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（出國類別：進修）

赴美國懷俄明大學進修報告

服務機關：經濟部工業局
出國人 職　　稱：技　正
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內容摘要: 本次進修在課程選修上以商學院課程爲主，共修畢30學分，撰寫2篇論文，該2篇論文均與電子商務有關。第一篇論文題目爲縱觀全球電子商務之規範與管理，主要探討現行國際上對於電子商務的一些規範，由於電子商務並無國界，此對於現行以國爲基礎的私法相關法令造成巨大衝擊，目前國際上討論中的法令規範主要有海牙公約，歐盟的資料保護指導綱要，OECD及歐盟對於營所稅及營業稅的規定以及WTO對於關稅的研議等。第二篇論文題目爲全球電子商務與ＧＡＴＳ，主要探討數位產品所引發的一些問題，以及ＧＡＴＳ對於電子商務有那些規定及可能發生的問題。探討的主題包括數位產品該分類爲服務或商品？如果分類爲服務，該列爲「跨國提供服務」或「國外消費」？ 停止關稅課徵對於開發中國家影響較大或對已開發國家的影響較大？在上述二篇文章中吾人均有提出建議做法。

本文電子檔已上傳至出國報告資訊網

赴美國懷俄明大學進修報告

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赴美國懷俄明大學進修報告

民國九十二年三月

本篇報告係記錄職於九十一年一月十六日至九十二年一月三日間赴美國懷俄明大學進修的學習情形與心得感想，以下分就進修情形及心得、論文摘要及檢討與建議等三部分加以闡述。

一、進修情形及心得

職於九十一年一月十六日起程赴美，由於華航班機延誤致來不及搭乘轉機班機而於洛杉磯停留一晚，次日由洛杉磯飛往丹佛，再轉機至懷大所在之 Laramie。一月二十一日為開學日，在此之前，除了熟識環境、辦理各項註冊手續外，亦參加新生訓練，瞭解學校各項規定、設備及功能，也參加該校專為外籍學生設計的“友好家庭計畫”（Friendship Family Program）。此項計畫的主要目的為增進當地美國家庭及外籍學生的相互了解，美國家庭可以幫助外籍學生了解美國文化與價值，外籍學生可幫助美國家庭了解他們的國家。職藉由此項計畫認識了一美國家庭，他們在日常生活上對職提供很大的幫助，也經常邀請職參與他們的家庭活動，讓職

對美國社會及文化有較為深入之了解。職與此一美國家庭建立了十分良好的互動關係，直至返國後仍經常聯絡。

在研究所課程選修上，職與指導教授國際事務研究所 Dr. Jensen 討論結果，仍爰本部進修人員先例，選擇計畫B（plan B）攻讀，該計畫要求學生須修畢三十學分並撰寫兩篇論文。職於上、下學期及暑假期間共修十門課，計三十學分，因個人對於商學院課程較有興趣，故大多選讀企管、經濟相關課程。上學期選修人力資源管理、服務業的行銷、國際貿易及研究方法等四門學科；暑假期間選修美國金融組織與金融市場及獨立研究；下學期則修習國際金融、工業組織與公共政策、營運資金管理及農業政策等四門課，經過一年之努力，各科成績均達A。上述十門課之內容及心得感想謹臚列於左：

（一）人力資源管理

本課程由管理暨行銷系 Dr. John H. Jackson 教授主講，Jackson 教授授課相當認真，除了要求學生提交每堂課的心得報告外，並要求學生自選一與人力資源管理有關的議題，針對此議題閱讀四篇刊登於著名期刊上的報告，於學期末提出

閱讀心得報告。課程內容主要強調人力資源管理應以達成公司願景及任務為主要考量，並成為公司策略規劃的一部份。鑑於競爭之全球化，人力資源管理部門不應僅扮演傳統資料管理者角色，應轉型為策略規劃者，協助公司達成目標，並印證其在公司之價值，否則容易成為公司外購（outsourcing）的對象，其並以 Sears'為例，強調該公司人力資源部門努力服務其客戶－公司員工，最後讓該公司轉虧為盈。

在人力資源管理上，經常被用以評估個人工作表現的公式如下：個人表現=能力 x 努力 x 後勤支援。能力包括一個人的天資、興趣、性向及體格等，這些均可於招募時予以判定。努力則可由個人動機、工作倫理、出勤狀況以及職務設計等來判別，其中職務設計之所以會影響一個人的工作表現，在於公司可藉由職務內容擴大（job enlargement）與多樣化（job enrichment）來增進個人工作滿意度，進而提升其工作表現。其次，公司提供後勤支援措施如在職訓練、擴充及改善設備及工作群組等，對於工作表現的提升亦有相當助益。許多研究顯示，工作滿意度與生產力並無絕對關係，亦即"快樂工作者並不必然是有生產力的員工"。

學習此課程亦讓職對於美國保護少數族群的努力留下

深刻印象，其所制定的“平等就業機會法案”（Equal Employment Opportunity）為其中的代表，該法案規範公司的招募、升遷、降級、訓練及遣散政策。所謂的少數族群包括種族（膚色）、性別（婦女）、年齡（四十歲以上）、無能力者（身體上或精神上）、退伍軍人（越戰）及宗教信仰者。美國政府甚致要求員工人數超過五十人、契約金額超過五萬美元的契約廠商進行“承諾活動(affirmative action)”，來保障少數族群的就業機會，普遍使用的措施為“五分之四原則”，即少數族群必須占公司總員工人數的百分之二十。另有規定企業必須依其所在地之人口結構雇用相同比例之少數族群的原則，譬如企業所在地區有１％的非裔美人，該企業就必須雇用１％的非裔美人，許多企業認為此項法令過於嚴格，曾有企業為符合規定而必須至行車一小時遠之地區招募員工，並派遣專車載送員工上下班之案例，造成企業相當大之不便。該法案對於老人、婦女、無能力者及退伍老兵亦有諸多保護，例如企業於招募人才廣告中，不得限制年齡、性別、學歷、身高、體重、婚姻等，除非該公司可清楚說明這些限制對於該項工作的執行是需要的，對於個人隱私亦有諸多保護，例如企業於面試時，不得詢問非工作相關之

個人隱私問題，如是否為同性戀及是否已結婚等等。

（二）服務業之行銷

本課程由管理暨行銷系副教授 Dr. Terri Rittenburg 主講，Rittenburg 教授授課方式相當活潑，利用各種方式增進學生的學習效果，例如要求學生就生活上與服務業接觸的經驗，分析接觸前選擇對象的考量、目的及期望，探討接觸後的滿意程度以及如何增進滿意度；要求學生訪談一目前在該校研讀的外籍學生，了解該國人民對於滿意度的要求程度以及該國服務業的運作現況；要求學生分組並自選一服務業進行產業分析。考試前，並以時下流行的搶答方式，激發學生的學習意願，增進學習效果。

課程內容主要介紹服務業的行銷策略，包括服務不同於商品之特性、消費者的期望模型及影響因素、服務品質的分類、營運政策的決定、人、環境、定價及通路等因素對服務結果的影響、競爭策略、如何撮合供給與需求以及提高生產力等。服務的特性包括「無實體」（Intangibility)，「無法儲存」 (Perishability)，「不可分離」 (Inseparability)與「易產生變異」 (Variability)等四種，本質上與商品有很大差異，其經

營管理及行銷手法也有不同。「無實體」表示在購買前，服務缺乏實品可供檢視及接觸，服務業乃必須思考如何增進消費者對其產品的信任，例如強調實質資產或利用「口耳相傳」（word-of-mouth）方式；「無法儲存」表示服務無法像商品一樣加以儲存，服務業必須思考如何撮合供給與需求，例如進行需求分析與預測，實施彈性供給策略，以因應需求的強烈波動，或進行策略性差別定價，以分散與導引需求；「不可分離」表示服務之生產與消費是同時發生的，因此服務無法事先製造，也無法如商品般使用大量製造及規模經濟方式，服務業的生產／服務據點必須接近消費者，服務人員與消費者的互動情形對於消費者滿意度影響甚大，服務業乃必須思考其通路、人員訓練及後勤支援等政策；「易產生變異」表示不確定因素易使服務品質產生變異，由於服務結果通常也是人與人的互動結果，其品質也可能因人而異，服務業必須思考如何將服務流程標準化以控制品質。

影響消費者期望的因素有三：一為內在因素，如個人需要、參與程度及過去經驗；一為外在因素，如競爭廠商的產品、社會背景及「口耳相傳」；一為廠商因素，如促銷、定價及通路。服務品質模式探討消費者期望與服務流程之五種

缺口，第一類缺口為消費者的真正期望與經營者所認定的消費者期望的差異，此種差異源於經營者無法確認消費者的真正期望，而消除此類缺口的方法有與消費者進行溝通、進行市調、鼓勵員工向上級反應以及組織扁平化（減少決策層次）等；第二類缺口為經營者認定的消費者期望與服務內容項目的差異，此種缺口源於資源限制及經營者的不關心，消除此類缺口的做法有經營者的支持決心、訂定品質目標及作業標準化；第三類缺口為服務內容項目與服務傳遞的差異，此種缺口源於員工對於服務內容項目的不了解、無能力或不願意提供，消除此類缺口的方法有強調工作群組、確認員工—工作適合性、確認技術—工作適合性、給予員工一定程度的自主權、發展適當的監督系統、減少角色衝突及角色模擬兩可；第四類缺口為服務傳遞與服務洽談內容的差異，此種缺口源於組織內缺乏水平式溝通及業務員的過度保證，消除此類缺口的做法有加強組織內水平溝通及防止業務員過度向消費者保證；第五類缺口為前述四種缺口的總合。

服務業應先定位其本身的營運方向（成本效益、技術導向、服務導向或客製化），再設定營運策略及技巧，例如，若定位為「成本效益」，其營運目標應為生產最大化；若定

位為「客製化」，其營運目標則應為客戶導向及最大客製化。

（三）國際貿易

本課程由經濟暨財金系資深教授 Dr. William Morgan 講授，課程內容主要介紹國際貿易形成的原因以及各種國際貿易理論，並提及台灣之所以能創造經濟奇蹟，採用正確國際貿易策略為主要原因之一。

（四）研究方法

本課程由農經系系主任 Dr. Edward B. Bradley 副教授負責教學，課程內容主要闡述研究計畫的進行步驟，首先應對問題加以定義，確定問題後，再進行文獻回顧，了解前人對於該類問題是否已有發展解決方法，接著再規劃研究流程，並進行資料蒐集及分析工作。

（五）金融組織及金融市場

本課程由經濟暨財金系助理教授 Dr. Vassil A. Konstantinov 講授，Konstantinov 來自保加利亞，畢業於哈佛大學商學院，仍十分年輕。課程內容主要介紹金融組織存在之意義、不同型態之金融組織之功能及各種金融市場商品等，金融組織主要包括存放款機關（商業銀行等）、保險公

司（人壽、產物等）、證券公司及投資銀行、融資公司、共同基金及 Venture Capital 等，由於金融市場較金融組織更為透明及更有彈性，目前發展趨勢為金融組織發展新商品，隨後進入金融市場進行自由交易，以使資源做最有效運用。

（六）獨立研究

本課程為暑期課程之一，係由選修者自選研究主題進行獨立研究，經與指導教授討論後，以畢業論文之一──縱觀全球電子商務之規範與管理為研究主題，主要內容見二、論文摘要。

（七）暑期參訪

為了解國際金融組織及美國相關政府組織及學府之運作方式與功能，於暑假期間赴美東地區（華盛頓、紐約及波士頓）進行實地參訪，獲益良多。

（八）國際金融

本課程由經濟暨財金系助理教授 Dr. Patrik Hultberg 執教，Hultberg 來自瑞典，仍十分年輕。課程內容主要介紹國際收支平衡表、匯率之變動與如何規避匯率變動風險、總體經濟因素對於所得之影響以及在不同匯率制度下，如何利用

