# 行政院所屬各機關因公出國人員出國報告書
（出國類別：進修）

服務機關：行政院經濟建設委員會
出國人 職　　稱：專員
姓　　名：徐如實
出國地點：美國
出國期間：88年9月27日至89年9月26日止
報告日期：90年2月2日

# 「經濟政策管理」課程進修報告

目 錄

# 「經濟政策管理」課程進修報告

一、進修目的

近年來，網際網路的發展無遠弗界，全球化趨勢愈趨明顯，世界經濟瞬息萬變，國家經濟政策的研擬，必須掌握世界脈動，才能研擬正確的發展方針，加速國家經濟發展。

職奉 准赴美國哥倫比亞大學國際暨公共事務學院參加「經濟政策管理」的研習課程(program in economic policy management)，自民國八十八年九月二十七日起至八十九年九月二十六日止，為期一年，包括課程訓練以及機關實習二部分，修習課程及實習內容詳列如后。

二、進修過程概述

㈠修習課程

哥倫比亞大學行自1993年始，與世界銀行合辦「經濟政策管理」研訓課程，旨在培育優秀政府部門經濟政策制訂者，熟悉國際重大趨勢與經濟政策管理技能，課程由經濟系與世界銀行共同規劃，集合經濟系、商學院，以及公共事務學院師資，並由世界銀行日本經濟發展基金提供15名獎學金贊助會員國學員。本學年共計三十八個國家政府派員參加研習，包括歐洲、南美洲、非洲、經濟轉型國家、東亞及中亞等國。由於我國並非世界銀行會員國，必須自費參加研習。

哥倫比亞大學為學期制，每年分秋季、春季及夏季三學期。「經濟政策管理」課程修習期間涵蓋夏季上、下學期、秋季班，以及春季班，共須修習四十七學分。受限於政府研習期間不得超過一年的規定，本人在校進修期間僅參加秋季

班與春季班課程，進修之課程如下：

1.總體經濟政策管理(Ⅰ)與(II)：主要包括匯率制度、國際資金移動，及政策工具有效性的研究。

(1)總體經濟政策管理(Ⅰ)

①國際貨幣交易理論

－外匯市場交易。

－Mundell-Fleming模型與固定匯率制度。

－貨幣政策與財政政策的有效性。

②匯率制度及其影響之研究

－固定匯率制、浮動匯率制、管理式浮動、釘住匯率制、目標區(target zone)管理、複式匯率制度、通貨局(currency board)的設立等。

－固定匯率制度下的資本管制。

－投機性資金襲擊(speculative attack)、固定匯率制度，與金融危機的發生。

③貨幣政策的運作機能

－中央銀行的行爲分析。

－貨幣政策工具的應用。

－開放經濟體系下貨幣政策的運作法則。

－中央銀行政策目標的選定與對總體經濟的影響。

(2)總體經濟政策管理(II)：主要包含三大議題，通貨膨脹的控制、金融體系的管理，以及金融危機的防範。

①通貨膨脹的發生、穩定政策與穩定成效

－通貨膨脹及對總體經濟生產面、消費面的不良影響。

－政府政策動態不一致性(dynamic inconsistency)與通

貨膨脹。

－貨幣政策控制通貨膨脹的運用。

－惡性通貨膨脹的發生與穩定政策(stabilization policy)的實施。

－正統(orthodox)與非正統(heterodox)的通貨膨脹穩定政策。

－個案研究：迦納(Ghana)惡性通貨膨脹的穩定與改革。

②金融體系研究

－資本市場的基本要素與運作。

－金融抑制(financial repression)與金融自由化。

③金融危機與國際收支危機。

④銀行體系的發展與管制。

2.個體經濟政策管理(Ⅰ)與(II)

(1)個體經濟政策管理(Ⅰ)：主要介紹國際貿易理論與產業組織等應用個體經濟學。

①基本貿易模型

－李嘉圖模型(Ricardian model)。

－特定要素模型(Specific-factor Model)。

－Hecksher-Ohlin模型。

②貿易政策與福利分析

－關稅與配額(quota)對福利水準的影響。

－直接非生產性活動(direct unproductive activity)，如競租(rent seeking)與賄賂(corruption)行爲等，對福利水準的影響。

③貿易政策作爲經濟發展策略的運用

－進口替代與出口導向工業化策略。

－幼稚產業的保護。

－貿易政策對經濟成長的影響。

④多邊與區域貿易協定。

(2)個體經濟政策管理(II)：主要討論政府部門在市場經濟中扮演的角色，政府政策如何矯正市場失靈。

①政府部門運作的極限

－政府在經濟體系的角色分析。

－政府失靈(government failures)及其影響。

②福利定理(第一福利定理及第二福利定理)與柏拉圖最適(Pareto optimal)。

③市場失靈下的政策制訂

－公共財、外部性對政策制訂的影響。

－自然壟斷下政府政策制訂：政府管制與特許權標售(franchise auctions)。

－資訊不對稱、不完全下政策自然調節機制的制定。

④租稅理論

－租稅結構對生產與消費活動的影響。

－租稅課徵對福利水準的影響。

⑤個案討論與研究：政府對外部性行爲的矯正與政策制訂

－森林濫伐。

－預防接種與預防醫學研究。

－削減貧窮。

－美國醫療保險制度。

3.政策制訂管理技術研究(Ⅰ)與(II)

(1)政策制訂管理技術研究(Ⅰ)：經濟分析中重要統計與計

量方法的介紹與應用。包括：

－普通最小平方法的估計、假設檢定、殘差分析、線性重合問題的處理，以及虛擬變數的應用。

－設定誤差(mis-specification)的檢定與校正，包括序列相關(serial correlation)及變異數不齊一(heterskedasticity)的估計，即一般最小平方法(generalized least squares，GLS)的應用。

－橫剖面(cross section)資料迴歸估計法。

－聯立方程組的認定(identification)與估計方法。

(2)政策制訂管理技術研究(II)：包括公司財務與公部門政策管理二部分。

①公司財務：介紹公司財務報表的表現與應用。包括：

－資產負債表(balance sheet)與損益表(income statement)的製作，現金基礎與實付基礎(accrual basis)的介紹，以及流動資產的管理等。

－長期資產折舊與損耗的計算。

－時間價值的計算：複利(compounding)與折現(discounting)。

－金融工具的介紹，包括公司債、公司股票、國際資金融通的工具與選擇、金融工具收益與價格的決定。

－中間值變異數資產組合理論(mean variance portfolio theory)與資本資產定價模型(capital asset pricing model, CAPM)。

－長期投資的淨現值、收益率，以及風險評估。

②公部門政策制訂與管理

－公部門授權的原則。

－公部門決策制訂流程與規劃。

－公部門招標與採購程序。

－公務員的操守與懲戒。

③研提學期報告「公務員的選擇與晉用」(Employee Selection in the Public Sector)(附錄1)。

4.全球經濟重要問題(I)與(II)

(1)全球經濟重要問題(I)：主要爲經濟發展問題個案研究。包括：

①經濟成長來源的理論與實證分析

－新古典成長理論。

－內生成長模型。

－要素累積與技術進步。

－亞洲經濟奇蹟。

－政府干預與經濟成長：南韓與台灣的個案研究。

②優質成長制度面因素的建立。

③世界銀行計畫的成功性探討

－世界銀行援助計畫的執行，與援助成效。

－個案研究：世界銀行對迦納(Ghana)援助計畫之執行情形。

④東亞金融危機的起因與啓示。

⑤優良金融制度之建立

－中央銀行功能與聯邦準備體系之運作。

－金融體系之監控。

－外匯市場的管理與干預。

－貨幣政策的運用。

－中央銀行獨立性問題。

－通貨局(currency board)制度。
－個案研究：印尼的通貨局制度。

(2)全球經濟重要問題(II)：主要討論總體變數關連性分析，兼論國際貨幣基金會(International Monetary Fund, IMF)的功能。

①總體經濟關連性分析：國際收支帳、國民所得帳、政府收支帳、儲蓄與投資之間的關係。

②國際貨幣基金會(IMF)在東亞金融危機所扮演的角色
－東亞金融危機的起因及其外溢效果。
－國際貨幣基金會的救助措施與主張。

5.世界經濟展望

(1)全球化經濟的歷史演進，包括：
－全球化的起源，早期(1000-1350年)世界貿易契約形式的演進，黑死病對經濟的影響。
－航道的發現與新經濟對歐陸、非洲、亞洲經濟的影響。
－十六世紀價格機能的演進，初級產品、製造加工品、奴隸的三角貿易(triangular trade)。
－工業革命、大蕭條的發生及其對生產、消費的重大影響。
－二次大戰後全球經濟的快速成長與整合。

(2)貿易模式與經濟成長
－古典成長模型，熊彼德的技術創新，Harrod-Domar 與Feldman-Mahalanobis成長模型，勞動剩餘說與雙元經濟說(Arthur Lewis)，Solow成長模型，經濟成長會計與技術進步，邊做邊學(learning by doing)，內生成長

與技術創新。

－比較利益原則，世界價格及經濟效率的決定，扭曲、影子價格、最適干預，國際要素移動，進口替代、出口導向等經濟發展策略的應用。

－貿易與成長的動態模型，變動要素比例與比較利益階梯論(ladder of comparative advantage)，「南、北模型」(North-South model)，外人投資與技術移轉。

(3)政治經濟學研究

－國家(政府)及市場經濟在經濟發展的角色。

－開放經濟中開發中國家與福利國家的差異。

－貿易障礙與競租(rent-seeking)行為。

－內生性關稅(endogenous tariff)理論。

(4)全球化重要課題

－全球化程度深淺論。

－貿易與技術進步對「南、北模型」工資的影響。

－童工保護、智慧財產權保障、環境保護對全球貿易的影響。

(5)提交學期報告「我國政府在經濟發展中的角色分析：政府干預與比較利益的調和」(The Role of Government in Taiwan's Economic Development — the Harmonization of Comparative Advantage and Industrial Policy)(附錄2)。

6.公共政策理論

(1)公共財價格與水準的制訂。

(2)政府管理消費與生產具外部性行為的政策制訂。

(3)民主制度的公共選擇理論，如投票法則、不可能定理。

(4)租稅的經濟效果、歸宿(tax incidence)，與稅負分配。

7.當代日本經濟發展：介紹日本經濟的發展歷程與當前日本重大經濟問題

(1)日本戰後的經濟成長。

(2)90年代以來日本的經濟結構與表現

—總體經濟政策與工具。

—金融體系與儲蓄行爲。

—銀行問題與金融大改革。

—日本大財團、企業集團(keiretsu)，與公司管理。

(3)日本的勞動市場與就業結構。

(4)日本公部門運作、政府與民間企業間的關係、產業政策，及解除管制。

(5)日本的跨國企業與對外投資。

(6)提交學期報告「早期日本汽車工業的發展」(The Early Development of Japan's Automotive Industry and Its Industry policy)(附錄3)。

