伍、第一場次專題研討：績效管理與國家競爭力

Session I: Performance Management & Nation's Competitiveness

伍、第一場次專題研討

一、時間：101 年 10 月 15 日 (星期一) 下午 3 時

二、主題：績效管理與國家競爭力

三、主持人：詹中原　考試委員

四、演講人：William Vocke 傅爾布萊特學術交流基金會臺灣辦事處執行長

五、與談人：Monika Elschner 德國公共行政聯邦學院資訊與數位學習處處長

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六、主持人：

各位貴賓，各位女士、先生，我們接下來進行第一場次的專題研討，這個場次的演講人是 William Vocke，他是傅爾布萊特學術交流基金會臺灣辦事處執行長，他的博士學位是從美國南卡羅來納大學獲得，他也是一個非常經驗老道的學者，他要跟我們談的是績效管理與國家競爭力，我們歡迎演講人。

七、演講人：

大家好！我會說一點點中文，但我還是要用英文演講。我以身爲政治方面的學者及國際教育方面的專家來講這個主題，而不是以身爲公共行政的學者的身份來談論這個主題，所以有些關於公共行政方面的術語，我可能比較不了解，請大家多多包涵。

首先，先作背景的介紹。我今天要講的是國際教育，我覺得國際教育其實跟陽光有一點像，陽光會讓我們快樂，跟國際教育一樣，它很有效果，而且它有很多的優點，譬如說曬太陽的時候，我們會產生維他命 D，但我不知道爲什麼會如此，國際教育就像陽光一樣，是很有效果的，它對我跟我的家人來說，都很有效。我的女兒曾在國外念書，而我自己也在國外念書，今天早上馬總統在致詞的時候，也談到了國際教育，且在很多不同的場合，也都有提到國際教育，教育部也非常重視國際教育，在近期也有推出一本談國際教育的白皮書。我想在場有許多人，可能是自己出國念書，或者是親戚、家人、朋友出國念書，我們都知道國際教育或海外教育，是很有效果的，但我們沒有辦法去評估它或了解它，或者是深入的研究它。

接下來我想給大家談一個比喻，這是費里曼的一本書，叫作「了解全球化」。費里曼講到現在的世界當中，像 Lexus 這樣的車子，它所代表的就是融合及全球化，也代表象徵自由市場的自由主義，爲什麼呢？因爲 Lexus 這樣的車子，它的零件來自世界各地，而且在世界各地生產、銷售、行銷、販賣。這就是費里曼爲全球化所舉的例子。而另外一個趨勢叫作橄欖樹。橄欖樹代表的就是所謂的分割或是分化，因爲橄欖樹它的根在某個地方，在某些特定的地點，它是比較在地的象徵或是代表，所以它其實也代表了分化或是分散，也就是每一個人都想要找到自己的根，自己的家，找到自己的

根源或是源頭，它跟全球化是相對的，所以費里曼有講到全世界有這兩種趨勢，全球化與在地化。

而國際教育的目的，其實就是要讓我們從橄欖樹理論中能夠看到 Lexus，但同時又不會忘記我們的根，我們的源頭，也就是我們要成爲世界公民，要成爲全球的一部份。但除此之外，不只看到 Lexus 這麼名貴的車輛，更不能忘記我們的根，也就是我們的地方環境，這就是國際教育的目的，要提升我們的遠見。

費里曼他講的沒有錯，全球化已經發生了，我們看到 1950 年代到 2010 年代的商品、服務及貿易，甚至看到商業貿易大幅度的成長，可以看到這樣的趨勢坡度，也可以看到貿易成長的面貌。如果要從另外一個角度切入，藍色代表的是商品的出口，GDP 則是紅色的線條，我們可以看到平均的商品出口，下面則是各國平均的 GDP。商品出口的成長速度比起各國的 GDP 成長速度還要更快，這代表什麼意思呢？簡單來說，就是我們出口的速度比我們生產產品的速度還要快，也就是說世界越來越整合了，越來越緊密了。而在 2011 年，我們知道金融危機發生的時候，其實只有兩個時間點是生產比出口的成長更快速，也就是世界各地越來越緊密相連，全球化的趨勢越來越明顯。