財政與貨幣政策，透過對ＩＳ、ＬＭ及ＢＰ曲線之影響來解決失業及通貨膨脹問題，同時達成國際收支之平衡。其主要結論之一為在固定匯率制度下，貨幣政策無法產生效果，惟有財政政策即擴大政府支出或減稅才能改善失業及通貨膨脹問題，其中擴大政府支出之乘數效果大於減稅，所以前者之效果較佳，因此，渠對布希政府欲以減稅來刺激經濟景氣的做法持不同意見。

（九）工業組織與公共政策

本課程由經濟暨財金系系主任 Dr. Owen Philips 教授講授，渠為美國史丹福大學經濟學博士，專長及研究領域在於工業組織、計量經濟及個體經濟之應用，教學以嚴謹著稱。課程主要內容為探討在不同競爭市場下廠商的定價策略以及反托拉斯（anti-trust）經濟分析。課程首先對市場獨占力下一定義，即廠商有能力提高價格而不會損失所有銷售量，此與完全競爭市場不同，在完全競爭市場下，廠商是價格接受者。獨占力的形成原因有三個：一為自然形成，一為策略形成，另一為政府政策形成。自然形成的獨占力源於廠商面臨持續降低的平均成本曲線，亦即該市場規模由一家廠商生產最有效率，例如電力、電話等等，由於獨占廠商傾向訂定

較高價格，政府必須介入使其訂價符合公共利益，但獨占廠商亦對社會有正面之處，例如在某種情況下，獨占廠商可能提供最多元化的產品，例如台灣偏遠地區之公共交通即為明顯案例。廠商實施策略定價亦可能造成獨占力，例如掠奪式定價，此外政府法令規定亦可能造成獨占情形，例如菸酒、汽油等（以台灣為例）。

在反托拉斯經濟分析方面，本課程對美國反托拉斯之發展歷史作了詳細介紹。美國反托拉斯相關法令包主要包括 Sherman Act (1890)， Clayton Act (1914)，The Federal Trade Commission Act (1914)以及 Robinson-Patman Act (1936)。在發展初期，由於對聯合行為普遍持懷疑態度以及經濟分析尚未成熟，法院經常引用「當然違反原則」(per se violation)，即市場佔有率達一定比例，該廠商或組織即違反反托拉斯法令，所以，當時曾發生擁有四百餘名會員的公協會違反反托拉斯法的判例。但從標準石油(Standard Oil)案件以後，美國法院較常採用「合理原則」(rule of reason)，亦即獨占廠商並不當然違反反托拉斯法之規定，而需依個案視其行為而定。

（十）營運資金管理

本課程由經濟暨財金系助理教授 Dr. Vassil A. Konstantinov 講授，課程主要內容為介紹如何分析資產負債表、現金流量表及相關財務報表，以及如何決定最適營運資金數額。理論上，公司的營運資金愈少愈好，因為營運資金有其成本，例如借自銀行需負擔利率，而且與機械設備等資產相較，營運資金通常無法為企業創造利潤，因此，營運資金為零是為最佳方案，但只有在相關條件下才有可能。另一方面，少量營運資金可能會導致企業業務量下降，客戶滿意度下降，因為企業資金無法滿足商業活動需求，例如進貨緩慢、無法提供買方較佳之付款條件等。

（十一）農業政策

本課程由農經系副教授兼系主任 Dr. Edward B. Bradley 負責教學，課程內容主要介紹美國農業政策的形成過程及演變歷史。課程首先介紹美國的政府組織及其運作方式，其中以國會中與農業政策有關的委員會、主管農業相關議題的行政部會以及國會與行政部門之互動關係為主要重點。與農業有關的委員會主要有預算委員會、農業委員會及撥款委員會，由於農業問題的廣泛性（例如環保、國際貿易、財政及社會發展等)，其他委員會亦常參與農業政策之制定，因此，

不論國會農業委員會或農業部均無法獨占農業政策的決定權。在行政部門方面，農業部轄有超過十萬名員工，屬人員最多的部會之一，顯示了美國農業議題的複雜性及其對農業問題之重視。

課程接著對於公共政策的形成過程作系統化說明，並探討利益團體在政策形成過程中的角色。在美國，國會議員通常處於被動，即利益團體針對本身的需求向國會議員提出建議書，國會藉由公聽會聽取其他相關團體之意見，其中國會議員的影響力、法案的爭議程度、利益團體是否準備充分及其支持者的多寡為法案是否通過的關鍵因素。一般而言，較無爭議的法案較易獲得國會議員的支持，所以，利益團體最好在向國會提出建議書前，擴大支持基礎，減低反對力量，在此過程中，妥協為必要的手段，也基於此種因素，美國公共政策的改變通常是漸進式（incremental）而非 muddle through，亦即政策變動較小者，較易獲得人民的支持。了解這種趨勢對農民團體十分重要，因為農業從業人口僅占美國總人口１%左右，農民團體欲讓法案獲得支持，在積極作為上，有賴其他利益團體的支持，在消極上，則仰賴其他利益團體的不反對。近年來，由於美國民眾已逐漸不再視農民生

活為一理想的精神表徵、日受矚目的農業環保問題以及農業逐漸地工業化，再加上嚴重的財政赤字問題，美國民眾已逐漸減低對農業之支持，此可由其二００二年農業法案減少對農業的補貼窺知一二。無論如何，在短期內，美國農民仍將享有其他利益團體所沒有的價格及所得支持措施。

美國雖是國際最大農業輸出國，但對其農業亦有相當保護，不過，其保護程度仍不及歐盟。美國保護農業之最主要理由為平衡農業所得與其他行業所得之差距，及解決農業所得過度波動的問題，由於農業生產亦受諸多因素影響，相較工業產品，其產量較無法預測。農業所得偏低之另一原因為對農產品之需求彈性較低，即價格的變動大於數量的變動，舉例而言，當產量增加１％時，價格減少超過１％，農民的所得也隨之減少。

二、論文摘要

（一）縱觀全球電子商務（electronic commerce）之規範與管理

本篇論文主要探討現行國際上對於電子商務的一些規範，由於電子商務並無國界，此對於現行以國為基礎的私法

相關法令造成巨大衝擊，目前國際上討論中的法令規範主要有海牙公約（Hague Convention），歐盟的資料保護指導綱要（data protection directives），ＯＥＣＤ及歐盟對於營所稅及營業稅的規定以及ＷＴＯ 對於關稅的研議等，目前歐盟已決定對電子商務課徵加值稅（Value-Added Tax, VAT），ＷＴＯ則同意延緩決定是否對電子商務課徵關稅。

海牙公約主要探討法院管轄權（jurisdiction）及執行他國法令判決等問題，而對於從事電子商務的公司而言，最關心的無非司法管轄權。司法管轄權包含二部分，一為當爭端發生時，爭議雙方誰有選擇管轄法院的權利，另一為該法院對被告是否有管轄權。司法管轄權對於網路交易非常重要，由於網路的世界沒有國界，一般而言，任何人可以進入任何網站，網站經營者必須面臨來自世界各地的潛在控訴。若屬Ｂ２Ｂ交易，買賣雙方可以契約約定管轄法院，但在Ｂ２Ｃ交易上，由賣方決定的管轄法院及適用條文經常無法執行。海牙公約由美國於一九九二年提出，主要原因在於美國認為美國法院通常會執行他國法院的判決，但是很多國家的法院卻不執行美國法院的判決。美國雖為原創者，但目前草擬中的海牙公約卻面臨美國的強烈反對，因為海牙公約草案條文

多參考屬於成文法（civil law）的布魯塞爾公約（Brussels Convention），與屬於習慣法（common law）的美國法律格格不入，例如成文法多於條文內明定管轄法院，但美國法律強調的是適當程序（due process），即管轄法院的選擇對原告與被告均必須公平，所以，管轄法院的選擇依個案而會有不同。在成文法下，消費者可以在他們的居住地控告網站經營者，假如該消費者進入該網站並完成交易合約，這使得網站經營者承擔相當大的風險，因為網站經營者可能被來自世界各地的消費者所控告，且必須至世界各地的法院進行抗辯。美國反對海牙公約草案的理由除了決定司法管轄權的方式不同外，也是基於保護其本身的利益—保護其國內電子商務經營者不受來自世界各地的任意或惡意的控告，美國是目前電子商務相關產品的最大出口國，它的反對是可以理解的，而讓美國更無法接受的是，根據目前草案，美國法院還必須去執行外國法院的判決。舉法國政府控告美國亞虎（Yahoo U.S.）為例，美國亞虎是一設於美國的網站，該公司在其網站上拍賣納粹紀念品，這種行為在美國為合法，但在法國為非法，法國政府向其國內法院控告美國亞虎的行為違反該國法律規定，並要求美國法院執行法國法院的判決。

面對如此嚴格的消費者保護法令，網站經營者必須認真思考如何因應。有四種方法可以避免不必要的控訴：第一種為在網路的世界裡，定義一種不需要保護或需要較少保護的消費者（sophisticated consumer），這種方式在歐洲的金融服務市場上已行之有年；第二種為網站經營者可以為其網路交易購買保險；第三種為網站經營者可以就同一產品提供兩種價格，即針對需要較少保護的消費者提供較低價格，而對需要較高保護的消費者收取較高價格；第四種為網站經營者可排除銷售其產品予部分被認定會發生司法管轄權問題的國家（jurisdiction avoidance）。

與網站經營者不同的，隱私權（privacy）與交易安全（security）才是從事網路交易的消費者最關心的問題。由於網路的無遠弗界，一國人民可以輕易的上他國網站，並傳送個人資料至他國，個人資料遭濫用的情形時有所聞。跨國企業為了節省成本考量，常將客戶資料集中處理，個人資料在各國間往來傳遞的情形愈來愈多，造成許多國家擔心其人民的個人資料會遭誤用，歐盟的資料保護指導綱要便是這種考量下的產物。同樣地，該指導綱要也引起美國方面的反對，因為雙方對於個人隱私的保護方法不同：歐盟視個人隱私為

基本人權，傾向由政府訂定範圍廣泛且嚴格的法律加以保護；美國是自由市場最深化的國家，對於個人隱私的保護，仰賴企業的自我規範以及針對性的保護（例如立法要求特定行業必須保護消費者的隱私）。根據該指導綱領，歐盟會員國必須禁止任何企業將歐盟人民的個人資料傳送至對個人隱私沒有足夠保護的國家，由於美國無專門法律保護消費者的個人資料，被歐盟視為上述沒有足夠保護的國家之一。美國儘管不高興，為了商業考量，仍然展開與歐盟的談判，最後獲得歐盟同意以「避風港」（safe harbor）規範代替其指導綱領。根據此「避風港」規範，美國公司只要符合七條「避風港」標準並取得美國商業司的認證即可，但金融機構，如銀行、證券及保險公司等，尚未能適用該「避風港」規範，目前的做法只能與各歐盟成員國談判並簽訂協定，或與其歐盟客戶就個案簽訂契約。

對於各國政府而言，最關心的則是稅的問題。由於網路交易無須繳稅，網路交易的迅速成長，促使各國政府擔心稅收將大幅減少，網路交易逐漸取代店面交易，也讓政府面臨來自小企業主的強大壓力，目前已認真考量對網路交易予以課稅。以營所稅為例，徵收的方式有兩種：一為依所得來源