8.世界貿易體系研究

(1)自由貿易的原則與主張

—自由貿易的主張與基本論點。

—自由貿易的傳統挑戰。

—自由貿易的新世紀挑戰。

(2)如何達成自由貿易

—多邊貿易協定。

—最惠國貿易協定，如北美貿易協定(NAFTA)、南錐共同體(Mercosur)等。

—單邊貿易自由化。

(3)世界貿易組織(WTO)

－贊成與反對成立WTO的主張。

－政府與非政府組織(NGOs)在貧窮國家與富有國家的角色分析。

－西雅圖會議的啓示。

(4)研提學期報告「在世界貿易組織的勞動條件中附加社會條款弊多於利」(A Social Clause on Core Labor in the WTO Would Do More Harm Than Good)（附錄4)。

9. 美國的醫療保險制度：從非營利事業到競爭性公司型態的轉型

(1)1966年以前美國健康保險體系的融資情況。

(2)健康保險組織虧損狀況。

(3)營利與非營利健康保險組織的興起。

(4)聯邦政府改革健康保險制度的策略。

－建立前瞻性支付體系(Perspective Payment System)。

－柯林頓健康保險改革法案。

－平衡預算法案(Balance Budget Act of 1997，BBA 1997)。

(5)聯邦政府改革新策略對醫療體系的重大影響。

㈡實習

學校課程結束後，經面試進入世界銀行歐洲與中亞部門削減貧窮與經濟管理單位，擔任世界銀行短期諮詢，與資深經濟學家Dr. Cevdet Denizer共同從事塔吉克斯坦(Tajikistan)的經濟規劃作業與經濟研究工作，主要工作事項如下：

1. 協助完成塔吉克斯坦 (Tajikistan)年度總體經濟政策、公共建設效益，及世界銀行貸款績效評估，成爲世界銀行國家

報告(country report)的一部分。

2. 協助進行世界銀行研究計畫「金融深廣度對經濟發展的影響」。

3. 提交實習報告，作爲實習成績的一部分。

## 三、進修心得與建議

此次赴美進修，在校研習期間，兼顧經濟理論的充實與政策制訂的討論與研究；在實習階段，進入世界銀行、國際貨幣基金會，與世界銀行經濟學家共同研究，獲益良多，共修得四十七學分，完成四篇關於經濟發展、國際貿易、公部門管理等學期報告及一篇實習報告。不僅提升國際觀，同時，亦增進對開發中國家經濟發展問題的瞭解，對提升工作品質有莫大助益。進修心得與建議如下：

㈠台灣快速經濟發展模式，爲其他開發中國家學習的典範，國際知名文獻，如Rodrik (1996)[1]等亦肯定我國政府對過去經濟發展的貢獻。許多開發中國家難以解決的經濟問題，如南美洲國家經年的惡性通貨膨脹、開發中國家的準財政赤字(quasi fiscal deficit)、外援的失效性、所得分配嚴重不均、非洲國家的政府官員收賄致阻礙經濟發展(即corruption)等問題，在我國經濟發展歷程中皆能有效抑制，沒有成爲經濟快速發展的制限因素。

－關於我國政府在過去經濟發展中所扮演的角色，國際文獻主要有二派主張。其一認爲東亞各國的經濟發展，絕非市場經濟自然形成，政府干預爲不可或缺的要素；另一方則

[1] Nani Rodrik, " Getting Interventions Right: South Korea and Taiwan Grew Rich," *Economic Policy*, 1996.

認爲，台灣政府並無強力干預經濟發展，台灣快速的經濟發展應歸功於市場機能。本文認爲，政府在台灣經濟發展的地位，雖然不可或缺，但是其干預的方式，並非直接影響市場機能，而是經由完備基礎設施、激勵物質資本與人力資本的累積，發揮市場機能，亦即順應階段性比較利益(ladder of comparative advantage)的發展而成。政府的角色是激勵動機，而非直接干預。

一面對當前國家經濟發展轉型的關鍵時刻，外在客觀情勢上，面臨資訊化、全球化趨勢的挑戰；國內經濟情勢上，出現結構性失業、金融機構壞帳過多，及股市投資人信心疲弱等問題，再次凸顯政府健全市場機能角色的重要性。未來政府應儘速矯正市場失靈現象，放鬆人爲不當管制，並擬訂有利市場機能運作的政策措施，才能突破經濟發展瓶頸，促進經濟穩定成長。

㈡產業政策是許多國家爲扶植幼稚工業，促進經濟發展的政策工具。我國政府過去也曾運用若干產業政策，輔助特定產業的發展。日本政府運用產業政策，促進汽車工業發展即爲一成功的案例。目前，日本汽車工業爲其最重要的製造業之一，日本亦成爲世界最大的汽車製造國，其產業政策的特色與成功的關鍵，可歸納爲下列數項：

一政府保護特定產業的政策必須適切，過猶不及皆不適當，且必須附加落日條款。廠商家數的選定攸關生產效率的發揮，如果廠商家數過多，無法發揮市場規模；若廠商家數過少，則將流於長期保護一個競爭力低落的產業，廠商將失去追求效率化、追求創新的經營動機，無法激勵其成長。

一產業政策必須適時迅速調整。日本政府根據不同的外在環

境與不同的發展階段，迅速調整產業政策，被視爲助長其汽車工業發展不可或缺的要素之一。例如，自1948年日本政府宣布發展汽車工業以來，1950年代日本政府即相繼運用外匯管制、政府補貼、融資優惠、租稅減免及高關稅等政策扶植其發展。隨著國民所得的快速成長，1956至1959年，日本政府更加速大力興建全國道路交通網，刺激國內汽車需求，有效提升汽車工業的生產效率。1957年開始，汽車所有零件皆能在日本生產，無須仰賴進口。1965年後，日本汽車更達到國際水準。爲因應外國開放市場以及日圓升值的壓力，日本政府才逐漸開放汽車進口，並降低關稅。爲迎接德國、美國等國際大廠的挑戰，日本政府轉向鼓勵本國汽車公司的合併重整，或進行國際聯盟，以確保有效率的生產規模，提高國際競爭力，並利出口的拓展。

－我國政府亦曾運用若干產業政策，發展汽車工業，然而我國目前汽車工業的發展與日本差異頗大。部分學者指出，雖然汽車工業具有大規模的產業關連效果，發展汽車工業可帶動上中下游關聯產業的發展，有利促進經濟成長，惟台灣因市場過於狹小，不適於發展汽車製造業。汽車工業的發展首重規模經濟，部分零件的生產，如引擎及傳動裝置等，甚至需要更大的規模經濟。目前，台灣中小企業在某些特定零組件的生產，即相當具有國際競爭力，爲美、日大廠所需，建議台灣應朝此方向持續發展。

㈡在國際貿易政策中附加勞動條款的例子所在多有。例如，在北美自由貿易區協定(NAFTA)中，美國國會曾對提高墨西哥勞動條件(如工資、工時等)爭論不止。部分人士認爲，如果不對墨西哥勞工實施高的勞動條件，開放自由貿易後，美

國廠商會因勞動成本較高而失去競爭力，或大舉南移，將不利於美國勞工；WTO組織亦準備附加美國的勞動條件，作爲各國入會或進入市場的社會條款。本人研究報告「在世界貿易組織的勞動條件中附加社會條款弊多於利」指出，由於國家發展水準不同，勞動條件不同是自然(natural)的現象。原因與解決之道如下：

－各國相同的勞動條件不能達到全球經濟效率的提升、福利水準的極大。

－高所得國家要求各國相同的勞動條件並不一定對其有利，因爲這可能導致勞動密集型產品價格上升，高所得國家貿易條件惡化、福利水準下降。

－強制性高勞動條件對低所得國家的勞工也不利，因爲這將導致眾多非技術勞工被迫失業，嚴重危害生計。

－解決之道是一方面進行全球自由貿易，另一方面由跨國的非政府組織，如國際勞工組織(international labor organization，ILO)、聯合國等機構，督促開發中國家政府，針對其市場失靈問題尋求改善。

㈢勞動市場的失靈，應以「勞動政策」針對失靈問題進行適當的矯正；以「貿易政策」加以限制將產生經濟扭曲。伸言之，若勞動市場失靈無法改善，開放自由貿易將有害而無益。因此，在我國即將加入世界貿易組織之際，全球自由貿易即將全面開展，政府首要之務，宜從健全勞動市場供需機制著手，促進勞資雙方協商機制的建立，減少阻礙市場機能運作的不當限制與干預，才能有效解決失業問題，促進本國福利水準、經濟效率的提升。

㈣此次在世界銀行實習，見習世界銀行對開發中國家援助計畫的研擬與執行，同時目睹諸多優秀、頂尖的經濟學家長期致力開發中會員國經濟情勢及經濟政策的討論與評估，對我國際地位的孤立無援深感遺憾。由於我國非世界銀行會員國，不僅危機發生時，世界銀行、國際貨幣基金等國際機構無法提供資金等實質援助，在平時經濟政策的分析、評估，也須自立而爲，明顯限制我國政府相關單位對經濟規劃及經濟政策研擬之切磋及學習的機會，實爲我國的一大損失。鑑於我國短期內加入世界銀行等國際組織，成爲正式會員國的可能性極低，政府宜鼓勵相關機關人員，主動接觸經濟發展國際組織相關人員，發展非正式的友好往來關係，便利我國取得相關資訊，避免孤立。

附錄1

# Employee Selection in the Public Sector

Shu, Ju-ping

May 1, 2000

PEPM

# Employee Selection in the Public Sector

## I. Introduction

Government is a labor-intensive enterprise. The performance of the government depends crucially on the quality of public employees. By hiring a right person in the right place, managers can save great amount of time. A right match of employee abilities to a particular work can also enhance job satisfaction, improve productivity, lower turnover, and reduce number of problem employees.

Good people are often difficult to find. First, civil service rules often make hiring a long and tiresome process. Second, a manager must make sure whether he has the personnel allocation, and whether the organization has the budget to offer attractive salaries to hire the prospective employees. Also, since public sector salaries tend to be inflexible and low when compared to private sector salaries, it becomes harder to attract excellent persons to work in public sector. More importantly, permanent workers protected by civil service rules have fairly impressive job-security protection. This attracts timid, risk-averse individuals to public employment. It is difficult to attract entrepreneurial-minded staff members to work under this condition. This makes government sector become more passive, conservative, and uninspiring.

