大之前勞、農、軍公教、低收入家庭醫療保險部分之特性，因此也延續了這些保險的若干規定，例如把被保險人依就業及職域別分為六類十四目，保費以投保薪資或設算所得為計算基礎，以及政府對不同投保類別提供不同保費補助比率等情事。

根據法律規定，全民健康保險應維持財務獨立及平衡，保費分別由被保險人、雇主及政府分不同比例共同負擔。被保險人之扶養親屬應（得）隨同被保險人連同投保，稱為眷口，但每一被保險人所須付費之眷口數不超過三個人。

全民健康保險開辦時費率為 4.25%，2002 年提高為 4.55%，之後即未再調整，而改以提高部分負擔、更嚴控審查特約醫療院所申報費用，在總額支出規範下，調整支付點值的方式來試圖解決健保財務的失衡。

健保的財務失衡在 1999 年起即已相當明顯，當年度的收支差短達 210 億元，2000 年有 10 億的盈餘，但 2001 年到 2005 年分別出現 15.6 億、15.7 億、4 億、4 億及 63 億的收支缺口。其中 2003 年及 2004 年的缺口縮小，除了反映健保局於 2002 年調漲費率及部分負擔外，也因為 2003 年 SARS 爆發，導致一般性疾病需求降低所致。

依健保局的統計，全民健康保險施行的十年內，健保支出以平均每年 5.9% 的成長率上升，而收入成長率為 4.82%，因此收支差缺是必然的現象。我國人口老化當然是導致健保支出上漲的一個主要原因，老年人口健康情形較差，自然會

對醫療服務有較高需求，同時也可能需要較昂貴的醫療服務。表十比較 2003 年及 2004 年我國全民健康保險依年齡組別的人口分配及申報健保給付的分配，明白顯示老年人口使用較高比例的健保資源，再依表十的相關給付表達在圖七至圖十一中，可以得出 45-49 歲的人口為臨界點，超過這個年齡階層，即超過比例的耗用較多健保資源。隨著人口老化程度提高，這種情形只會更加嚴重。

除了高齡化對健保的衝擊外，我國健保的財務制度中亦有相當多值得檢討的地方。例如政府對不同職域者提供不同補貼，不同職域的被保險人的投保薪資與實質薪資各有不同的折讓率，二、三類在工會及農漁會投保的保險人都以平均費率投保，與實質所得水準無關等，都不符合全民健康保險主張公平的量能收費的社會保險目標。根據行政院「二代健保規劃小組」的分析，目前的健保財務制度在保費徵課面有以下的各項問題：

- 1、投保人六類十四目的分類，勞、資、政三方有不同的保費分攤方式，被保險人轉換工作就必須申報退保/加保手續，增加相當的行政成本。
- 2、投保薪資低於實質薪資，且勞資雙方皆須負擔保費，使勞資雙方皆有意願低報或降低經常性薪資，以減少保費，再以其他名目支付薪資。
- 3、第二、三、五、六類等被保險人的定額保費自 1999 年以後即未調整，大幅降低保費收入的所得彈性。而第一類被保險人中，有 14% (2003 年統計) 的勞動者以最低工資投保，最低工資未調整，這些被保險人薪資增加亦不可能反映在保費收入上。
- 4、全民健保強調的量能付費設計，事實上無法達成。從垂直公平和水平公平的角度評估，由於投保薪資，按口計費，選擇依賴投保等規定和行為，都使保費負擔與家庭所得的分配呈現水平不公和垂直不公的現象。
- 5、最後，由於被保險人的部分保費是由政府與雇主共同分攤，因此

發生道德危機(moral hazard)的可能更高。被保險人需求更多的照顧，自己雖可能必須面對較高的保費，但也有一部分是由政府與雇主分擔，免費乘車(free-riding)或最少部分免費乘車的行為，自然促使醫療支付水準上漲。

行政院於 2002 年成立二代健保規劃小組，研擬全民健保各層面的改革方案，其中有關財務規劃方式的重點如下⁷：

- 1、保費計算基礎改為家庭綜合所得總額，並加計例如軍教人員的薪資所得，十八萬定額免稅的稿費、演講鐘點費等之免稅所得。被保險人改為以綜合所得稅申報時之納稅義務人及申報親屬為一個單位，單位內所有成員只需共繳一份保險費，依費率乘以家庭所得總額計收。同時，並有最低保費和最高保費（例如十倍）之設計，以維持全民健康保險為一保險，不宜要求被保險人承擔超高保費的性質。
- 2、政府與雇主仍須承擔健保財務責任。不過，這兩個部門的財務責任與健保保費的費率，亦與健保支付需求並不直接相關。對政府而言，在二代健保制度推動時，即以前一年政府補助經費占健保收入之比率為一固定比率，依實施首年的健保支付額計算政府的經費負擔，以後年度依前三年的 GDP 平均成長率及個人醫療支出平均率調升。至於企業方面，則以實施前三年企業及雇主所負擔保費、企業用人費用之比率之平均，作為基準費率，實施期間，企業負擔的保費責任皆以年度用人費用乘以基準費率計算，與健保支付總額，或者個人醫療支出變動無關。不過，如果經濟成長同時也反映在薪資水準的增長上，則企業的負擔也會因而提高。
- 3、二代健保特別強調的財務責任（或者可稱為財務究責，financial

⁷ 行政院衛生署(2004)。

accountability) 顯示在費率的計算上。由於政府與企業的財務責任與費率無關，因此費率之決定或調整就完全以健保支付水準扣除政府和企業的負擔和其他補助財源後，除以所有被保險人的綜合所得總額來決定。當然，部分負擔水準的高低會直接及間接的影響費率。不過，費率的主要決定因素除了分母的所得水準外，就是反應醫療服務使用和需求的健保支付水準。因此，願意多承擔部分負擔，限制支付項目的話，費率可望調低；反之，要求調降部分負擔，或者要求擴大支付範圍，或者因老年人口比例上升導致需求自然增加的話，費率就會上升。決定支付內容和部分負擔程度的權力和責任在被保險人，對醫療需求較高的老年人口也是被保險人，而費率高低的影響也在被保險人，因此被保險人在費率決定上完全權責相符，責任和權利同時決定。

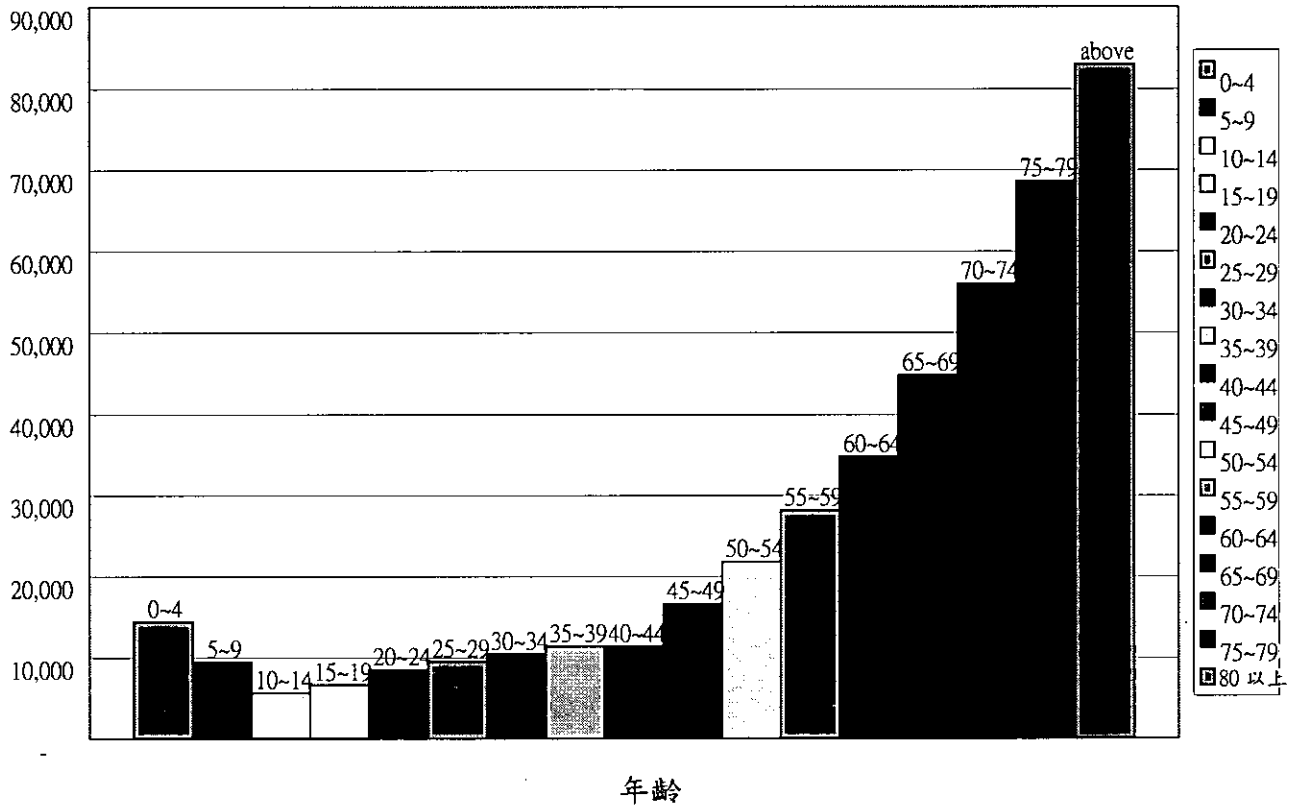
- 4、為提升健保的財務資訊透明，所有私立和財團法人醫院都必須對衛生署或健保局提供年度財務報告，違者須接受處分。財務資訊能充分、正確的提供，才足以在訂定合理服務支付水準和健保制度追求成本效果 (cost-effectiveness) 的雙重目標中，尋求一平衡點。

二代健保的各項改革建議，已納入行政院衛生署已完成「全民健保法」的修法草案，經行政院審查通過，提交立法院審議，並被列為本會期的重大法案項目

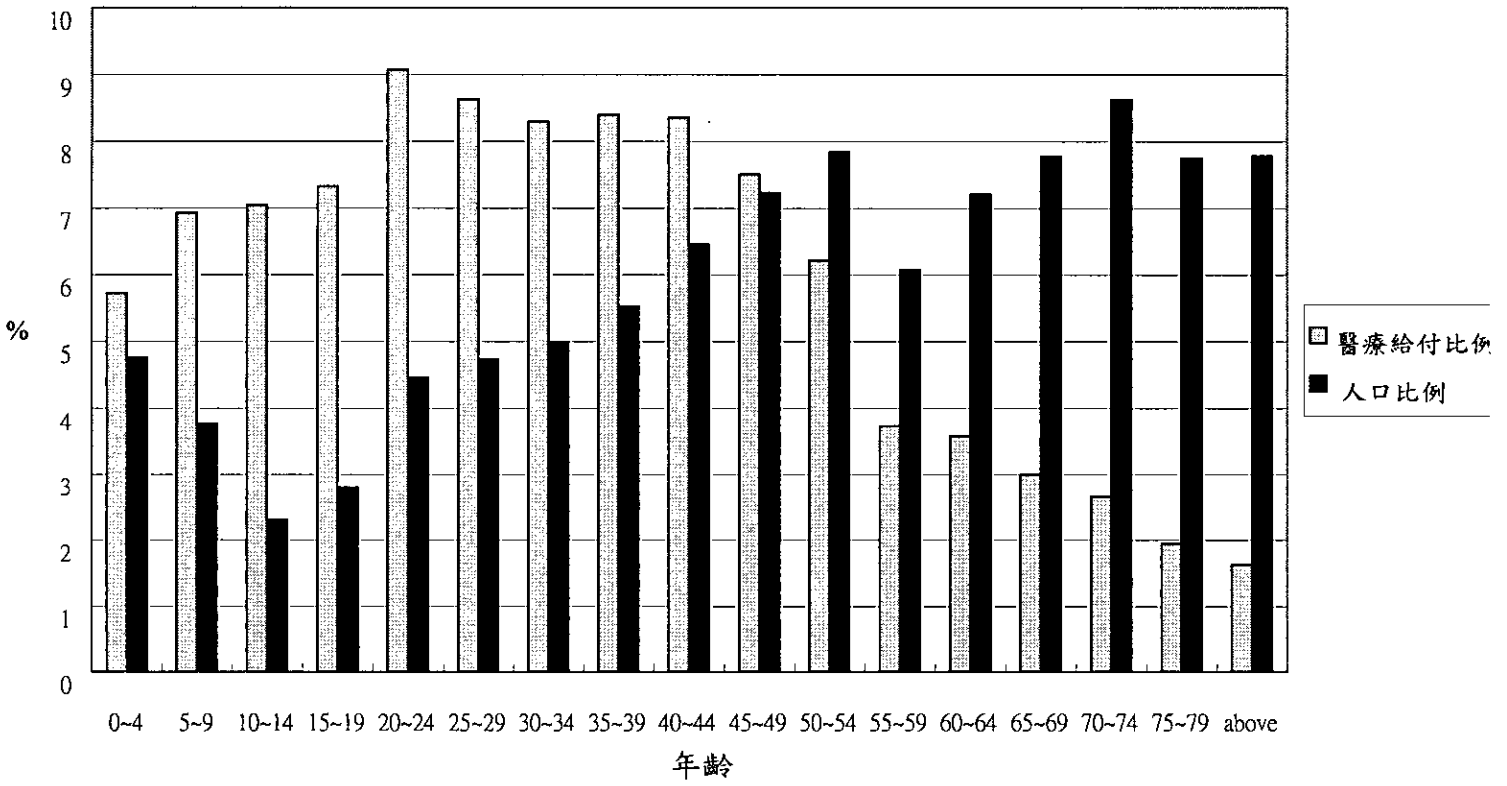
表十 全民健康保險醫療支出分配：依年齡別

年齡	2003			2003			2004			2003			2004			2003 各年齡層保險對象醫療給付比例與人口比例之差異	2004 各年齡層保險對象醫療給付比例與人口比例之差異
	每人平均醫療給付			各年齡層保險對象之比例(%)			各年齡層保險對象醫療給付之比例(%)			各年齡層保險對象醫療給付之比例(%)			各年齡層保險對象醫療給付之比例(%)				
	男性	女性	全體	男性	女性	全體	男性	女性	全體	男性	女性	全體	男性	女性	全體		
0~4	13,229	15,417	14,372	2.73	2.99	5.72	2.60	2.85	5.45	2.09	2.67	4.76	1.99	2.54	4.54	-0.96	-0.91
5~9	8,884	9,856	9,390	3.32	3.61	6.93	3.20	3.48	6.67	1.71	2.06	3.77	1.65	1.99	3.63	-3.16	-3.04
10~14	5,487	5,793	5,647	3.37	3.68	7.04	3.36	3.67	7.03	1.07	1.23	2.30	1.07	1.23	2.30	-4.74	-4.73
15~19	6,784	6,434	6,603	3.54	3.78	7.32	3.43	3.69	7.12	1.39	1.41	2.80	1.35	1.37	2.72	-4.52	-4.40
20~24	8,971	8,025	8,473	4.56	4.51	9.07	4.45	4.35	8.80	2.37	2.10	4.46	2.31	2.02	4.33	-4.61	-4.47
25~29	10,921	7,961	9,474	4.41	4.22	8.63	4.50	4.31	8.80	2.79	1.95	4.73	2.85	1.99	4.83	-3.90	-3.97
30~34	11,701	9,067	10,399	4.19	4.10	8.29	4.16	4.03	8.19	2.84	2.15	4.99	2.82	2.12	4.93	-3.30	-3.26
35~39	11,822	10,907	11,365	4.20	4.20	8.40	4.20	4.16	8.36	2.87	2.65	5.53	2.87	2.63	5.50	-2.87	-2.86
40~44	13,480	13,189	13,334	4.17	4.18	8.35	4.21	4.19	8.40	3.25	3.19	6.45	3.29	3.20	6.49	-1.90	-1.91
45~49	16,712	16,542	16,628	3.77	3.73	7.50	3.86	3.82	7.68	3.65	3.57	7.22	3.73	3.66	7.39	-0.28	-0.29
50~54	21,972	21,623	21,798	3.13	3.08	6.21	3.29	3.24	6.53	3.98	3.86	7.84	4.19	4.06	8.24	1.63	1.71
55~59	28,212	28,017	28,116	1.89	1.84	3.73	2.03	1.98	4.00	3.09	2.98	6.07	3.32	3.21	6.53	2.34	2.53
60~64	34,248	35,289	34,751	1.85	1.73	3.58	1.84	1.73	3.57	3.67	3.53	7.20	3.65	3.53	7.18	3.62	3.61
65~69	44,290	45,287	44,768	1.56	1.44	3.00	1.60	1.45	3.04	4.00	3.78	7.78	4.10	3.80	7.90	4.78	4.86
70~74	54,491	57,320	55,992	1.25	1.41	2.65	1.27	1.35	2.61	3.94	4.68	8.62	4.01	4.48	8.49	5.97	5.88
75~79	63,405	72,917	68,633	0.88	1.07	1.95	0.91	1.11	2.02	3.23	4.52	7.75	3.34	4.69	8.03	5.80	6.01
80以上	75,162	91,317	82,967	0.84	0.78	1.62	0.88	0.84	1.72	3.66	4.12	7.78	3.83	4.44	8.27	6.16	6.55
總計	17,235	17,308	17,272	49.65	50.35	100.	49.77	50.23	100.	49.54	50.46	100.	49.66	50.34	100.	0.00	0.00