（source-based taxation），另一為依居住地點（residence-based taxation），依ＯＥＣＤ慣例，若可確定公司的永久營業場所（permanent establishment），由所得來源國課徵，若無法確定，則由居住地點國徵收。通常若企業於某國有固定場所（fixed place of business），即被視為該企業在該國有永久營業場所。由於網路超越國界的特性，對於上述課稅方式產生巨大衝擊，例如網站是否可視為一固定場所呢？針對電子商務交易特性，ＯＥＣＤ於二０００年十二月達成下列共識：（一）網站（website）並不被視為一固定場所，因網站並不包括實質設備，反之，網站所依附的伺服器（server）則被視為一固定場所，因其必須有實質空間加以置放；（二）若網站與伺服器的經營者不同，則該伺服器不被視為一固定場所，反之，若網站與伺服器的經營者為同一人，則該伺服器被視為一固定場所；（三）伺服器存在於某地一段時期後，亦被視為固定場所；（四）電腦設備是否為固定場所，依個案檢視其是否在商業活動上扮演主要角色。依此原則，如何確定一伺服器的所在位置便為上述原則可否應用的問題所在。上述原則也可能導致一個結果，伺服器經營者將其伺服器遷移至低稅率國家，以規避高額稅負，而這些低營所稅國

家通常是開發中國家。可預見的，美國並不支持上述主張，而傾向由居住地點國徵收營所稅，因為大部分伺服器經營者為美國公司。

消費稅所產生的問題更大，因其對於政府稅收與公平性均有相當大的衝擊。根據美國一項研究，居住於高銷售稅（sales tax）區的消費者比較可能上網購物，因為上網購物無須繳納銷售稅，網路上所售物品較店面便宜許多。由於上網購物成長迅速，逐漸侵蝕店面的營收以及政府的稅收，來自小店面企業主的壓力及稅收減少的事實，已引起美國許多州政府的重視，串聯向聯邦要求徵收網路交易的銷售稅（目前美國國會禁止州政府向電子商務課徵銷售稅）。惟由於美國各州的銷售稅均不同，目前徵收作業的困難度仍相當高。

歐盟也面臨類似問題。依據目前稅制，非歐盟國家的供應商無需繳納加值稅，而歐盟國家內的供應商則必須繳納加值稅，如此削弱歐盟供應商的競爭能力，造成不公平的競爭，因為消費者將因外國貨品較為便宜而上網購買。值得一提的是，為何歐盟國家相當重視加值稅，而美國聯邦政府卻不太重視銷售稅，此乃因為在歐盟國家中，加值稅約占政府稅收的三十％，而美國政府稅收的主要來源卻是個人所得稅

及營所稅。為消除上述不公平現象，歐盟已決定要求外國公司代為向其國內消費者收取加值稅，並要求外國公司必須向歐盟的任一國登記，此決議已引起美國方面的抗議，因為美國公司並無意願代替歐盟政府向其人民收取加值稅，而且，歐盟國家的加值稅均不同，如何認定消費者所在地及應繳稅率也是一大問題，美國已威脅要向WTO提出控訴。

（二）全球電子商務與GATS

本篇論文主要探討數位產品（digitized products）所引發的一些問題，以及GATS對於電子商務有那些規定及可能發生的問題。探討的主題包括數位產品該分類為服務（services）或商品（goods）？如果分類為服務，該列為「跨國提供服務」或「國外消費」？ 停止關稅課徵對於開發中國家影響較大或對己開發國家的影響較大？

有關數位產品的分類已引起美國與歐盟間的齲齒，因為分類的結果會影響其國家利益。數位產品若分類為商品，適用GATT的規定，不論任何項目，均必須引用最惠國原則（Most Favored Nation）與國民待遇（National Treatment），且原則禁止配額（quotas）制度及國內成分（domestic

content)。數位產品若分類為服務，則適用ＧＡＴＳ的規定，而ＧＡＴＳ的規定相當鬆散，只有承諾的項目才必須遵守最惠國原則及國民待遇等。由於美國是數位產品的最大出口國，當然希望將數位產品分類為商品，納入自由化較高的ＧＡＴＴ適用範圍下，而歐盟則基於保護其國內產業及文化的理由，希望將數位產品歸為服務，納入較鬆散的ＧＡＴＳ管轄。ＷＴＯ秘書處亦傾向將數位產品分類為服務，因其認為電子傳遞本身才是主要產品，至於下載後對該數位產品的處置方式則是另一回事。目前有四種方法可以解決這個問題：第一種為透過ＷＴＯ爭端解決機制，即由ＷＴＯ爭端解決小組依個案判定；第二種為建立一包含服務與商品的新混合類別；第三種為視數位產品交易為智慧財產權交易，不歸入服務或商品；第四種是最困難，但似乎是無法避免的：確定分類原則，目前較可行的原則為若一數位產品為下載後可予儲存（locally stored）及可移轉（transferable）者，視為商品，反之，視為服務。這種分類符合服務的四個特性：「無實體」(Intangibility)，「無法儲存」 (Perishability)，「不可分離」(Inseparability)與「易產生變異」(Variability)。若數位產品下載後可予儲存，因不符「無實體」的特性，所以宜歸類為商

品，若其可移轉，因不符「無法儲存」與「不可分離」的特性，也不宜列入服務。

即使在ＧＡＴＳ管轄範圍內，也有歸類上的爭議。ＧＡＴＳ所規範的服務的提供有四種方式：「跨國提供服務」（cross-border）、「國外消費」（consumption abroad）、「商業據點呈現」（commercial presence）以及「自然人呈現」（presence of natural persons）。數位產品不易依上述四種方式加以分類，例如，由於消費者無論身在那裡均可輕易地上網購物，這種交易型態是屬於「跨國提供服務」或「國外消費」呢？並不易予以區分，目前比較可行的做法為定義「國外消費」必須包括親自現身於消費地點。

ＷＴＯ於一九九八年要求會員國暫停對電子商務交易課徵關稅，並於二００一年於ＤＯＨＡ舉行的第四次部長會議中決議將是否繼續該項暫停行動延至第五次會議再決定。開發中國家對此項暫停課徵關稅措施持有不同意見，因為開發中國家多為電子商務產品的淨進口國，而且，關稅收益占其政府稅收相當大的比例，開發中國家擔心不但收不到新的稅收，政府的稅收還可能因此大幅減少，因為消費者可能逐漸上網購物而不再光顧店面，需繳納關稅的進口貨品必

然減少。這項暫停措施對已開發國家的影響不是很大，雖然依絕對值計算，已開發國家的損失更多，但由於關稅並非已開發國家稅收的主要來源，所以影響不若開發中國家大。無論如何，目前若要課徵關稅，技術上及制度上均必須大幅改善。

三、檢討與建議

在工作十餘年後仍有幸至美國進修，除應感謝局內長官的支持外，對公務員的在職進修制度也由衷感激，流傳於公務員間的一段話—公務員最大的福利為充沛的在職進修機會，似乎又一次的得到應證。經過一年的知識浸淫與文化洗禮，學到的除了專業知識外，還對美國社會價值、文化與信仰有較為深入的了解，從而覺得美國之所以成為目前世界上唯一超強是有跡可循的。除此之外，由於懷大位於美國中西部，人口稀少（僅四十八萬），居民多以放牧為生，為典型西部牛仔的生活型態，職有幸親身體驗田野工作，對該項工作之辛苦留下了深刻且難忘的記憶。

在經費方面，由於懷大每年調漲住宿費，至本（二００三）年六月底止，單身宿舍收費四百一十八美元，單身公寓

收費四百六十八美元，七月起各再調漲十%左右，再加上飲食支出，每月一千美元的補助已產生捉襟見肘之窘。在學業負擔方面，一年三十學分及兩篇論文負荷不算低，由於應付課業已占用大部分時間，鮮有時間練習英文說寫，職以為本部派赴懷大進修者應擔任助教工作，以增進英文說寫能力，惟為避免負擔過重，宜要求懷大允許進修者以國經班學分抵扣部分應修學分。此外，由於本部與懷大的交換學生計畫已達十六年，實可考慮停止與懷大的契約，轉與其他著名學府簽約，以增進本部與其他著名學府的關係，並使本部同仁學習管道多元化，此外，亦可考慮開放進修同仁自由申請學校。

附件一

An Overview on the Governance of Global Electronic Commerce

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An Overview on the Governance of Global Electronic Commerce

Introduction

Cyberspace governance has been debated since the creation of electronic commerce (in short, e-commerce). Proponents of the laissez-faire free enterprise ideology believe that any attempt to regulate or tax e-commerce would be counterproductive, calling for self-regulation of the private sector and reliance on market forces. They argue that owing to the borderless nature of the Internet, nationally legislated laws are meaningless since the rules of these laws must be made to deal with different legal systems and borders. Thus, states should not be trying to legislate on Internet issues. Opponents to an unregulated cyberspace argue that reliance on market forces or self-regulation alone will not suffice, and cyberspace should not remain free from taxation and regulation. For the merit of social justice and equity, transactions that are taxed in the physical world should be taxed on the Internet; activities such as medical and financial services that are regulated in physical space should be regulated in cyberspace. Furthermore, any market, virtual or real, requires societal infrastructure to function, and the market cannot itself provide some of the public goods, such as protection of property rights, predictability, safety of transaction, protection of personal privacy, etc.

The Internet is indeed international. For example, Internet operators are allowed to access and operate the Internet through the domain name system, thus nationality, which is traditionally important for national legislated laws, are becoming less significant. The generic top-level domain names (the .com, .net, .org, etc.) do not give any indication about the nationality or location of the "site" or the person who owns or operates it. Even national top-level domain names (the .fr for France, the .us for the United States, etc.) are no longer meaningful because a resident of Taiwan can register a domain name in the U.S. and vice versa. Whoever sends data via the Internet, even to a local correspondent, may need to deal with operators located in different countries, sometimes without knowing it.

At present, most agree that states do have an important role to play in the development of global e-commerce. Many argue that governments have a major responsibility to support the spread of modern communication technology by creating the underlying conditions, such as an effective legal system, in which the technology will flourish. Meanwhile, an important challenge is to define the appropriate scope of intervention in the pursuit of legitimate public policy objectives, without compromising the promise of these modern technologies. In addition, the global reach of the Internet and e-commerce implies a need for international responses to some of the policy challenges, and thus for active cooperation among governments. It would

cause a tremendous obstacle to the development of e-commerce if all countries claim to apply their own legal system to an Internet transaction.

This article explores some of the most pressing e-commerce issues, such as jurisdiction, privacy and data protection, e-signatures, and taxation. An attempt is made to explain both the status of the solutions currently available and the evolution of international negotiations on these matters. Finally, a framework developed by Kobrin (2001) will be introduced and it is helpful for the explanation of the formation of international cooperation.

Major Concerns for On-Line Shopping

The major concerns for consumers with respect to on-line transactions are the privacy and the security of these transactions. According to a survey conducted by Forrester Research Inc. (Karakaya, 2001), of those who do not shop online, 59 % worry that their credit card numbers might be stolen and 54 % do not want to give out personal information to online stores. Consumers also expect reliable customer service, which has been a serious problem in the past. Failure to deliver and return Internet products on-time caused major consumer complaints during the 1999 Christmas season (Karakaya, 2001). Following are the three major concerns to consumers when engaging in Internet transaction.

1. Privacy

Privacy is the major issue that concerns many people in modern society. In this information age, advanced technology and the unbridled exchange of electronic information has made the protection of privacy an even bigger challenge.

There are two major reasons that Internet vendors will ask visitors to provide personal information. A reason that benefits the consumer is the creation of their own visitor profiles, which makes subsequent visits to that same site much more convenient. In most cases, online shops will ask for permission from customers to use their personal information in marketing activities, but many sites are not secure. A study from the General Accounting Office revealed that inquiries for online fraudulent assistance have climbed from 35,235 in 1992 to 522,922 in 1997 (Karakaya, 2001). In addition, cases of misuse of Social Security numbers totaled nearly 39,000 in 1999, up from 1,153 in 1997 and 305 in 1996 (Fletcher, 2000). Consequently, many online shoppers still leave the sites without providing the requested data for fear of a privacy breach.