Then how to select a prospective employee while we really need someone to do a specific job? There are a few important steps in selection process. In this paper I would like to discuss the steps and ways to screen a right person to fit our right demand.

**II. Steps to select an employee**

i) The first step: Identification and evaluation of candidates

The selection process should begin with identification and evaluation of candidates. This includes position analysis, identify necessary knowledge, skills, and ability, and develop indicators of required knowledge, skills and abilities.

1. Position analysis

In order to find good people, managers must know exactly what kind of people you need. First, we should assess what current staffs we have, what jobs they can accomplish and what jobs they can't. The person you need is the one with the exact addition skills to fill the blank. Ideally, no vacancy would be filled until management has reviewed whether or not that position serves the short- and long-term needs. A selection process that does not begin with this analysis would run the risk of identifying inappropriate candidates.

2. Identify necessary knowledge, skills, and ability

From the position analysis, it is clear that what attributes an individual should have in order to fulfill the assigned duties. Identification of necessary knowledge, skills, and ability will help us to pick the most desired candidate from a broad array of persons.

3. Develop indicators of required knowledge, skills and abilities

Once the job content and the kind of person needed have been defined, indicators of the knowledge, skills, and abilities required can be developed. This might include experience in a particular occupation, completion of a given training, evaluations by former employers and so on. These indicators should be integrated into the later procedures to be used for selection decision.

ii) The second step: device a recruitment plan

After assessing our real staff needs, we should device a recruitment plan and develop a recruitment network. Traditionally, government has been passive in communicating position. However, effective public managers should use innovative ways to make the recruitment more productive. There are several steps that should includes in the recruitment process:

1.Deciding where to search

Recruitment can be internal and restricted to current employees, or it can be external and invite applications from anyone that might be interested and qualified. So the first

issue is to decide it is internal or external. If it is internal, we can just determine from the staffing inventory and see if qualified candidates exist within our organization. If the recruitment is external, we need to conduct more formal ways to do it.

2. Preparing the announcement

Using the position's job description as a reference, a job announcement should be drawn up for use in advertising the opening. This announcement should describe major duties and responsibilities, title, salary, career potential, location, and the requirements of education, certification, and experience that candidates are expected.

3. Advertising the vacancy

After writing the job announcement, we should advertise the vacancy as many locations as possible to attract the greatest number of applications. Formal job posting and advertisement in trade periodicals is not enough. Instead, we should make use of professional network to identify applicants.

iii) The third step: Screen applicants

Ordinarily, this screening process should consist of a systematic analysis of the candidates' education and experience through a review of their resumes or application forms. We can set up some minimum qualification to facilitate screening. This minimum qualification can be some certain level of education and experience. Candidates who

achieve a satisfactory score are certified as eligible and placed on a register. If some applicants do not have the minimum qualifications required, there is no sense in having them take the examination or interview in the later process.

iv) The fourth step: Construct and administer examinations

Since the passage of the Pendleton Act, the emphasis for entry into government jobs has been on examinations rather than patronage. Civil service examinations are commonly regarded as synonymous with the public sector selection process. Examinations attempt to measure the traits, knowledge, skills, and ability that are thought to be necessary to do well in a job. Examinations can be categorized according to what you want to measure. For example, examines can be General Intelligence test, Personality Traits test, Written Performance test, Oral examination, and so on.

However, there is some shortcoming in exams. Any type of exams can not predict how well job performance will be. There is an argument says that unless high scores on an exam can be shown to be highly correlated with job performance, we can never trust the exam instrument. This reflects the fact that exam can test the knowledge the candidate has, but it never tells you anything about future performance. Performance of an exam can be an indicator, but not all of them.

v) The fifth step: Apply Laws and rules for certification and veteran's preference points

A key mechanism for eliminating patronage in the selection process has been the requirement that managers choose from among the top three to five scores on the examination, and build them into the certification process. To do this, first, we have to decide the passing scores. Then, we have to add some preference on veterans. There is a public policy towards preferential hiring of military veterans. The rationale is simply to include this as one of the benefits available to those who have serve in the military and help them transit from military to civilian lives.

vi) The sixth step: interview and make a selection

Although it is common for managers to interview those who have been certified, most civil service laws do not require it. What is required is that all certified candidates receive equal treatment. Most managers add their judgment to the evaluations and pick the suitable one to probate.

vii) The last step: evaluate performance during probationary period

The last and best stage of the selection process is probation. An evaluation of performance during the probationary period is direct evidence of how suited a person is for the job. The length of probation varies with the type of job. If the manager think the actual performance is good, the final step would be to advance the new appointee from probationary to permanent status.

## III. Conclusion

Government is a labor-intensive sector. We need high quality government employees to have better performance of public sector. After the discussion above, we can have the following conclusion:

1. In order to enhance the efficiency in public sector, government sector should recruit in a more aggressive and innovative way, instead of sitting back and waiting for excellent people to drop in.
2. Before announcing the vacancy, managers should complete careful human resource planning and position analysis to know what real need is and to avoid hiring the wrong person.
3. Although examination in selecting is required by the Law, managers should focus on evaluating the performance of job, not just sticking to the performance of examination.
4. Recruitment is not only a science but also an art. It must proceed with caution and humility. Selection employees should place emphasis on job-related competencies, rather than moods and impressions.
5. Probation is the best stage to know if the person can really perform well and serve our need. We should make use of it, not simply let it become the early stage of permanent employment.

**Reference**

Cohen, Steven, 1988. *The Effective Public Manager: Achieving Success in Government.*

Dresanq, Dennis L., 1999. *Public Personnel Management and Public Policy.*

Graham, Cole Blease, 1993. *Managing the Public Organization.*

附錄二

# The Role of Government in Taiwan's Economic Development

## -- The Harmonization of Comparative Advantage and Industrial Policy

Ju-ping Shu

May 12, 2000

# The Role of Government in Taiwan's Economic Development
# -- The Harmonization of Comparative Advantage and Industrial Policy

## I. Introduction

Over the past forty years, Taiwan has grown rapidly from a backward rural economy to a newly industrializing one. Per capita GNP has increased more than 60 times within 47 years (from $196 US dollars in 1952 to $12,020 US dollars in 1998). The economic achievement is well known as "East Asian Miracle". We also know that the Taiwan economy went through the stages of import substitution, export promotion, and technology intensification. The leading role shifted from agriculture to industry, and from labor intensive light manufacturing to capital and skill intensive manufacturing. Between them, international trade has played a crucial role in the development and is the major source of growth. Export share of GDP increased from 8% in 1952 to 48% in 1998. Taiwan has become the fourth largest trading country in the world.

One important feature of Taiwan's economy development is government role. There are two competing and contradictory views in literature debates regarding the role of government in Taiwan's economic development. One school attributed the success to market mechanism. They indicated that the success of Taiwan's economic development

was due to the fact that government got the relative prices right and allowed markets to function well (World Bank (1993), James, Naya, and Meier (1989)). The other school emphasized the role of government. They argued that it is government intervention that distorted the prices and happened to yield the right outcome (Amsden (1989), Wade (1990, 1999)). Lin (1999) pointed out further that although Taiwan government intervened in the market, it did it in a quite different way. Taiwan government, instead of adopting 'anti-comparative advantage" strategy, provided incentives for economy agents to exploit the economy's comparative advantage, fastened the dynamic change of comparative advantage, and contributed to achieve rapid upgrading its industrial structure (comparative advantage development strategy). However, Lin (1999) did not point out the industrial policies that can be characterized as the comparative advantage development strategy.

In this paper, I would like to point out first Taiwan's economic success should be attributed to both government intervention and market mechanism. As industrial structure became more capital and technology intensive, the role of market mechanism increased and the role of intervention declined. Then, I will demonstrate the industrial policies that government adopted as a support of Lin (1999), and explain what policies were designed to act in consistent with Taiwan's "anticipated comparative advantage", and help to

accumulate human and physical capital.

The structure of this paper is as the followings: First, I would like to point out the changing pattern of Taiwan's comparative advantage. Secondly, I would list the industrial policies that government implemented in different stages of economic development. Then, I would to discuss what the changing role of government policies during economic development. The last part is conclusion.

## II. The dynamics of Taiwan's comparative advantage

Trade is the engine of Taiwan's economic growth. International trade following the principle of comparative advantage allows Taiwan to achieve a higher income and hence to accumulate capital by raising the capacity to save and invest.

Traditionally a country's comparative advantage based on its endowment is stationary. However, comparative advantage would change during economic development process. Balassa (1981) pointed out "stages approach to comparative advantage", and indicated that the structure of export change with the accumulation of physical and human capital. East Asian countries like Japan, Korea, Singapore, and Taiwan, have very similar pattern of economic development. When Japan's comparative advantage has shifted towards highly capital-intensive exports, Taiwan, with a relative highly labor endowment, took

Japan's place in exporting relative labor intensive products. International trade played an important role in Taiwan's economic development. As Schive (1987) pointed out, comparative advantage can explain the trade pattern of Taiwan.

According to the trade theory, a country has a comparative advantage in producing a good if the opportunity cost of producing that good is lower than it is in others. Hence, the strength of comparative advantage is measured by differences in pre-trade relative prices. However, the price data we can observe is post trade prices. Therefore, we can only observe comparative advantage, as it is "revealed" in trade flow data. That is, if markets are free and efficient, firms' maximizing behaviors will lead to export goods whose pre-trade relative prices are low and import goods whose pre-trade relative prices are high. The pattern of trade and true comparative advantage should be closely related.

Ranis (1992) and Chow and Kellman (1993) used "revealed comparative advantage" (RCA) to examine the changing of Taiwan's comparative advantage. By calculating Taiwan's RCA in each economic development period, they showed a clear pattern of changing in Taiwan's comparative advantage.

According to Bela Balassa (1965), for commodity $i$ of country $j$, the revealed comparative advantage index can be defined as:

$$RCA_{ij} = \left( X_{ij} / \sum_{i} X_{ij} \right) \Big/ \left( \sum_{i} X_{ij} / \sum_{j} \sum_{i} X_{ij} \right)$$

If $RCA_{ij}$ is greater than one, that is, when the share of commodity $i$ in country $j$'s exports is greater than the share of that commodity in world trade, country $j$ is revealed to have a comparative advantage in commodity $i$. When the RCA index becomes higher, the comparative advantage is greater.

According to the RCA index calculated by Chow and Kellman (1993), we can have the following findings.