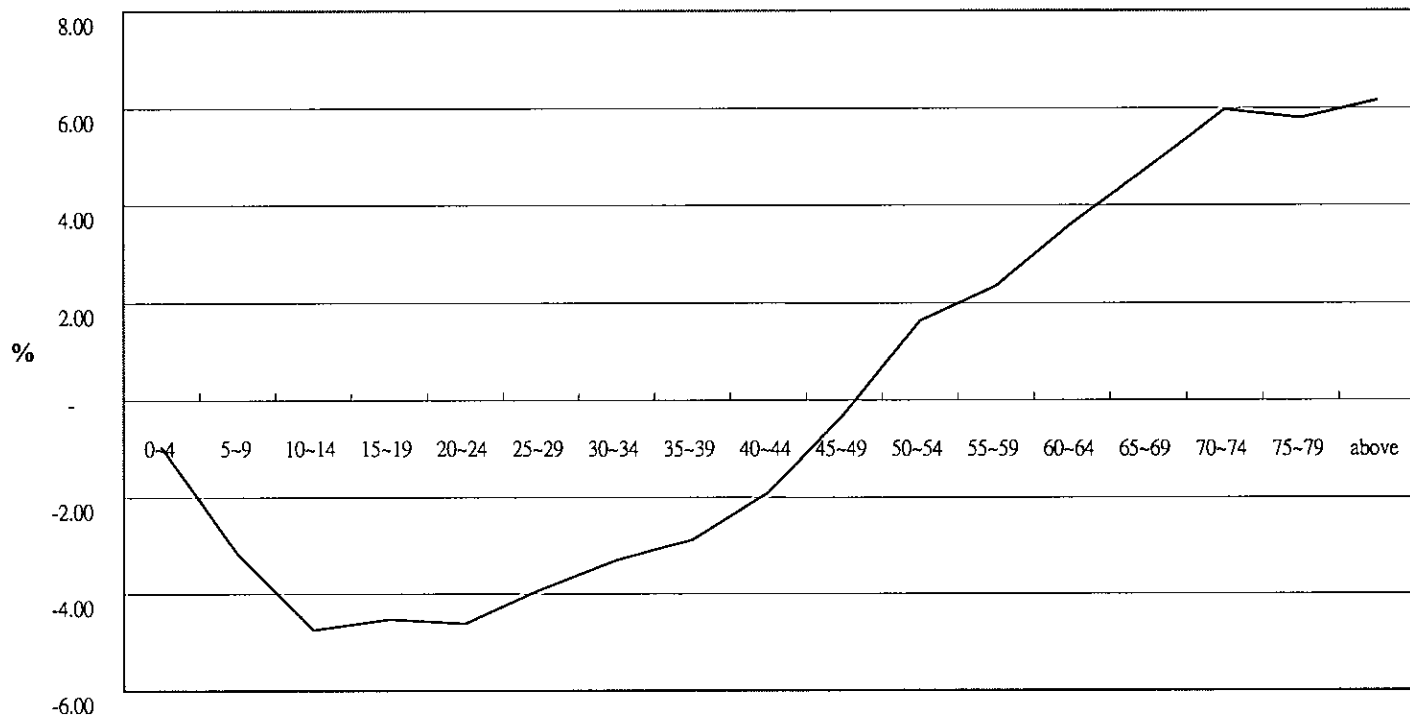
圖七 每人平均健保醫療給付：依年齡層分



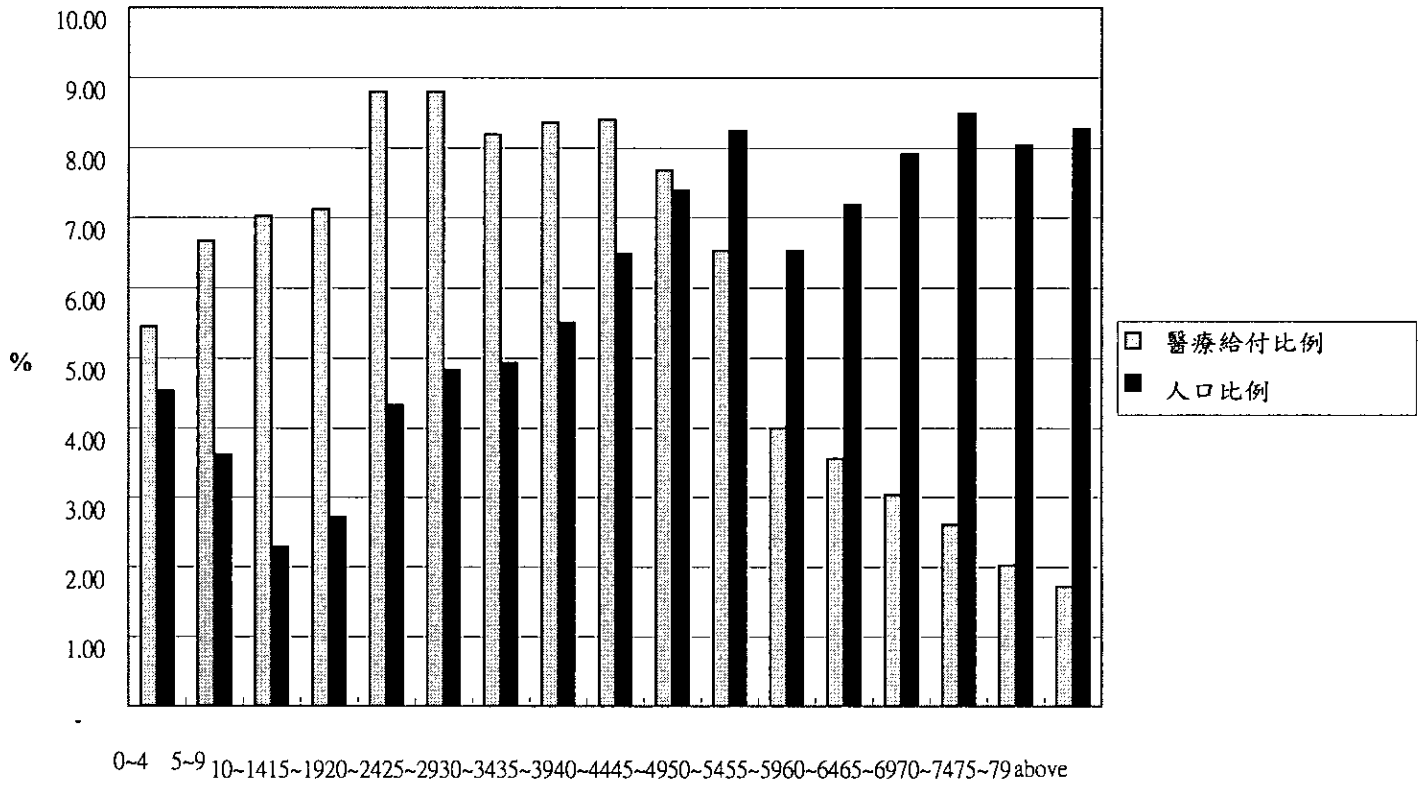
圖八 健保醫療給付及人口之年齡分配：2003 年



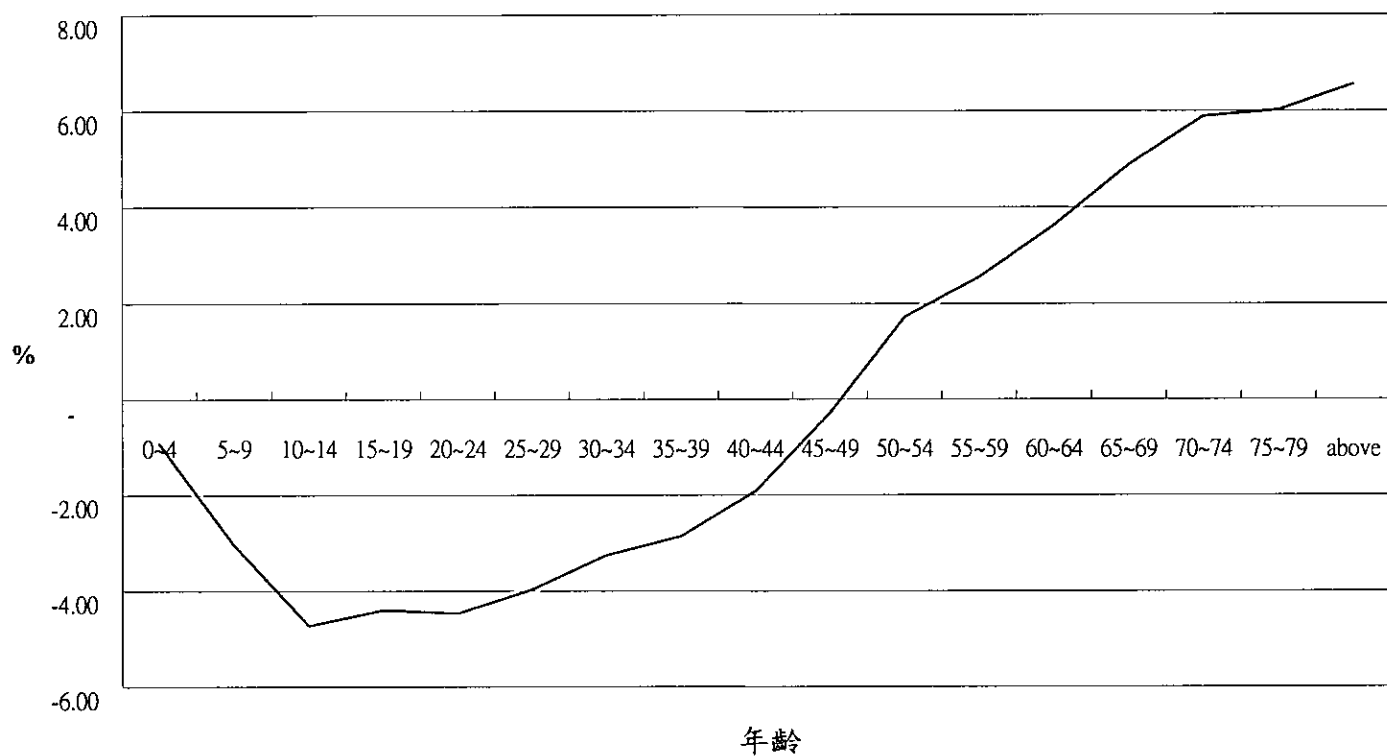
圖九 2003 年醫療給付比例與人口比例差異之年齡分配



圖十 健保醫療給付及人口之年齡分配：2004 年



圖十一 2004年醫療給付比例與人口比例差異之年齡分配



陸、長期照顧保險規劃

長期失能照顧的需求與老年人最為相關。目前我國老年人口的長期照顧責任主要落在失能老人的家屬上。雖然透過健康保險對慢性病患的住院服務、內政部提供居家照顧補助、中低收入家庭老人的機構式及居家照顧、國軍退除役官兵輔導委員會對榮民提供的養護照顧等，政府在這方面投入不少資源，但是對一般民眾而言，政府補助卻無法享受。如果以護理之家每月收費介於 20,000 元到 40,000 元的水準來說，完全由住院老人或老人的家庭支付，對大部分個人和家庭都會構成沈重的財務負擔。因此失能的風險會導致個人或家庭的財務困難，有必要研擬解決的辦法，檢討是否有擴大政府參與的必要及可能。內政部在行政院已推動先導計畫之後，委由研究機構執行我國長期照顧服務制度之規劃，其中財源籌措方面的主要結論為：

- 1、據估計，於 2006 年，臺灣人口中，有 2.87%，亦即 66 萬人需要長期照顧服務；到了 2031 年，隨著人口老化，需要長期照顧服務的人口增加 60 萬人，占全國人口的 5.38%。在 2006 年到 2031 年，前五年間，需照顧人口增加 8 萬人，之後十五年內，每五年增加 11 萬人，之後十年，每五年增加 15 萬人。在人口比例方面，在 2006 年，66 萬需照顧人口中，有 52.89% 為超過 65 歲以上的老人，在 2011 年，比例上升到 54.77%，2016 年為 59.44%，2021 年為 64.61%，2026 年為 70.20%，2031 年則已達到 74.73%。老年人口比例愈高，需照顧的老人數目和比例都上升。
- 2、規劃報告中提出三種政府管理長期照顧服務市場的方案。如果長期照顧服務採全民強制納保的獨立社會保險方式提供，部分負擔為 10%，則估計 2006 年的保險支出為 GDP 的 0.5%，再假設 GDP 年成長 2.5%，到 2031 年支出比上升為 0.62%。第二種方式，仍

然有 10% 部分負擔，但採取長期照顧國民服務的形式，財源由一般稅收融通，則 2006 年的支出比例為 0.31%，2031 年為 0.56%。第三種方案為合併長期照顧服務於全民健康保險制度中，在這種設計下，服務支出比例與第一案相同。

- 3、若採第一案的獨立社會保險，則在 2006 年，一個四口雙薪家庭的月付保險費為 312 元，約為平均可支配家庭所得之 0.42%。不過，政府及企業各須額外負擔總保費之 40%(312 元)及 20%(156 元)。
- 4、政府於 2006 年的整體財務負擔為 215 億元，占各級政府支出之 1.34%，或中央政府社會福利支出之 7.25%。提高加值型營業稅稅率 0.5 到 0.6 個百分點就足夠支應此項額外支出。
- 5、在保險行政上，長期照顧保險由中央健康保險局負責可降低行政成本。不過，兩項保險財務應各自負責，以維持彼此權責相符的特性。
- 6、如果採稅收制，而非保險制，則 2006 年需增加 330 億，合中央政府歲出之 2.06%，或中央社會福利支出之 11.13%，到 2031 年，財務負擔達 1,123 億，比社會保險制高出兩倍。
- 7、以供給面來看，機構式和非機構式服務的供給在目前的收費水準和需求下應算充分，不過，在人力供應上，須仰賴有時並不具備必要技術的外籍看護工作。未來如果有政府的投入，提供公共服務，預估需求會上升，此時，合乎需求的人力缺乏將會導致供給質、量均受影響。
- 8、依幾次意見調查的結果，在稅收制和保險制三項方案之間，沒有一案能獲得 50% 以上的支持率。不過，反對稅收制的超過 50%，可能反映民眾對任何明顯加稅方案的反對態度。在專家調查方面，大部分都贊成採獨立社會保險案，有少數專家支持稅收案，

而沒有任何受訪專家贊成與全民健保結合的合併案。

柒、老年人口社會保障服務之財務意涵

隨著老齡化速度的加快，我國政府在提供老年人口生活保障、健康維護以及長期照顧服務上的服務應是責無旁貸。老年人口承受更多的健康健康危險和長期失能風險幾乎是所有高齡化社會普遍的現象，因此，人口逐漸老化，整體社會的相關風險也跟著提高，面對這種情形，依靠市場解決恐怕必然會導致資源配置的缺乏效率。道德危機和逆選擇兩者就可以解釋市場失靈的現象。政府的適當干預對矯正市場失靈有一定的效果。因此，各國幾乎都存在公共退休金制度，而在已開發國家中，大都有公共健康保險制度來提供國民的健康醫療服務。

在長期照顧服務市場上，各國的差異性較明顯。例如德國、日本及荷蘭，依靠社會保險，美、加兩國則依賴私人市場為主，為低所得家庭提供公共援助為輔。在我國，則存在一個混合方式。首先是非正式照顧，由家庭成員負責，大部分職責落在女性成員肩上。不過，隨著少子化及老年化的演變愈來愈迅速，由家庭非正式照顧轉向正式機構服務或日間照顧的需求會愈來愈多；其次是正式服務，由個人自市場上選擇購買，而政府亦對有需要但沒有能力購買的人提供補助。

老年化的人口雖不一定導致政府支出增加，但一定難以避免的會使政府在老人福利及服務上的支出增加。我國全民健保制度正在尋求改革，而改革的導因其實有很大的比例是源自目前制度所面臨的財務困難。在退休後所得安全方面，國民年金保險的實施，可以為未納入任何職域保險的 400 萬以上人口，提供基礎保障。政府更積極擔起長期照顧服務的責任已列入明年的政府施政計畫重點中。當國民年金保險和長期照顧保險或國民服務制度確定並執行時，我國已為老年人口提供了主要風險的保障，不管本身有沒有累積資產，老年人都可過著有尊嚴的生活，確實離福利國家的理想不遠了。

不過，一個老人福利國家的建構，不可能是一項無本工程。本研究的目的之一在提醒政府和民間，天下沒有白吃的午餐，追求一個有效率，或者最具財務永

續性的解決方案，必須兼顧下列各項原則：

1、確定政府財源

國民年金保險的原來規劃和長期照顧社會保險的規劃中，都設定政府以提高營業稅稅率的方式來籌措必須財源，是一種負責的規劃方式。任何引起政府額外支出的計畫，必須確實評估整個財務負擔，政府及民間的分攤比例，以及不同設計對可行性、效率及公平的影響。對政府的財政需求又須分別考慮是以排斥其他支出的方式，抑或是透過非舉債的其他收入方式來籌措財源，必須妥善決定。缺乏清晰的財務計畫，任何老人服務計畫的福利評估都不具意義。

2、釐清政府與民間部門的財務責任

健康保險、國民年金保險和長期照顧服務等三項社會保險計畫都訂定政府和民間分攤財務責任的要求和比重，而且在全民健保中，受僱者和雇主都得支付保險費。學理上，受益人支付保險費理所當然，但為什麼政府和雇主也被要求承擔？對政府來說，殊價財、外部效果和社會保險中的重分配功能應該都是可以接受的理由。至於企業或雇主，保費的負擔可能只是一種代為扣繳的方式，支付的保費可以完全由轉嫁後少支付的薪資收回，也就是只能部分轉嫁，由於健康保險的服務，勞動力健康條件改善、生產力提高，無異對雇主也是有利的條件。

3、提昇財務責任

二代健保規劃中對勞資政三方分攤保險成本的方式有一項新的安排，政府和企業財務責任和調整機制與健保支出或者服務需求的變動沒有直接關連。被保險人消費更多，或者需求更多，必須自行負擔因此增加的財務成本，即更高的保險費率。在這種設計下，被保險人再無法把服務成本外溢或者輸出給企業或政府，必須自負責任。雖然這種改變不可能解決道德危機—被保險人在有保險保障下

偏好多用醫療資源的行為，不過，最低限度可以維持健保的財務安全。這項設計是否應用在長期照顧保險之中，現在討論可能為時尚早，不過，財務究責應該是設計長期照顧保險制度中，不可或缺的一項。

4、促使財務透明

「二代健保」要求醫療院所公開透露財務資訊，新修正的醫療法目前是規定具備公益性質的財團法人醫院依一定格式送交年度財務報告，再由衛生署公開。以後是否再擴大適用對象到一般醫院，目前並未定案。此項在國外行之多年的政策，一方面可以提供正確資訊，供中央健康保險局訂定及調整服務支付水準的根據，同時可供社會大眾參考，應有利於費率調整。另一方面，公開財務資訊亦有利於醫療市場中的「同儕」競爭及學習功能，促進更有效的經營方式。

5、提高生育水準

事實上，設法降低我國老年化速度是減輕政府財務壓力最有效的方法。如上文所述，壽命延長和低生育率是我國人口老年化急速上升的原因。對於前者，我們不可能也不宜有任何對策，而應在提高生育率上採取更積極的措施，建立更利於生育、養育子女和提昇子女品質的環境，例如工作中的父母都可以申請更方便的育嬰假，並由政府提供育嬰時期的補助和援助，都有助於生育和養育子女的機會成本，降低孩子的價格，提高對小孩的需求。

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Summary

Population projection in Taiwan predicts that in 2007, the share of population above 65 will reach the 10% level, and this share will double within a 21 years period, to 20.44% in 2026. As one of the most rapidly aging economy in this region, what are the challenges facing the government and the society? How can the elderly be protected against different types of risks?

Health risk of the elderly in Taiwan is protected by a social health insurance service, and at least three fourths of retired workers are covered by either one of the retirement programs or old age allowance schemes. To cover the rest of the population for income security after withdrawing from the labor market due to age factor, a national pension plan was proposed by the government. If accepted by the legislation, the system will inaugurate in 2007. Lately, a new defined-contribution labor pension plan was put into effect since July 1st, 2005. Millions of workers of the private sectors are affected and suppose to be better protected for retirement life. The last protection available in the welfare state for the elderly is a formal long term care service scheme where a compulsory social insurance plan is one of the options in the hand of the government. Of course, a welfare state for the elderly can by no means be arrived at low cost. Discussions of financing these existing or planned programs in this paper remind the government and the private sector that there is no free lunch. Efficiency, or at least to have the system be sustainable financially, will require the following principles:

- (1). Clear assignment of financial means to support the various schemes
- (2). Shared responsibility among the government and private sector especially with respect to the financing aspect
- (3). Enhancing accountability of the beneficiaries to reduce the degree of moral hazard
- (4). Requiring financial transparency of the systems and also the service providers
- (5). Promotion of higher fertility to lower the speed and the associated burden of population ageing.

Keywords: Ageing, Retirement Income Security, Health Insurance, Long-term Care Service, Financing

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Executive Summary

The official population projection for Taiwan predicts that in 2007, the share of population above 65 years of age will reach the 10% level, and this share will double within a 21-year period to 20.44% in 2026. As one of the most rapidly ageing economies in this region, what are the challenges facing the government and the society? Do these challenges bear unique elements given Taiwan's specific socio-economic and political conditions? What are the policy options for the government to meet the demand in delivering and financing the public services necessary due to the changing population demographics?

To answer these questions, this paper aims to discuss the relationship between Taiwan's rapidly ageing population and the related fiscal policy changes, most of them reflecting possible changes in spending and taxation policies in association with building a broader social security system for the elderly.

Health risks of the elderly in Taiwan are protected by a social health insurance service, and either one of the retirement programs or old-age allowance schemes cover at least three-fourths of retired workers. To cover the rest of the population, for income security, after withdrawing from the labor market due to age, a National Pension Plan (NPP) has been proposed by the government. Before the due procedure begins on the NPP legislature, a newly defined-contribution labor pension plan was agreed upon by the legislature and was put into effect on July 1st, 2005. Millions of private sector workers are affected and are supposedly better protected for retirement life. The last protection available in the welfare state for the elderly is a formal long-term care scheme where a compulsory social insurance plan is one of the options considered by the government. These three parts of the public safety net for the elderly in Taiwan will be introduced in the rest of this research project.

Entering the 1990s, the economic growth of Taiwan maintained its momentum, yet at a lower rate of speed. The average annual growth rate of real GNP fell to 6.3%, lower than the 8.1% in the 1980s, and significantly lower than the 9.4 % in the 1970s. The slowing down of economic growth was more evident, if per capita GNP in US dollars is used as the measure, since the domestic currency, the New Taiwan Dollar (TWD), had depreciated against the dollar from 1992. Following the 1997 Asian Financial Crisis, the TWD dived heavily along with currencies of other Asian economies. An unprecedented negative rate of growth, at -2.18, was recorded in 2001. The economy recovered since then with a more than 6% rate of growth in 2004. As for 2006, the latest projection for the real rate of economic growth is 4.1 to 4.5%.

Aggregate saving ratio as a percentage of GNP in Taiwan has been able to keep at relative high levels in the last decade, but it has slid down steadily mainly due to existence of huge amount of government budget deficit since 1992. Excess savings in the private sector was noticeable if we compare the saving ratio with the investment figure. Growth rates of fixed capital formation as a whole dropped to a record low 1.7% before the 1997 Asian Financial Crisis then bounced in the following two years, then fell to another low of 1.85%. From 1999 to 2005, in four out of the seven years we experienced negative growth rates of private capital formation. In 2001, it was -29.2%, the key factor behind that year's economic recession. Two reasons are given to explain the disappointing private investment activities since 2000: the relocation of the

manufacturing plants in Mainland China by Taiwan enterprises and the worsening of the investment environment on the island.

The slowing down of investment in the private sector was parallel to that of the public sector, which included investment in infrastructure by the local and central government, as well, expansion in plants and facilities by public enterprises. The sluggish public investment activities reflected the shortage of funds available to the heavily indebted government and other hindrances, such as resistance from local residents to any public construction projects, encountered in public investment on transportation systems and environmental conservation and protection facilities.

Financial statistics clearly showed nothing other than the incapability of the Taiwan government in its fiscal management. Over the years, the tax burden, measured by total tax revenue collection as a ratio of GDP fell from a peak of 18.83 % to a low of 11.7% in 2002, the lowest among major industrialized and newly developed economies. A comparatively low tax collection ratio, even the government had been working very hard to control and even tried to cap the public spending level, unavoidably resulted in an ever-increasing outstanding debt-level for the government. As a percentage of GDP, government unpaid debts in forms of public bonds and borrowings from the commercial banks, has inflated by four times, from 5.84% to over 25% at the end of the decade. During this period of financial difficulties, the current government deficit amounted to as high as 6.1% of GDP in FY 1999, double the 3% limit set for the European Community countries. Fortunately, the fiscal gap has narrowed down slowly; since after a series of spending control programs and accelerating sales of government-owned assets, which included land and public corporations.

The fiscal stance of the government after 2000 was actually getting worse. In 2001, a negative rate of growth was recorded; both domestic investment and value of international trade dropped by more than 10%; actual tax collection fell short of the estimated figure by TWD 70 billion, or by more than 7%, thus further widening the deficit gap in the budget. These negative economic signals pushed the government into a paradox in decision-making. On the one hand, expansionary fiscal policy may be needed to help stimulate the sluggish economy. Yet this will further increase the level of public debts. Even if the government decides to take the risk on trading-off of economic growth with expanding deficit, the ceiling on the level of borrowing in the Public Debt Law, a 15% limit of annual borrowing to the level of spending for all levels of government actually left very small space for further deficit financing. On the other hand, if slowing down of the economy is mainly induced by external factors, such as the soft landing of the US economy, which happens to be the most important export partner for Taiwan's computer chips and 3C products, domestic stimulating policy can offer little, if any, help. Additional weakening of the fiscal stance by higher spending and, or, lower tax collection, might merely result in more serious problems in inter-generational transfers and rigidity in future public spending.