The business practices of multinational corporations have also raised considerable concerns from many countries over the issue of misusing personal information from their citizens. For cost saving and data uniformity, multinational corporations often transfer personal data from their customers and employees from the

world to a few places for data processing and analysis. Many countries have introduced data protection legislations to protect their citizen's privacy.

2. Security of transaction

Although there have been many advances in the security of transactions since the start of online shopping, security is still considered one of the biggest hurdles to the prosperity of e-commerce. Facing unknown Internet vendors, consumers are wary about giving out their credit card number for fear of financial loss from credit card misuse. Therefore, consumers are more likely to purchase goods from renowned companies or companies having physical presence in the world.

Most online shops use encrypting software when they receive the credit card data and the software enables them to instantly verify the authenticity of the cards and to authorize the purchases. In most cases, a consumer is only liable for $50 if his or her credit card has been used fraudulently (can be seen in the model contracts of many credit cards issuing companies).

3. Customer service

Customer service is another problem facing consumers and online companies. Due to the impersonal nature of the Internet, there is no one to answer questions, no one to interact with, and no one with whom to bargain down prices. It is estimated that about 50 to 75% of customers abandon their shopping carts without making any

purchases because of poor or no customer service. And it is estimated that 7.8 % of those customers abandoning shopping carts could be salvaged through an effective system of customer service and the total additional sales could amount to $6.1 billion. (Karakaya, 2001).

Main Aspects of Cyberspace Governance

While cyberspace may be borderless, it is not unregulated. Indeed, laws and regulations are being enacted on all levels, from local to national to international. The following analysis reviews some of the legal developments related to cyberspace governance.

1. Jurisdiction and selection of law

One of the most significant concerns for companies engaging in e-commerce is jurisdiction—the ability of one party to sue another in the court of its choice and the power of a court over those parties. Jurisdiction is a crucial matter when Internet transactions are involved, because individual and businesses operating on the Internet face the danger of potentially being sued in any jurisdiction from which their sites or online services are accessed. In the Business-to-business (B2B) context, companies can avoid some, but not all, of these difficulties through choice of law and choice of forum provisions, which should be included in online contracts, licenses, and

agreements as well as in a website's terms of service. In Business-to-Consumer (B2C) transactions, however, choice of law and forum selection clauses imposed by a business on the consumer may not be enforceable. The most important international regulation governing jurisdiction issues has been the Hague Convention.

(1) The Hague Convention

The most important multilateral effort to resolve jurisdictional and choice of law issues has been the Hague Conference on Private International Law for a Convention on Jurisdiction and the Recognition and Enforcement of Foreign Judgments. At present, there is no effective international regime for enforcing the judgments of national courts in transnational legal disputes (House, 2001). The U.S. provided the original impetus for the Hague Convention in 1992. The driving force was the US perception that U.S. courts typically enforce foreign judgments, while foreign courts often do not enforce U.S. judgments. The Hague Convention was initiated to provide international rules on jurisdiction and recognition and enforcement of foreign judgments. It concerned two aspects of jurisdiction over a foreign person or company: (1) personal jurisdiction (can the foreign defendant be sued in this court?); and (2) enforcement (will a court in the defendant's home country recognize and enforce the court's decision?).

The current official draft of the Hague Convention, which was adopted in

October 1999, has met with significant opposition from a variety of private sectors in the U.S. According to the testimony of Ms. Barbara Wellbery before House of Representatives (House 2001), a great deal of the opposition stems from the very different approaches to jurisdiction taken by common law and civil law countries and the fact that the 1999 preliminary draft borrows heavily from the civil law approach to jurisdiction (particularly from Brussels Convention) . At the core of the e-commerce community's concerns is that the jurisdictional rules contained in the Hague Convention tend to make web site operators and Internet Service Providers (ISPs) more vulnerable to lawsuits around the world and what is more, require U.S. courts to enforce the resulting foreign judgments.

Ms. Wellbery also mentioned that the requirement for the Hague Convention to create uniform rules of jurisdiction, indeed, poses special difficulties for the US side. Under the common law system, U.S. courts would focus on issues of due process—fairness to the defendant as well as to the plaintiff—and determine jurisdiction on a case by case basis. It cannot be said that a consumer can always sue in his home jurisdiction. But the approach to jurisdiction in civil law countries is usually far more formalistic than the US approach. For the breach of a contract, a plaintiff can sue in the forum where the goods or services are provided unless one party to the contract is a consumer. In these cases, the consumer can sue where he/she

resides if the defendant solicited business through advertising (such as a web site) and the consumer took steps to conclude the contract in that jurisdiction. For tort actions, plaintiffs may sue where the harmful act or omission occurred or where the injury arose. It is said that the civil law approach to jurisdiction provides certainty at the expense of justice, and the common law tradition provides justice at the expense of certainty, but in many if not all cases, they lead to the same result.

E-commerce creates challenges for both civil and common law approaches to jurisdiction since both depend on geographical location of the parties and relevant events. The Internet, however, is borderless, thus it is difficult if not practically impossible to know where the parties are located, whether one of them is a consumer, where the contract was negotiated, and in the case of intangible goods and services, the physical location to which they were transmitted. Although the Hague Convention applies to e-commerce transactions and ISPs, it was drafted without paying any attention to the particular jurisdiction issues raised by e-commerce, and thus without recognition of the significant problems it poses for the Internet and e-commerce.

There are essentially two problems the Hague Convention creates for e-commerce and ISPs. First, the Hague Convention would lead to increasing vulnerability to tort suits against ISPs. It would permit suits for all kinds of torts, including copyright infringement, privacy, defamation, and in some countries, hate

speech, to be brought wherever the act or omission occurred or where the injury arose. This jurisdictional rule would allow a company with a web site to be sued for copyright infringement anywhere its web site could be accessed. And an ISP could be sued wherever it makes the copyrighted work available. Yet, in both instances, the company may have had no contact at all with the jurisdiction in which the suit is brought.

The second critical problem the Hague Convention creates is that it would subject web-based companies to suits arising out of consumer contracts anywhere in the world. It would allow a consumer to sue in his home jurisdiction so long as the defendant has directed his activities to that state (through advertising) and the consumer has taken the steps necessary for the conclusion of the activity in that state. The effect would be that a business could be vulnerable to suit anywhere in the world that its web site is accessible.

The most famous case is the French Yahoo decision. That is, a French court took jurisdiction and imposed penalties against Yahoo U.S., because a web site hosted by Yahoo auctioned Nazi memorabilia and was accessible to users in France. The site's content was illegal in France, yet legal in the United States. Under the Convention, U.S. courts could probably still refuse to enforce such judgments on First Amendment grounds, but courts in other countries would have to enforce them. The

result could be that the Internet is reduced to the lowest common denominator where web sites avoid any but the safest content for fear of offending someone and being hauled into court. Alternatively, the Internet could be subject to as many different standards of conduct as there are countries.

There are four approaches to dealing with this very restrictive protection of consumers (UN, 2001). First, it may be possible to agree on a new definition of a sophisticated consumer who may need less or no protection in the online world. In Europe, in the financial service sector, a concept of "sophisticated consumer" has been used for a number of years. Second, Internet operators could buy some special insurance coverage for their Internet dealings. Third, operators can offer two different prices to consumers, i.e. consumers can choose a lower price with not much protection if something goes wrong or pay a higher price in order to be better protected. Fourth, operators could make use of jurisdiction avoidance. This means that if they feel unable to sell in one jurisdiction, when a consumer declares that he/she is located in that jurisdiction, a notice should appear on the site to the effect that no sale may be concluded in that jurisdiction.

2. Privacy and data protection

Privacy is clearly one of the biggest consumer protection issues facing the e-business world. The challenge of privacy policies is to provide sufficient consumer

confidence for consumers to place orders. According to a survey, the e-retailers worldwide lose $6.1 billion in sales, due to an 80 percent failure rate in online purchase attempts (House, 2001). Invasive information requests (52 percent) and reluctance to enter credit card data (46 percent) account for most of these lost sales. Clearly, business is paying a big price for lack of consumer confidence in online transactions.

Companies engaged in international commerce compile business and consumer data which transcends national boundaries. Many multinational firms ship all their human resources data to one location for record keeping, benefits, and payroll purposes. Credit card companies do the same with bankcard information for billing purposes. Credit and insurance markets increasingly operate on a global basis and require the transfer of information about individuals across borders to evaluate their creditworthiness or insurance risks. Citizens of one country may easily visit web sites in other countries, transferring personal information across borders as they visit. As more and more multinational companies transfer customers' personal information back and forth between their business branches, some countries are concerned about privacy breach and personal data misuse to their citizens by those multinational companies.

The EU Data Protection Directive reflects the concerns of the European Union

countries. Due to the international impact of the Directive, the U.S. argues that the EU has imposed its only will on the U.S. side and its companies. These problems are exacerbated when nations that have longstanding differences in how to protect privacy adopt very different approaches to dealing with these issues, such as the United States and the European Union. Traditionally, the U.S. has relied on self-regulation and limited sector-specific legislation to protect privacy while EU countries, which view privacy as a fundamental right, have adopted broad, strong regulatory protection for privacy. The U.S. is also concerned about frivolous lawsuits by disgruntled consumers that may cripple the beneficial exchange of information.

Another organization that has been very active in the field of privacy protection is the Organization for Economic Cooperation and Development (OECD). As early as 1980, it drew up "Guidelines on the Protection of Privacy and Trans-border Flows of Personal Data" that provide principles for the collection and processing of personal data.

(1) The EU Data Protection Directive and Safe Harbor

The EU Directive on Data Protection requires member states to prohibit the transfer of personal data to countries outside the European Union that fail to ensure an adequate level of privacy protection. Because the U.S. has no comprehensive national privacy policy, the EU has decided that all of American firms lack adequate privacy

protections for personal data. The approaches available to determine whether or not a firm satisfies the "adequate" standard have proven to be expensive, time consuming, and only suitable for larger companies (House, 2001). Thus, the U.S. negotiated the "Safe Harbor" with the EU as an alternative to the adequacy requirement of the Directive. Safe Harbor is considered to be more streamlined and less expensive. Under Safe Harbor, a U.S. company may be certified by the U.S. Department of Commerce that it meets the seven Safe Harbor standards and thereby avoid enforcement actions by EU member states, which could result in interruptions in its electronic commerce transactions (Johnstone, 2001). But certain firms cannot take advantage of Safe Harbor protection. For example, financial institutions, such as banks, securities firms, and insurance companies, do not have Safe Harbor protection at this time. The only way for financial firms to currently comply is through the negotiation of private contracts either with their EU customers directly or with EU privacy officials in each country where they operate. In March 2000, the two sides agreed to continue their discussions with respect to the financial services sector.

Many in the U.S. are suspicious about the effect of Safe Harbor and are disgruntled by the fact that the EU places its own will on the U.S. side without international negotiation. Although Microsoft, Intel, and Hewlett-Packard have announced that they would sign on to Safe Harbor, only about 70 U.S. firms had

signed on as of July 2001 (House, 2001).

Even though there are many criticisms of Safe Harbor, it is believed that Safe Harbor is the better resolution compared to its alternatives, such as individual contracts, model contracts, and consent of the consumer. Safe Harbor creates a single privacy regime for U.S. companies transferring personal information from the EU to the U.S. and eliminates the need for prior approval to begin data transfers to the U.S. Camp (2000) argued that the EU Directive would primarily affect those businesses that make considerable money from the secondary distribution of data (because the Directive prevents secondary use of data). For companies that plan to observe their own customers and use the data to improve service locally, following the American Code of Fair Information Practice has a high probability of meeting the Directive's privacy constraints.

(2) The Model Contract

In 2001, the EU approved a so called "model contract" that can be used to meet the stringent requirements of the Data Protection Directive. However, the model clauses are considered much harsher than those of Safe Harbor (House, 2001).