1. In early period, the revealed comparative advantage of Taiwan lay in those product groups, which are traditionally defined as labor intensive products. Among them, clothing and textiles are major product groups. Besides, resource-based products group also has greater revealed comparative advantage in mid-1960s.
2. Since 1970s, the competitive positions have changed. As the relative labor cost increased, competitiveness in clothing and textiles declined steadily. The comparative advantage of resource-based products also decreased significantly.
3. There were significant shifts of comparative advantage in exports from resource-based products to electrical machinery. Comparative advantage in resource-based products characterized Taiwan in mid-1960s, but by 1990 this was not true. Conversely, in the earlier period, Taiwan did not demonstrate a comparative advantage in electrical machinery. However, the situation completely reversed from 1990. These show that

Taiwan has successfully upgraded exports from labor-intensive and resource-based products to more technology-intensive products. This also shows that over the forty years, Taiwan has accumulated sufficient human and physical capital, which made this shift possible.

Table 1 Revealed Comparative Advantage of Taiwan in OECD

| Product group | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 |
|---|---|---|---|---|---|---|
| Resource-base products | 2.31 | 1.12 | 0.75 | 0.83 | 0.73 | 0.58 |
| Clothing | 5.34 | 7.17 | 5.21 | 3.54 | 2.63 | 1.58 |
| Textiles | 1.80 | 1.46 | 1.22 | 0.83 | 0.78 | 0.88 |
| Footwear | 2.55 | 5.57 | 6.72 | 7.23 | 6.12 | 3.61 |
| Furniture | 1.60 | 1.67 | 1.36 | 2.37 | 3.50 | 2.73 |
| Chemicals | 1.06 | 0.17 | 0.13 | 0.17 | 0.14 | 0.19 |
| Metal manufactures | 0.15 | 0.28 | 0.40 | 0.69 | 1.01 | 1.16 |
| Nonferrous metal | 0.14 | 0.04 | 0.02 | 0.02 | 0.07 | 0.15 |
| Non-electrical machinery | 0.01 | 0.12 | 0.21 | 0.33 | 0.67 | 1.14 |
| Electrical machinery | 0.95 | 2.76 | 2.20 | 2.03 | 1.61 | 1.57 |
| Transport equipment | 0.03 | 0.07 | 0.08 | 0.13 | 0.17 | 0.27 |
| Precision instrument | 0.08 | 0.21 | 0.46 | 0.58 | 0.67 | 0.75 |
| Miscellaneous manufactures | 1.63 | 1.71 | 2.30 | 2.64 | 2.22 | 2.05 |

Resource: Chow and Kellman (1993).

If we examine Taiwan's export commodity composition over the past four decades, we can find there is a significant change in export goods. At present, 98.2% of Taiwan exports are manufactured goods. In 1985, 93.5 % of total exports were accounted for by manufactures, 1.6 % by agricultural products, and 4.5 % by processed agricultural products. If we trace back further, in 1970 nonagricultural products accounted for 78.6 %

of Taiwan's total exports, but it was only 32.3% in 1960.

While Taiwan has exported increasingly many manufactured goods in both the relative and absolute terms, the export composition of manufactures has also changed rapidly. During the past four decades, textiles have obviously been in the forefront of Taiwan's exports, and they have now been replaced by electrical equipment and electronics. Plywood has followed basically the same pattern as textiles, with an even shorter life cycle. Exports of metals and metal products with scraps from ship-breaking increased faster than total exports in the 1960s and were further augmented by a modern steel complex established in the late 1970s. Machinery also demonstrated a remarkable stable increasing trend in total exports. Electronics and electrical equipment like computer and the peripheral, becomes the largest category of manufacturing export. It accounts for 34.3 of Taiwan's export, while it only took up 0.6% in 1960. That shows that over the pass forty years, Taiwan's export product has shifted from labor intensive products to capital and technology intensive product. This is exactly what the changing pattern of revealed comparative advantage showed.

## III. The harmonization of comparative advantage and industrial policy

In order to upgrade Taiwan's industrial structure, Taiwan government always adopted

Table 2 Export commodity structure of Taiwan (percentages)

| | Agricultural product | Processed agriculture products | | | Manufactured products | | | | | | | Total exports |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | sugar | Canned food | Total | Textiles | Plywood | Plastic products | Metals and Metal Product | Machinery | Electrical equipment, Electronics and Appliances | Total | |
| 1960 | 12.0 | 44.0 | 4.8 | 55.7 | 14.2 | 1.7 | - | 4.0 | 0.2 | 0.6 | 32.3 | 100.0 |
| 1965 | 23.6 | 13.1 | 10.5 | 30.4 | 15.8 | 5.9 | - | 4.8 | 1.3 | 2.7 | 46.0 | 100.0 |
| 1970 | 8.6 | 3.1 | 5.7 | 12.8 | 31.7 | 5.3 | - | 6.3 | 3.3 | 12.3 | 78.6 | 100.0 |
| 1975 | 5.6 | 5.0 | 2.9 | 10.8 | 27.6 | 3.3 | 6.5 | 4.8 | 3.6 | 14.7 | 83.6 | 100.0 |
| 1980 | 3.6 | 1.2 | 1.4 | 5.6 | 22.6 | 2.1 | 7.4 | 6.4 | 3.8 | 18.2 | 90.8 | 100.0 |
| 1982 | 1.9 | 0.4 | 0.9 | 5.7 | 21.6 | 1.5 | 6.8 | 7.6 | 3.8 | 17.6 | 92.9 | 100.0 |
| 1985 | 1.6 | - | - | 4.5 | 19.5 | 0.8 | 4.3 | 7.7 | 4.8 | 20.5 | 93.5 | 100.0 |
| 1990 | 0.7 | - | - | 3.8 | 15.3 | 0.3 | 5.8 | 7.8 | 8.6 | 25.9 | 95.5 | 100.0 |
| 1995 | 0.4 | - | - | 3.4 | 14.0 | 0.1 | 6.4 | 9.0 | 7.5 | 29.9 | 96.2 | 100.0 |
| 1998 | 0.3 | - | - | 1.5 | 13.2 | 0.1 | 5.3 | 9.8 | 7.1 | 34.3 | 98.2 | 100.0 |

Source: Council for Economic Planning and Development, *Taiwan Statistical Data Book*, 1999.

"pragmatic approach" in designing industrial policies. They set up different industrial policies in response to the changing of comparative advantage in each stage. As Lin (1999) indicated, when a country increases enough both human and physical capital in its overall endowment structure, the attempt to upgrade a country's overall industrial structure can succeed. That is to say, if the government adopts a policy framework that provide economic agent with incentives to accumulate human and physical capital, and to exploit the economy's existing comparative advantage, this economy will be competitive and can achieve rapid change in comparative advantage and a quick upgrading of its industrial structure. This is exactly what Taiwan government did in the past forty years.

i) 1950-1958 -- in pursuit of stability and self-sufficiency (first import substitution)

In the early 1950s, Taiwan was poorly endowed. It was not rich in natural resources and there were almost no valuable mineral deposits in Taiwan. The existing amount of cultivated land can not be increased. Moreover, Taiwan' population density is extremely high. In 1952, Taiwan's per capita GNP was only US$196. Taiwan was in short of capital, technology, and foreign exchange. During this period, Taiwan government did not adopt the heavy industry-oriented development strategy. Instead, in line with the capital scare and labor-abundant characteristics of resource endowment, Taiwan government exploited its comparative advantage in relative labor-intensive manufactures and relied on the development of labor intensive and low technology industries to push forward the early period of economic development. Taiwan's policy was inward looking at that time, with priority given to producing enough consumer non-durables and construction materials for basic needs. Those policies includes land reform, import substitution policies (i.e. foreign exchange policy, import control and high tariff), high interest rate policy and so on.

1) Land reform: Land reform was carried out in three phases: rent reduction, sale of public land, and the "land-to-the-tiller" program. The significant change in tenancy condition provided strong incentive to make extra efforts in cultivation. This contributed to the increase in agriculture production. Land reform led to a smaller-scale farming

system, which brought about more labor-intensive production of vegetables and fruits. Land reform also provide more widespread choice of farmers regarding the cultivation of crops, which contributed to the development of multiple cropping farming and agriculture diversity. Technology changes like biological innovation, institutional innovation, and mechanical innovation increased agriculture productivity and generate sufficient surplus in agriculture sector to finance the capital demand of initial development of industrial sector.

2) Import control and high tariff: During 1950s, Taiwan was confronted with a sizable trade deficit. In order to facilitate the development of light industries, the government controlled those imports from foreign and imposed high tariff on import substituting goods. This prevented domestic firms from foreign competition especially from Japan and boosted up the domestic price that help domestic industry grew rapidly.

3) Foreign exchange control: In 1951, the multiple exchange rate policy was introduced. Goods imported by the public sector, plant, important raw materials and intermediate inputs imported by the private sector were given a lower official rate; imports of other goods were given a higher rate. Export of major exports, sugar, rice, and salt, were given a lower rate than private export earning.

4) High interest rate: There were two purposes for Taiwan government to adopt tight

monetary policy: one is to stabilize financial situation after hyperinflation; the other is to encourage private saving. In order to increase capital supply, government designed the "preferential interest rate saving deposits" policy and "longer-term preferential interest rate saving deposits" policy to encourage private saving. In order to solve the asymmetric information problem in capital market, government conduct direct credit to manufacture firms in the interest rates lower than black market rates. Through allocation of funds by the government, import-substituting industries grew rapidly.

During 1950s, main exports were traditional export item, like sugar, tea, and canned and tropical fruits accounted for 87.3% in 1953 and 67.7% in 1960. In this period, manufacture exports, mainly textiles though were minimal but did start picking up near 1960. In 1953 to 1960, the fastest growing industries were agricultural product processing, foodstuffs, and textiles. Agriculture GDP share in 1955 was 29.1%, while manufacturing shares was only 15.6%. The share of agriculture product and processed agriculture products to total export was 89.6%. The share of industrial product was 10.4% in 1955. Then, due to rapid expansion in textile manufacturing, the share of industrial product increased to 32.3% in 1960.

ii) 1958 to 1971-- export expansion

Near the end of 1950s, prices became stable and the utilization rate of industrial capacity was low. This implied that domestic market became saturated, and the economy reached a turning point. A set of policy reforms was therefore initiated around 1960 to create a favorable environment for encouraging exports. This is so-called export promotion, export substitution period. In mid-1960s, Taiwan had enjoyed its comparative advantage as the government adopted export-led growth strategies. The important policies includes two devaluations that brought the New Taiwan dollar to its market valve, the unification of the multiple exchange systems, and various policies that provide incentive schemes for investment. These policies includes:

1. "Nineteen-point Economic and Financial Reform": Reform the foreign exchange and trade administration to establish a unitary exchange rate, and to liberalize control. Give private business preferential treatment in the areas of tax, foreign exchange and financing. Reform tax system and tax administration to enhance capital formation. Broaden measures encouraging exports including improve procedures governing settlement of foreign exchange earned by exporters.