During the last 15 years, price inflation has never been a major issue in Taiwan's development process. Especially after 1997, price levels only changed minimally, but no evidence of deflation was found either. The stability of price level was also shown in the decreasing rediscount rate set by the central bank. However, both the rate of price inflation and the rediscount rate bounced to higher than 2% in 2005, suffering from the international petroleum price hike.

Labor participation rates for females have increased steadily over the years with an opposite tendency for men. The total labor participation ratio has decreased slightly. The unemployment rate, as the economy grows and higher ratio of the work force is engaged in the non-agricultural sector, follows an upward trend. The three percent unemployment rate recorded in 2000 was in fact almost doubled that in 1991. The employment condition deteriorated as the general economy slowed down. In 2001, the unemployment rate climbed up to 4.57%. The induced increasing demand for higher governmental spending on unemployment relief and other welfare items had placed a heavier burden on the already indebted finance.

Finally, a measure of income distribution inequality, the average income of the wealthiest 20% households as a multiple to that of the lowest 20%, shows that income distribution in Taiwan has been worsening since 1995 to 2001, the year of negative rate of growth.

In real world, in supplying goods to the public, governments do not always follow economic theories. Public goods of limited benefit regions are sometimes provided by the national government, owing to, for example, the existence of externalities. Redistributive programs carried out by local governments for the aged, low-income and disabled, with or without central coordination, can easily be found in developed and developing countries. Overlapping of responsibilities among central and local government in Taiwan is naturally expected, such as in the provision social welfare and social assistance.

Since the 1990's, local government units had begun to adopt a more generous policy toward social assistance for the aged and needed residents. Some of the counties and cities, even dependent heavily on upper level government grants already, were involved in a "war of welfare competition." Monthly allowances were given to people above 65, without any form of means-tested, and uniform subsidies to children under the age of 3 on registration fee charged by medical institutions contracted with the National Health Insurance system are provided in several local units.

High fertility rates in Taiwan during the 1950's, a period after the civil war and the baby boom, began to decline entering 1960. Total fertility rate (TFR) fell to less than 3.5% in 1972, mainly due to a series of remarkably successful birth planning campaigns. With the rising of labor force participation of the females, another 10 percentage drop in TFR was attained in 1983 when the government decided to review seriously should the active population control policy focusing only on reduction of the number of births be appropriate given the apparent socio-economic changes. In the 1990's, the government decided to gradually replace the "two is just good but one is not bad" policy by "two is good" and later "two is good but three is blessing". Lately, direct cash subsidy plans for having babies are proposed by several city and county governments given the fact that the TFR had fallen to 1.180% in 2004, an 83.23% reduction from the 7.04% level in 1951.

Three reasons are frequently discussed to explain the steady falling of fertility. First, postponement of childbearing as shown on mean age of childbearing increased from an average of 25 years in 1960's to 28 years since 1998. Second, it was the decrease in marriage rate such that in each age cohort, the percentage of females with marriage status single increases rapidly in the last twenty years. Finally, for marriage women, they had their desired number of children decreased, partly because of a higher female labor participation rate resulted from higher education level, increase in women's right, etc.,

which will push up the opportunity cost of childbearing and caring, and partly because a change in the attitude of gender discrimination among the children.

Over the past fifty some years, the natural rate of population growth, the gap between crude rate of birth and crude rate of death declined steadily. It was slightly over 3.0% in 1962, dropped to less than 2.0% in 1972, then fell to lower than 1.0% since 1993, where in 2003, it was at its lowest level of .427% and the actual population growth rate was 0.37% taken into account the net emigration effect. These changes reflected a continuous decline in crude birth rate and a U-shaped distribution over the years in crude death ratio.

The process of ageing in Taiwan's population can be seen in two indices: life expectancy in birth and the ratio of elderly, both representing the factor of numerical ageing and structural ageing. For the male population, life expectancy at birth exceeded 60 years since 1954, 70 years in 1984, and the latest estimate was 73.33 years in 2003. The females, as in other countries, has a gender advantage over the males in life expectancy by 4 years in 1950 then extended to 5.5 to 6 years entering 2000. The ageing of the population can also be shown by the median age which increased from 19.5 years to 34.2 in 2004. As the elderly lives longer and the number of births become smaller, the old-age dependence ratio (the ratio of population at and over 65 to population of working ages, between 14 and 64, ODR) naturally rises. For the past fifty some years, changes in ODR tells that the burden of supporting the elderly is increasingly higher on the working population which may take the form of higher taxes in a Pay-as-you-go (PAYG) pension system, social insurance plans for the elderly, or social assistance financed partly by income taxes. Should caring of the elderly be basically the job of the family, the effect of a heavier burden is more evident.

Assuming the TFR bounces back to the level of 1.215% and maintains at that level for the next half century, the official population projections for Taiwan reveal that in about 16 years, total population will reach the peak of 23.69 million persons and stop growing. The gap between the TFR and replacement rate causes an increasing negative population growth rate. In 2034, the total population will begin to shrink by 0.5% annually, and at the end of the projection, the population size is estimated to be 19.59 million, about the size of 1987.

The proportion of population over 65 will exceed 10% next year, 15% in 2020, and when the population ceases to increase, it will have already exceeded 26%. According to the official projection, at the end of 2051, the old-age ratio in Taiwan will be 35.47%. Persons in the working ages constitute merely 55% of the total population, a 15% drop from 2004 at the end of the period. Again, the ODR continues to rise such that in 2020, on average, one elderly can be supported by less than five working age persons. The number will become less than two in 2045 and 1.6 in 2051. The total dependence ratio, including both ends of the age distribution of the population, will be close to 80% in that year.

The high ODR is a result of two factors: declining birth rates and longer life expectancy. We have explained briefly the reasons for a falling birth rate earlier and a longer life expectancy basically demonstrates an improving health status among the elderly, perhaps induced by a better and boarder medical service system, and a more costly one also. Projected life expectancy reaches 75 years for the male in next year and increases slowly to over 79 years from 2030, while in 2007, female life expectancy will

be 80.72, 85 in 2018, and levels off at 86 after 2042. The mean age of the population, beginning at 35 in this year, will exceed 40 in 2016, 50 in 2034, and at the end of the projection, it will be 55.6.

Financial burden on medical service and provision of retirement living such as a comprehensive national pension system, or alternatively, an old-age allowance program, will be one of the major problems facing the society and future taxpayers. Its numerator links to the cost of medical and income security benefits for the elderly, and its denominator is related to the tax base. The tax rate must change in proportion to the changes in ODR if the benefit delivered to each of the elderly is kept intact even the ODR increases.

Unfortunately, entering the 1990s, Taiwan's fast economic growth disappeared which partly explained the weakening of the government's fiscal stance. In addition, demand for higher public spending in areas of social services increased significantly which the government could no longer ignore given the high-speed development of political democratization. The deficient tax system was not able to generate sufficient revenue to support higher expenditure needs. Massive central government budget deficits were covered by borrowing and issuances of government bonds, while the local government became more and more dependent upon central government transfers on their operations. With the implementation of the NHI, a mandatory, comprehensive health insurance scheme, in 1995, a pension system for those neither covered by the public employee insurance plan, nor by the labor insurance plan was the next one in line. However, the expected additional financial burden on the government was huge even if the national pension system had been designed to take a social insurance form. A formal proposal of a national pension insurance system was drafted until 10 years later in the end of 2005.

Public income security provided for the elderly and retired in Taiwan takes various forms depending mainly on the occupation of the benefit recipients. Different insurance systems and retirement schemes are established for government employees, servicemen, laborers, and farmers. In addition, to veterans and low-income aged persons, special programs are available to provide cash payment or in-kind assistance. The latest statistics shows that slightly higher than half of the total population, are covered by one of the various insurance schemes, retirement fund programs, or social relief plans implemented by the central or local government. Besides public support, economic needs after retirement are also met by personal savings and family support in Taiwan, as in most Asian economies. After the successful implementation of the National Health Insurance (NHI) in March 1995, a general, or alternatively, a supplementary system for those not covered by the existing plans and schemes, on providing economic safety after retirement became the focus of social welfare policy in Taiwan.

A proposal of a universal National Pension Plan (NPP) was completed by an ad-hoc task force set up by the government in June 1998. The essence of the plan was to establish a first pillar social security system for all in Taiwan to meet their basic needs. Since government employees have a separate, and much more generous, security system jointly provided by the Government Employees' and School Staffs' Insurance (GESSI) and the Public Service Pension Fund (PSPF), in the original proposal, they were granted the option to join the new NPP or to stay in their original program. As for workers already enrolled in the Labor Insurance (LI), their participation was voluntary also. The main

purpose of the NPP was to provide basic economic security after retirement for the remaining three million plus people in Taiwan who have not been covered by either one of the three major retirement programs, namely, the GESSI, the LI, and the Serviceman Insurance (SI). The structure of the NPP was a gradual fully funded system, PAYG to begin with.

With the successful implementation and relatively high level (about 70% consistently) of popularity, especially in the part of the general public, of the NHI, a consensus on reforming the existing pension systems, in terms of its coverage and enrollment, was reached by both the private and public sector. The timing was right in this regard. On the other hand, in light of existing social insurance programs, the funding arrangement of a more comprehensive pension or retirement program will certainly add to the already heavily indebted government finance a higher burden.

The NPP was originally submitted by the Council of Economic Planning and Development to the Cabinet in 1998 with a designated implementation year in 2000. A new proposal was later proposed by the Cabinet inaugurated after the 2000 general election. The new proposal consists of two plans: one a contributory scheme such that premium will be collected for the insured; alternatively, the non-contributory scheme shouldering the whole financial cost on general tax collection of the government, basically, the central government, such that a raise in the Business Tax rate to 6 or 7 percent from the current 5 percent, will; be needed to finance the program. However, the proposal had been frozen by the administration from submission to the legislature for discussion and passage for six years. At the end of last year, it began to defrost.

Reforms in the existing public retirement programs were planned and implemented recently. A new labor retirement plan to increase the replacement ratio for those covered by LI was established in July 2005, followed by a proposal to cap the replacement ratio on GESSI beneficiaries, in addition to a possible increase in the contribution rate of the PSPF in order to narrow the deficit in future benefits and contribution collection. The size of financial gaps of the national health insurance had also reached a level that a raise in premium is urgently needed to save the system from going bankruptcy. A rather comprehensive reform proposal under the title of "Second Generation of the National Health Insurance System" (or Second Generation National Health Insurance) is proposed for consideration and review. In addition to retirement and health benefits, a social service particular relevant to the need of the elderly, the long-term care service (LTC), services provided in times of disability, had among the high priority items when considering welfare programs to be needed in the future by the government. Together with the LTC program, the elderly in Taiwan will be protected by income, health, and disability security, close enough to a welfare state.

The mandatory GESSI in Taiwan began as early as 1958. The original insurance was basically a PAYG mixed system providing old-age, survivor, and medical benefits. Since 1995, the medical insurance part was integrated into the NHI. The current format has all government employees, not including those in military service, in government agencies, teachers, faculties and staffs in public schools, and private schools, which have fulfilled the requirement set by the educational authorities in the central and local government. The current premium rate is set at 7.15%. Premium is calculated based on the insured monthly payroll, which is about 40 to 50% of average total pay to the employees. Premium is collected from both the employers and the employees, by 65 % and 35 %, respectively.

respectively. For teachers and staffs in private schools, the 65% will be paid equally by the government and the employees. Cash benefits are provided for old-age retirement, birth, disability, and survivors.

A new type of retirement benefit, mainly in the form of a pension was established from 1995, that is, the Public Service Pension Fund which covers all employees in the government's payroll, including military personnel. The fund is functioned as a replacement of the GESSI old age benefit. For the GESSI insured, old age benefit at their retirement will consist of two parts: before 1995 and after 1995. For those joining the GESSI after 1995, their old age benefit will be covered by the PSPF.

In PSPF, an 8 to 12% contribution rate on monthly income (more exactly, 200 % of the base salary, which amounts to about 85 to 95 % of the total pay), but the actual burden on the insured is only 35% while the rest will be paid by the employers.

The Labor Insurance (LI) in Taiwan was established since 1950, aiming at the provision of basic, minimum economic security for retired workers in the private sector. It is a mandatory insurance for all employees not in the government sector, except for workers who only take temporary or part-time jobs and are not members of labor unions of any forms. The LI is the largest occupation-related social insurance in Taiwan in terms of its enrollment. Cash benefits provided in the LI include maternity, sickness and injury, disability, old-age, survivor and unemployment, where the last item was added in 1999. Two types of insurances are combined in the LI: the regular insurance and occupation casualty insurance. For the former, a flexible premium rate on monthly income received from the insured job between 6.5 and 11 % is applied for all insured, with the current rate set at 6.5 % for those covered by unemployment benefits, and a one percentage point discount is yielded to those not covered. For occupational casualty, risk factors are applied to determine the premium rates, ranging from 0.29 to 3 %.

Premium is collected according to the insured monthly salary of the insured, with a minimum level equal to the minimum wage set in the Labor Standard Law and also a ceiling, TWD 43,900 presently. On average, the insured monthly salary is about 80 % of the average monthly pay counting all cash income and fringe benefits. In most of the cases, namely, the insured working for definite employer, the employers, the employees, and the government share the financial burden by a distribution ratio of 70 %, 20 % and 10% in the regular insurance component; for the occupation casualty component, the employers solely bear the cost. Distribution ratios are different in other cases.

A second pillar retirement benefit for those covered by the LI is provided via the Labor Retirement Fund as stipulated in the Labor Standard Law enacted since 1984. Under this Law, employers are required to set up and contribute solely to an employee retirement fund reserve account. This retirement benefit is not portable such that workers changing their jobs, voluntarily or involuntarily, will bear the risk of losing the benefit. In reality, a very high percentage of employers have failed to contribute according to the law to this account.

After three or four years of study, discussion and solicitation, the Labor Pension Act was passed by the Legislation and began to operate since July 1st, 2005. In this Law, a more flexible arrangement of retirement benefits for workers insured in the LI is provided. Since the existing LI and Labor Retirement Fund provides retirement benefits for the insured, options on staying in the original LI retirement scheme, or shift to the new system are open to the LI insured workers under the condition that they work with the

same business. All new workers or workers changed their job are required to join the new system.

Two retirement accounts are created for each individual worker under the new program: Individual Account (IA) and Special Account (SA). The IA is a forced saving account for each qualified workers where contribution from the employers at a rate of not less than 6 % of the individual's monthly salary, and contribution from the employees is voluntary at a rate not higher than 6%. A lump-sum retirement benefit equal to total accumulated contribution plus earnings of the account, can be claimed at the age of 60 with less than 15 years of work seniority. In addition, survivor benefits will be paid in case of death before the retirement. Workers with 15 years or more work seniority will receive monthly pension benefit. The specific amount of the monthly installation is determined by factors such as life annuity chart, average life expectance and predetermined interest rates.

The SA is created by voluntary contribution by the workers in additional to the mandatory employer's 6% contribution. A maximum of 6% of the worker's monthly salary can be deposited into the SA and deductible in filing the individual income tax return.

The recent Labor Pension scheme requires the employer, or the enterprise, to bear the financial burden completely which means an increase in labor cost. Some employers react to this cost increase by shifting a portion of the contribution to the workers by lowering the wages, or cease to grant pay raises. Some even argue that the increase will cause an acceleration of capital and investment outflow to the mainland and other countries.

The proposed NNP combined basic pension benefits with other welfare measures to the elderly. For those over 65, persons eligible for Low-Income Aged Subsidy, Aged Farmer's Living Allowance, and veterans in caring institutes will not be affected in terms of their present level of benefit. For senior lacks of any types of public assistance, under a rather generous means-tested procedure, a monthly welfare allowance of TWD 3,000 (adjusted for the average of inflation rate and growth rate of real wage in subsequent years) will be disbursed. For those who had already received retirement benefits from various social insurances, the actual amount paid will be deducted according to the benefit received in these entitlement programs.

Persons between the age of 25 to 64, including social insurance retirement benefits recipients, not in the labor force, or not enrolled in any one of the four social insurance schemes, are required to join the NPP. They will have the option to join the program voluntarily in the first year of the plan. But in the third year, enrollment is compulsory.

Employees between the age of 25 and 64, not covered by GESSI, SI and LI will be forced to join the program. Farmers already covered by the FI can stay with the original system which will fade away as farmers below the age of 25 are all required to join the NNP.

Monthly benefit of pension in NPP is determined as 1.2% times the year of enrollment in the program and the monthly insured payroll. For example, a TWD 7,500 pension benefit will be disbursed to the eligible who has stayed in the program for 40 years. This amounts to a replacement ratio with respect to the minimum wage at about 50%. Cash benefits for old-age, survivor, disability and maternity are available.

Financial costs of the NPP are designed to be shared by the insured and the

government, and the employers in its original format. The 2006 Conference on Sustaining Taiwan's Economic Development just concluded at the end of last month (July) had reached a conclusion that the burden will be on the insured and the government only such that it will not add further cost on labor input for the business sector. Government subsidies to insurance premium chargeable on the insured vary from the normal 40% to 55%--100% for low-income insured, and disabled of different degrees. The needed fund will be financed by an 1% point increase or surcharge in the VAT as well as earmarked revenue from the sale of public interest lottery.

The proposed NPP provides income sufficient for a subsistence consumption level for individuals after retirement, the first pillar in the World Bank's scenario. In fact, second pillar occupation pension is available to workers on the government's payroll. To insured protected in the GESSI and SI, NPP is unattractive at all as a substitute of the existing insurance schemes. Hence, the "integrating existing public retirement programs" function of the NNP has been denied.

In 2002, aiming at saving the NHI from deeper financial difficulties and other improvements, the government established a task force on the reform of the system and is called The Second Generation of NHI. After thirty months of studying and related administration process, a comprehensive reform proposal was accepted by the government and a draft of revision of the National Health Insurance Law had submitted to the legislation for review and discussions. Main elements, with respect to the financing aspect, of The Second Generation of NHI include:

1. Premium collectible from the insured, or the family or household, will be calculated based on gross family income (before taking deductions and exemptions and adding back income not subject to tax) as defined in the individual income tax law rather than monthly payroll which is not a good indicator for the ability to pay of individual insured. For most families, equals will be treated equally, and un-equals will be paying their premium unequally. Both a maximum amount and minimum amount payable will be imputed to maintain the social insurance property of the NHI.
2. Both the government and the employers will still have to bear their shares of the premium but their payments are calculated according to formulas which are less dependent upon the spending of the system highly affected by the behavior of moral hazard in medical insurance. For the part of the government, once the share of cost on the government is calculated for the year prior to the implementation of the second generation of NHI, growth rate of government funding in insurance premium revenue will be the average of mean GDP growth rates and mean personal medical spending growth rates in the previous three years.
3. For the business sector, again a three year average ratio is applied. For the year of implementation of the new system, the base share on the business or employer is imputed by taking the total contribution by the employers in NHI premium as a percentage of total payrolls in the previous three years. This base share, represented by a percentage, will be fixed for the employers and be independent from any later adjustments on the premium rate determined by the insured. The employers will contribute to the system a fixed percentage, the base share, of their total wage bills.

4. Financial accountability is strengthened in the part of the insured. They as a group will have to pay more in case of higher utilization of medical services or that broader coverage of services are required by the insured. Premium rate will be in line of needs and spending. Since premium contributed by the government and the employers are both pre-determined, subtracting additional revenue from the appropriation of sales of public lottery and the surcharges on tobacco tax, annual revenue needed to finance the system given a specific coverage plan and co-payment schemes can be estimated. The premium base is given by gross family income. Simulations on different sets of floors and ceilings can be performed to give the premium rate payable by the insured. Most importantly, the particular coverage and co-payment mix is determined by the insured themselves. Widening of the medical service provided by NHI will imply an increase in premium rate and/or co-payment. It is the insured that is responsible for making the decision on the NHI what they demand from and they have to pay for. Accountability is the essence of the reform.
5. To enhance transparency of the system, large contracted hospitals are required to submit annual operation and financial reports to the Bureau of National Health Insurance (BNHI) or Department of Health. Non-submitting or false submission will be subject to penalty or even termination of contracts. Without sufficient, correct and updated information, it will be difficult to locate the fair prices paid for services which can maintain reasonable profit margins for the contracted institutes and in the meantime, will not hurt the cost-effectiveness in service purchases of the BNHI.