(3) Declaration on the Protection of Privacy on Global Networks, OECD

At the OECD Ministerial Conference held in Ottawa from October 7-9, 1998, the OECD Ministers adopted a Declaration on the Protection of Privacy on Global

Networks, reaffirming their commitment to achieving effective protection of privacy on these networks and their determination to take the necessary steps for this purpose, and recognizing the need to cooperate with industry and businesses. They also agreed that the OECD should provide practical guidance for implementing the guidelines on the protection of privacy (UN, 2001).

3. E-Commerce and E-signature laws

As electronic commerce has grown, more and more countries have adopted or considered introducing e-commerce or e-signature laws, which aim to provide legal certainty to e-commerce transactions and give electronic contracts the same legal status as paper contracts.

E-signature legislation would accomplish two important goals: to remove barriers to e-commerce, and to enable and promote the desirable public policy goal of e-commerce by helping to establish the trust and the predictability needed by parties doing business online. There are at present three main functions attached to e-signatures (UN, 2001):

(1) Data origin authentication: This can provide assurance that a message came from its purported sender;

(2) Message integrity: This enables the recipient of a message to verify that a message has not been intentionally or accidentally altered during transmission;

(3) Non-repudiation: The sender cannot deny that the message was sent.

At the moment, several methods are available for carrying out the above functions. However, one type of e-signature, the so-called digital signature technology based on public key cryptography, is regarded today as the most common and reliable technique. For digital signatures to achieve authenticity functions it is necessary to use a trusted third party called a certification authority, which, given satisfactory evidence, is prepared to certify the identity and attributes of the parties.

There are two model legislations on e-signatures that can be referred to by states wishing to enact legislation in this field. One is the EU Directive of December 1999 on a Community Framework for Electronic Signatures, and the other is UNCITRAL (the United Nations Commission on International Trade Law) Model Law on Electronic Signatures, 2001. The former was aimed at establishing a harmonized community-wide legal framework for e-signatures and e-certification services. Member States are entitled to set up voluntary accreditation schemes to provide consumers with a higher degree of legal security regarding certification service providers (CSPs). Furthermore, they are required to ensure the establishment of an appropriate system that allows for the supervision of the CSPs established on their territory and to issue qualified certificates to the public. Regarding liability, the CSPs are liable for damage caused to any entity or legal or natural person who

reasonably relies on the certificate unless the CSP proves that he/she has not acted negligently. The Directive required member States to implement it by July 2001. However, actual implementation has been extremely slow to date (Brightbill and Dylag, 2001).

UNCITRAL Model Law on Electronic Signatures (MLES) has three main parts: criteria for reliable e-signatures, duties on the three potential functions involved in an e-signature (signatory, certification service provider, and relying party), and the recognition of foreign certificates and e-signatures. The MLES applies only to commercial activities in a wide sense that includes the supply or exchange of goods or services, distribution agreements, agency, factoring, leasing, investment, financing, banking, insurance and carriage of goods.

4. Taxation

The question of taxing e-commerce has increasingly been of concern to governments and tax authorities in both developed and developing countries. Fears about revenue losses resulting from uncollected taxes on Internet transactions, coupled with the substantial growth of Internet commerce in the past years and predictions for the next few years, have prompted governments and international organizations to set up committees to evaluate the implications of e-commerce for national and international tax systems. The main players in the debate on e-commerce

taxation have been the United States, the European Union, and the Organization for Economic Cooperation and Development. The United States and the EU member States are primarily concerned with how their respective tax systems will be affected by e-commerce. The OECD secretariat, whose Model Tax Convention serves as a basis for most bilateral tax treaties (including between non-OECD member countries), has been asked by its member States to take the international leadership role in e-commerce and taxation (UN, 2001).

The OECD articulated five key taxation principles that guide governments in relation to e-commerce (Banham and Orton, 2000):

- Neutrality: taxation should seek to be neutral and equitable between forms of e-commerce and conventional commerce. Business decisions should be motivated by economic rather than tax considerations. Taxpayers in similar situations carrying out similar transactions should be subject to similar levels of taxation.
- Efficiency: compliance costs for taxpayers and administrative costs for the tax authorities should be minimized as much as possible.
- Certainty and simplicity: the tax rules should be clear and simple to understand so that taxpayers can anticipate the tax consequences in advance of a transaction, including knowing when, where and how the tax is to be accounted.
- Effectiveness and fairness: taxation should produce the right amount of tax at the

right time. The potential for evasion and avoidance should be minimized and counteracting measures should be proportionate to the risks involved.

- Flexibility: the systems for taxation should be flexible and dynamic to ensure that they keep pace with technological and commercial developments.

(1) Income Tax

The taxation of income, profits and capital gains is a major source of government revenue, especially in developed countries. There are two basic ways countries tax income. First, source-based taxation is applied in the jurisdiction where the economic activity takes place, for example the sale of a service or a good. Foreigners who do not reside in the jurisdiction where their economic activity takes place are still taxed on their profits earned in that jurisdiction. Second, residence-based taxation takes place in the jurisdiction of the place of residence of the person/business earning the income. Among the OECD countries, it is agreed that if a "permanent establishment" has been determined, source-based taxation applies; if not, residence-based tax principles apply (UN, 2001). The usual practice among OECD countries is to tax residents on their worldwide income and non-residents on the income they earn in the relevant country.

According to the OECD Model Tax Convention, business profits of non-resident enterprises may only be taxed in a country to the extent that they are

attributable to a permanent establishment that the enterprise has in that country, which must also be a "fixed place of business". The source-based concept of income taxation could lead to substantial erosion of the tax base since the link between income-generating activity and a specific location becomes blurred in e-commerce. In December 2000, the OECD reached consensus on the following important changes to the Commentary on Article 5, which would be applied to e-commerce:

- An Internet website does not constitute a "place of business", as there is "no facility such as premises or, in certain circumstances, machinery or equipment". Hence, a website in itself cannot constitute a permanent establishment. On the other hand, the server operating the website is a piece of equipment which needs a physical location and may thus constitute a "fixed place of business" of the enterprise that operates it.
- A distinction between the enterprise that operates the server and the enterprise that carries on business through the website is necessary. If the website is hosted by an ISP and a different enterprise carries on business through the website, the server cannot be considered a fixed place of business. The server and its location are not at the disposal of the enterprise and the enterprise does not have a physical presence in that place since the website does not involve tangible assets. However, if the web server is owned or leased by the business which carries on business

through a website located on that server, the place where that server is located could constitute a permanent establishment.

- A server constitutes a "fixed place of business" if it is located in a certain place for a sufficient period of time.
- In the case of ISPs, even though they own and operate the servers, they cannot be considered to constitute permanent establishment of the businesses whose websites they host, because they will not have the authority to conclude contracts in the name of the enterprises they host and thus are not agents of those enterprises.
- Whether computer equipment used for e-commerce operations may be considered to be a permanent establishment needs to be examined on a case-by-case basis, depending on whether the equipment is used for activities that form an essential part of the commercial activity of an enterprise (as opposed to being used for merely preparatory or auxiliary activities).

What would be the possible implications for tax revenues considering these amendments to Article 5? For example, what if a web server constitutes a permanent establishment of a business? Since few resources are needed to set up and maintain a server, it could encourage the migration of servers and computer equipment to low-tax countries, including some of the developing countries. Currently, the United States

has the highest concentration of web servers in the world; should these be considered permanent establishments and thus subject to direct taxation, the United States may take a minimalist position on income tax to prevent servers from migrating across the border. One problem that needs to be addressed is tracing the legal entity operating a business through a website and identifying the business and its physical location.

Because of the difficulties in defining permanent establishment (and because of its large tax base), the United States has favored residence-based taxation over source-based taxation. However, residence-based taxation may not favor developing countries, given their small number of residents with e-business. In the short run, they are primarily net e-commerce-importing countries; hence, they would have an interest in source-based rather than residence-based taxation. On the other hand, residence-based taxation favors tax havens, which are often offered by developing countries.

The OECD is also examining the important issue of whether any changes should be made to that definition or whether the concept of permanent establishment should be abandoned altogether. Given that today's technology allows a company to base itself in one or more places and outsource all activities which require physicality, the concept of permanent establishment may become obsolete (UN, 2001).

On a related issue, the OECD has discussed whether income from the sale of

digital products or services should be characterized as business profits or royalties. While business profits are taxed in the country where the business has permanent establishment, royalty income is taxed by the country from which the royalties arise. A minority of countries argued in favor of classifying digital sales as royalties, arguing that the payment is only for the right to copy. This would allow e-commerce-importing countries to capture tax on sales to their residents, if permitted under their treaties.

(2) Consumption Tax

Consumption taxes usually include value-added taxes (VAT), sales taxes and turnover taxes. Traditionally, they are borne by the consumer and collected by the seller. Research carried out in the United States on the impact of taxation on Internet commerce and consumer online purchasing patterns found that consumers living in high sales tax area are significantly more likely to buy online than those living in low sales tax areas (UN, 2001). Hence, differentiated Internet taxation rules among countries could have a significant impact on the purchasing behavior of consumers, with the latter shifting from domestic to foreign suppliers.

This raises several problems for tax authorities. First, it leads to the gradual elimination of traditional intermediaries such as wholesalers or local retailers, who in the past have been critical for identifying taxpayers, especially private consumers.

Second, foreign suppliers may be tax-exempted, whereas local suppliers are normally required to charge value added tax or sales taxes. Third, direct orders from foreign suppliers could substantially increase the number of low-value shipments of physical goods to individual customers.

Major differences exist between the EU and the United States in the way taxes are redeemed and hence in their approaches to international taxation rules on e-commerce. The EU countries derive about 30 percent of government tax revenue from taxes on domestic goods and services (mainly VAT) (UN, 2001). Their main concern is that under current tax law, non-EU suppliers are exempted from VAT, but EU suppliers are subject to VAT payment. This could lead to unfair competition. Furthermore, the VAT exemption provides incentives for suppliers to locate outside the EU.

The United States government, on the other hand, derives most of its tax revenues from personal and corporate income tax and social security contributions; revenues from taxes on domestic goods and services are extremely low (3.6 percent) (UN, 2001). The United States is currently both a net exporter and the main exporter of e-commerce worldwide. Hence, it has a great interest in encouraging business to locate in the United States and pay direct taxes to the United States tax authorities. Even though the United States federal government has been less concerned about VAT

regulation, the potential loss in sales taxes as a result of e-commerce has caused major concern among local governments. United States-based online suppliers selling to out-of-state (including foreign) customers do not currently have to charge local sales tax. States are therefore becoming increasingly worried about how to secure their sales tax revenues in the light of Internet commerce. The estimated revenue lost due to Internet sales will come to about $2.5 billion in 2002 and $3.5 billion in 2003, which is a small proportion of sales tax revenue, i.e. less than 2 percent of potential sales tax revenue (Wiseman, 2000)

In 1998, the United States Congress created the Advisory Commission on Electronic Commerce to study a variety of issues involving e-commerce taxation. In March 2000, the Commission voted to extend a three-year moratorium on domestic Internet taxation for the concerns of stifling the development of e-commerce if sales tax is in place. The moratorium essentially bans taxes on Internet access fees. The National Governors' Association, on the other hand, has been very active in paving the way for taxation of online trade. It has initiated the Streamlined Sales Tax Project whose aim is to simplify and harmonize state sales tax systems in the light of e-commerce.