2. "Statute for encouragement of investment": The main purposes were to facilitate the acquisition of plant sites and to provide tax exemptions and deduction. These policies include five-year tax holiday for productive firms, tax exemption for undistributed profit.

3. Tax reduction and rebates: Tax rebates for exports were applied to customs duties and commodity taxes. The credit for investment included the income tax. The reduction of taxes under the Statute for Encouragement of Investment, and the tax and duty rebates for exports, amounted to a large proportion of levied taxes. The largest rebates of customs duties on exports amounted to 67.3% of the corresponding taxes.

4. Nominal exchange rate was unified and substantially devalued.

5. A special export loan with favorable interest rate was initiated in 1957 for exporting financing.

6. Set up three Export Processing Zone: No duties were imposed on imports of materials, machinery and equipment within this zone.

7. In 1968, government made secondary school completion (9 years of education) mandatory for both boy and girls.

From the late 1950s, export expansion was emphasized and various promotion schemes were implemented. Nominal rate of protection, investment policy, tax rebates, and trade loans all provided favorable incentives for export promotion. During this period, Taiwan's comparative advantage in labor intensive manufactures also help to give a strong boost to exports. The adoption of an export-oriented strategy not only rescued Taiwan from potential economic stagnation, but also contributed to its rapid economic

growth. Between 1961 and 1973, the average annual growth rate of the GNP exceeded 10%. The average annual growth rate of industrial products was more than 18%. The share of industry in the economy increased to 43.8%. The share of industrial products in exports reached 84.6%.

iii) In 1971-1982 – the second import substitution

In the 1970s, Taiwan encountered a number of challenges. Externally, it faced energy crisis, world stagflation, and the revival of strong trade protectionism. Internal difficulties included the emergence of serious bottlenecks infrastructure, especially transportation and electric power, and shortages of intermediate inputs need for manufacturing exports. Large amount of demand for intermediate inputs constituted economics of scale and became profitable to set up plants to produce them. The era of low wages has passed due to the full employment. The newcomers, notably Southeast Asian countries and Mainland China, in the international market were accelerating their exports of cheap labor products. Taiwan has gradually lost its comparative advantage in low-cost labor. Government recognized the imperative of changing comparative advantage and adopted measures to encourage direct foreign investment in more capital and technology-intensive industries, so as to produce and export higher value added and more sophisticated product utilizing

less unskilled labor. Foreign direct investment to Taiwan was largely invested in Electronics and Chemical industries. The industry structure moved promptly from labor-intensive, light industries to skill-intensive, heavier industries. This is the second stage of import substitution: import substitution for heavy industry. The policies that government implemented includes the followings:

1. Establish science-based industrial park: The most important measure was the establishment of science-based industrial park in 1980, which had attracted foreign and domestic firms engaged in mainly electronics manufacturing. This formed the sound foundations of the development of Taiwan's high-tech industry.
2. Implement the "Ten Major Construction Projects": The main purpose was to build up the infrastructure and facilitate development of heavy industry. They included six transportation projects, three heavy industry projects and one nuclear power generation project. Among these were the North-South Freeway and the Chiang Kai Shek (CKS) international airport that speeds up the delivery of commodity and inputs. The projects started in 1973. Its investment even reached 20% of total investment in 1975 and 1976.
3. Issue "Methods of Assisting Strategic Industries": Promote development of some heavy industries and parts industries by setting up strategic industries. Assist local industry in technology innovation, the improvement of productivity, and the effective

utilization of resources.

4. Strengthen high tech education: Enhance vocational and skill training, and higher education in science and engineering. Establish the Industrial Technology Institute to assist local industry in technology innovation.

During this period, agriculture exports share decreased significantly, from 8.6% in 1970 to 1.6% in 1985. Textiles exports share also reduced from 31.7% to 19.5%. The share of manufacturing good went up, especially the electrical equipment, electronics and appliances. Agriculture share in GDP declined by 10%, while manufacturing share increased by 8%. The electronics industry in Taiwan illustrates the interaction between foreign investment, technology diffusion and especially, the changing comparative advantage. The forerunners of this industry were the transistor radio and television products. Over the years, these firms extended their production from televisions to computers, notebooks, disk drives, printers, terminals, LED, and monitors.

iv) 1983 till now -- Economic liberalization and technology-oriented development

Due to rapid export expansion, Taiwan's trade surplus began to swell substantially in 1983. Huge amounts of foreign reserves have piled up in spite of a more than 50% appreciation of the New Taiwan Dollar in this period. This has not only led to trade friction but also to excessive expansion of the money supply and excess liquidity. The

government also realized that the long-standing emphasis on export expansion, including policy loans and other incentives, couple with measures to discourage and restrict imports, was exacerbating the trade imbalance. On one hand, in 1984, the government declared that economic liberalization and internationalization would be the guiding principles of the nations. On the other hand, industrial restructuring efforts have continued. Taiwan continued encouraging development of technology-intensive industries. The important policies included the followings:

1. Financial liberalization: Lift foreign exchange controls, exchange rates were determined by the market force. Decontrol interest rate.
2. Relax import control and reduce import tariff.
3. Relax foreign investment control. Foreign private capital has been given easy access to the highly protected service sector.
4. Issue "Statute For Promoting Industry Upgrading" to replace "Statute for Encouragement of Investment". Accelerate the set up of ten largest newly development industries.
5. Develop the "Plan of Developing Taiwan as a Regional Operation Center". Build up capacity of Taiwan's manufacturing sector by enhancing its supporting service, including transportation. Telecommunications, and finance. Especially, implement

large deregulation towards fully liberalization and internationalization to promote free flow of individuals, investments, industries, and information.

6. Implement project of "Science and Technology Based Economic Development": Continue developing high value added industries. Develop another four high-tech industrial park (by both government and private sector) to construct innovation environment facilitating development of high-tech industries.

Till today, Taiwan has become one of the largest electronic producers all over the world. Textile products no longer top the export list. Traditional exports are increasingly overtaken by new and more sophisticated manufactures. This is certainly a far cry from the early 1950's, when sugar and rice together accounted for more than 70% of exports.

**IV. Government role in industrial development**

From the description above, as Taiwan's labor cost rose gradually, and capital accumulated, it is obvious that Taiwan's comparative advantage changed significantly from the more labor-intensive industries to the more capital-intensive and technology-intensive ones. During that time, government policies played a key role. We can not deny the role and the efforts of government in pushing economic development. The question is how Taiwan government did? Did it intervene the market, got the price wrong, and

happened to yield the right results? Or Taiwan's success should be attributed to the free market mechanism? In this section, I would like to discuss to what extent the success is attributed to government intervention and to what extent it is the results of market mechanism. Especially, I will discuss the motive and basis rationale for Taiwan government to adopt these industrial policies.

In order to speed up economic growth, Taiwan government announced policies to encourage development of the industries that government desire. Basically, as we examine those policies described above, there are two major ways implemented to facilitate that. One is to artificially change the relative price. The other is to improve the development environment. The former includes multiple exchange rate system and high deposit interest rate in first import substitution period, the high import tariff, and tax exemption and reduction for producers in export expansion period. The latter one includes improvement of infrastructure capability and external ways to facilitate its development. The former is of course government intervention. The latter one does not directly distort relative price in the market.

Therefore, we can not jump to a conclusion that Taiwan government never distorted the market over the whole period of economic development. However, Taiwan government did also play an important role to improve the development environment, which did not

really effect the relative price. For example, the policies that government adopted to set up export processing zones, Ten Major Construction Plan, and the set up of high-tech science parks. The rational behind this is that as industrial structure becomes more capital and technical intensive, it can become costly to for government to subsidize a particular activity. As James, Naya, and Meier (1989) as far as high technology is concerned, Taiwan government did not directly intervene in capital markets and foreign trade to promote the development. Instead, Taiwan government facilitated the inflow of advanced technology by establishing a science-based industrial park. Therefore, I would like to point out that Taiwan's economic success should be attributed to *both* government intervention and market mechanism. The weight in policy mix between the two methods varied across different development periods. As industrial structure towards capital and technology intensive, the role of market mechanism increased and the role of government intervention declined. As Taiwan economy now integrates into world economy more heavily, much greater policy emphasis is on deregulation. The plan of developing Taiwan as a region operational center implemented in 1995 is an obvious example of full range of liberalization.

No matter what policy that Taiwan government adopted to encourage the development of certain industries, the motive and principle behind are comparative advantage. As Wade

(1990) pointed out, the way in which Taiwan government intervention is different from that other many other developing countries used. Taiwan government policy consistently acted in "anticipation of comparative advantage". We can have the following examples:

1) In early period, labor was abundant and capital was insufficient for industrial development. Government implemented land reform to stimulate agriculture production so that they could create surplus and transform it into capital to support future industrial development. Government also encouraged accumulation of physical capital by adopting high interest rate policy. Besides, in order to save enough foreign exchange for the need of import machine equipment, government also conducted foreign exchange and import control to facilitate accumulation of foreign exchange. At that time, the comparative advantage of trade was cheaper unskilled labor not capital. The policies were for anticipated future industrial development.
2) For another example, in the second import substitution, government recognized the losing comparative advantage in unskilled labor. The industrial policies were focus on encouraging development of high technology industries. This paved the way for today's development electronics.
3) Based on anticipating the coming of informational economy in the 21 centry, the current policies are targeting at deregulation to facilitate the free flow of 3 i's, i.e.

individual, information, investment, and industries.

We can find out Taiwan's industrial policies have always being focusing on the anticipated future comparative advantage.

Taiwan's changes in overall industrial structure and in comparative advantage can ne attributed to persistent physical and human capital accumulation. On one hand, the accumulation of physical capital was successful by encouragement of government policy in each period. On the other hand, Taiwan's education speeded up accumulation of human capital. There is an important characteristic of Taiwan's education development. Taiwan's education expanded from primary education, followed by the second education, then higher education. It is totally designed to support the development of industries. In 1950s, government policy was committed to lowering illiteracy. In the 1960s, mandatory secondary education was expanded. The increase in public expenditures on education in the 1980s reflects a shift in hocus towards higher education. Government policy is to improve the education level of labor force to support the need of industrial development. Expenditures on education as a percentage of income increased from 2.6% in 1960 to 5.5% in 1990. Taking account the high economic growth rate, this amounts to an impressive commitment to education. Taiwan government also encouraged and supplied students to study abroad. The ratio of higher education (collage, university and above)

employment increased from 1.4% in 1952 to 24.9% in 1999. Number of student studying abroad also increased significantly. Government offered a special offer to scholars who returned from abroad to work in the public sector. The flow of scholars and students who returned from abroad after completing their degrees has increased dramatically since 1980s. This constituted an impressive supply of high-skilled workers and contributed to Taiwan's technology progress. The development of Taiwan's electronics industry is benefited from those scholars bringing back advanced technology and experiences which they gained from training abroad, especially from the US. Taiwan's education created and accumulated human capital such that it played a key role in supporting and speeding up the change of comparative advantage.