To reduce individual or family risk in demand for the costly LTC service, a task force on planning for the future LTC service system in Taiwan was set up by the Ministry of Interior Affairs. Finances which included discussions on estimating future needs, provision cost of the service, and design and comparison of different forms of financing are a major part among the agenda of the task force. Key findings in the financial plan are as follows:

1. In 2006, an estimate shows that 2.87%, or 660,000 people of the total population in Taiwan are disabled persons who will require LTC service. An additional 600,000 people, 5.38% will need LTC service in 2031. The projection predicts that for the first five year period, 80,000 more persons will require LTC service, for the second and third five year period, 110,000 more will be added each time. From 2021 to 2025, and 2026 to 2031, 150,000 persons higher each period. Age distribution estimates on the disabled show higher and increasingly higher percentages of them are from the elderly. In 2006, 52.89% of the estimated 660,000 are from age over 65, and the percentage climbs up to 54.77% in 2011, 59.44% in 2016, 64.61% in 2021, 70.20% in 2026, and 74.73% in 2031. It is clear that as the population gets older, demand for LTC service will inevitably increase.
2. Three separate forms of provision with public intervention to the LTC service market are proposed and studied. Estimated demand in terms of expenditure from 2006 to 2031 amounts to 0.5% to 0.62% of GDP which is assumed to grow at a flat 2.5% annually if an independent social insurance LTC system is adopted with universal coverage for all and 10% co-payment. In case of a

National LTC Service Scheme such that service will be provided by the government with a 10% co-payment charge and tax financing, the expenditure to GDP ratio will be lower, 0.31% in 2006 and 0.56% in 2031. Finally, if LTC service is integrated with the NHI, the same level of expenditure needs as in the social insurance system is assumed.

3. If a social insurance plan is implemented, in 2006, the monthly premium on a double-income four persons household is TWD 312, about 0.42% of disposable family income. This premium charge is calculated based on the assumption that total contribution will be shared by 40%, 20% and 40% between the insured (households), the employers, and government.
4. The financial burden on the government in 2006 will be TWD 21.5 billion, 1.34% of the central government budget in the same year, or 7.25% of total central government social welfare expenditure. An increase in the VAT rate by 0.5% will be able to cover the spending need.
5. LTC administration cost will be lower if the social LTC insurance is operated by the BNHI. However, the two social insurance systems should maintain financial independency to address to the principle of accountability of the two systems which secure the insured form different types of risks.
6. Should the social insurance option be rejected and the service be financed with general tax revenue, the budget demand in 2006 will be TWD 33 billion, 2.06% of total central government outlays, or 11.13% of total central social welfare expenditure. In 2031, the financial burden will be TWD 112.3 billion, two times more than the burden under the social insurance format.
7. Presently, the availability of non-institutional and institutional services seems to be sufficient to meet the demand, given the current price and charge conditions. Foreign workers, some of them may lack the necessary skill, are allowed to work in this industry. It is generally believed that an increase in demand due to the establishment of a public LTC service program can be satisfied by a corresponding increase in supply if the price or reimbursement system more or less reflecting the equilibrium market price. However, the lack of well-trained and qualified workers which has now been a problem may affect the quantity and quality of the service provided.
8. Results from several waves of opinion polls reflect that out of the three proposals, none receives a simple majority support. The ratio of opposition on the tax financing scheme exceeded 50% which may be a straight reaction by the people on any possibility of tax increase. A majority of consulted experts supports the social insurance plan while a few experts stand behind the tax financing plan. None of the experts surveyed is for integration.

A welfare state for the elderly can by no means be arrived at low cost. Discussions of financing these existing or planned programs in this paper remind the government and the private sector that there is no free lunch. Efficiency or at least to have the system be sustainable financially will require the following principles:

1. Clear assignment of financial means
Financing arrangements of Taiwan's NNP and social LTC insurance system are both clearly identified in the planning process. The expected total burden to the government and the public and their relevant shares must be estimated as to

evaluate the feasibility, efficiency and equity implication for different variant of each program. For the government's share, whether the additional revenue needs be financed by crowding out of other spending, by increases in tax collections (in what taxes if so), or by other types of non-debt related means must also be assigned. Meaningful welfare analysis on proposed programs can only be obtained with a clear financial plan.

2. Shared responsibility among the government and private sector

As discussed, all three social welfare programs in Taiwan will have their costs shared by the government and the private sector, where both the NHI will have the share on the private sectors distributed to the employers and the employees. It is natural to have the insured, that is the beneficiaries, to bear the cost since they are the ones being protected by the systems, but why do the government and the business sector? Both the merit goods and externality arguments are suggested to argue for government intervention and financed, at least partly, of the health and pension systems in addition to the most frequently accepted redistributive role. As for the business sector, paying a part of cost on the employees may simply induce no additional financial burden if full cost shifting is possible. In case that only a partial shifting is expected, a working force of better health status and higher productivity will certainly benefit the employers as well. It is fair to compensate for the opportunity of having a more productive labor force.

3. Enhancing Accountability

A new element of accountability is stressed in the reform of the NHI in its cost sharing formula. The NHI system will have the government and the enterprises paying their parts of the premium according to different formulas and adjustment mechanism not directly related to the expenditure in benefit demanded and provided. If the insured demand or consume higher quantity and quality of the service, they have to bear additional costs thus induced. It is the insured, or the major player of the game, who have to determine what level of spending they would like to enjoy and correspondingly, what level of cost, the premium rate they have to face. With this new format, the insured can no longer free-ride on the government and employers. The insured will be held accountable for their decisions. This new scheme can not solve the problem of moral hazard in medical insurance, of course, yet when the consumers have to face higher prices when they increase their demand, the mechanism of the law of demand will perform. Demand will then be lower than if the price is heavily subsidized by the government and the business. Even if the consumer has very low price elasticity in medical service consumption, at least the financial status of the NHI system will not be hurt since the additional cost will be recouped through the adjustment in premium collection. As for the social LTC insurance system, it is still highly uncertain on whether it will be implemented or not, but, the element of accountability will certainly be a major part of it if it is chosen to provide needed service for the elderly in Taiwan.

4. Financial Transparency

Contracted institutes in NHI are required to disclose their financial information in the reform of NHI. Actual costs of operation which will affect the level of

reimbursement in service provision to the insured must be known by the BNHI as to adjust the price paid for the purchase of service and also be known by the insured in order to persuade them to accept a premium raise. Auditing of the correctness and thoroughness of the disclosed information will be performed if necessary to ensure the availability of true information. An addition function of the mandated financial information disclosure is to promote peer competition or learning in the medical market. A hospital may compare itself with other hospitals of the same group in terms of scale, specialty and location, and look for ways for further improvement.

5. Promotion of higher fertility

The problem of the rapidly ageing society is a result of two events: longer life expectancy and fewer births. It is hard to deal with the first cause since it may actually be a blessing to the population. It is the second reason that the society has to work on. In response to a declining birth rate, the government should develop an environment that is conducive to child bearing, raising children and providing quality education. In addition, a mechanism for providing support for parents, working or not working, when they take unpaid parental leave and for childcare will also help cut down the opportunity cost, or the price of having children.

Introduction

The official population projection in Taiwan predicts that in 2007¹. The share of population above 65 will reach the 10% level, and this share will double within a 21 years period, to 20.44% in 2026. As compared to Taiwan, Japan took 24 years, Finland 48 years, Germany 54 years, and Sweden 85 years to attain the same degree of ageing. The projection also indicates that in 2041, the old-aged population share will climb to above 30%, and almost 35% in 2049. Meanwhile, the elderly dependency ratio projection, the share of population above 65 to population between 14 and 64, will be 1 to 5 in 2019, as compared to 1 to 7 this year. This burden will increase to 1 to 3 in 2028, 1 to 2 to 2041 and at the end of the projection period only slightly more than one and a half worker will support every elderly person.

As one of the most rapidly ageing economy in this region, what are the challenges facing the government and the society? Do these challenges bear unique elements given Taiwan's specific socio-economic and political conditions? What are the policy options in the hand of the government to meet the demand in delivering and financing public services called upon by the changing population?

To answer these questions, this paper aims to discuss the relationship between Taiwan's rapidly ageing population and the related fiscal policy changes, most of them reflecting possible changes in spending and taxation policies in association of building a broader social security system for the elderly.

Health risk of the elderly in Taiwan is protected by a social health insurance service, and at least three fourths of retired workers are covered by either one of the retirement programs or old age allowance schemes. To cover the rest of the population for income security after withdrawing from the labor market due to age factor, a National Pension Plan (NPP) is proposed by the government. Before the due procedure begins in the NPP legislature, a new defined-contribution labor pension plan was agreed upon by the legislature and was put into effect on July 1st, 2005. Millions of workers of the private sectors are affected and supposed to be better protected for retirement life. The last protection available in the welfare state for the elderly is a formal long term care service scheme where a compulsory social insurance plan is one of the options considered by the government. These three parts of the public safety net for the elderly in Taiwan will be the focus of the following discussion.

This paper is divided into following parts after the introductory section. First, in section two, to provide basic information, a brief review of socio-economic conditions in Taiwan over the last 15 years and the demographic trend as well as projected population development will be given. The third section discusses the various retirement schemes currently implemented and latest development in the reform of the government employee program, and the newly established labor pension fund. Major elements of the proposed NPP will also be given. The Financial proposal on National Health Insurance System (NHI), the so-called "Second Generation of the National Health Insurance" will be in section four², and details of the Long-Term Care Service Plan are provided in section five. The last section briefs our findings and also the policy implication of this study.

¹ Please refer to reference for websites providing relevant statistics reports.

² Officially, it is called Second Generation National Health Insurance (Department of Health, 2004.)

Basic Economics and Demographic Development in Taiwan

Economics

The total area of Taiwan is 36,000 squared kilometers of which less than 0.4% (127 squared kilometers) is occupied by the Penghu archipelago. Taiwan situates between longitude 124o34'09" and 119o18'03", latitude 21o45'18" and 25o56'21". Total population of the Taiwan area is, at the end of 2004, 22.6 million. On average, more than 620 people lives in a squared kilometer over the whole area, yet, the population density on cultivated land exceeds 2,500 people per squared kilometer. The annual population growth rate had declined to at most 1 % since 1990.

Table 1 gives some macroeconomic indices of the last 15 years.

Entering the 1990s, economic growth of Taiwan maintained its momentum but at a lower rate. As shown in Table 1, the average annual growth rate of real GNP fell to 6.3%, lower than the 8.1% in the 1980s, and significantly lower than the 9.4 % in the 1970s. The slowing down of economic growth was more evident if per capita GNP in US dollars is used as a measure since the domestic currency, the New Taiwan Dollar (TWD), had depreciated against the dollar from 1992. Following the 1997 Asian Financial Crisis, the TWD dived heavily along with currencies of other Asian economies. An unprecedented negative rate of growth, at -2.18%, was recorded in 2001. The economy recovered since then with a higher than 6% rate of growth in 2004. As for 2006, the latest projection of real rate of economic growth is 4.3 to 4.5%.

Aggregate saving ratio as a percentage of GNP in Taiwan stayed at relative high levels in the last decade, but it slid down steadily mainly due to existence of huge amount of government budget deficit since 1992. Excess savings in the private sector was noticeable if we compared the saving ratio with the investment figure. Growth rates of fixed capital formation as a whole dropped to a recorded low 1.7% before the 1997 Asian Financial Crisis, then bounced in the following two years, again fell to another low of 1.85%. From 1999 to 2005, in four out of seven years we experienced negative growth rate of private capital formation. In 2001, it was -29.2%, the key factor behind that year's economic recession. Two reasons are given to explain the disappointing private investment activities since 2000: the relocation of the manufacturing plants in Mainland China by Taiwan enterprises and the worsening of the investment environment in the island.

The slowing down of investment also took place in the public sector which decided investment in infrastructure by local and central government, as well expansion in plants and facilities by public enterprises. The slugging public investment activities reflected the shortage of fund available to the heavily indebted government and other hindrance, such as resistance from local residents to any public construction projects, encountered in public investment on transportation systems and environmental conservation and protection facilities.

Summaries on government finance statistics in Table 1 clearly showed nothing other than the incapability of the Taiwan government in its fiscal management. Over the years, the tax burden, measured by total tax revenue collection as a ratio of GDP fell from a peak of 18.83 % to a low of 11.7% in 2002, the lowest among major industrialized and newly developed economies. A comparatively low tax collection ratio, even the government had been working very hard to control and to cap the public spending level,

unavoidably resulted in an ever-increasing outstanding debt level for the government. As a percentage to GDP, government unpaid debts in forms of public bonds and borrowings from the commercial banks,⁷ has inflated by four times, from 5.84% to over 25% at the end of the decade. During this period of financial difficulties, current government deficit amounted to as high as 6.1% of GDP in FY 1999, double the 3% limit set for the European Community countries. Fortunately, the fiscal gap does narrow down slowly since, after a series of spending control programs and accelerating sales of government-owned assets including land and equities of public corporations.

Fiscal stance of the government after 2000 was actually getting worse. In 2001, a negative rate of growth is recorded; both domestic investment and value of international trade dropped by more than 10%; actual tax collection fell short of the estimated figure by TWD 70 billion, or by more than 7%, thus widening the deficit gap in the budget. These negative economic signals pushed the government into a paradox in decision-making. On the one hand, expansionary fiscal policy might be needed to help simulate the sluggish economy, yet, it will further increase the level of public debts. Even if the government decides to take the risk on trading-off of economic growth with expanding deficit, the ceiling on the level of borrowing in the Public Debt Law, a 15% limit of annual borrowing to the level of spending for all levels of government left very small space for further deficit financing. On the other hand, if slowing down of the economy is mainly induced by external factors, such as the soft landing of the US economy which happened to be the most important exporting partner for Taiwan's computer chips and 3C products, domestic stimulating policy can offer little, if any, help. Additional weakening of the fiscal stance by higher spending and, or, lower tax collection, might merely result in more serious problems in inter-generational transfer and rigidity in future public spending.

During the last 15 years, price inflation has never been a major issue in Taiwan's development process. Especially after 1997, price level only changed minimally, but no evidence of deflation was found either. The stability of price level was also showed in the decreasing rediscount rate set by the central bank. However, both the rate of price inflation and rediscount rate bounced to higher than 2% in 2005, suffering from the international petroleum price hike.

The rest of Table 1 reports selected social indicators in Taiwan. Labor participation rates for the female increases steadily over the years with an opposite tendency of the male. The total labor participation ratio decreases slightly. The unemployment rate, as the economy grows at a lower speed and higher ratio of the work forces is engaged in the non-agricultural sector, shows an upward trend. In 2000, the three percent unemployment rate was in fact almost doubled that in 1991. The employment condition deteriorated further recently. In 2001, the unemployment rate climbed up to 4.57%. The induced increasing demand for higher government spending on unemployment relief and other welfare items had put heavier burden on the already indebted finance.

Finally, a measure of income distribution inequality, the average income of the wealthiest 20% households as a multiple to that of the lowest 20%, the so-called Oshima Index, shows that income distribution in Taiwan has been worsening since 1995 to 2001, the year of negative rate of growth.

Government Levels and Responsibility Assignment

The vertical tier of functions and powers in ROC on Taiwan is guided by the

Constitution such that the government, before the 1998 constitution amendment, was organized into three levels: the central level, the provincial level, and the county/city level. Within the territory currently under control of the Republic of China, there are two provinces, namely the Taiwan Province and the Fukien Province. Sixteen counties as well as five cities are included in the Province of Taiwan and two relatively small counties are within the Fukien Province. In our political system, different numbers of subordinate cities, urban town and rural town (all three of them are formally called township offices, not government since their autonomous power is not clearly stated), classified based on the size of residents, fall under the jurisdiction of the 18 counties. However, their legal status is not explicitly stated in the Constitution. Presently there are a total of 309 cities, urban towns and rural towns in the 16 counties of the Taiwan Province and ten subordinated cities and townships are included in the Fukien Province.

Relatively populous cities not on the scale of the Taipei and Kaohsiung City, which we will explain in next paragraph, are termed “cities directly under the province”. These cities are subdivided into districts. In the Taiwan Province, there are five such provincial cities.

Parallel to the province, there exists two special municipalities or special cities or “cities directly under the control of the Executive Yuan (the Cabinet)”, namely, the Taipei and the Kaohsiung City. These two cities are the largest and most populous cities within the territory of Taiwan and undoubtedly enjoy better financial situation than the province due to special financial privileges granted by the central government and more satisfactory economic conditions with clustered industrial and business activities.

The 1998 constitutional amendment put the Taiwan Provincial Government into sleep by confiscating all its functions and responsibilities. With a revision of the tax assignment law, no autonomous tax revenue will be collected by the provincial government. Provincial elections were abolished. As a result, a two-tier government structure prevails.

Economic theory provides clear guidance for expenditure responsibilities among different tiers of government in an abstract world. The three fiscal functions of the public sector suggest that a certain public good or service should be provided by the level of government that most closely represents the region that benefits from such good or service. Based on this benefit principle, pure public goods can only be provided by the national or central government on efficiency ground while for impure public goods which can only benefit persons living in a given state, province, city or township, decentralization of relevant expenditure decisions is desirable for allocative and administrative efficiency. Besides the economic goal of allocative efficiency, the remaining functions of macroeconomic stability and redistributive equity both require centralized administration and centralized policy.

In real world, in supplying goods to the public, governments do not always follow the above principles. Public goods of limited benefit regions are sometimes provided by the national government, owing to, for example, the existence of externalities. Redistributive programs carried out by local governments for the aged, low-income and disabled, with or without central coordination, can easily be found in developed and developing countries.

In Taiwan, foreign relations, defense, currency, goods and services usually cited as examples of pure public goods are assigned to the central government. In addition, we

have uniform judicial and legal systems across the country since they are responsibilities of the central government. An identical educational system, or more precisely, school system, is administrated in Taiwan as provided in various laws passed by the Legislative Yuan. Primary and secondary public education are supplied by Taipei and Kaohsiung City, while in province, counties and cities are responsible for the supply of primary and junior high education with the last three years of secondary school provided by the counties, cities or directly by the central government. Public college and post-graduate education is mostly financed by central government budget and subject to central supervision³.

Overlapping of responsibilities among tiers of government is naturally expected, such as the case of social welfare and social assistance. Nevertheless, water and public transportation enterprises, tourism, construction management, etc. are pure local government responsibilities in Taiwan's present government structure.

Since the 1990s, local government units had begun to adopt a more generous policy toward social assistance for the aged and needed residents. Some of the counties and cities, even dependent heavily on upper level government grants already, were involved in a "war of welfare competition." Monthly allowances were given to people above 65, without any form of means-tested, and uniform subsidies to children under the age of 3 on registration fee charged by medical institutions contracted with the NHI are provided in several local units.

Demographic Trend and Projection

High fertility rates in Taiwan during the 1950s, a period after the civil war and baby boom, began to decline entering 1960. Total fertility rate (TFR) fell to less than 3.5% in 1972, mainly due to a series of remarkably successful birth planning campaigns. With the rising of labor force participation of the females, another 10 percentage drop in TFR was attained in 1983 when the government decided to review seriously should the active population control policy focusing only on reduction of the number of births be appropriate given the apparent socio-economic changes. In the 1990s, the government decided to gradually replace the "two is just good but one is not bad" policy by "two is good" and later "two is good but three is blessing". Lately, direct cash subsidy plans for having babies are proposed by several city and county governments given the fact that the TFR had fallen to 1.180 in 2004, an 83.23% reduction from the 7.04% level in 1951 as in Figure 1.

Three reasons are frequently discussed to explain the steady falling of fertility. First, postponement of childbearing as shown on mean age of childbearing increased from an average of 25 years in 1960s to 28 years since 1998. Second, it was the decrease in marriage rate such that in each age cohort, the percentage of females with marriage status single increases rapidly in the last twenty years⁴. Finally, for marriage women, they had their desired number of children decreased, partly because of a higher female labor

³ The two laws governing the status of the self-government of sub-national regions have provisions related to the establishment of universities and colleges administered by local governments. Therefore, in addition to the Taipei Municipal Normal College, later called the Taipei Municipal Normal University, which was established before the year Taipei became a special city, Taipei County and Kaohsiung City, and other cities also, had make considerable effort to establish and finance their own universities.

⁴ For example, in 1980, the percentage of "single women" in age cohort 20-24, 25-29, 30-34, and 35-39 are 59.4, 19.6, 7.7, and 3.9, where in 2004, all percentages increase, up to 89.5, 59.1, 26.9, and 14.8 respectively.

participation rate resulted from higher education level, increase in women's right, etc., which will push up the opportunity cost of childbearing and caring, and partly because a change in the attitude of gender discrimination among the children.

Figure 2 and 3 depicts the trend of population in Taiwan in the same period. Over the past fifty some years, the natural rate of population growth, the gap between crude rate of birth and crude rate of death declined steadily. It was slightly over 3.0% in 1962, dropped to less than 2.0% in 1972, then fell to lower 10% since 1993, where in 2003, it was at its lowest level of .427% and the actual population growth rate was 0.37% taken into account the net emigration effect. These changes reflected a continuous decline in crude birth rate and a U-shaped distribution over the years in crude death ratio.

The process of ageing in Taiwan's population can be seen in two indices: life expectancy in birth and the ratio of elderly, both representing the factor of numerical ageing and structural ageing. For the male population (Figure 4), life expectancy at birth exceeded 60 years since 1954, 70 years in 1984, and the latest estimate was 73.33 years in 2003. The females, as in other countries, has a gender advantage over the males in life expectancy by 4 years in 1950 then extended to 5.5 to 6 years entering 2000. The ageing of the population can also be shown by the median age which increased from 19.5 years to 34.2 in 2004. As the elderly lives longer and the number of births become smaller, the ODR naturally rises. For the past fifty some years, Figure 5 and 6 gives the age distribution and both the old-aged dependence ratio and young-aged dependence ratio. The ODR curve clearly tells that the burden of supporting the elderly is increasingly higher on the working population which may take the form of higher taxes in a PAYG pension system, social insurance plans for the elderly, or social assistance financed partly by income taxes. Should caring of the elderly be basically the job of the family, the effect of a heavier burden is more significant. As for the YDR, the decreasing birth rate is reflected in the falling curve where the hum over the beginning one third of the period signaled the period of baby boom.