A new EU proposal is already in place that requires non-EU suppliers to apply taxes on the same basis as a EU operator when transacting business in the EU. The

proposal also suggests that non-EU e-commerce operators be required to register in one EU member state. This has been a controversial point among the EU members States who are concerned that Luxembourg, the State currently with the lowest VAT rate (15 percent), would be the preferred country of registration and tax collection without having to compensate other member States. The proposal has also prompted a strong reaction from non-EU suppliers, who have little interest in collecting VAT for EU tax authorities, arguing that this would impose an unnecessary burden on their overseas transactions and, in general, restrict e-commerce. A key problem for tax authorities will be to identify the customer and the location of the jurisdiction responsible for collecting the tax. Because of disintermediation, apart from the seller and the customer, there are no other parties involved in the transactions (which could collect the tax). Credit card companies, ISPs, banking and payment systems providers and telecommunications companies have all been mentioned as potential new intermediaries in verifying the location of a customer and the respective tax jurisdiction. This, of course, raises privacy issues and could lead to abuses of information. In addition, how can an Internet seller determine whether the customer is a business or an individual consumer, each of which is subject to different VAT rules? An increasing number of e-commerce businesses are small entrepreneurs operating from home who may receive services for business or personal purposes.

The EU also proposed that for VAT purposes trade in digitized goods should be treated as a supply of services and that VAT rates on all e-services should be harmonized into a single rate. This could result in tax losses since consumption taxes are lower on services than on goods (UN, 2001). It could also lead to losses in tariffs and import duties on digitized goods that were shipped physically in the past and which would now be subject to much lower duties. This would impact developing countries in particular, whose reliance on import duties as a government revenue source is much higher than that of developed countries.

The United States takes a different position on this issue: digital products should be characterized on the basis of the "rights transferred" in each particular case. The U.S. argues that some goods which are now zero-rated (such as books and newspapers) would be subject to VAT if treated as a service. Customers may therefore prefer to buy local zero-rated books rather than digitally imported services, many of which could be supplied by United States online providers. As an alternative, the United States has proposed an origin-based consumption tax for intangibles (e-services), which would be collected from the supplier and not from the consumer. The U.S. also argues that it is easier to identify the supplier than the customer on the basis of the permanent establishment rule since businesses are subject to audit. The United States as a net exporter of e-commerce would benefit from an origin-based tax,

although such a tax may further erode the tax base in e-commerce-importing countries. On the other hand, it puts domestic producers at a disadvantage in their export sales since they, instead of the final consumer, would have to pay the tax on the exports. This may encourage businesses to set up shop in countries with no origin-based taxation. Finally, it needs to borne in mind that most e-commerce will be business-to-business (currently 80 percent of e-commerce) (UN, 2001), which is often tax-exempted or subject to voluntary compliance.

On Feb. 12, 2002, the EU unilaterally decided to impose VAT and collection liability on foreign companies that don't have physical appearance in any EU country. The U.S. considered it a violation of WTO rules, creating a disadvantage for non-EU companies and has threatened to bring it to the WTO courtroom (Associated Press, 2002). Owing to the fact that a unilateral decision may have an international effect in e-commerce era, multilateral arenas, such as OECD and WTO, could be the most appropriate places to negotiate and setup international rules of e-commerce (Merrill, 2001).

The Formalization of Intergovernmental Cooperation

Kobrin (2001) developed a framework to deal with the evolving nature of the formation of international cooperation. His model is based on the concept that governance regimes of e-commerce are evolving along two dimensions (figure 1).

Early regulatory mechanisms are likely to be informal norms or codes of conduct, which then become increasingly formalized, legalized, and institutionalized over time. Similarly, regimes are likely to involve a limited number of actors at first—self-regulation by the private sectors at first—and then an incorporation of multiple actors such as NGOs and intergovernmental groups. The model goes through four stages: (1) self-regulation becomes formalized; (2) informal bilateral schemes evolve towards formal multilateral agreement; (3) formalization of intergovernmental cooperation; (4) international cooperation and international institutions. There are a number of examples for each stage.

1. Self-Regulation Becomes Formalized

Take the online e-marketplace "Covisint", created by the major automotive firms, for example. In this B2B e-marketplace, self-regulatory codes or norms may evolve governing electronic contracts, the acceptance of digital signatures, choice of applicable law, and dispute resolution procedures. However, one can anticipate self-regulatory regimes evolving towards increased formalization. There is increasing interest, for example, in formal arbitration schemes or alternative dispute resolution mechanisms (ADRs) that might be incorporated into self-regulatory codes in the e-marketplace.

2. Informal Bilateral Schemes Evolve Towards Formal Multilateral Agreement

The protection of the privacy of personal data is a contentious and ongoing issue characterized by sharp cross-national differences in basic beliefs and legal approaches. As mentioned above, through bilateral negotiation between the U.S. and the EU, the Safe Harbor provision provides U.S. firms an opportunity to regulate themselves under the oversight and enforcement of government.

3. Formalization of Intergovernmental Cooperation

An example of intergovernmental cooperation is "surf days", which was created to surf the Internet to find websites suspected of fraud that targeted 1,600 sites in 28 countries (Kobrin, 2001). This activity was coordinated by the U.S. Federal Trade Commission and involved several other countries such as the UK and the South Korea.

4. International Cooperation and International Institutions

As mentioned before, taxation of e-commerce presents formidable problems, especially in the case of digitalized product transactions. At present, OECD has developed a statement of Tax Framework Conditions, a set of principles or norms for e-commerce. Principles or norms could be implemented through unilateral action such as harmonization of tax codes by any government, through the sort of bilateral tax

treaties that now deal with many aspects of direct taxation (e.g. income tax), or through a multilateral treaty.

Owing to the boundless and unwieldy nature of e-commerce, a country may face huge difficulty when trying to regulate e-commerce itself. Many researches have found that the global e-commerce must be governed under international rules to reach its maximum potential. It is conceivable that the complexity of this issue combined with the difficulties entailed in developing non-territorially based modes of direct or indirect taxation, might lead to the need for a relatively autonomous international organization with considerable powers to collect and distribute information, monitor activities, establish and enforce policy and perhaps eventually collect and distribute indirect taxes.

Conclusion

This paper presents the ongoing legal developments which, whether intentional or not, have a great impact on the prospect of e-commerce. It starts by examining the chief concerns for online shopping and provides statistic evidences that show that fears of privacy breach and credit card fraud and lack of interactive consumer service are the main forces obstructing the rapid growth of e-commerce. It then explores the laws and regulations that instituted by governments or organizations for the efforts to deal with those issues. Among these laws and regulations, four distinct areas are

emphasized: jurisdiction, data protection, e-signature, and taxation. As far as jurisdiction is concerned, the Hague Convention is the most important international forum that addresses the issues of jurisdiction and recognition and enforcement of foreign judgments. But the fundamentally different approaches to jurisdiction between the U.S. and the EU make it difficult, if not impossible, to reach consensus in this regard in the near future. Moreover, the borderless nature of e-commerce makes the discussion even complex. As mentioned in the previous section, a consumer can sue a website owner in a jurisdiction where the consumer resides and the owner may have had no contact at all as long as the website can be reached (through the Internet) by the consumer located in that jurisdiction and the consumer has taken the steps necessary for the conclusion of the business activities in that jurisdiction. This makes website owners vulnerable to suit anywhere in the world where their websites are accessible. The UN (2001) suggests four approaches to avoid the risk of frivolous lawsuit: a new definition of consumer, insurance, differentiated prices to consumers, and the avoidance of jurisdiction.

The privacy and data protection is another area where the U.S. and the EU disagree on. Although this difference stems from the distinct approaches to the protection of privacy as in the case of jurisdiction, their consequences are distinguishable. There is a solution on hand to the privacy concerns: Safe Harbor

which is an agreement between the U.S. and the EU to be an alternative to the EU Directive on Data Protection. Taxation is another concern facing developed countries, especially in the area of consumption tax. Predictably, the U.S. and the EU share different perspective on this issue. The EU fears that the rapid growth of non-taxed online trade and the substitute effect of online trade to physical delivery will erode their tax revenues which are the main source of government revenues in developed world. On the other hand, the U.S., who is the largest exporter of e-commerce, is afraid that imposing tax on e-commerce will stifle its development. The fear drives the EU to decide to impose VAT on the trade of e-commerce in Feb 2002. To the United States' discontent is that the EU impose the collection liability on foreign companies which, most of them, are the U.S. companies. At this point in time, it is unclear that if the collection is technologically possible and what the WTO will rule on this issue if the U.S. bring it to the WTO panel.

As noted above, the Internet breaks down the distinction between domestic and international borders, and electronic commerce penetrates deeply into domestic and international structures. That brings differences in belief systems and cultural norms to the foreground (privacy is an excellent example) and can result in deep-seated inter-societal conflict. While these differences cannot be covered up, it is far from clear how they can be resolved equitably and efficiently. Furthermore, any attempts at

resolution will involve the government, the private sector and the interested elements of civil society. And as events such as the Seattle Round of the World Trade Organization, where turmoil took place when civil right groups strongly protested against globalization and the stances many governments take to the environmental issues, show that barring civil society groups from the discussion is neither feasible nor desirable. Governance of cyberspace will require a new relationship between the public and private sectors. The complexity of this technology and its rapid rate of change make traditional regulatory schemes problematic in many key areas. In order to be effective, regulatory frameworks will require joint efforts, hybrid schemes of self-regulation with public oversight and enforcement. As for the establishment of international institute empowered to deal with the complex issues of e-commerce such as tax collection, it will be very difficult to achieve in the foreseeable future, given the fact that it certainly would compromise fiscal sovereignties of governments.

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附件二

Global Electronic Commerce and GATS

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Global Electronic Commerce and GATS

Introduction

The advances of information and communication technology (ICT) are changing lives in a way never before imagined. New means of exchanging information and transacting business are transforming many aspects of the social and economic organization. These modern technologies are being combined through the Internet to link millions of people in every corner of the world. There were only 4.5 million Internet users in 1991, since then the number has grown to as many as 374.9 million by 2000 (Table 1) (Karakaya, 2001). As expected, the U.S. has the largest online population of 135.7 million. Taiwan with 6.5 million Internet users ranks 13th.

Table 1: Top 15 Nations in Internet Use at Year-End 2000

Rank	Nation	Internet Users (millions)	Share (%)
1	United States	135.7	36.20
2	Japan	26.9	7.18
3	Germany	19.1	5.10
4	UK	17.9	4.77
5	China	15.8	4.20
6	Canada	15.2	4.05
7	South Korea	14.8	3.95
8	Italy	11.6	3.08
9	Brazil	10.6	2.84
10	France	9.0	2.39
11	Australia	8.1	2.16
12	Russia	6.6	1.77
13	Taiwan	6.5	1.73
14	Netherlands	5.4	1.45
15	Spain	5.2	1.39
	Rest of World	66.5	17.74
	Worldwide Total	374.9	100.00

Source: Karakaya, 2001

Global Electronic Commerce (GEC) can be defined as the production, advertising, sale and distribution of products via telecommunication networks (WTO, 1999). Meringer (2002), a representative from Forrester Research, predicts the transactions of GEC, both business-to-business (B2B) and business-to-commerce (B2C), will reach $12,837.3 billion in the year 2006, which would be about 18.4% of total estimated sales in 2006 (Table 2). North America represents a majority of this trade, amounting to 58.2%, which is a significant decrease from 73.1% in 2002. Its dominance is thus expected to fade as some Asia-Pacific and Western European countries gradually keep abreast of the trend; especially, their shares will grow from 14.9% and 10.7% in 2002 to 19.2% and 20.6% in the year 2006, respectively. Meringer also predicts that the productivity resulting from the widespread application of ICT could increase 15% by 2012 with the services sectors benefit the most (46%), followed by manufacture sectors (45%) and design industries (9%).