## V. Conclusion

In the above discussion, most of Taiwan's past success has been attributed to government's ability to encourage exploit its comparative advantage in relatively labor-intensive manufacturing in the early period of development, and then in the more capital and skill intensive products after that. Therefore we can say that the spirit of Taiwan's industrial policy is to provide incentives for economic agents to help accumulate of human and physical capitals. Economic strategy has generally emphasized finding niches

of comparative advantage in the global economy. After carefully examining the industrial policies implemented, we can not conclude that Taiwan government did not intervene in the market and distort the price. The essence is still to foster capital accumulation to speed up change in comparative advantage, and upgrade industrial structure. The "comparative advantage development strategy" is thus the efficient way that Taiwan economy achieved high and rapid economic growth.

**Reference**

Amsden, Alice H., 1999. "Taiwan's Industrialization Policies: Two views, Two types of Subsidy" in *Taiwan's Development Experience: Lessons on Roles of Government and Market*, edited by Erik Thorbecke and Henry Wan, Kluwer Academic Publishers, 1999.

Balassa, Bela, 1965. "Trade Liberalization and reveal comparative advantage." *The Manchester School of Economic and Social Science* 33: 99-124.

Balassa, Bela, 1981. *The Newly Industrializing Countries in the World Economy*, Pergamon Press, 1981.

Chow, Peter C.Y. and Mitchell H. Kellman, 1993. *Trade- the Engine of Growth in East Asia.*

Kuo, Shirley W. Y., 1983. *The Taiwan Economy in Transition.*

Lin, Justin Yifu, 1999. "Comparative Advantage Development Strategy and the Economic Development of Taiwan" in *Taiwan's Development Experience: Lessons on Roles of Government and Market*, edited by Erik Thorbecke and Henry Wan, Kluwer Academic Publishers, 1999.

Schive, Chi, 1987. "Trade Patterns and Trends of Taiwan" in *Trade and Structural Change in Pacific Asia,* edited by Colin Bradford and William Branson, 1987.

Wade, Robert., 1990. *Governing the market: Economic Theory and the Role of Government in East Asian Industrialization.* Princeton: Princeton University Press.

附錄 3

# The Early Development of Japan's Automotive Industry and its Industry Policy

Ju-ping Shu

November 23, 1999

## Introduction

The automotive industry is closely linked to many other industries, and has conspicuous propagation effects on the whole economy. This is why many countries choose the automotive industry as a strategic industry and put high priority in developing it. The Japanese government, too, adopted a variety of industrial policies to foster development of its car industry, so that growth in automobile industry could bring huge positive efforts to expedite the growth of other related industries, to expand export, to raise technical level, and thus to improve standard of living. Now the automobile industry is a leading industry in Japan.

As we look back to 1955, the production and investment shares of the automotive industry were only 2.91% and 2.85% of the total production and investment in Japan. It only accounted for 0.28% of the total exports. However, in 1985, the situation changed dramatically. The share of the industry reached 11.8 % of the total production and 20.8% of the total investment. Export share increased to 26.4% (Table 1). Japan successfully overtook West Germany and the United States within a very short period of time and became the largest automobile producing country in the world. It is thus worth examining how automotive industry developed in Japan and how Japanese government supported its

development as a successful model for less developing countries to follow.

Table 1: Japanese Economy and the Position of Automotive Industry

(Billion Yen, 1,000 persons)

| | Automotive Industry | Iron and Steel | Electric and Machinery | Textiles | Automotive Industry's Share in Manufacturing total (%) |
|---|---|---|---|---|---|
| 1955 | | | | | |
| Production | 181.1 | 635.0 | 240.9 | 999.0 | 2.91 |
| Employment | 12.7 | 27.5 | 22.9 | 108.7 | 2.56 |
| Investment | 7.0 | 31.3 | 10.8 | 26.1 | 2.85 |
| Export | 2.0 | 93.4 | 11.1 | 210.6 | 0.28 |
| R&D | 7.1 | 4.5 | 17.0 | 2.5 | 9.69 |
| 1985 | | | | | |
| Production | 31,531.3 | 17,791.3 | 41,117.3 | 8,118.6 | 11.8 |
| Employment | 76.5 | 38.8 | 271.8 | 21.0 | 7.0 |
| Investment | 1,331.4 | 659.5 | 1,519.8 | 134.6 | 20.8 |
| Export | 819.5 | 325.3 | 710.2 | 149.7 | 26.4 |
| R&D | 686.7 | 192.1 | 163.5 | 59.5 | 14.4 |

Source: Itami, Kagono, Kobayashi, Sakakibara and Itoh (1988).

Table 2: Japan and World Automotive Industry

(1,000 unit, %)

| | Japan | U.S.A | West Germany | France |
|---|---|---|---|---|
| 1955 | | | | |
| Production | 69 | 9,204 | 909 | 725 |
| Export ratio | 1.8 | 4.2 | 41.9 | 22.4 |
| New motor vehicle registrations | 65 | 8,127 | 501 | 541 |
| Import ratio | 10.5 | 0.7 | 3.8 | 2.0 |
| 1985 | | | | |
| Production | 12,270 | 11,650 | 4,450 | 3,020 |
| Export ratio | 54.8 | 7.7 | 61.8 | 56.4 |
| New motor vehicle registrations | 5,560 | 15,560 | 2,510 | 2,110 |
| Import ratio | 1.0 | 36.3 | 45.4 | 54.4 |

Source: Itami, Kagono, Kobayashi, Sakakibara and Itoh (1988).

## I. Industrial Policies of Government

In 1948, Japanese government announced the "Basic Automotive Industry Policy", which set the goal to develop small trucks, establish a mass production system, and promote export to Southeast Asia. MITI (Ministry of International Trade and Industry) sought to "foster" the automobile industry to bring other related industries to modernization. The automobile industry was thus became one of the strategic industries and was placed under strong government protection in order to become a key export industry.

Thanks to government's protection, production of automobiles kept on expanding and arrived at the international standard very rapidly. During the twenty-two years from 1949 to 1971, production of Japanese automobile expanded 200 times for all cars and 3,475 times for passenger cars. At the following, I examine the policies that government implemented to support its development. These includes government protection policies that were used to foster growth of automobile industry, the demand stimulation policy that provide sufficient domestic market, and the liberalization policy that government adopted under the pressure of foreign countries.

### A. Protection policy

There were lots of measures in which Japanese government implemented to protect its growth and prevent from foreign competition. The basic idea of government is to

"postpone trade and capital liberalization as long as possible and to prepare the industry fully for the liberalization". Ueno and Muto (1980) indicated that these measures basically could be classified into protective and support measures.

1. Protective measures are devised to restrict the import of foreign-made automobiles. These include:

1) Favorable tax rate for domestic automobile production, including high tariff rates and high excise tax for imported automobiles;

2) Import restriction through the operation of foreign exchange allocation.

1) Favorable tax rate

Tariffs and excise taxes protected small passenger cars more than other automobiles. The fixed tariff rate imposed on passenger cars in 1960 was 40%, 10% higher than the rate on trucks and parts (Table 3). The excise tax rate on small passenger cars was 15%. In order to provide more advantages for Japanese automobiles, the government imposed 30% to 50% excise tax rates on medium-sized and large passenger cars, which were mostly made by foreign countries.

Table3: Automobile Import Tariff Rates in Japan (May 31, 1960)

| | Fixed rate |
|---|---|
| Automobile passenger car | 40 % |
| Automobile truck | 30 % |
| Automobile parts | 30 % |

Source: MITI, Nihon no Jidosha Kogyo (Japanese automobile industry), 1960-61.

Table4: Excise Tax Rate on Automobiles in Japan (April 21, 1959)

| | | |
|---|---|---|
| High-class passenger cars | 50 % | For passenger cars with wheelbase above 305 cm or cylinder capacity above 4,000 cc. |
| Median-sized passenger cars | 30 % | For passenger cars above 245 cm and below 305 cm or cylinder capacity above 1,500 cc and below 4,000 cc. |
| Small passenger cars | 15 % | For passenger cars with wheelbase below 245 cm and cylinder capacity below 1,500 cc. |

Source: MITI, Nihon no Jidosha Kohyo (Japanese automobile industry), 1960-61.

2) Import restriction

Foreign exchange allocation system also formed another barrier for import of automobiles. The amount of foreign exchange allocation for automobile imports was $13,740,000 in 1953. It was reduced to $610,000 in 1954 and further to $ 920,000 in 1955. This effectively reduced the amount of imported foreign automobiles from 5,900 in 1953, to 370 and 545 in 1954 and 1955 respectively. However, the foreign exchange allocation for automobile parts had been increased, since they still relied on importation of assembly parts through international technical cooperation. In 1957, all parts began to be produced at home; parts were on longer imported from abroad.

2. Support measure: The Japanese government adopted support measures to reduce production cost and enhance the international competitiveness of its automobile industry. These measures includes:

1) loans at low interest rates from public financial institutions;

2) government subsidy;

3) special depreciation;

4) exemption of import duties on necessary machinery and equipment;

5) Authorization for essential technology imports.

1) Low-interest rate loan

Japanese government offered low-interest loans through public financial institutions to finance automobile firms. The most important source was the Japan Development Bank (JDB). JDB played a key role in financing during two periods: FY 1951to 1956 and FY 1966 to 1971. Each period has its different concerns. The main object of the first period loan is to help firms to establish mass production system. It offered 1.5 billion-yen loan totally in the manufacturing facilities of medium- and small-sized passenger cars during 1951-1955 period, nearly 10% of the total investment (Ueno and Muto (1980)). The main goal of loans during FY 1966 and 1971 was to strengthen and rationalize passenger car production facilities. The finance totaled 11.9 billion yen, which is 1% of total investment by auto manufacturers in that period.

Low interest financing loan not only was lent to automobile manufacturers, but also lent to automobile parts industry. In June 1956, government enacted the "Law Concerning

Provisional Measures for Development of the Machinery Industry", which automobile parts industry was included to be promoted. There was a time limit of five years for firms to rationalize production systems, modernize equipment, and develop technology. In 1961 and 1966, they included automobile parts, machine tools for automobiles and other related industries in this law in order to lower the prices of automobile parts and reduce production cost of automobile. Under this circumstance, JDB and SBFC (Small Business Finance Corporations) executed the allocation of financing fund. JDB was responsible for financing of primary automobile parts makers. The SBFC took charged of financing for secondary parts makers. JDB's financing reached the highest level of 30% of fixed investment in the automobile parts industry during 1957 to 1960 and 1964 to 1965. On average, it financed 13.6 % of investment in parts industry.