Assuming the TFR bounces back to the level of 1.215 and maintains at that level for the next half century, the official population projections for Taiwan reveal that in about 16 years, total population will reach the peak of 23.69 million persons and stop growing. The gap between the TFR and replacement rate causes an increasing negative population growth rate. In 2034, the total population will begin to shrink by 0.5% annually, and at the end of the projection, the population size is estimated to be 19.59 million, about the size of 1987.

The proportion of population over 65 will exceed 10% next year, 15% in 2020, and when the population ceases to increase, it will have already exceeded 26%. According to the CEPD projection, at the end of 2051, the old-age ratio in Taiwan will be 35.47%. Projection data in a five-year interval are provided in Table 2 and 3. We can see that persons in the working ages constitute merely 55% of the total population, a 15% drop from 2004 at the end of the period. Again, the ODR continues to rise such that in 2020, on average, one elderly is supported by less than five working age persons. The number will become less than two in 2045 and 1.6 in 2051. The total dependence ratio, including both ends of the age distribution of the population, will be close to 80% in that year.

The high ODR is a result of two factors: declining birth rates and longer life expectancy. We have explained briefly the reasons for a falling birth rate earlier and a longer life expectancy basically demonstrates an improving health status among the

elderly, perhaps induced by a better and boarder medical service system, and a more costly one also. Projected life expectance reaches 75 years for the male in next year and increases slowly to over 79 years from 2030, while in 2007, female life expectance will be 80.72, 85 in 2018, and levels off at 86 after 2042. The mean age of the population, beginning at 35 in this year, will exceed 40 in 2016, 50 in 2034, and at the end of the projection, it will be 55.6.

Financial burden on provision of retirement living such as a comprehensive national pension system, or alternatively, an old-age allowance program, will be one of the major problems facing the society and future taxpayers. The financial burden has its numerator link to the cost of medical and income security benefits for the elderly, and its denominator is related to the tax base. The tax rate must change in proportion to the changes in ODR if the benefit delivered to each of the elderly is kept intact even the ODR increases.

Unfortunately, entering the 1990s, Taiwan's fast economic growth disappeared which partly explained the weakening of the government's fiscal stance. In addition, demand for higher public spending in areas of social services increased significantly which the government could no longer ignored given the high-speed development of political democratization. Unfortunately, the deficient tax system was not able to generate sufficient revenue to support higher expenditure needs. Massive central government budget deficits were covered by borrowing and issuances of government bonds, while the local government became more and more dependent upon central government transfers on their operations. With the implementation of the NHI, a mandatory, comprehensive health insurance scheme, in 1995, a pension system for those neither covered by the public employee insurance plan, nor by the labor insurance was the next one in line. However, the expected additional financial burden on the government was huge even if the national pension system had been designed to take a social insurance form. A formal proposal of a national pension insurance system was drafted until 10 years later in the end of 2005.

Public income security provided for the elderly and retired in Taiwan takes various forms depending mainly on the occupation of the benefit recipients. Different insurance systems and retirement schemes are established for government employees, servicemen, laborers, and farmers. In addition, to veterans and low-income aged persons, special programs are available to provide cash payment or in-kind assistance. The latest statistics shows that slightly higher than half of the population, are covered by one of the various insurance schemes, retirement fund programs, or social relief plans implemented by the central or local government. Besides public support, economic needs after retirement are also met by personal savings and family support in Taiwan, as in most Asian economies. After the successful implementation of the National Health Insurance (NHI) in March 1995, a general, or alternatively, a supplementary system for those not covered by the existing plans and schemes, on providing economic safety after retirement became the focus of social welfare policy in Taiwan.

A proposal of a universal National Pension Plan was completed by a task force set up by the government in June 1998. The essence of the plan was to establish a first pillar social security system for all in Taiwan to meet their basic needs. Government employees have a separate, much more generous, security system jointly provided by the Government Employees' and School Staffs' Insurance (GESSI) and the Public Service

Pension Fund (PSPF). In the original proposal, even integrating the existing systems was one of its main characteristics, they were granted the option to join the new NPP or to stay in their original program. As for workers already enrolled in the Labor Insurance (LI), their participation was voluntary also. The main purpose of the NPP was to provide basic economic security after retirement for the remaining three million plus in Taiwan who have not been covered by either one of the three major retirement programs, namely, the GESSI, the LI, and the Serviceman Insurance (SI). The structure of the NPP was a gradual fully funded system, Pay-As-You-Go to begin with.

With the successful implementation and relatively high level (about 70% consistently) of popularity, especially among the general public, of the NHI, a consensus on reforming the existing pension systems, in terms of its coverage and enrollment, was reached by both the private and public sector.⁵ The timing was right in this regard.

On the other hand, in light of existing social insurance programs, the funding arrangement of a more comprehensive pension or retirement program will certainly add to the already heavily indebted government finance a higher burden.

The NPP was originally submitted by the CEPD to the Cabinet in 1998 with a designated implementation year in 2000. A new proposal was later proposed by the Cabinet inaugurated after the 2000 general election. The new proposal consisted of two plans: one a contributory scheme such that premium will be collected for the insured; alternatively, the non-contributory scheme laying the whole financial cost on general tax collection of the government, basically, the central government, such that a raise in the Business Tax rate to 6 or 7 percent from the current 5 percent, will be needed to finance the program. However, the proposal had been frozen by the administration from submission to the legislature for discussion and passage for six years. At the end of last year, it began to defrost.

Reforms in the existing public retirement programs were planned and implemented recently. A new labor retirement plan to increase the replacement ratio for those covered by LI was established in July 2005, followed by a proposal to cap the replacement ratio on GESSI beneficiaries, in addition to a possible increase in the contribution rate of the PSPF in order to narrow the deficit in future benefits and contribution collection. The size of financial gaps of the national health insurance had also reached a level that a raise in premium is urgently needed to save the system from going bankruptcy. A rather comprehensive reform proposal under the title of "Second Generation of the National Health Insurance System" is proposed for consideration and review. In addition to retirement and health benefits, a social service particular relevant to the need of the elderly, the long-term care service (LTC), services provided in times of disability, had among the high priority items when considering welfare programs to be needed in the future by the government. With the LTC program, the elderly in Taiwan will be protected by income, health, and disability security, close enough to a welfare state.

Structure of the new programs and the reform or remedial measures of the existing social welfare programs for the elderly in Taiwan and their relevant financial

⁵ Establishment of economic safety nets for sickness, after retirement and unemployed periods was stated as a national policy goal of the government since mid-1970's when Taiwan had recovered from the upset on its rigorous economic growth due to external shock activated by the first oil crisis. Since unemployment had had seldom be a topic of major concern, the next step after the NHI was logically aiming at a national pension plan.

arrangements will be discussed in the following sections.

Retirement and Pension Plans

In Taiwan, various government-administered or publicly implemented programs provide cash or in-kind transfers to old-aged or the retired. They may be in the forms of a compulsory social insurance scheme, social relief or social assistance, and special caring arrangement for veterans. Three separate insurance schemes set for different occupations, the GESSI, the LI, and the SI, provide retirement benefits to the insured. As in their current format, the GESSI and the SI allow its beneficiaries to choose between a lump-sum retirement benefit and a monthly retirement payment, similar to that of a pension, subject to eligibility conditions. Only lump-sum retirement benefit is provided in LI⁶.

In 2001, out of a total of 12 million persons between 25 and 64, approximately 3.84 million, or 32% were not enrolled in any public retirement programs. Adding the additional 450,000 persons over the age of 65 not receiving public retirement benefits of any kind, a total of 4.3 million persons would be the primary target group of Taiwan's current pension reform.

Not included in the social insurance schemes, a mean-tested old-age allowance, Aged Low-Income Family Subsidy, is available to persons over 65 classified as medium-low income (the average low income) individuals, and for farmers above 65, old-age living allowance is given without any other eligibility condition. Finally, in-kind transfer including housing, food and daily caring are provided by the Veteran Agency to veterans in need.

Old-age, retirement and other forms of allowance to the aged are part of the overall social security and social welfare service in Taiwan. Total spending in social welfare services from all sources in Taiwan in the past thirteen years (1991- 2004) increased at an annual rate of 11.67%, while social insurance spending had taken an increasingly larger share of the total amount. Social assistance or social relief shared as low as 4.69% (FY 1992) to a high of about 17.74 % (FY 2000). Spending on public health dropped continuously since 1996, mainly reflecting the implementation of the NHI.

Statistics also showed that in the 18 months period beginning July 1999, the elderly received a total of NT 350.4 billion, more than 11% of the total government spending, cash and in-kind benefits. Over NT 120 billion was disbursed in the form of old-age benefits and NT 135.9 billion, about one third of the overall medical benefit in the NHI, was utilized in health caring for the elderly.

Major social insurance schemes providing retirement benefits are introduced briefly as follows.

The Government Employees' and School Staffs' Insurance (GESSI)

The mandatory GESSI in Taiwan began as early as 1958. The original insurance was basically a PAYG mixed system providing old-age, survivor, and medical benefits. Since 1995, the medical insurance part was integrated into the NHI. The current format has all government employees, excluding those in military service, in government agencies, teachers, faculties and staffs in public schools, and private schools, which have fulfilled

⁶ A tentative proposal on reforming the lump-sum benefit to an annuity is suggested by the government, but no definite conclusion is arrived.

the requirement set by the educational authorities in the central and local government. The current premium rate is set at 7.15%. Premium is calculated based on the insured monthly payroll, which is about 40 to 50% of average total pay to the employees. Premium is collected from both the employers and the employees, by 65 % and 35 %, respectively. For teachers and staffs in private schools, the 65% will be paid equally by the government and the employees.

Cash benefits are available to the insured in the following three forms:

1. Disability Payment

A minimum of 6 times of the insured monthly payroll to a maximum of 30 times will be given to the insured in case of disability from sickness or casualties depending on the degree of disability.

2. Survivor Benefit and Dependent's Funeral Subsidy

Survivor benefit ranges from 30 times to 36 times the insured monthly payroll in case of death of the insured and 100 to 300% of the insured monthly payroll in case of the death of the parents, spouse and dependent children of the insured.

3. Old-age Benefits

Retirement benefits for the insured are computed according to both the insured payroll and the duration of enrollment. The mandatory retirement age is 65, which can be extended to 70 for certain cases. Presently, early retirements are encouraged for those over 55 and have been insured for over 15 years. This policy is subject to a critical evaluation lately due to the financial burden caused in the last few years. For each year of enrollment, 1.2 points (base units) is given, and a maximum of 36 points is allowed. For each point, one month of insured monthly payroll will be paid as the retirement benefit. The original format of retirement benefits is a lump-sum payment with a preferential 18 % interest rate on the amount of total retirement benefit if put on a special saving account. In the 1970s, the government decided to be more flexible, basically due to financial consideration that time, to grant the retired options of taking a monthly retirement benefits, or a lump-sum amount, or a mix of both. As increasing number of GESSI retirement choosing the pension form and life after retirement become longer as time passes by, the financial security of the GESSI has been in danger for some time.

As explained above, the GESSI is a PAYG and defined benefit system with an adjustable premium rate. Surplus or deficit in running the insurance are combined with the general government budget. Recently, it had been operated with annual deficits which were supplemented by general government revenue.

Public Service Pension Fund

A new type of retirement benefit, mainly in the form of a pension was established from 1995, that is, the Public Service Pension Fund which covers all employees in the government's payroll, including military personnel. The fund is functioned as a replacement of the GESSI old age benefit. For the GESSI insured, old age benefit at their retirement will consist of two parts: before 1995 and after 1995. For those joining the GESSI after 1995, their old age benefit will be covered by the PSPF.

In PSPF, an 8 to 12% contribution rate on monthly income (more exactly, 200 % of

the base salary, which amounts to about 85 to 95 % of the total pay), but the actual burden on the insured is only 35% while the rest will be paid by the employers. At the end of 2002, there were a total of 617,867 participants, comprising 324 political appointees, 291,052 public servants, 203,880 education workers, and 122,611 military personnel. The accumulated net amount of the fund stood at TWD 187.19 billion at the end of 2002.

The most recent amendment to the contribution rate of PSPF treats differentially general government employees, schoolteachers, staffs, and service personnel against political appointees. For the first category, the withholding rate is fixed at 8.8 %, while the political appointees have to pay 12 %.

Since 2000, it had been found that with the combined benefits provided in the GESSI and PSPF, the replacement ratio of a beneficiary having tenure in the government sector for 30 years or longer easily exceeds 85 % and it is very likely that some retired with rather long duration enjoy a 100% replacement ratio. What is more pleasurable, at least to the retired, is that the retirement benefit is not related to income earned after retirement. For those who are able to find another job, counting together the retirement income and income from the after-retirement-job, the replacement ratio easily exceeds 100%.

The financial security of the PSPF is always a problem of great concern. Given the current format of benefits, an actuarial evaluation done on 1999 pointed out that the financially balancing contribution rates for public servants, education workers and military personnel were 15.5%, 17.9% and 21.9%, far much higher than the current statutory rate between 8 and 12%, and the actual collection rate of 8.8%. To save the fund from bankruptcy, or merely to reduce the size of contingent liability, increasing the voluntary retirement age eligible for claiming the full pension benefit from 55 to 60 years gradually, and a more realistic contribution rate scheme are the most possible policy options.

The Labor Insurance (LI)

The Labor Insurance in Taiwan was established since 1950, aiming at the provision of basic, minimum economic security for workers in the private sector. It is a mandatory insurance for all employees not in the government sector, except for workers who only take temporary or part-time jobs and are not members of labor unions of any forms. The LI is the largest occupation-related social insurance in Taiwan in terms of its enrollment. Cash benefits provided in the LI include maternity, sickness and injury, disability, old-age, survivor and unemployment, where the last item was added in 1999. Two types of insurances are combined in the LI: the regular insurance and occupation casualty insurance. For the former, a flexible premium rate on monthly income received from the insured job between 6.5 and 11% is applied for all insured, with the current rate set at 6.5 % for those covered by unemployment benefits, and a one percentage point discount is yielded to those not covered. For occupational casualty, risk factors are applied to determine the premium rates, ranging from 0.29 to 3 %.

Premium is collected according to the insured monthly salary of the insured, with a minimum level equal to the minimum wage set in the Labor Standard Law and also a ceiling, TWD 43,900 presently. On average, the insured monthly salary is about 80 % of the average monthly pay counting all cash income and fringe benefits. In most of the cases, namely, the insured working for definite employer, the employers, the employees, and the government share the financial burden by a distribution ratio of 70 %, 20 % and

10% in the regular insurance component; for the occupation casualty component, the employers solely bear the cost. Distribution ratios are different in other cases.

Old age and retirement benefits in the LI can be claimed by:

1. male workers over 60 and female workers over 55 with at least 12 months of enrollment;
2. The insured over 55 with a length of enrollment for at least 15 years;
3. The insured with the same employers covered by the LI for over 25 years.

Retirement benefit in the LI is given as a lump-sum payment only. For the first 15 years of enrollment, one month of the insured income will be paid by the system, and for enrollment over 15 years, two months of the insured income will be paid with a maximum of 45 months. For insured workers over 60, a maximum of 50 months is allowed. Given the present ceiling on insured income, theoretically, the highest retirement benefit available is about TWD 3 million, while for actual application, on average, claimed retirement benefits are below TWD 1 million which represents a replacement ratio of less than 20 % for most of the retired which of course is far from adequacy for the provision of income security on after retirement life.

Survivor benefits range from 15 months to at most 45 months of the insured salary, and in case of the death of the parents and dependents, one and a half to 3 months will be disbursed.

A second pillar retirement benefit for those covered by the LI is provided via the Labor Retirement Fund as stipulated in the Labor Standard Law enacted since 1984. Under this Law, employers are required to set up and contribute solely to an employee retirement fund reserve account. Employees working with the same employers may claim voluntary retirement when one of the following conditions is met: (1) Over 15 years of tenure and over 55; or (2) over 28 years of tenure. The labor retirement benefit will also be paid on a lump sum format, such that for the first 15 years, two months of the average monthly salary will be disbursed for each year of employment. Beginning from the 16 year, one month of average monthly salary will be added. The maximum of the retirement benefit is 45 months. This retirement benefit is not portable such that workers changing their jobs, voluntarily or involuntarily, will bear the cost of losing the benefit. In reality, a very high percentage of employers have failed to contribute according to the law to this account.

After three or four years of study, discussion and solicitation, the Labor Pension Act was passed by the Legislation and began to operate since July 1st, 2005. In this Law, a more flexible arrangement of retirement benefits for workers insured in LI is provided. Since the existing LI and Labor Retirement Fund provides retirement benefits for the insured, options on staying in the original LI retirement scheme, or shift to the new system are open to the LI insured workers under the condition that they work with the same business. All new workers or workers changed their job are required to join the new system.

Two retirement accounts are created for each individual worker under the program: Individual Account (IA) and Special Account (SA). The IA is a forced saving account for each qualified workers where contribution from the employers at a rate of not less than 6 % of the individual's monthly salary, and contribution from the employees is voluntary at a rate not higher than 6%. A lump-sum retirement benefit equal to total accumulated contribution plus earnings of the account, can be claimed at the age of 60 with less than

15 years of work seniority. In addition, survivor benefits will be paid in case of death before retirement. Workers with 15 years or more work seniority will receive monthly pension benefit. The specific amount of the monthly installation is determined by factors such as life annuity chart, average life expectancy and predetermined interest rates.

The SA is created by voluntary contribution by the workers in addition to the mandatory employer's 6% contribution. A maximum of 6% of the worker's monthly salary can be deposited into the SA and deductible from the individual income tax return.

The recent Labor Pension scheme requires the employer, or the enterprise, to bear the financial burden completely which means an increase in labor cost. Some employers react to this cost increase by shifting a portion of the contribution to the workers by lowering the wages, or cease to grant pay raises. Some even argue that the increase will cause an acceleration of capital and investment outflow to the mainland and other countries.

Major Problems in Taiwan's Income Security System for the Aged

In brief, the following are the most urgent issues to be addressed.

1. Some 4 million of the total population is still left uncovered by public retirement schemes. The majority of these unprotected are housewives and farmers.
2. Even for those covered in the LI net, the lump-sum retirement benefit is hardly adequate for economic needs after retirement. In addition, higher risk in management of the retirement payment is associated with the lump-sum transfer, and a fixed amount of fund is certainly more vulnerable to price inflation during old-aged. An estimate reported by the Ministry of Interior has pointed out that as an individual getting older, the ratio of retirement benefit received to total financial sources for living decreases, a clear signal on the inadequacy of the current retirement arrangement in the LI. Even under the new Labor Pension plan, it is still considered as far from sufficient to protect the retired workers from economic difficulties given the estimated replacement ratio is at most 30 to 35%.
3. The occupation-related characteristics of the three major insurance systems of which we have discussed two have failed to become a coordinated one. Therefore, years of enrollment in the GESSI and SI can not be transferred to the LI such that changes of employment in the public sector to one in the private sector usually imply a reduction of retirement benefits. Ironically, years of enrollment in the LI can be added to the GESSI if one decides to join the government service. Furthermore, there are huge discrepancies in retirement benefits from different schemes also.
4. To supplement the social insurances, two major social allowance programs are provided for the aged, namely, the Aged Low-Income Family Subsidy and the Aged Farmer Living Allowance. Both measures are meant to be a social relief program such that aids will be provided to the needed. However, political reality turned the later service into a non-contributory pension system which pays, without means-tested, to aged farmers and fishermen monthly allowance. It will be difficult to argue that this is an equitable or fair means for income redistribution goals.

The National Pension Plan

A comprehensive study on the establishment of a National Pension Plan which would provide the first pillar public pension benefit for the whole population in Taiwan was completed in 1998 and a new, additional to the existing GESSI, SI and LI, system was originally scheduled to begin from the year 2000. The scheduled time was first delayed due to the devastating "921" earthquake, and later, after the change of governmental power, the plan became only one of the options available to the new government.

The proposed NNP combined basic pension benefits with other welfare measures to the elderly. For those over 65, persons eligible for Aged Low-Income Family Subsidy, Aged Farmer Living Allowance, and veterans in caring institutes will not be affected in terms of their enjoyed benefit. For senior persons lack of any types of public assistance, under a rather generous means-tested procedure, a monthly welfare allowance of TWD 3,000 (adjusted for the average of inflation rate and growth rate of real wage in subsequent years) will be disbursed, yet for those who had already received retirement benefits from various social insurances, the actual amount paid will be deducted according to the benefit received in these entitlement programs.

Persons between the age of 25 to 64, including social insurance retirement benefits recipients, not in the labor force, or not enrolled in any one of the four social insurance schemes, are required to join the NNP. They will have the option to join the program voluntarily in the first year of the plan, and after the third year, all of them are required to enroll.

Employees between the age of 25 and 64, not covered by GESSI, SI and LI will be forced to join the program. Farmers already covered by the FI can stay with the original system which will fade away as farmers below the age of 25 are all required to join the NNP.

Monthly pension benefit in NNP is 1.2% times the year of enrollment in the program and the monthly insured payroll. For example, a TWD 7,500 pension benefit, at 2006 or 2007 dollar value, will be disbursed to the eligible who has stayed in the program for 40 years. This amounts to a replacement ratio with respect to the minimum wage at about 50%.

Benefits of the NNP include:

1. Retirement Pension

Depending on the age when enrollment begins, the full amount or a portion of TWD 7,500 will be paid to the insured after retirement. For example, for workers at the age of 40 or above when the NNP is implemented, they will be paid the full amount after 25 years of enrollment. Yet for workers at the age of 25 to 39, the eligibility condition on receiving full amount extends from 40 years to 26 years, that is, enrollment periods will be one year shorter for one year older.