Table 2: Forecast: Worldwide Online Trade Growth, 2002 and 2006

(US$ billions)

	2002		2006		% of Total Sales in 2006
	Value	%	Value	%	
North America	$1,677.3	73.1	$7,469.0	58.2	10.7
Asia-Pacific	$341.6	14.9	$2,458.6	19.2	3.5
Western Europe	$246.3	10.7	$2,645.6	20.6	3.8
Rest of World	$28.2	1.3	$264.1	2.0	0.4
Total	$2,293.5	100	$12,837.3	100	18.4

Source: Meringer, 2001

This paper is going to examine the existing World Trade Organization (WTO) rules which apply to GEC and the potential improvement of these rules in order to make the most of the benefits GEC brings to us. Taiwan, as a new member of the WTO and a major player in the information technology arena, is paying much attention to the new round of WTO talks in respect to the GEC issues. The WTO is going to launch new round of talks next year (2003) regarding agriculture and services sectors, due to the complicated nature of the talks and the emergence GEC poses, I am motivated to gain a better understanding about this issue.

Definitions and Classifications

Liberalization and removal of market access obstacles are the centers of the WTO negotiation. The WTO system is a series of agreements between governments. It involves a set of rules, freely negotiated and accepted by a consensus of the member governments, which limit the government's ability to interfere with trade (WTO, 1999). As to GEC, because of its comprehensive and evolving nature, the WTO has to reexamine three questions (Moore, 2000). The first is how do existing WTO agreements impact GEC? Second, are there any weaknesses or omissions in the laws that need to be remedied? Finally, are there any new issues not now covered by the WTO system on which members want to negotiate new disciplines? I will start with an examination of the two classification problems now under fierce debates. One

classification problem is between the General Agreement on Trade in Services (GATS) and the General Agreement on Tariff and Trade (GATT). The other is within GATS. Then, I will make an attempt to explore the potential solutions to these problems through the clarification, modification, or extension of the existing WTO rules.

1. Classification between GATS and GATT

There have been battles between the United States and the European Union as to how digitized products (DPs) will be classified. At stake are the national interests of the United States (U.S.) and the European Union (EU). The U.S. (the dominant country in GEC) prefers to classify DPs as goods to harvest the most benefits, but the EU prefers to classify them as services. If digitized trade products are classified as goods, then GATT discipline is applied, i.e. Most Favored Nation (MFN), National Treatment and no Quantitative Restriction are mandatory. On the contrary, if they fall into the category of service, then, the less liberal of GATS discipline applies.

Tuthill (2002), a representative from World Trade Organization, lists the different disciplines between GATT and GATS (Table 3). Most Favored Nation (Article II) requires members to extend favorable treatment, which they negotiate with one country, to all WTO members—unless they have listed exemptions in their schedules of commitments. Under Article XVI (Market Access) members that want to retain restrictive domestic measures may either exclude sectors in their schedule or include

them with reservations for the measures in question. Once commitments are made, members are to avoid numerical restrictions unless otherwise specified in their schedule. National Treatment (Article XVII) requires members to offer foreign services suppliers the same treatment as they offer to domestic suppliers.

Table 3: The different disciplines between GATT and GATS

	GATT/Goods	GATS/Services
Tariffs	Progressive elimination	Not recognized, but national treatment may apply
Licensing	Of the imports: rules in place	Of suppliers: principles exist
Quantitative Restrictions	Prohibited	Progressive elimination
National Treatment	Obligatory	Progressive implementation
Subsidies	Disciplines	National treatment applies
Measures Covered	Imports	Services and suppliers in all modes of supply

Source: Tuthill, 2002

The essence of GATT is to reduce or eliminate tariffs over time through the binding of tariff concessions, but tariffs are so uncommon in services trade that GATS does not even mention them. Under the rules of GATT, members are committed to National Treatment and Market Access as well as MFN. National Treatment for internal taxes is obligatory. Quotas and domestic content are prohibited under GATT discipline. But under the GATS discipline, only those sectors covered by service trade commitments are subject to the protections of National Treatment, quota-free, and so on. In other words, National Treatment for internal taxes is negotiated. Nevertheless, as Tuthill points out, with full commitments there are almost no differences between

GATT and GATS disciplines (Table 4). Because the talks are still ongoing, to date, there is no consensus within WTO members as to how the DPs have to be classified. The transactions of many DPs, just like their physical counterparts, are now treated as goods and are under protection of the GATT rules. Teltscher (2002) defines DPs as follows: 1. Can be delivered physically or digitally; 2. Can be identified by Harmonized System (HS) code; 3. Can be transformed into digital format; 4. Physical delivery: via carrier medium; 5. Digital delivery: via networks; 6. Printed matter, software, music and other media products, film, and video games.

Table 4: The different disciplines between GATT and GATS with full commitments

	GATT/Goods	GATS/Services
Tariffs	None	None
Licensing	Imports: Non trade restrictive	Suppliers: Non trade restrictive
Quantitative Restrictions	None	None
National Treatment	Full	Full
Subsidies	Non-trade distortion	Non-discriminatory (National treatment)
Measures Covered	Tariff and non-tariff barriers on imports	Affecting services and suppliers in all modes of supply

Source: Tuthill, 2002

This classification problem has become a political issue. The European Union argues that all transmissions of DPs constitute services and fall under the scope of GATS. Drake and Nicolaidis (2000) indicate that there are at least three reasons why the EU takes such a position. First, this stance is embodied in EU single market agenda, and the EU is, of course, keen to ensure consistency between its internal

reforms and its WTO commitments. Second, the EU excluded audio-visual services from its liberalization commitments in the Uruguay Round, owing to the urging from a few nations' ministries of culture. As noted above, a classification that could result in television programs, movies, and music being treated as goods would allow foreign suppliers to operate under GATT rules instead of GATS. Finally, a services classification would also ensure that EU policies on privacy protection apply to the supply of DPs.

Predictably, the U.S., now the largest digitized product provider, shares a different perspective. The U.S. has suggested that, given the broader reach of WTO disciplines accorded by the GATT, there may be an advantage to a GATT versus GATS approach to the digital products which could provide for a more trade-liberalizing outcome for electronic commerce. In the testimony before U.S. Congress, Bonnie J.K. Richardson, a representative from Motion Picture Association of America, states, 'It would be completely unacceptable if products that are currently classified as goods-motion pictures, magnetic tapes, DVDs, etc.-lost trade benefits through a re-classification process.' (U.S. Congress Hearing, 2001)

Tuthill (2002) lists the advantages and disadvantages of the alternatives of classification (Table 5). The advantage of the classification as goods is that these DPs apply to the same disciplines regardless of the means of delivery. But because these

DPs are only a tiny portion of GEC, the disadvantage is that it could have unintended consequences for the status of other online services. And the advantages and disadvantages of classification of DPs as services are just the opposite. The WTO Secretariat has prepared a background note that leans toward an all-services classification (Drake and Nicolaidis, 2000). The Secretariat argues that the only issue is the character and treatment of electronic transmission itself--what is done with the information after downloading is another matter. If hard copies are produced, whether legally or not, this is a manufacturing process resulting in the production of goods, into which the electronic transmission could be seen as an input of service. Presumably, when a program is downloaded, what is sold is the electronic transmission itself. But what consumers are buying from Disney is Mickey Mouse, not an electronic transmission.

Table 5: The advantages and disadvantages of the alternatives of classification

	Classified as goods	Classified as services
Advantages	May clarify situation with respect to tariffs and national treatment, etc. for the products concerned	May clarify the status most forms of e-commerce
Disadvantages	Could have serious unintended consequences for the scope of the GATS, e.g. for the status of other on-line services (occupy approximately 99% of trade in merchandise and more than 99% of duties collected world wide) beyond those actually at issue (only occupy 1% of total merchandize traded and 1% of total duties collected world wide)	1.Leaves open the issue of differing treatment of similar products delivered by physical and electronic means 2.Could raise questions on the GATT status of the content of digital products that remain traded on physical formats

Source: Tuthill, 2002

A problem has arisen in relation to the classification under GATS. Newspapers and CDs have long been manufactured through a process involving the international transmission of data over private networks to production facilities. If transmission to a printing company is part of a trade in goods transaction, why would transmission to an individual consumer be trade in services? It would seem that a good has been sold irrespective of whether it was intangible on delivery or of who made it tangible afterwards. It also raises the concerns of violation of 'technological neutrality' principle under GATS that implies that members agree not to make policy distinctions between products on the basis of the means of delivery.

Drake and Nicolaidis (2000) suggest four approaches to resolve this issue. First, negotiators could leave it up to dispute settlement panels to decide which products are goods and which are services. Second, negotiators could establish a new category of "hybrids" for products that have the properties of both goods and services. This might seem to be the soundest approach conceptually, and it could contribute to promoting the horizontal consistency of WTO instruments. But it might also add unwanted complexity and risk undermining the individual coherence of both GATS and GATT and making bargaining more difficult. Third, consider such products as trade in intellectual property rights and do not classify them as either a good or service. But this may be fudging the issue, and given the nature of the TRIPs agreement, it would

not seem to contribute heavily to the cause of trade liberalization. The fourth approach seems most difficult but unavoidable: negotiators should define and agree on clear criteria differentiating goods and services. In effect, this is a question of technological neutrality between goods and services, not just within services. Before developing the criteria, the definition of services must be reviewed. Services have four characteristics: intangibility, perishability, inseparability, and variability (Kurtz and Clow, 1998). Intangibility refers to the lack of tangible assets that can be seen, touched, smelled, heard, or tasted prior to purchase. Perishability means the service cannot be inventoried or stored. Inseparability is the simultaneous production and consumption of services. Variability refers to the unwanted or random levels of service quality customers receive when they patronize a service.

Drake and Nicolaidis continue to argue that an operational definition must include both physical and contractual considerations. They provide two criteria, locally stored and transferable, for the differentiation of DPs between goods and services. For example, a digital product can be categorized as goods if it becomes locally stored and transferable between buyers. The "locally stored" means that the product is downloaded onto a physical medium. It need not take on a tangible form: a magazine, CD, or movie can be downloaded onto a computer and controlled by the consumer without any involvement by the producer and without making a separately

packaged hard copy. But even this simple distinction raises problems. For example, companies are developing the means to transmit on-line movies that can remain on a consumer's hard drive either for a few days as a rental or permanently as a purchase. Thus, additional definition is a must. "Transferable" means that the value of the product can be preserved independently of the initial consumer and transferred to another consumer without the intervention of the producer. An airline ticket is a part of a service that is bound to a specific person unless and until the seller transfers it to another. An architect's drawing or a teacher's comments on a paper in a long distance course are services that are intrinsically bound to the input of the buyer (inseparability). But downloaded instructions for do-it-yourself learning or textbooks would not be services under the definition. In a word, the definition is that a product delivered electronically must be considered as a good if it is locally stored and transferable between buyers, or if its function and contractual value become independent from the intervention of the supplier at the time of transaction. Although this classification would fail to address the EU concerns that audiovisual products are part of national culture and ought not to be treated in the same way as classic goods, the EU may be less concerned about music, games, software, news, and the like, so there could be room for at least some progress.

12. Classifying within GATS

Article I (Scope and Definition) of GATS specifies that GATS covers any service in any sector except those supplied in the exercise of government authority, and that its disciplines apply to measures affecting trade in services that are taken by central, regional, or local governments and authorities as well as by nongovernmental bodies exercising authority delegated by such government. Moreover, trade in services is defined as the supply of services (1) from the territory of one member into the territory of another member (cross-border); (2) in the territory of one member to the service consumer of any other member (consumption abroad); (3) by a service supplier of one member through commercial presence in the territory of another member (commercial presence); and (4) by a service supplier or one member through the presence of a natural person in the territory of another member (presence of natural persons). This formulation can cover all services relevant to GEC.