2) Government subsidy

Besides, low interest financing, Japanese government also provided direct subsidies to support domestic production of automobiles. The government disbursed 369 million yen of subsidies and commissions for the Automobile Technology Association, the Japan Small Automobile Industry Association, and other organizations from 1951 to 1959 to promote the expansion of machine industry.

3) Depreciation system

The depreciation system for automobile industry is also favorable. The special depreciation took effect from 1952 for the automobile industry and from 1956 for the parts industry. In that system, the government offered a depreciation for purchase of specified equipment by 50% in the first year after acquisition ("Special Taxation Measures Law" enacted in 1952). There was a straight-line depreciation for purchase of facilities for testing and research during a three-year period. This law successfully stimulated investment of automobile industry. As a result, the expenditure that automobile industry spent to purchase machines reached 18.4% of total investment in the 1951-1959 period.

4) Exemption of import duties

Exemption of import duties was designed for purchase of machines that were necessary in automobile production in Japan and not manufactured in Japan. This was provided as exceptions to the Tariff Law (1954) and the Provision Tariff Measure Law (1960).

5) Authorization for technology imports

As for essential technology imports, Japanese government authorized 155 cases for both automobile manufacturers and for automobile parts makers during 1951 to 1969 to raise technology level.

B. Stimulation of domestic demand

Porter and Takeuchi (1999) emphasized the importance of stimulation of domestic demand. They pointed out that the key reason Japanese automobile became a successful industry is that government stimulated demand for new products, spurred Japanese firms to investment in the industry, and hence, improved their products and kept on expanding. In mid-1950s, personal demand for automobiles was only 3% of the total demand. In 1955, MITI announced a "people's cars" concept to stimulate personal demand. It designed an ideal minicar with low priced and popular style. Through this, MITI also encouraged firm to achieve the concentration of production in one company. This policy not only provided a stimulus to produce popular cars, but also had great influence on the later popularization of passenger car in Japan.

The high economic growth policy and road network construction program also contributed to the development of automobile industry. Ueno and Muto (1980) estimated the income elasticity and price elasticity of car demand in Japan was 3.2 and -0.42 respectively, which is higher than those of US, West Germany, and Canada are. High economic growth policy formed a virtuous cycle of automobile production: it increased income, spurred automobile demand, then stimulated mass production of automobiles, reduce the cost and, hence, the price of automobiles, and further increased automobile demand. Increase in income also induced larger flow of population and commodity. This

caused rising demand of roads. Through 1956 and 1959, Japanese government accelerated the construction of road network (Establishment of the Japan Highway Public Corporation in 1956, Enactment of laws concerning construction of national-wide roads and high-speed road in 1957. Enactment of law dealt with highways in capital cities in 1959). This expanded the demand for automobiles. To the production firms, it provided sufficient demand for automobiles, necessary to improve the production efficiency.

C. Policies responded to liberalization

Protected by the government, Japanese automobile industry grew beyond the infant-industry stage very rapidly. In 1965, Japanese automobile industry reached the international standard in the scale of mass production of passenger cars. In response to foreign pressure, MITI started to change its position in assisting development of automobile industry.

1) The Japanese government liberalized imports of bus and truck in 1961, and liberalized imports of passenger car in 1965.

2) After the Kennedy Round negotiations in 1967, Japan announced to reduce import duties on large passenger cars from 35% to 17.5%. Import duty for small passenger cars was also reduced from 40% to 30%. For buses and trucks, the rate was reduced from 30% to 15% by 1972.

3) In August 1968, after the Japan-US automobile negotiation, the government further liberalized import barrier by expanding the import quota, and reducing the tariff rate on large passenger cars. Besides, Japan began to accept the applications for establishing joint-venture assembly companies.

4) In 1969, Japan government announced further reduction in restrictions of capital investment in response to foreign pressure. This included liberalization of capital investment in October 1971 for automobile industry, parts industry and sales services. Joint venture could have up to 50% of foreign capital.

Though government announced these programs to liberalize import, MITI's policy was still highly protected. For example, MITI still provided loans to encourage inter-enterprise links and merger, in order to secure efficient mass production.

## II. Development of Automotive Industry

According to Watanabe (1993), Japanese development of automotive industry after the war II can be divided into five stages. Each stage of development responded different domestic and world environment changes. The five stages are:

a) early 1950s, the reconstruction period under occupation

b) mid- and late 1950s, achievement of industry independence

c) 1960s, liberalization and domestic market expansion

d) 1970s, maturation of the domestic market, expansion of export and concern over environment and energy

e) 1980s, trade friction and overseas manufacturing operations

**a) Reconstruction period under occupation (early 1950s)**

Due to the occupation policy, domestic production of motor vehicles was controlled at the end of the war. In October 1949, production restrictions for small vehicles were first removed. And following that, in April 1950, all production restrictions and price controls were also abolished. The production of truck first recovered. The outbreak of Korean War in 1950 stimulated demand for trucks. This also stimulated new investment for rationalization. By receiving easy access to foreign exchange, investment for rationalization was continued after Korean War. The capital accumulation during this period played an important role for future development of the automobile industry.

**b) Achievement of industry independence (1950s)**

In 1950s, auto manufacturers, under the government's guidelines, began to look for technology tie-ups with foreign firms and acquire foreign production techniques through the location production of foreign models. In the latter half of the 1950s, automobile

manufactures began to set up mass production system through which they could achieve production efficiency and reduce production cost. Automobile firms competed with each other in the domestic market. The annual growth rate of production volume registered 47% high. It multiplied seven times in five years. After this period, the automotive industry could compete with foreign imports.

**c) Liberalization and domestic market expansion (1960s)**

In 1960s, in response to foreign pressure, trade and capital liberalization occurred in automobile industry. MITI announced "the producer's" group concept" in May 1961, to reorganize auto makers into mass production "group", to reduce of number of models and firms, and to strengthen the mass production system. After capital liberalization, in 1971, the automobile industry engaged in reorganizing with mergers and tie-ups with American manufacturers (the second round of reorganization). Six groups makers formed at this time. As a result of reorganization, production expanded significantly.

**d) Export expansion and concern over environment and energy (1970s)**

There are two main issues happened during 1970s, which influenced the development of automobile production in Japan. One is environmental concern. The other is export expansion.

The income level increased dramatically in Japan during 1970s. Japanese economy

finally caught up with other developed economy. Atmospheric pollution and other environmental problems became a main concern during this period. In response to government's stringent regulation, producers managed to develop low pollution engines. Government also provided tax incentive encouraging producers to meet pollution requirement.

On the other hand, the maturation of domestic market urged firms to seek for export expansion. In 1973 and 1979 oil crisis happened, the attributes of smallness and fuel efficiency of Japanese cars made it more attractive and competitive in the world market. The expansion of foreign market induced large production expansion.

**e) Trade friction and overseas manufacturing operations (1980s)**

As the export of Japanese automobiles expanded, foreign firms, especially US firms, faced competition. This caused trade friction and a rising protectionism. The first phase of negotiations between Japan and US was in 1980, which reduced tariffs on automobile parts import. As US automobile production continued to decline, the second phase of negotiations began in 1981, which concluded that a voluntary restriction by Japan on exports to be exercised. After the Plaza agreement in 1985, the yen began to appreciate. Japanese firms, including Honda, Nissan, and Toyota, moved their operations overseas, mostly in North America, for pursuing management efficiency and avoiding trade friction.

Production from these overseas plants expanded significantly.

## IV. Conclusion

The automobile industry is an industry that economies of scale matter. At the early stage of development, there should be sufficient domestic demand to support its development and to achieve the efficient scale. Government industry policy plays an important role in this respect. Nevertheless, the protection of government should not be excessive or insufficient. If number of firms is too much and domestic market is relatively limited, production efficiency is difficult to be achieved. However, if number of firms is not enough to form the competitive pressure, industrial policy will always result in keeping a weak industry and fail to foster its growth. Besides, technology played an important role in producing automobiles. Being a capital and technology intensive industry, the automobile industry requires considerable capital and advanced technology. The technology level of related industries should be raised at the same time to support the production of automobiles.

It is clear that Japanese government played a key role in development of automobile industry. Japanese government not only provided sufficient protection in the sense that liberalization never occurred till domestic production has build up competitiveness, but

also indicated the time limit of protection. This prevented government protection from resulting in keeping a weak industry too long. Besides, Japanese government adjusted its policy according to different economic conditions and its different development position. The timely response of government policy to changes of internal and external environment is deemed a more important factor to foster its growth. These factors altogether contributed to the success of Japanese automobile industry.

Japanese automobile development model was such a successful one that other governments tried to follow it. Taiwan government was one of them. The industry policy adopted by Taiwan government to support automobile development can be judged to be a failure. Taiwan's automotive industry now is still in the assembly stage and is thought to suffer from the foreign competition after entering the WTO. As we compare the policies adopted by the two governments, both of them used protection measures and offered production incentives to increase domestic production. Japan succeeded but Taiwan did not. The big difference is that Taiwan government failed to construct an environment that achieve the economics of scale, i. e., the entry of a large number of firms and the limited domestic market prohibited the appropriate development of competitive environment. On the other hand, though both countries depended on import of foreign technology, Japan has higher technology level to support development of related industries, which is

essential for producing automobiles. Taiwan's small and medium enterprises seemed more difficult to develop advanced technology without a considerable amount of capital. In sum, it is the appropriate government policy, highly expanding domestic economy, plus favorable external condition that made the success of Japanese automobile industry.

# Reference

Itami, Hiroyuki, Tadao Kagono, Takao Kobayashi, and Motoshige Itoh "Competition and Reform- Growth in Japan's Automobile Industry,", Tokyo, Keizai Shinposha, 1988.

Kohama, Hirohisa and Shujiro Urata, "Industrial Policy and Development Strategy in East Asia," in Industrial Policy in East Asia, Ryuichiro Inoue et. al, 1993.

Porter, Michael E. and Hirotaka Takeuchi, "Fixing What Really Ails Japan," Foreign Affairs, May/ June 1999.

Ueno, Hiroya and Hiromichi Muto, "The Automobile Industry of Japan," in Industry and Business in Japan, Kazuo Sato edited, 1980.

Watanable, Machiko, "Japan-Industrial Policy and the Development of the Automotive Industry," in Industrial Policy in East Asia, Ryuichiro Inoue et. al, 1993.