A minimum enrollment period of 10 years is required for the insured under the age of 55 when the NNP is implemented. For those over 55, no minimum duration is set.

During the transition period, pensioners receiving payments less than TWD 3,000 will also receive a supplementary grant to fill in the gap.

2. Disability Benefit

In case of serious disability occurred within the period of enrollment, and the length of actual enrollment exceeds two thirds of the period that is required to enroll, a disability benefit equal to the entitled pension will be paid.

3. Survivor Benefit

In case of death of the insured during enrollment, if the length of actual enrollment exceeds two thirds of the period that is required to enroll, survivor benefit equal to the entitled pension will be paid. In addition, the difference between total contributions collected, plus imputed interest, by the NPP and aggregate benefits received will be reimbursed to the survivors.

4. Funeral Subsidy

In case of death of the insured, an amount equal to ten payments of the full monthly pension benefit will be paid.

In addition, maternity and sickness subsidies are also available.

Financial costs of the NPP are designed to be shared by the insured and the government, and the employers in its original format. The 2006 Conference on Sustaining Taiwan's Economic Development just concluded at the end of last month (July) had reached a conclusion that the burden will be on the insured and the government only such that it will not add further cost on labor input for the business sector. Government subsidies to insurance premium chargeable on the insured vary from the normal 40% to 55%--100% for low-income insured, and disabled of different degrees. In case of emergency or unemployment, other welfare measures will be taken to help.

The proposed NPP provides income sufficient for a subsistence consumption level for individuals after retirement, the first pillar in the World Bank's scenario. In fact, second pillar occupation pension is available to workers on the government's payroll. To insured protected in the GESSI and SI, NPP is unattractive at all as a substitute of the existing insurance schemes. Hence, the "integrating existing public retirement programs" function of the NNP has been denied.

The NPP intend to extend the coverage for retirement benefits to estimated 3.25 million persons aged 25 or older. These three million some beneficiaries consist mainly of small business owners, farmers, the unemployed, housewives and students. If public pension will crowd out personal savings for retirement living, the impact of the NPP on aggregate savings will certainly be a popular research topic. One study reports that discouraging effect on aggregate savings is found under all assumptions on the ratio of perfectly fore-sighted households among the total population, the rate of interest prevailing in the credit market, and whether income taxes or business tax is used as a means to raise additional revenue. However, in the short run, since myopic households may actually save more, counting forced saving in the NPP together, Taiwan's aggregate saving rate may increase, while, when the system gets mature, the higher consumption ability to the myopic proportion of the population will reduce the size of total national savings. In this study, the author concluded that, based on the evidence from simulations, the NPP will have no significant effect on Taiwan's overall saving rate.

As discussed above, the latest development of the NNP narrows the coverage of the system only to persons not already enrolled in GESSI, SI, and LI. The planned integration of the NNP and the three retirement programs is terminated. As for those insured by the FI, farmers between 15 and 24 are required to join the program and for those already covered by FI, they are given an option to stay at the old FI or join the new NNP.

Voluntary enrollment options are also provided for those over the age of 60, recipients of the lump-sum old-age benefit, farmers currently enrolled or previously enrolled in the FI, recipients of a lump-sum old-age benefit below TWD 500,000 or less than ten times the insured payroll from GESSI and SI.

The monthly premium was initially calculated based on the minimum wage which is TWD 15,840 presently. With a 5.5% contribution rate, maximum out-of-pocket premium for the insured is TWD 523 per month since the government will subsidize at least 40% of the premium. The burden on government finance of the NPP is estimated to be TWD 132.1 billion which includes TWD 12.8 billion in premium contribution and TWD 114.2 billion in various types of old-age, disability and other types of welfare allowance, plus TWD 5.1 billion of the start-up and administration cost of the NNP. As compared to the total cost of all types of welfare allowances, the NNP spends an additional TWD 21.6 billion. For the first decade of its operation, a total of TWD 165.5 billion more will have to be raised. However, a change in calculation of the premium base was decided in 2001's revision. Premium will be 10% of the full monthly pension benefit, TWD 750, when the system is implemented with government subsidies ranging from 20% to regular individuals and 40% to 100% to the low income and disability. Additional financial burden to the government is estimated to be TWD 15.4 billion in the first year. However, in 2018, the total cost on the government including both sharing of the premium and spending on old-age allowance will be less than the amount needed for provision of old-age allowance to the population without the NNP. At 2031, an estimated saving in public expenditure of the amount TWD 38.5 with the implementation of NNP can be expected.

To finance the needed spending, two independent means are suggested: first, a one percentage point increase in the 5% VAT tax rate which could input about TWD 40 billion to the special account, and second, a fixed share of the royalty charged on the public-interest lottery. Any deficit of the program not covered by these two means will be filled by general government revenue.

The NNP legislation is still pending and may have a chance to be completed by 2007 since it is among the conclusions drawn by the Conference on Sustaining Taiwan's Economic Development.

The National Health Insurance and Its Reform

Prior to the implementation of the National Health Insurance (NHI) in 1995 health insurance services were provided by the GESSI, LI, SI, FI and Low Income Family Insurance. The coverage rate of these five programs was about 59% of the total population. The NHI requires mandatory enrollment for all and is operated by a government agency, the Bureau of National Health Insurance (BNHI) which also plays the role as the insurer. As in 2004, over 22 million, or 98.6% of the total population, are covered by the NHI. The insured are classified into the following six categories: Employees with definite employers and employers (private sector employees, government employees, self-employed and employers), union workers, farmers and fishermen, military servicemen, dependents, and veterans, low-income households, community residents. Obviously, the classification of the insured reflects a characteristic of the NHI: Integrating the medical parts provided by the five social insurance programs into one.

The NHI is designed and required by law to be financially independent, that is, a specific account is set up for the BNHI for the operation of the insurance. The premium is charged according to the insured monthly payroll of the insured, an amount close to 75 to 80% of total monthly pay for Category One insured persons. Premium is collected from the insured, the employer, and also the government with different sharing arrangement among different categories. Those who are not at works but are dependents of the working insured are covered by the same insurance, paying the same amount of premium with at most three dependents being chargeable. The premium rate was set at 4.25% and stayed for eight years. The current premium rate is 4.55%. The fact that there have been few adjustments of premium rate should not be confused with a sound financial status of the insurance. In fact, since it was very sensitive to have the rate raise, the BNHI had adopted other measures such as increase in co-payments, penalty to acquiring service from higher accredited hospitals without referral, and cutting back as well as more critical in disbursement to the service providing institutes.

Even Taiwan's NHI was evaluated highly by international scholars and experts, its financial gap continued to enlarge. Annual operation deficit of the program since 1999 were TWD 21 billion, TWD 156 billion in 2001, 157 billion in 2002, 4 billion in 2003 and 2004 (after raises of both the premium rate and co-payments), and bounced back to 64 billion in 2005. This financial gap reflects the slower growth rate of insurance revenue as compared to insurance cost or reimbursement. For the first decade of the NHI, revenue grew at an average rate of 4.82% while spending on benefits claimed increased by an annual average rate of 5.9%. Many factors which affect both the quantity demanded and the unit cost of medical services covered by the insurance stand behind the growth of insurance spending. Ageing of the population implies higher demand on average over the total population since the aged are believed to have worse health condition which will require a higher consumption of in-patient and out-patient utilization of medical service. Further, ageing contributes to the ever-increasing cost of spending if the aged not only consume higher amount of medical services but also more expensive services. Some figures on the age distribution of the insured (and dependents) and utilization of insurance benefits are given in Figure 7 to 9.

The finance of the NHI basically adopted the ones applied in medical insurances embedded in GESSI, LI, SI, FI and Low Income Family Insurance. Therefore, even with a notional universal premium rate, the insured in fact pay different premium not only in relation to their reported monthly payroll, but also related to their occupation, or their beneficiary classification group. For example, employees in the private and public sector will have to bear 30% of the assessed premium while self-employed and individual employers carry 100% of the premium charges. For these two types of employees/insured, namely, workers with regular employers, the government will subsidize 10% and the employers pay the rest of the 60% for insured in the private sector, and all 70% will be paid by the government for public workers.

Workers joining the NHI through labor unions pay 60% of the fixed premium, which in most cases is lower than the actual premium chargeable if the premium is calculated according to the monthly wage income. Fixed premium are also collected for members of the farmer and fisherman associations. However, 70% of the premium chargeable is paid for by the government.

This financing scheme, especially with respect to the differentiated charge,

implemented by the NHI created the following problems:

First, the insured are classified by six beneficiary categories and 14 sub-groups with seven different formulas to calculate the contribution shares on the government, the employers, and the insured. A “withdrawal from/ application for” process must be completed for each change of employers or other insured status for the insured which involves high compliance and administration costs for the insured, the employers, and the NBHI.

Secondly, average annual growth rate for medical expenses per capita in the NHI from 1995 to 2003 stood at 4.93% which exceeds the GDP growth rate of 3.57%, and also higher than the growth rate of average monthly wages and salary income (the premium base) in the industrial and service sector. In NHI, premium is calculated according to the concept of “insured payroll-related amount”, the regular monthly wage and salary where bonus, year-end extra monthly compensation and some fringe benefits are not included. The collectible premium base is smaller than the potential base if all wages and salary payment were included. An incentive exists for both the insured and the employers to report or actually to lower the regular wage and salary income in return for an extra monthly pay or higher bonus. Without hurting total take home pay of the workers, both the employees and the employers can enjoy lower health insurance contributions. Further, the premium chargeable on individual insured is collected with a ceiling which is fair since redistribution of income is not the only policy aim of the system. However, if distribution of increases in income among families skewed toward the high income individuals, the premium collection will obviously be behind the average income growth. In the same time, political economy factors caused the freezing of premium collected from the insured in category 2 (union member workers not covered in category 1) and category 3 (members of the farmer associations and fisherman associations) from 1999 which had kept the premium chargeable on category 5 (low income families) and category 6 (community residents not elsewhere not covered) from any adjustment in the same period. More serious, even for insured in category 1 (workers with regular employers in private and public sectors), 14% (as in 2003) of them were chargeable based on the minimum wages, or basic wages, determined by the government which had been fixed from October 1997. Without a raise of the premium rate, increases in premium collection in relation to income growth fell on 39% of the total population, namely, insured of Category One paying their premium higher than those having the minimum wage as their payroll-related amount.

Thirdly, as a social insurance system, the NHI was designed to fulfill the principle of ability to pay in its financing. Yet, distribution of financial cost on the insured, the out-of-pocket premium contribution in particular, exhibited remarkable vertical and horizontal inequity. About half of insured are charged based on the insured payroll-related amount criterion and the other half pay by fixed premium of different amounts. People with higher income not necessarily pay higher premium, and people with the same income level will pay the same premium only by chances. The ability to pay principle was further deviated by the element of premium collection for a family according to the size of the family. For example, for one worker families with identical income, NHI contributions are determined according to the number of persons in the family. Dependents of the worker are payable for their premium as the worker, or the insured, up to a maximum of three persons. Sorting the families by income cohorts, a 200%

difference in the burden of NHI premium payment will exist among families with the same income level even if all income are wages and salary and are correctly reflected in the insured payroll related amount, a violation of horizontal equity. Vertical equity may also be violated, taking the same example, since larger families with lower income may actually have to pay higher total premium than smaller but higher income ones. For insured in categories not applying the insured payroll related amount system but fixed premium bases, since every insured and their dependents, if any, will have to pay the same amount, it will be rather implausible to argue for any possibility of vertical and horizontal equity. The decision on “premium avoidance” is another factor causing inequity of the financing burden distribution. Dependents of families with both parents working will tend to link with or insured under the lower wage parent and benefited from paying lower premium.

Finally, the degree of moral hazard in medical insurance was further encouraged by the fact that a very high proportion of the insured only bear a certain percentage of the premium with the government and the business sector partly sharing the cost. A fiscal illusion prevails in the demand for medical services delivered by the system. The insured certainly acknowledge that an increase in demand will correspondingly imply a higher premium burden but they may take into consideration the direct increase on their out-of-pocket spending only. Free-riding on the sharing of full increase by the government and employer part may push up medical service utilization from the insured.

In 2002, aiming at saving the NHI from deeper financial difficulties and other improvements, the government established a task force on the reform of the system and is called The Second Generation of NHI. After thirty months of studying and related administration process, a comprehensive reform proposal was accepted by the government and a draft of revision of the National Health Law had submitted to the legislation for review and discussions. Main elements, with respect to the financing aspect, of The Second Generation of NHI include: (Department of Health, 2004)

1. Premium collectible from the insured, or the family or household, will be calculated based on gross family income (before taking deductions and exemptions and adding back part of income not subject to tax) as defined in the individual income tax law rather than monthly payroll which is not a good indicator for the ability to pay of individual insured. For most families, equals will be treated equally, and un-equals will be paying their premium unequally. Both a maximum amount and minimum amount payable will be imputed to maintain the social insurance property of the NHI.
2. Both the government and the employers will still have to bear their shares of the premium but their payments are calculated according to formulas which are less dependent upon the spending of the system highly affected by the behavior of moral hazard in medical insurance. For the part of the government, once the share of cost on the government is calculated for the year prior to the implementation of the second generation of NHI, growth rate of government funding in insurance premium revenue will be the average of mean GDP growth rates and mean personal medical spending growth rates in the previous three years.

For the business sector, again a three year average ratio is applied. For the year of implementation of the new system, the base share on the business or

employer is imputed by taking the total business contribution for NHI premium as a percentage of total payrolls in the previous three years. This base share, represented by a percentage, will be fixed for the employers and be independent from any later adjustments on the premium rate determined by the insured. The employers will contribute to the system a fixed percentage, the base share, of their total wage bills.

3. Financial accountability is strengthened in the part of the insured. They as a group will have to pay more in case of higher utilization of medical services or that broader coverage of services are required by the insured. Premium rate will be in line of the need and spending. Since premium contributed by the government and the employers are both pre-determined, subtracting additional revenue from the appropriation of sales of public lottery and the surcharges on tobacco tax, annual revenue needed to finance the system given a specific coverage plan and co-payment schemes can be estimated. The premium base is given by gross family income. Simulations on different sets of floors and ceilings can be performed to give the premium rate payable by the insured. Most importantly, the particular coverage and co-payment mix is determined by the insured themselves. Widening of the medical service provided by NHI will imply an increase in premium rate and/or co-payment. It is the insured that is responsible for making the decision on the NHI what they demand from and they have to pay for. Accountability is the essence of the reform.
4. To enhance transparency of the system, large contracted hospitals, private and non-profit, are required to submit annual operation and financial reports to the BNHI or Department of Health. Non-submitting or false submission will be subject to penalty or even termination of contracts. Without sufficient, correct and updated information, it will be difficult to locate the fair prices paid for services which can maintain reasonable profit margins for the contracted institutes and in the meantime, will not hurt the cost-effectiveness in service purchases of the BNHI.

A Long Term Service (LTC) Insurance

Demand for long term care services is mostly generated from older persons of the population. Currently in Taiwan, in most cases, financial burden of LTC services lies on individuals who need the service or the families. Even the direct medical related portion of LTC service is covered by our NHI through the provision of chronicle sickness inpatient benefit, up to a limited duration of stay, and home care service, and for low income elderly, the Ministry of Interior Affairs provides both institution and home care services, public assistance in LTC service to the majority of those in need is insufficient in terms of benefit delivered by the NHI and coverage of needing persons by the respective government agency. For example, monthly charges by a LTC institution, nursing home such as, range from TWD 20,000 to 40,000 which is a significant individual or family financial burden. To reduce individual or family risk in demand for the costly LTC service, a task force on planning for the future LTC service system in Taiwan was set up by the Ministry of Interior Affairs. Finances which included discussions on estimating future needs, provision cost of the service, and design and comparison of different forms of financing are a major part among the agenda of the task

force. Key findings in the financial plan are as follows:

1. In 2006, an estimate shows that 2.87%, or 660,000 people of the total population in Taiwan are disabled persons who will require LTC service. An additional 600,000 people, 5.38% will need LTC service in 2031. The projection predicts that for the first five year period, 80,000 more persons will require LTC service, for the second and third five year period, 110,000 more will be added each time. From 2021 to 2025, and 2026 to 2031, 150,000 persons higher each period. Age distribution estimates on the disabled show higher and increasing higher percentages of them are from the elderly. In 2006, 52.89% of the estimated 660,000 are from age over 65, and the percentage climbs up to 54.77% in 2011, 59.44% in 2016, 64.61% in 2021, 70.20% in 2026, and 74.73% in 2031. It is clear that as the population gets older, demand for LTC service will inevitably increase.
2. Three separate forms of provision with public intervention to the LTC service market are proposed and studied. Estimated demand in terms of expenditure from 2006 to 2031 amounts to 0.5% to 0.62% of GDP which is assumed to grow at a flat 2.5% annually if an independent social insurance LTC system is adopted with universal coverage for all and 10% co-payment. In case of a National LTC Service Scheme such that service will be provided by the government with a 10% co-payment charge and tax financing, the expenditure to GDP ratio will be lower, 0.31% in 2006 and 0.56% in 2031. Finally, if LTC service is integrated with the NHI, the same level of expenditure needs as in the social insurance system is assumed.
3. If a social insurance plan is implemented, in 2006, the monthly premium on a double-income four persons household is TWD 312, about 0.42% of disposable family income. This premium charge is calculated based on the assumption that total contribution will be shared by 40%, 20% and 40% between the insured (households), the employers, and government.
4. The financial burden on the government in 2006 will be TWD 21.5 billion, 1.34% of the central government budget in the same year, or 7.25% of total central government social welfare expenditure. An increase in the VAT rate by 0.5% will be able to cover the spending need.
5. LTC administration cost will be lower if the social LTC insurance is operated by the BNHI given both are compulsory and universal. However, the two social insurance systems should maintain financial independency to address to the principle of accountability of the two systems which secure the insured form different types of risks.
6. Should the social insurance option be rejected, rather the service is financed with general tax revenue; the budget demand in 2006 will be TWD 33 billion, 2.06% of total central government outlays, or 11.13% of total central social welfare expenditure. In 2031, the financial burden will be TWD 112.3 billion, two times more than the burden under the social insurance format.
7. Presently, the availability of non-institutional and institutional services seems to be sufficient to meet the demand, given the current price and charge conditions. Foreign workers, some of them may lack the necessary skill, are allowed to work in this industry. It is generally believed that an increase in demand due to

the establishment of a public LTC service program can be satisfied by a corresponding increase in supply if the price or reimbursement system more or less reflecting the equilibrium market price. However, the lack of well-trained and qualified workers which has now been a problem may affect the quantity and quality of the service provided.

8. Results from several waves of opinion polls reflect that out of the three proposals, none receives a simple majority support. The ratio of opposition on the tax financing scheme exceeded 50% which may be a straight reaction by the people on any possibility of tax increase. A majority of consulted experts supports the social insurance plan while a few experts stand behind the tax financing plan. None of the experts surveyed is for integration.

Policy Implication

Taiwan's population ageing calls for further and perhaps more government involvement in providing income security after retirement, protection against sickness, and long-term disability risk for the elderly. Naturally, older people bear much higher degree of sickness and long term disability risks than the younger generations. As the population gets more ageing, overall risk of the society as a whole will be higher. It is well known that due to existence of moral hazard, adverse selection and uncertainty, market solution for these services will easily result in misallocation of resource and sub-optimal provision. Government intervention may correct for market failure in these cases and public programs in the form of social pension insurance have been adopted in many countries, where public health insurance system exists in a large number of countries.

Markets of long term care service among different countries are more diversified as compared to the other two. Some countries decide to depend on a social insurance system, such as Germany, Japan and the Netherlands. Some countries basically rely on the private market with public support available to the needed, especially to the low-income elderly, such as the United States and Canada. In Taiwan, a mixed system prevails. First of all, informal, family support which in most of the cases rely much more heavily on the female gender, plays an important role, though we do envisage an increasing demand for institutional and day care services. Secondly, professional, that is non-family provided, LTC services can be purchased by personal expenses at market prices and also available at lower prices subsidized by the government. Of course, a means-tested procedure or other eligibility conditions are set for the financial assistance or free in-kind service.

With a rapidly ageing population, where the older will certainly live longer, may or may not be healthier, and most possibly suffer from a higher risk of long term disability, the level and share of public spending in old-aged related areas will inevitably increase. In Taiwan, the present health insurance system is right in the process of undergoing a reform which is partly, conservatively speaking, initiated by the financial deadlocks encountered. A national pension system to complement the leakage left by the occupation-oriented social retirement systems and to integrate various forms of old-aged allowance has been studied for over 6 years, and an active LTC service network with active government role has been one of the major target areas in planning the future social welfare and social security programs by the government. Once the NNP and LTC service system are installed, public support of provision in Taiwan will be sufficient to protect the

elderly from the major risks. With or without personal assets or family support, the seniors will be able to live with dignity.

However, such a welfare state for the elderly can by no means be arrived at low cost. Discussions of financing these existing or planned programs in this paper remind the government and the private sector that there is no free lunch. Efficiency or at least to have the system be sustainable financially will require the following principles:

1. Clear assignment of financial means

both clearly identified in the planning process. The expected total burden to the government and the public and their relevant shares must be estimated as to evaluate the feasibility, efficiency and equity implication for different variant of each program. For the government's share, whether the additional revenue needs be financed by crowding out of other spending, by increases in tax collections (in what taxes if so), or by other types of non-debt related means must also be determined. Meaningful welfare analysis on proposed programs can only be obtained with a clear financial plan.