Drake and Nicolaidis (2000) note that there are two categories of questions arose. First, there are a number of services associated with GEC that have been developed since the Uruguay Round. It is not entirely clear whether existing commitments in more generically defined sectors automatically extend to them. For example, do web-hosting services, electronic authentication services, or data 'push' services fall under any traditional categories such as valued-added services or data processing, or

would more explicit commitments provide valuable certainty for the provision of these services? Moreover, the Internet allows for a great deal of bundling between sectors. In these circumstances it is not entirely clear what services ought to be bound: only the "primary" services or any associated content services as well? In the same vein, should back-office services such as payment and encryption services be classified separately or as an integral part of each sector? When services are intrinsically bundled, should concessions and access rights also be bundled? WTO negotiators may need to sort these and related issues out while scheduling commitments.

Second, GEC raises a dilemma about the boundary between modes 1 and 2. With the mass popularization of the Internet, millions of customers can now "virtually visit" a foreign country and import services, so the question of whether the services is being delivered within or outside the territory of the consumer gets blurry. There is also a political dimension to this issue. In the Uruguay Round the commitments undertaken by mode1 were often limited, in part because many governments preferred that suppliers enter their markets through commercial presence. Therefore, Mode 2 commitments tended to be stronger. It makes a difference whether GEC is treated as being supply by mode 1 or mode 2. For example, if a country gave full market access under mode 2 for a particular financial service that is traded electronically, the

commitment would have no liberalizing impact if GEC is classified as supply under mode 1 (Panagariya, 2000). The United States, which is the leading exporter of GEC services, has expressed interest in the idea that mode 2 commitments are applicable, but some governments appear reluctant to embrace this interpretation. In addition, the boundary problem also raises the issue of determining which nation's legal and regulatory jurisdiction applies to a given transaction. In general, if a transaction is classified under mode 1, the jurisdiction of the buyer applies; if a transaction is classified under mode 2, the jurisdiction of the seller applies. The EU may prefer GEC to be classified as the supply of mode 1 to be consistent with its data and privacy protection directive.

Drake and Nicolaidis offer three solutions. First, the negotiators might be able to sidestep the problem by simply listing identical commitments on both modes 1 and 2. But this would not resolve the jurisdiction dimension with any clarity. Second, the negotiators may create a new, fifth mode of supply for the Internet. But there might be problems in defining the boundaries between mode 1, mode 2 and the new mode.

The third option is for negotiators to define an unambiguous criterion for distinguishing between modes 1 and 2. A simple solution would be to amend Article I by specifying that mode 2 involves the physical presence of the person being serviced in another member's territory. A more practical problem with this option might be

what to do if a WTO member argues that its original commitments were based on a different understanding of the mode 1 and mode 2 boundary, but this may not be too controversial because the effect is to narrow down the more liberal mode 2 commitments.

Access to Telecommunications Transport Networks and Services

Conditions in the telecommunication network environment obviously have a major impact on the ability of individuals and organizations to engage in GEC. The dominant and incumbent public telecommunications operators (PTOs) in particular have the ability to employ restrictions that effectively limit the value of market access commitments by countries across the globe. There are three principal WTO provisions that govern access to communications networks: GATS Article VIII on monopolies and exclusive service suppliers, GATS Annex on Telecommunications, and the Reference Paper on regulatory principles in the Agreement on Basic Telecommunications reign the behavior of the major suppliers of telecommunications service.

GATS Article VIII requires members to ensure that monopoly suppliers do not act in a manner inconsistent with their obligations in a relevant market. The Telecommunication Annex deals with access to and use of public telecommunications transport networks and services as a mode of supply for services to which countries

have made commitments. The annex requires that public networks and services be provided on a reasonable and nondiscriminatory basis. The Reference Paper comprises six principles for the redesign of national regulatory rules and institutions to ensure compatibility with trade principles. The six principles are:

1. Competitive safeguards: Governments are required to ensure that major suppliers, especially the national PTOs, do not engage in anticompetitive cross-subsidization, and use information gathered from competitors with trade-restricting results.
2. Interconnection: PTOs are to provide market entrants with interconnection at any technically feasible point in the network.
3. Universal service: Such obligations are to be administered in a transparent, nondiscriminatory, and competitively neutral manner that is not more burdensome than required to meet the policy objectives.
4. Public availability of licensing criteria: Where licenses are needed, information and decision-making procedures are to be transparent.
5. Independent regulators: Regulatory bodies are to be separated from service providers and not accountable to them.
6. Allocation and use of scarce resources: Procedures for allocating and using frequencies, numbers and rights-of–way are to be carried out in an objective, timely, transparent, and nondiscriminatory manner.

There is a looming problem concerning the networks and services to which these instruments apply. Governments designed the annex and the Reference Paper to deal with basic telecommunications and public switched telephone networks (PSTNs), especially where these are supplied by the incumbent PTOs. Now with the emergence of major Internet access providers (IAPs) that are not providers of basic telecommunication and PSTNs, disputes have arisen between the EU and the U.S. as to whether the two instruments apply to IAPs or not. The EU supports the classification of IAPs as basic telecommunication providers, subjecting them to the full range of WTO obligations pertaining to such providers, but the U.S. opposes.

Customs Duty and Revenue Implication of DPs Trading

In 1998, the WTO imposed a moratorium on the imposition of customs duties on GEC transactions. The moratorium had expired in November 1999 and was due to be reviewed by ministers in Seattle, but no decision was reached in Seattle. In its fourth ministerial meeting in Doha, November 2001, WTO again declared that members will maintain their current practice of not imposing customs duties on electronic transmissions until the Fifth Session (WTO, 2001).

This ban on customs duties has raised serious concerns from developing countries. Many developing countries believe they will be net importers of DPs in the years ahead, so forswearing customs collection at the virtual border would be

depriving them of a new source of foreign revenue. On top of new revenue, when the Internet is used as an alternative to the conventional delivery of products that are subject to customs, this substitution effect is seen as eroding an existing source of revenue. Teltscher (2002), a representative from United Nations Conference on Trade and Development (UNCTAD), argues that the substitution is significant. Telscher quotes a survey from Forrest Research that predicts that digital CD sales will overtake physical sales by 2004, 17.5% of publishing industry's revenues will result from digital delivery by 2005, and 22% of online sales of DPs will be delivered digitally in 2004 (software 40%, music 25%, video games 14%, books 14%, film 1.5%).

Teltscher continues to calculate tariff revenues currently collected from the import of digitized goods to see if the argument from developing countries is justified. Table 6 shows world trade in DPs in 1999. The import and export of DPs in 1999 only amount to tiny share of world trade, and not surprisingly the share of developed countries is higher than that of developing countries.

Table 6: World trade in DPs, 1999

	Total imports			Total exports		
	Value ($ billions)	%	DP %	Value ($ billions)	%	DP %
Developed countries	40.5	81.5	1.0	41.0	88.5	1.1
Developing countries	7.7	18.5	0.4	7.7	11.5	0.4
World	48.2	100	0.9	46.4	100	0.9

Source: Teltscher, 2002

Despite the developing countries' import share in digitized products of only 18.5 % (see table 6), their absolute tariff revenue is almost double that of the developed countries, amounting to 64.5 % of world tariff revenue losses for these products (630,326/977,532=64.5, see table 7). Given their higher levels of MFN rates applied to these products, this should not come as a surprise. Hence, the argument from developing countries is found. Table 7 compares tariff revenues from DPs with import revenues and total revenues. Predictably, the percentages are relatively low due to its small share in world trade. In terms of the ratio of tariff to import revenues, the developed countries is larger than the developing countries, but developed countries' share of tariff amount to smaller portion (0.04%) of total government revenues compared to that of developing countries (0.16%). Accordingly, customs duties as a source of government revenue play a more important role in many developing countries than in developed countries. Nevertheless, it is unclear that this tariff moratorium will absolutely affect developing countries negatively. As Drake and Nicolaidis (2000) argue, "Some developing countries may well develop vital GEC export markets. Furthermore, if appropriate national policies are in place, GEC should contribute enough to overall economic activity to offset the absence of customs revenues on transaction."

Table 7: Shares of DP Tariff Revenues in Total Gov. Revenue, 1999

	DP Tariff Revenue (thousand $)	DP Tariff/import Revenues (%)	DP Tariff/total Revenues (%)
Developed	347,206	2.7	0.04
Developing	630,326	1.4	0.16
World	977,532	1.7	0.14

Source: Teltscher, 2002

Apart from the MFN tariff, many countries collect a number of additional duties on their imports, such as customs surcharges and fees and consumption taxes. These additional duties would also be lost if products were imported electronically and duty exempted. Table 8 compares consumption revenues from DPs with import revenues and total revenues. The developed countries occupy a huge share of world consumption revenue (85 %) from DPs trade and have a ratio of consumption revenue from DPs trade to import revenues of 81.7%, which is much higher than the 48.8% in the developing world. Evidently, the developed countries would mainly be affected by forgone consumption taxes on the import of DPs. In practice, it is considerably more difficult to collect customs as well as additional duties at current technology levels.

Table 8: Shares of DP Consumption Revenues in Total Gov. Revenue, 1999

	DP Consumption Revenue (thousand $)	DP Consumption /import Revenues (%)	DP Consumption /total Revenues (%)
Developed	5,102,676	81.7	0.33
Developing	935,020	48.8	0.29
World	6,037,696	73.8	0.37

Source: UN, 2001

Conclusion

E-commerce is a new field that is still developing and evolving constantly. Many see e-commerce as giving new momentum to the world's economies. Countries, whether developed or developing, can benefit from this powerful, pervasive, and borderless mechanism. It is so powerful that it can reduce transportation cost, change traditional business transaction patterns, and thus broaden market access that used to be out of reach or too costly. It is so penetrative that it touches the very core of any society in terms of technology, economics, politics, laws, and culture. This paper examines the pressing GEC issues and how these issues can be clarified or resolved under the structures of the WTO system.

There are two pressing classification problems that remain to be discussed in the next round of WTO talks. One is between GATS and GATT and the other is within GATS. The effective solutions for these problems, as Drake and Nicolaidis (2000) have appealed, are a thorough and operational definition of DPs and an unambiguous criterion for distinguishing between modes 1 and 2.

Market accessibility is the foundation and the realization of GEC. As mentioned above, the dominant incumbent public telecommunication operators intend to either manipulate their political power or use their market power to block foreign competitors from entering into their territories. Several GATS Articles are set up to

deal with this problem, such as Telecommunication Annex, Reference Paper, Article VIII (Monopolies and Exclusive Service Providers), Article IX (Business Practices), and Article XVI (Market Access). But even though telecommunications services exist, additional hardware and software that links up users to the Internet must also be put into place. The Information Technology Agreement (ITA) was drafted to cope with the problem of high tariffs on ICT products. The ITA requires the signatories to free-up trade of a large number of ICT products for the purpose of access to these equipments at lower cost.

As for the revenue implication of the customs duties moratorium, evidence showed that fiscal losses from customs duties are small compared with total government revenue, but are significant in absolute terms, especially if additional duties are taken into account. Developing countries suffer higher losses from reduced tariff revenues, while developed countries would mainly be affected by forgone consumption taxes on DPs imports. There is a so-called "digital gap" between developed and developing countries and many analysts believe that the protection measures adopted by many developing countries are the main source for this gap. A study conducted by the UN (UN, 2001) indicates that when developing regions fall behind technologically, the gap between developing and developed countries increases. The results also show that productivity growth in developed countries'

service sectors could result in a deterioration of the terms of trade, welfare and wages of many developing countries. Thus, it is in developing countries' interests to analyze the effects of these protection measures and to then explore the optimal trade policies that would reap the potential of GEC in the future and benefit themselves in the long-run.

The trade issues associated with GEC services are complex and wide ranging, and they will become more so as the technologies, business practices, and national policies continue to develop in the years ahead. Consequently, the constantly evolving nature of GEC will encourage governments to adopt a variety of national policies to deal with emerging problems. It is in the world's interest to establish a list of permissible domestic regulatory objectives, including consumer protection, to allow countries to follow up and harmonize their policies with respect to the government of GEC.

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