附錄4

# A Social Clause on Core Labor in the WTO would do more harm than good

Shu, Ju-ping

April 24, 2000
PEPM

# A Social Clause on Core Labor Standards in the WTO Would Do More Harm than Good

## I. Introduction

Imposing labor standard on international trade policy can be traced back for a long period of time. This issue is not only widespread but also has acquired considerable political influence. For example, in 1953, the United States proposed adding a labor standards article to the GATT, but it was unsuccessful. Canadian Federal election in 1988 was fought over the impact of "free trade" on Canadian labors. The concerns of labor interests appeared also in the North American Free Trade Agreement (NAFTA) debate. Supplemental agreements were negotiated with Mexico to raise and enforce labor standard as conditions for congressional approval. Their argument was, if US did not impose high labor standard on Mexico, after opening a free trade area, US firms would be at the disadvantage of higher labor costs and would lose competitiveness. In 1993, Ross Perot, a former presidential candidate, even warned that free trade between the United State and Mexico would lead to a "great sucking sound" as US industry moved south. Further, there is other concern that pressure will be put on the United States to lower labor standards domestically. Labor

standard concerns also formed a social clause in WTO that provided a prerequisite for market access. It is particularly a favorite of labor unions who want to seek for protection from foreign competition. People who adhere to this belief argue that foreign competition, based on low wages and low labor standard, is *unfair* and hurts other countries with higher labor standards. They would like to level playing field in the trade agreement.

Actually, as my following arguments, it is natural and legitimate for different countries to have different labor standards. Instead, I will argue that requiring universal labor standard across countries would do more harms than good, either from efficiency point of view or on grounds of morality. Especially, I would clarify the following arguments:

1. Is competition illegitimate and unfair if labor standards are different between trade partners?
2. Does universal labor standard is beneficial to the whole world?
3. Can high-income countries gain from imposing standards on low-income countries?

**II. Welfare analysis**

In this section, I want to use graphs to show that world efficiency achieves when each country chooses and imposes its own level of standard which reflect its domestic social cost.

Imposing uniform standard would decrease world welfare (Brown, Deardorff, and Stern 1996).

Suppose the behavior of suppliers in the absence of any policy is that a social cost is not capture in the supply curve. Assume the government of a small and importing country adopts a measure of preventing employing children, which imposes an additional cost C to producers. We can see from figure 1 that, under the world price $P^w$, the quantity of producer supply decreases from $Q_0$ to $Q_1$ while consumer still consume the same amount ($Q_d$) through importing more. Total social welfare increases by the area of d. If the country is an exporting country, total social welfare increase more.

If the additional cost of C is not determined by the national government, but by the uniformed international standard, then the effect on welfare will be different. Since all countries impose additional cost C, the world price will certainly increase. Domestic producer will decrease supply from $Q_0$ to $Q_1$ (figure 2). The consumer demand will shrink from $D_0$ to $D_1$. The net welfare loss will be (h+i+j-d). However, conversely, for an exporting country, imposing universal standard will have welfare gains.

From this analysis, we know that if a country can choose its own standard according to its own need and perceptions of social cost, we will have diverse standards in the world, and

this achieves world efficiency. If we harmonize the standards across all countries, some countries will end up imposing higher standards than the corresponding social costs. Some countries will impose lower standard than their social costs. Output levels will be set inappropriately, either too low or too high. In this case, welfare will not be optimal.

**III. A Social clause is not a good idea**

From last section, we know that as each country based on its cultural values and economic conditions to pursue economic interest, labor standards with which to correct market failure may not be the same. Those standards are welfare improving as long as they can fix market failure. It does not matter whether or not your trade partners behave similarly. So labor standard is domestic. It reflects the need of individual country and its own priorities. Thus, it is natural and legitimate for countries to have different standards. There is nothing unfair. Besides, it is still uncertain whether it is beneficial for a high-income country to demand a universal labor standard. Low-income countries tend to be relatively labor abundant and export labor-intensive goods. If high-income countries impose universal standards on low-income countries in labor-intensive industries, the world supply of labor-intensive goods will contract. This will boot up the prices of labor-intensive goods. As a consequence, it is

likely that the terms of trade of high-income countries will be worsened and make them worse off. On the contrary, if the labor standard is imposed in capital-intensive industry, then labor in low-income countries will move from the capital-intensive industries to labor-intensive ones, and thus, increase production of labor-intensive goods. The world prices of labor-intensive goods will fall. The high-income countries will be better off. Therefore, the effect of demanding uniform labor standard by a high standard is uncertain.

From the efficiency point of view, we say that diversity of labor standards is efficient. Hence, we should allow different countries have different standards to reflect their own social cost. However, as the debate move from human standard to human right, it is seen often in terms of moral concerns. For example, trade with countries that violate human right, like child labor, should be denied. There are many people argue that human right is so inalienable that it can not be taken away from others, even though we know it is better and efficient to do so. Therefore, we should impose trade sanction on those nations, which export the product of abusing human right in production process. In fact, this is not true. Morality is subjective. There is nothing objective to constrain that. If every country can insist its own morality and impose it on other countries by trade policy, then the world trade would become chaos and lose its order. Besides, trade sanction may not really benefit

labors in low standards countries. While we want to help those labors, we should think further if this will really help them. As we refuse the import from low standards countries, labors in this industry will lose jobs and will be forced to move to other industry. Most of them are unskilled labors. As demand for unskilled labor falls, wages go down. They are forced to take the jobs with even lower wages and, therefore, are very likely to be worse off. This result is definitely not what we want.

**IV. Ways to solve**

According to the argument above, we know that use of trade policy to do with the problem of abusing human right is not adequate. Then, how to address this problem? We have leaned from economic theory that two problems should be addressed with two policies. When there is a market failure in our domestic economy, we should use domestic policy to do with it directly. Addressing it with a trade policy indirectly will cause distortion elsewhere, and will not be efficient. In our case, if there is a market failure in labor market, the first best policy is to fix the market and maintain the free trade. If market failures remain unfixed, free trade can harm rather than help. If the market failure is fixed with an appropriate domestic policy, free trade can again achieve the efficiency (Bhagwati

1998(b)).

So following this idea, we should keep the free trade, receive the gains from trade, and use other methods (institutions) to do the problem of abusing human right. The national government is not suitable to do this, since it tends to ask others more than ask for itself. Instead, the appropriate institution is non-government organizations (NGOs), like UNICF, ILO, and UNEP. NGOs have the characteristics of worldwide and transparency, that can treat every country on equal basis. In this case, we need to strengthen the functions of NGOs in those low labor standard countries. Urge them to review the problems in their countries according to their conventions and monitor the problem effectively. By way of suasion, this can bring moral pressure for their government to bear for change in our desired direction, and a multilateral consensus can be achieved on the basis of moral and economic legitimacy.

Another way to solve this problem is "while in Roman, do as the Americans do". Proponents of high labor standard must deem high standard as good values that every producer in all countries should adopt. Then, when US firms move their plants out to low labor standards countries, they should still stick to the high labor standards regardless of where they move. This will encourage non-governmental organizations in low standard

country to incite the high standard to all firms. Besides, this will also give pressure to other foreign firms producing in low standard countries. Eventually, these efforts will push up the standards endogenously. As a consequence, we receive gains from trade and solve the human right problem.

## V. Conclusion

Trade theories emphasize that based on comparative advantage, trade makes both counties better off. This means that trade depends on differences in level of economic development, factor endowments, and domestic policies. Lower wage in trade partner is irrelevant to whether we gain from trade. Free trade makes it cheaper for us to produce the goods with comparative advantage.

As far as the motivation of demanding for universal standard is concerned, we know that each country having its own economic condition and perceptions will determine its optimal level of labor standard, which is not necessary equal to other countries' standard. Existence of diversity standards is neither illegitimate nor unfair. Instead, it is natural and legitimate. So there is no need to impose uniform standard. From the efficiency prospective, we know that world efficiency achieve when each country imposes its own standard in response to its

social cost, not imposing uniform standard. Besides, it is also uncertain whether it is beneficial for a high-income country to ask for imposing a universal labor standard. So insertion of a social clause for labor standards into the WTO can obviously do more harm than good. As for ways to address this problem, we should use two policies to solve two problems. That is, maintain free trade to receive gains from trade, and urge NGOs to solve the human right problems.

**Reference**

Bhagwati, Jagdish, 1998(a). "Trade liberalization and Fair trade Demands: Addressing the Environmental and Labor Standards Issues" in *A Stream of Windows: Unsettling Reflections on Trade, Immigration, and Democracy.*

_____, 1998(b). "Free Trade: why AFL-CLO, the Sierra Club and Congressman Gephardt Should Like It", paper presented at a Panel Discussion on the occasion of the award of the Seidman Distinguished Award in Political Economy.

Brown, Drusilla K., Alan V. Deardorff, and Robert M. Stern, 1996. "International Labor Standards and Trade: A theoretical Analysis" in Bhagwati, Jagdish and Robert Hudec, eds. *Fair Trade and Harmonization: Economic Analysis*, Volume 1. Cambridge, MA: MIT press.

Langille, Brian A., 1997. "Eight Ways to Think about International Labor Standards", paper presented at the Graduate Institute of International Studies, Geneva, March 1997.

Figure 1

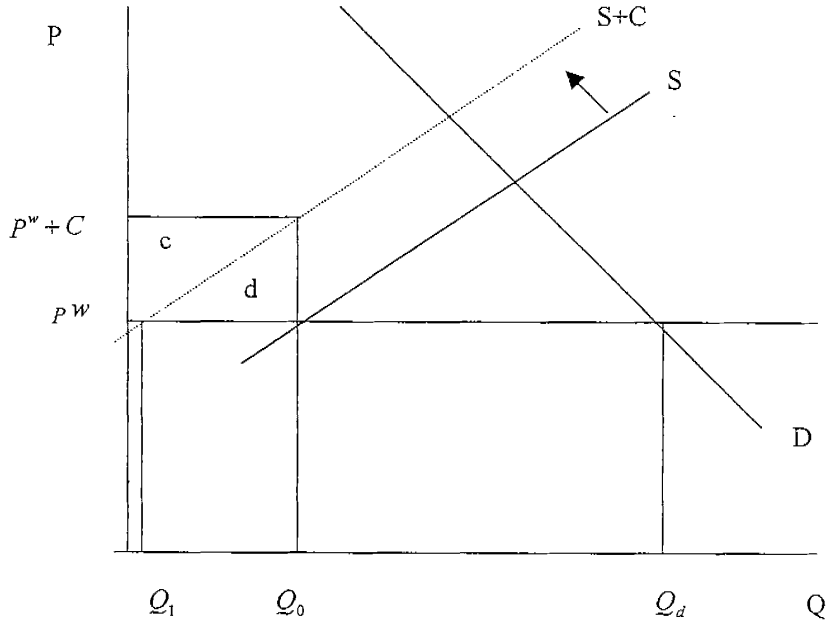


Figure 2