2. Shared responsibility among the government and private sector

As discussed, all three social welfare programs in Taiwan will have their costs shared by the government and the private sector, where both the NHI will have the share on the private sectors distributed to the employers and the employees. It is natural to have the insured, that is the beneficiaries, to bear the cost since they are the ones being protected by the systems, but why do the government and the business sector? Both the merit goods and externality arguments are suggested to argue for government intervention and financing, at least partly, of the health and pension systems in addition to the most frequently accepted redistributive role. As for the business sector, paying a part of cost on the employees may simply induce no additional financial burden if full cost shifting is possible. In case that only a partial shifting is expected, a working force of better health status and higher productivity will certainly benefit the employers as well. It is fair to compensate for the opportunity of having a more productive labor force.

3. Enhancing Accountability

A new element of accountability is stressed in the reform of the NHI in its cost sharing formula. The NHI will have the government and the enterprises paying their parts of the premium according to different formulas and adjustment mechanism not directly related to the expenditure in benefit demanded and provided. If the insured demand or consume higher quantity and quality of the service, they have to bear additional costs thus induced. It is the insured, or the major player of the game, who have to determine what level of spending they would like to enjoy and correspondingly, what level of cost, the premium rate they have to face. With this new format, the insured can no longer free-ride on the government and employers. The insured will be held accountable for their decisions. This new scheme can not solve the problem of moral hazard in medical insurance, of course, yet when the consumers have to face higher prices when they increase their demand, the mechanism of the law of demand will perform. Demand will then be lower than if the price is heavily subsidized by the government and the business. Even if the consumer has very low price

elasticity in medical service consumption, at least the financial status of the NHI system will not be hurt since the additional cost will be recouped through the adjustment in premium collection. As for the social LTC insurance system, it is still highly uncertain on whether it will be implemented or not, but, the element of accountability will certainly be a major part of it if it is chosen to provide needed service for the elderly in Taiwan.

4. Financial Transparency

Contracted hospitals in NHI are required to disclose their financial information in the reform of NHI. Actual costs of operation which will affect the level of reimbursement in service provision to the insured must be known by the BNHI as to adjust the price paid for the purchase of service and also be known by the insured in order to persuade them to accept for a premium raise. Auditing of the correctness and thoroughness of the disclosed information will be performed if necessary to ensure the availability of true information. An additional function of the mandated financial information disclosure is to promote peer competition or learning in the medical market. A hospital may compare itself with other hospitals of the same group in terms of scale, specialty and location, and look for ways for further improvement.

5. Promotion of higher fertility

The problem of the rapidly ageing society is a result of two events: longer life expectancy and fewer births. It is hard to deal with the first since it may actually be a blessing to the population. It is the second reason that the society has to work on. In response to a declining birth rate, the government should develop an environment that is conducive to child bearing, raising children and providing quality education. In addition, a mechanism for providing support for parents, working or not working, when they take unpaid parental leave and for childcare will also help cut down the opportunity cost, or the price of having children.

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<http://www.bli.gov.tw/english/sub.asp?a=0000052>

Labor Pension

<http://www.bli.gov.tw/english/sub.asp?p=0000000&a=0010384>

FI

<http://www.bli.gov.tw/english/sub.asp?p=0000000&a=0000054>

SI (Chinese Website)

<http://www.6law.idv.tw/law/%ADx%A4H%ABO%C0I%B1%F8%A8%D2.doc>

Table 1 Key Economic and Social Indicators in Taiwan

Items	Unit	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Economic growth rate	%	7.55	7.49	7.01	7.11	6.42	6.10	6.68	4.57	5.42	5.86	-2.18	3.94	3.33	6.07	4.09
GNP	100 Million US\$	1,837	2,170	2,286	2,483	2,691	2,836	2,933	2,692	2,905	3,139	2,868	2,901	2,970	3,334	3,550
Per capita GNP	US\$	8,982	10,506	10,964	11,806	12,686	13,260	13,592	12,361	12,325	14,188	12,876	12,884	13,139	14,770	15,676
Gross national savings/GNP	%	29.4	28.9	28.8	27.6	27.0	26.7	26.4	26.0	26.1	25.4	24.0	25.2	25.97	26.15	
Consumer price index changes)	%	3.6	4.4	2.9	4.1	3.7	3.1	0.9	1.7	0.2	1.3	-0.01	-0.2	-0.3	1.6	2.3
Agriculture	%	3.7	3.6	3.6	3.5	3.5	3.2	2.6	2.5	2.6	2.1	2.0	1.8	1.8	1.7	1.8
Industries	%	41	40	39.4	37.7	36.4	35.7	35.3	34.5	33.2	32.4	31.1	31.4	30.6	29.5	24.6
Services	%	55.1	56.3	57	58.8	60.1	61.1	62.1	63.0	64.2	65.5	67.0	66.8	67.6	68.7	73.6
Growth rate of fixed capital formation	%		18.5	12	7.4	7.3	1.7	10.7	8.0	1.8	8.6	-20.6	-1.6	-2.05	17.5	0.5
Growth rate of private fixed capital formation	%		29.3	16.7	10.3	11.4	3.4	18.6	11.8	-0.7	15.7	-29.2	3.1	-1.62	31	-1.3
Trade	NT\$/US\$	25.8	25.47	26.63	26.24	27.3	27.5	32.6	32.2	31.4	33.0	35.0	34.8	34.02	31.78	32.88
General government revenue/GDP	%	23.58	25.27	24.1	23.9	22.8	21.4	22.1	22.7	20.0	19.1	19.2	17.5	17.9	18.3	
General government expenditure/GDP	%	29.58	28.83	28.3	27.6	27.3	26.5	26.0	26.1	26.0	23.9	23.0	22.3	21.4	20.8	
General government balance/GDP	%	-6	-3.7	-4	-3.8	-4.6	-5.3	-4.0	-3.4	-6.1	-4.7	-3.8	-3.5	-3.5	-2.5	
Outstanding Debts/GDP	%	5.84	11.16	14.2	14.8	16.5	16.8	17.5	16.1	14.8	25.6	31.5	32.2	35.4	37.1	
Tax revenue/GDP	%	17.76	18.83	17.81	17.98	17	15.3	16.2	15.2	14.2	13.8	13.2	11.7	11.8	12.6	
Central government expenditures/GNP (Include Taiwan Provincial Gov't)	%	16.3	17.3	15.1	14.8	13.5	15.1	15.9	13.2	14.2	16.3	17.6	15.7	15.2	14	

Table 2 Demographic Projections in Taiwan

Unit: thousand, %

Year	End -Year Population				Population Change	
	Total	Annual rate of growth	Male	Female	Births	Deaths
2004	22,762	0.43	50.6	49.4	1.01	0.58
2005	22,858	0.42	50.5	49.5	1.01	0.59
2010	23,258	0.31	50.3	49.7	0.95	0.65
2020	23,687	0.07	49.7	50.3	0.79	0.72
2025	23,644	-0.11	49.4	50.6	0.72	0.83
2030	23,367	-0.32	49.2	50.8	0.65	0.97
2035	22,830	-0.56	48.9	51.1	0.59	1.16
2040	22,040	-0.8	48.6	51.4	0.56	1.37
2045	21,028	-1.03	48.3	51.7	0.55	1.59
2050	19,841	-1.23	48.1	51.9	0.53	1.78
2051	19,589	-1.27	48.1	51.9	0.53	1.82

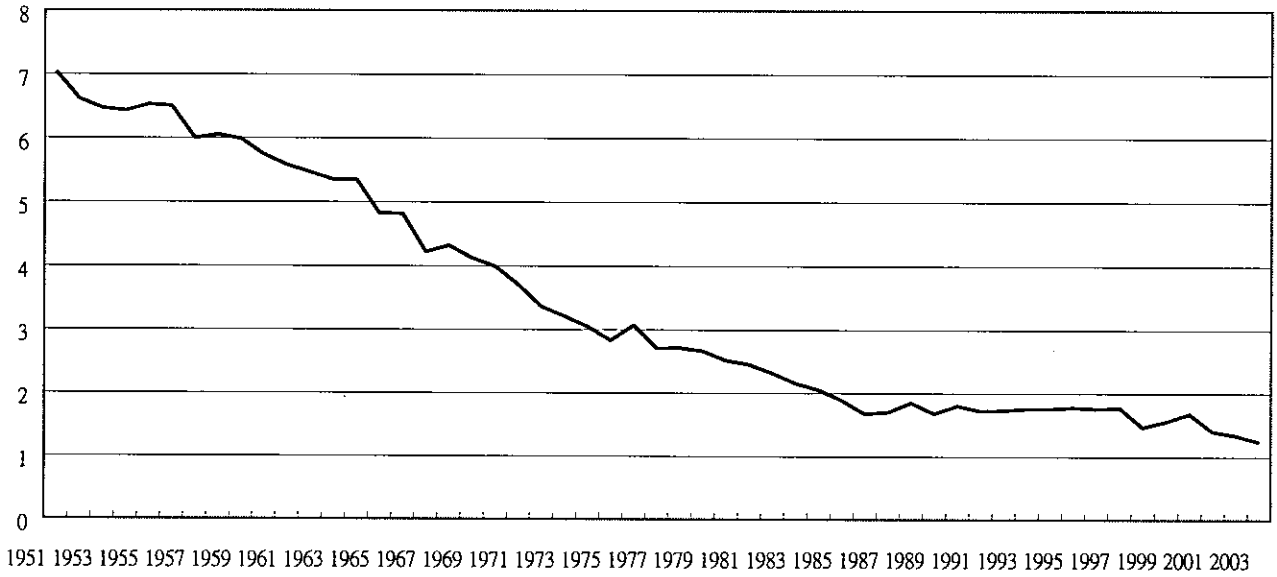
Table 3 Age Structure and Dependency Ratio

Year	End-Year Age Distribution (%)			Dependency Ratios (%)		Medium Age(Years)		Life Expectancy at Birth (Years)	
	0-14 Years	15-64 Years	65 Years & Over	Young	Old	Male	Female	Male	Female
2004	19.32	71.3	9.39	27.09	13.17	34.0	73.46	73.46	79.17
2005	18.77	71.6	9.62	26.22	13.44	34.6	73.71	73.71	79.25
2010	16.35	73.21	10.44	22.33	14.26	37.1	76.54	76.54	83.04
2015	14.22	73.61	12.17	19.32	16.53	39.7	77.75	77.75	84.53
2020	13.18	71.08	15.74	18.55	22.14	42.5	78.29	78.29	85.20
2025	12.21	68.16	19.63	17.91	28.81	45.3	78.53	78.53	85.44
2030	11.29	65.16	23.56	17.32	36.16	48.0	78.75	78.75	85.66
2035	10.44	62.67	26.89	16.65	42.91	50.4	78.92	78.92	85.83
2040	9.7	60.79	29.52	15.95	48.56	52.3	79.05	79.05	85.96
2045	9.19	58.02	32.79	15.84	56.51	53.9	79.13	79.13	86.04
2050	8.94	55.75	35.31	16.04	63.33	55.3	79.16	79.16	86.07
2051	8.91	55.62	35.47	16.02	63.76	55.6	79.16	79.16	86.07

Table 4 Age Distribution of NHI Spending

Age	2003			2003			2004			2004			2003			2004			2003			2004			
	Medical Expense Per Capita			Share of Insured (%)			Share of Insured			Share of Medical Expenses			Share of Medical Expenses			Difference in Shares			Difference in Shares			Difference in Shares			
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	
0~4	13,229	15,417	14,372	2.73	2.99	5.72	2.60	2.85	5.45	2.09	2.67	4.76	1.99	2.54	4.54	1.99	2.54	4.54	-0.96	-0.96	-0.96	-0.96	-0.96	-0.96	-0.91
5~9	8,884	9,856	9,390	3.32	3.61	6.93	3.20	3.48	6.67	1.71	2.06	3.77	1.65	1.99	3.63	1.65	1.99	3.63	-3.16	-3.16	-3.16	-3.16	-3.16	-3.16	-3.04
10~14	5,487	5,793	5,647	3.37	3.68	7.04	3.36	3.67	7.03	1.07	1.23	2.30	1.07	1.23	2.30	1.07	1.23	2.30	-4.74	-4.74	-4.74	-4.74	-4.74	-4.74	-4.73
15~19	6,784	6,434	6,603	3.54	3.78	7.32	3.43	3.69	7.12	1.39	1.41	2.80	1.35	1.37	2.72	1.35	1.37	2.72	-4.52	-4.52	-4.52	-4.52	-4.52	-4.52	-4.40
20~24	8,971	8,025	8,473	4.56	4.51	9.07	4.45	4.35	8.80	2.37	2.10	4.46	2.31	2.02	4.33	2.31	2.02	4.33	-4.61	-4.61	-4.61	-4.61	-4.61	-4.61	-4.47
25~29	10,921	7,961	9,474	4.41	4.22	8.63	4.50	4.31	8.80	2.79	1.95	4.73	2.85	1.99	4.83	2.85	1.99	4.83	-3.90	-3.90	-3.90	-3.90	-3.90	-3.90	-3.97
30~34	11,701	9,067	10,399	4.19	4.10	8.29	4.16	4.03	8.19	2.84	2.15	4.99	2.82	2.12	4.93	2.82	2.12	4.93	-3.30	-3.30	-3.30	-3.30	-3.30	-3.30	-3.26
35~39	11,822	10,907	11,365	4.20	4.20	8.40	4.20	4.16	8.36	2.87	2.65	5.53	2.87	2.63	5.50	2.87	2.63	5.50	-2.87	-2.87	-2.87	-2.87	-2.87	-2.87	-2.86
40~44	13,480	13,189	13,334	4.17	4.18	8.35	4.21	4.19	8.40	3.25	3.19	6.45	3.29	3.20	6.49	3.29	3.20	6.49	-1.90	-1.90	-1.90	-1.90	-1.90	-1.90	-1.91
45~49	16,712	16,542	16,628	3.77	3.73	7.50	3.86	3.82	7.68	3.65	3.57	7.22	3.73	3.66	7.39	3.73	3.66	7.39	-0.28	-0.28	-0.28	-0.28	-0.28	-0.28	-0.29
50~54	21,972	21,623	21,798	3.13	3.08	6.21	3.29	3.24	6.53	3.98	3.86	7.84	4.19	4.06	8.24	4.19	4.06	8.24	1.63	1.63	1.63	1.63	1.63	1.63	1.71
55~59	28,212	28,017	28,116	1.89	1.84	3.73	2.03	1.98	4.00	3.09	2.98	6.07	3.32	3.21	6.53	3.32	3.21	6.53	2.34	2.34	2.34	2.34	2.34	2.34	2.53
60~64	34,248	35,289	34,751	1.85	1.73	3.58	1.84	1.73	3.57	3.67	3.53	7.20	3.65	3.53	7.18	3.65	3.53	7.18	3.62	3.62	3.62	3.62	3.62	3.62	3.61
65~69	44,290	45,287	44,768	1.56	1.44	3.00	1.60	1.45	3.04	4.00	3.78	7.78	4.10	3.80	7.90	4.10	3.80	7.90	4.78	4.78	4.78	4.78	4.78	4.78	4.86
70~74	54,491	57,320	55,992	1.25	1.41	2.65	1.27	1.35	2.61	3.94	4.68	8.62	4.01	4.48	8.49	4.01	4.48	8.49	5.97	5.97	5.97	5.97	5.97	5.97	5.88
75~79	63,405	72,917	68,633	0.88	1.07	1.95	0.91	1.11	2.02	3.23	4.52	7.75	3.34	4.69	8.03	3.34	4.69	8.03	5.80	5.80	5.80	5.80	5.80	5.80	6.01
above	75,162	91,317	82,967	0.84	0.78	1.62	0.88	0.84	1.72	3.66	4.12	7.78	3.83	4.44	8.27	3.83	4.44	8.27	6.16	6.16	6.16	6.16	6.16	6.16	6.55
Total	17,235	17,308	17,272	49.65	50.35	100.	49.77	50.23	100.	49.54	50.46	100.	49.66	50.34	100.	49.66	50.34	100.	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Figure 1 Total Fertility Rate



— TFR

Figure 2 End -Year Population

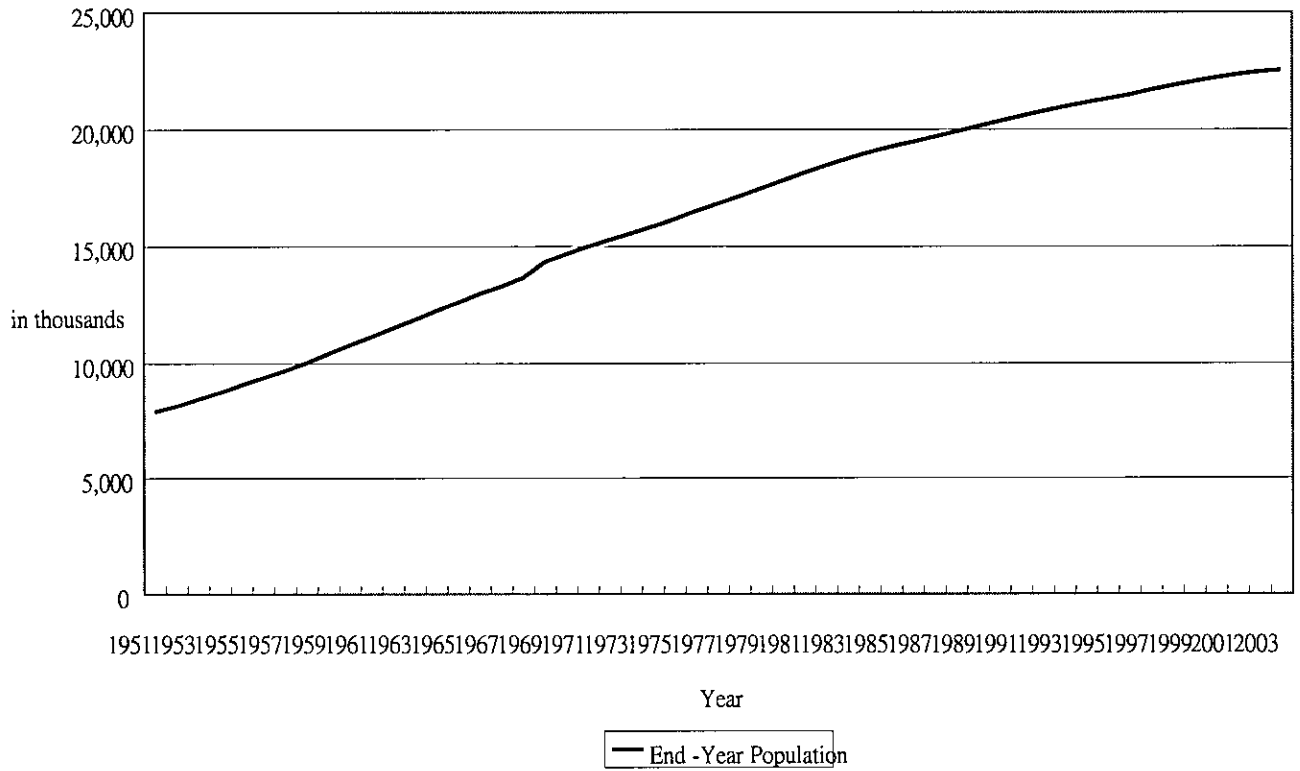


Figure 3 Annual Rate of Population Growth

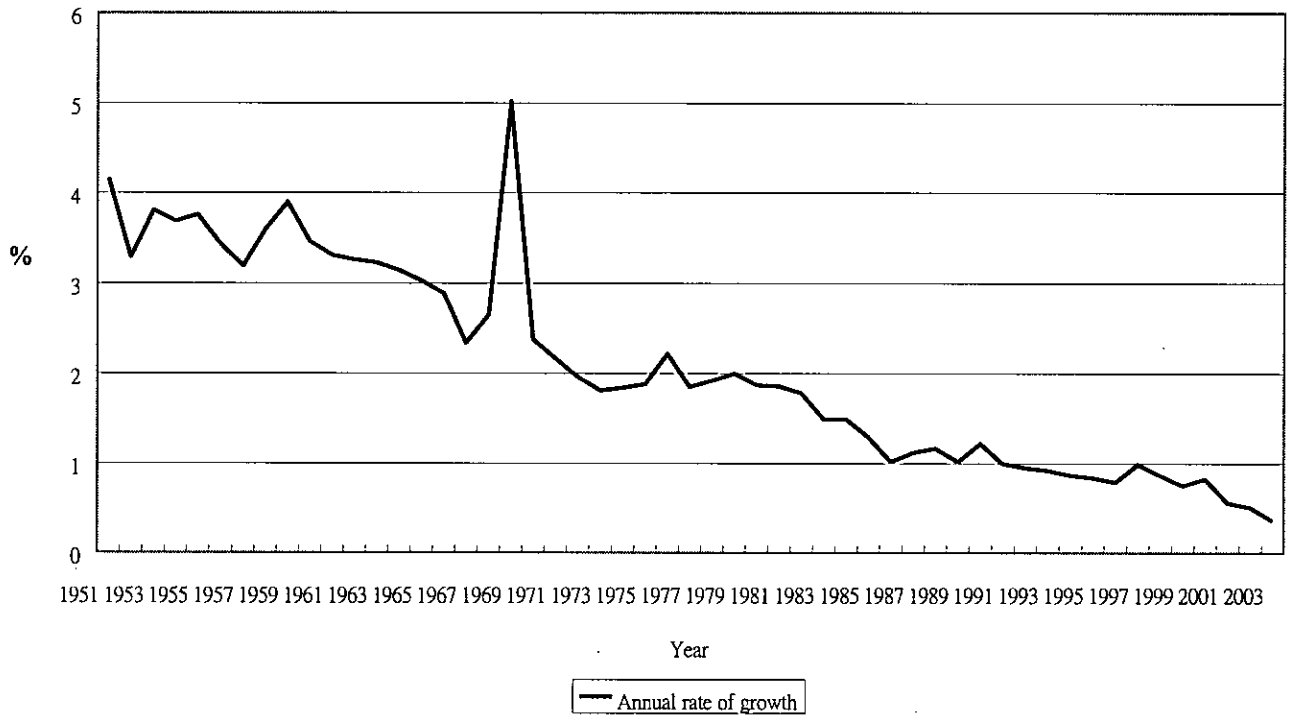


Figure 4 Life Expectancy

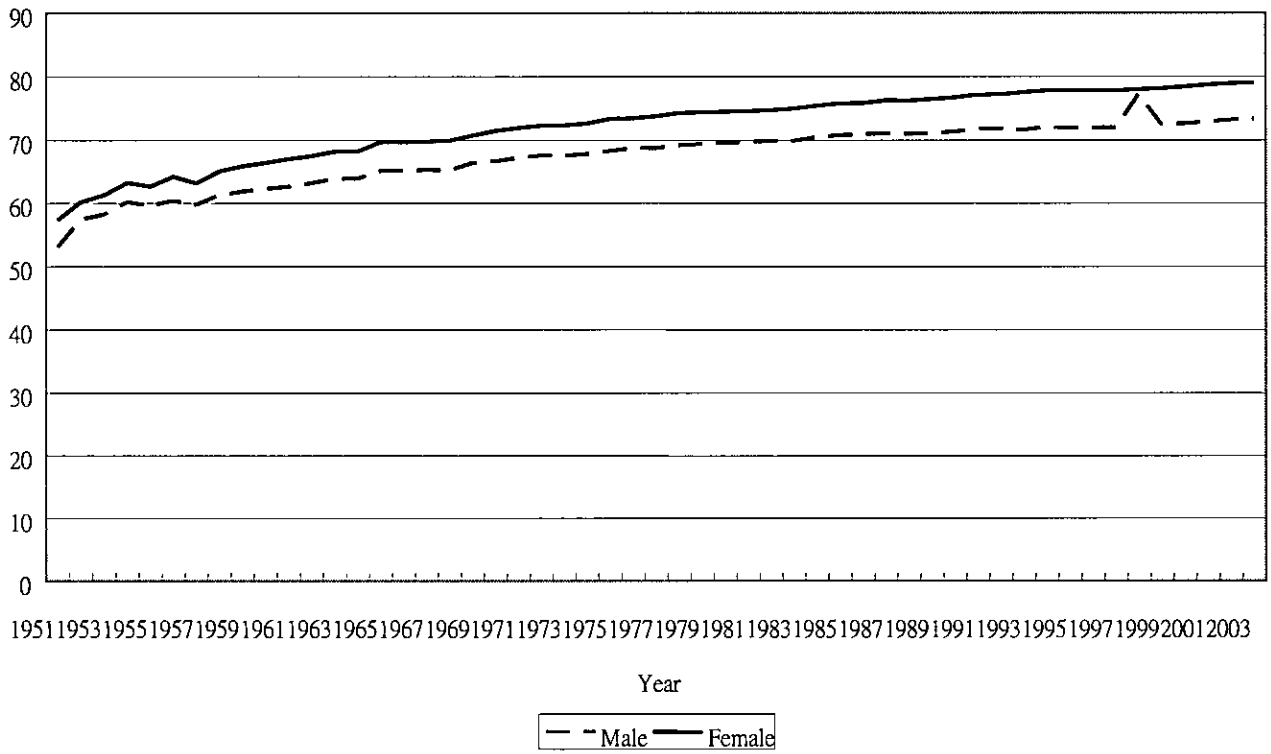


Figure 5 Age Structure of Population

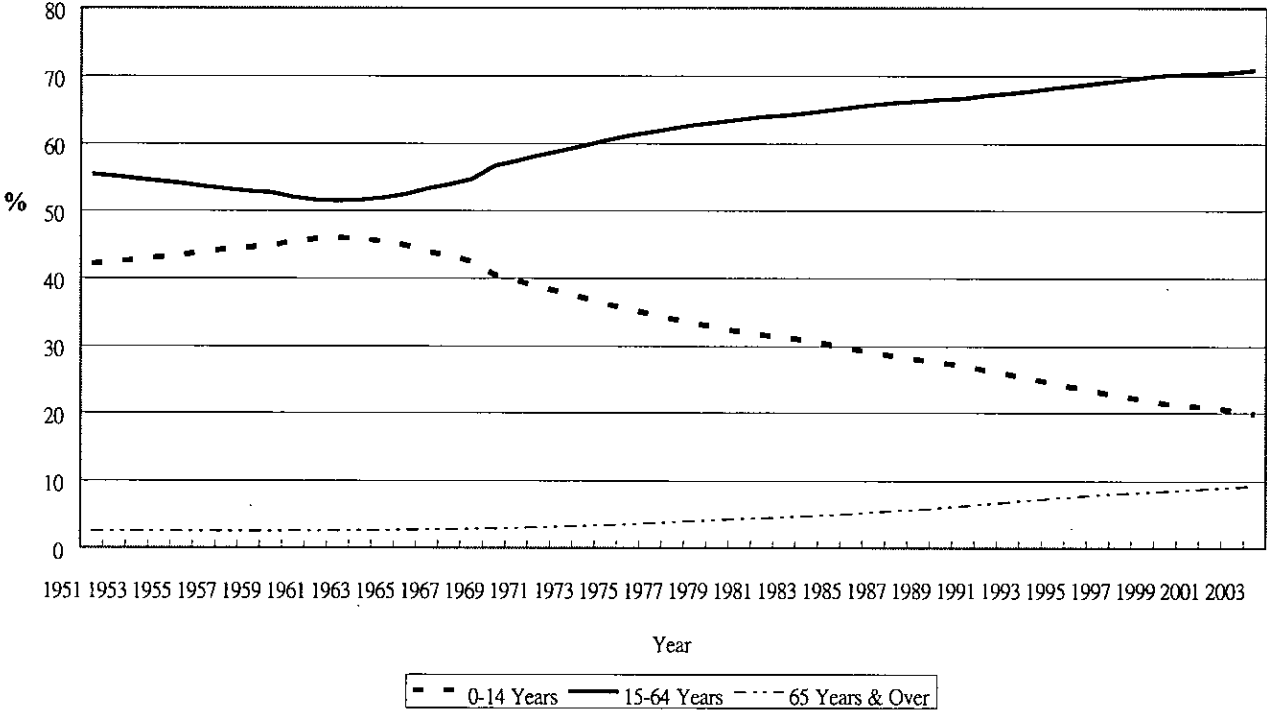


Figure 6 Dependence Ratios

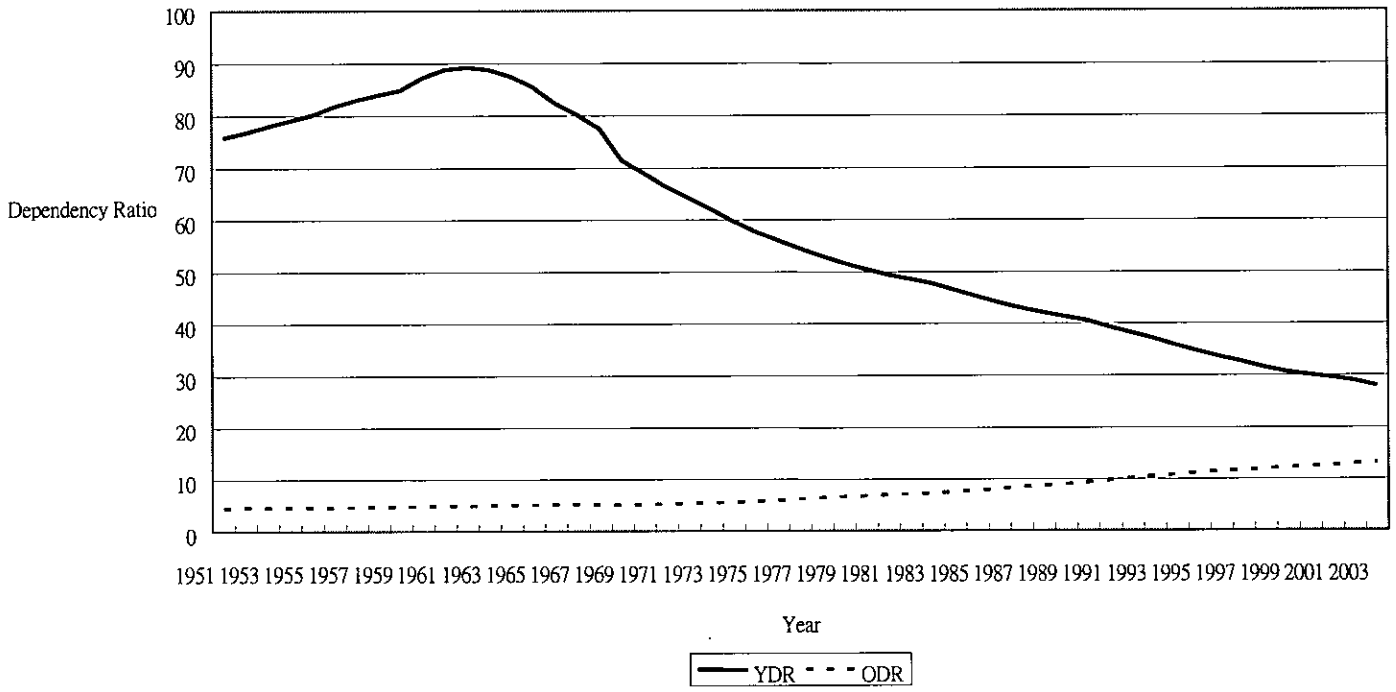


Figure 7 Medical Expense Per Capita: 2003

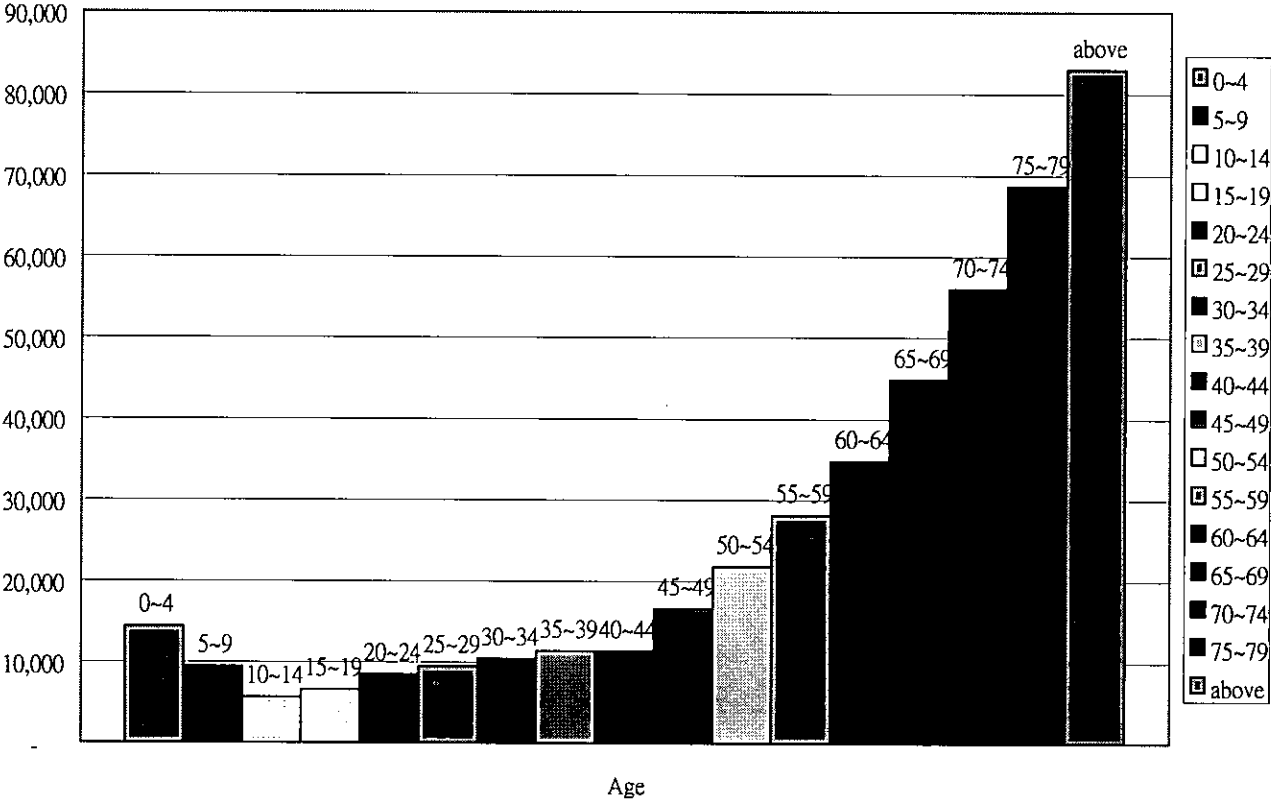


Figure 8 Distribution of Medical Expenses and Population by Age: 2003

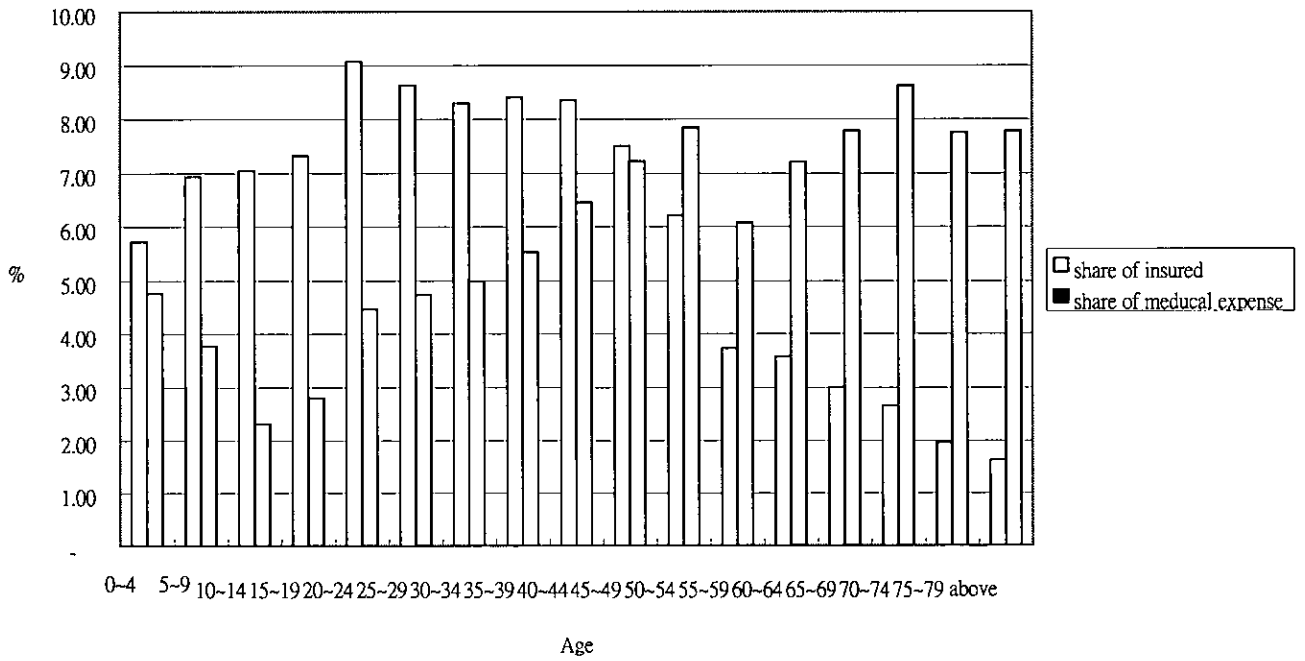


Figure 9 Excess Medical Utilization: 2003

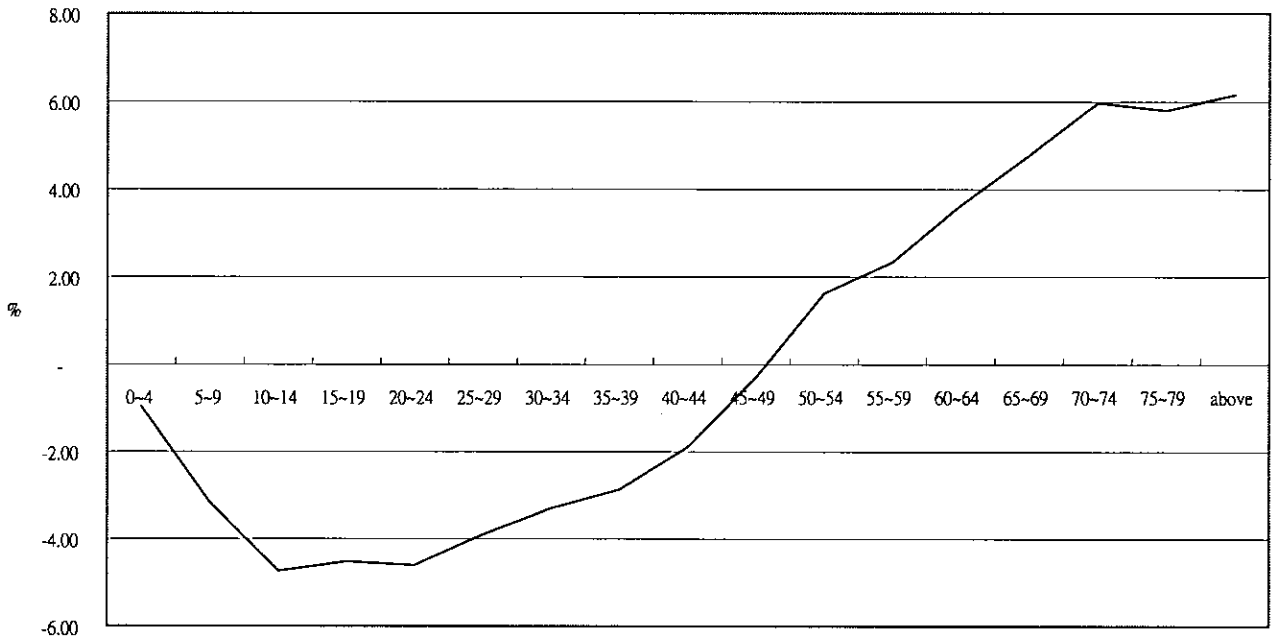


Figure 10 Distribution of Medical Expenses and Population by Age: 2004

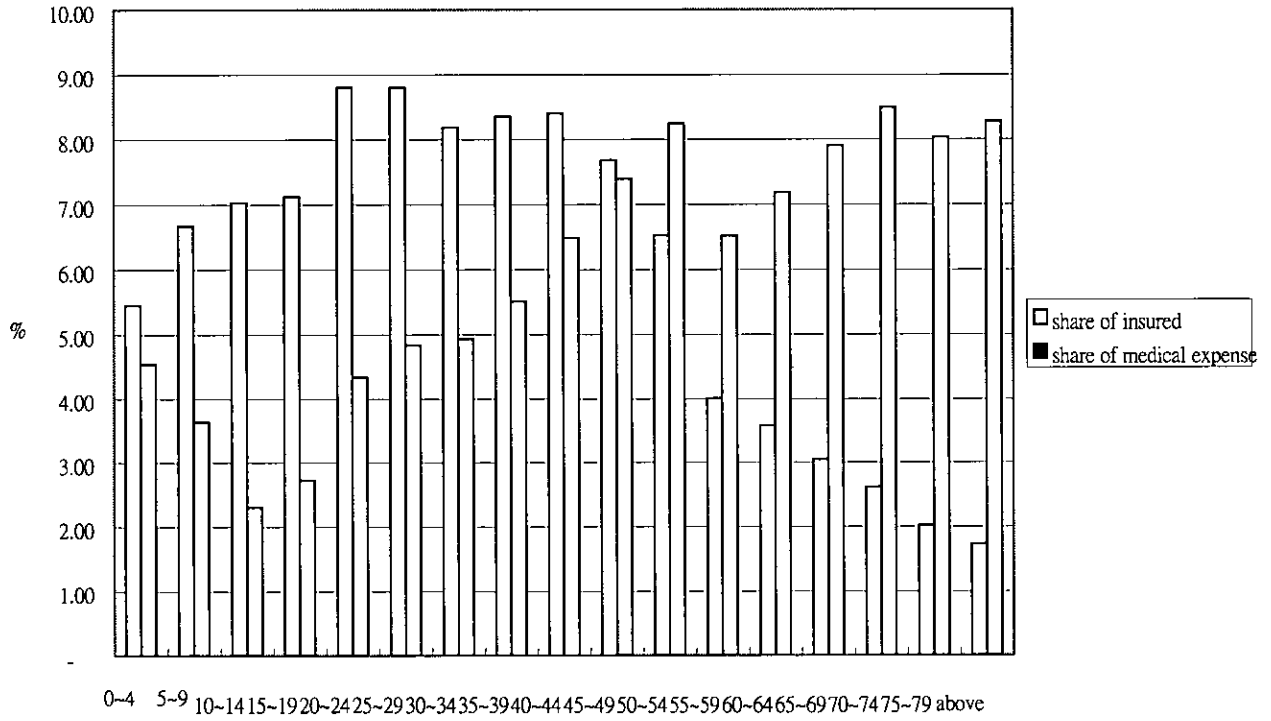


Figure 11 Excess Medical Utilization: 2004