費里曼在另外一本書當中有講到，全球化的驅動力是什麼呢？其實大部分跟企業或是公司它們的成長過程有關係，它會讓全球化更快速。以下有六點，我不會一一談，但會簡單的跟大家介紹。他說這些趨勢其實也越來越快速，越來越被強化，因爲有某些因素，有越來越多的裝置或工具讓我們能夠更快速，或者是更機動。費里曼就講到現在全球歷經了很多做事情方法的改變，而現在全球化的經濟，它受到什麼樣因素的影響呢？我們可以看到這張圖表上面，不只有企業做事的方法或是過程，很多時候影響全球化的因素，有可能是國界的瓦解、國營企業私有化、貿易、投資或是網路等，這些可能都是刺激全球經濟的因素。

譬如說爲什麼我們會去吃麥當勞呢？爲什麼我要吃麥當勞呢？麥當勞並沒有特別好吃，但是麥當勞在世界各地都是一致的，它有全球標準，雖然它的食物並不是特別好吃或是美味，但它是一個全球標準，也就是麥當勞的漢堡在世界各地，口味都是一樣的，這就是我剛談到的其中一個驅動全球化因子。所以經濟全球化代表公司企業，由原本的國內企業，轉變成爲現在其他的國際企業。在美國或是在某些地方的保險公司，它的公司主要都是國內公司，譬如說甘寇斯它是一個美國公司，但他除了國內的公司之外，也有一些跨國的公司，國際的公司，但這些國際公司，也有它們在地的根源，像 UBS 它就是一個這樣子的銀行，它們有在地的根，即使它們遍及全球，但他們還是有一些在地的特質。另外有一些像是 PMG 這樣子的跨國企業，它的總部在俄亥俄州，但它本質上是跨國企業，不論是它們的領導人或者是產品，或者是在銷售行銷人員等等，都是在跨國進行。所以我們就看到一種改變，這種改變是在我一生中所經歷過的，以前我年輕的時候，大部分的公司都是屬於國內的企業，到了我中年的時候，很多公司都成爲國際公司，現在這些公司都變成了跨國企業，這就是在我一生當中的種種變化，而這也反映出大家的另一種觀點，也就是大家看待世界的方式，也就是我們透過不同的層次來看待世界，來分析事情，我們可以透過五種不同的層次來做分析。

我在這邊提出一個比較有爭議性的分析，這個是經濟學人的封面，他講到說中國跟日本眞的會爲釣魚臺而打仗嗎？經濟學人的答案是肯定的。我們先不要談臺灣，爲什麼中國要這麼在乎這個問題呢？爲什麼中國會在第二次世界大戰後這麼在意釣魚臺問題呢？其中一個層面當然就是因爲現在

中國正在進行權力的鬥爭，而政治人物他們對釣魚臺的看法，就會影響他們在政治方面的地位。他從機構的觀點來看，可以從共產黨內部的權力鬥爭，這是從機構的觀點來看待中國爲什麼如此在意釣魚臺。從國家的層級來看，他們會覺得其實是跟自然資源、漁業、漁獲跟財富或是經濟比較有關的問題。如果不從國家的觀點切入的話，我們也可以從國際的觀點切入，覺得釣魚臺其實是主權的問題，因爲釣魚臺可以說是很在地的主題，因爲大家最在意的就是主權或者是自治；或者是我們可以從全球的觀點來看待釣魚臺的問題，我們看待的是某一個現有的強權跟一個新興的強權，它們之間的這種衝突，比如說第一島鏈、第二島鏈等等，就是全球策略定位的問題。所以從各種不同的層次來分析事情的時候，其實也跟我們談的國際教育有關，也跟大家了解臺灣的情勢有關，我們現在講到不同層次看待事情的方式。

競爭力是我們今天的主題，我們講到競爭力的時候，我們就要去談各國的情勢，現在的世界跟1950年代或是二十世紀的世界已經不同了。以前在二十世紀的時候，我們比較少看到所謂的跨國組織，在這段期間，我們可以看到跨國組織成長，只有在蘇聯瓦解的時候，跨國組織或國際組織它才會下滑，普遍來說，跨國組織的數量是有增加的，而國際的非營利組織或是非政府組織也增加了，所以世界的政治局勢改變了。

不過我們現在談論競爭力的時候，我們還是以國家爲單位。世界經濟論壇就有一個全球競爭力指數，這個指數它是針對經濟作評量，我們今天就不談主權的問題，它把臺灣視爲一個經濟體，應該是說它以經濟體來衡量各個經濟體之間的表現，而不是以國家。而世界經濟論壇講到世界的競爭指數時，提及十二大項重點，也就是競爭力的決定因素。其中有四點，機構、基礎建設、宏觀經濟、整體經濟，還有健康以及基礎教育，這四個因素都是必要的因素才能夠有競爭力，而大部分的經濟也受到這四個因素所影響，這個是第一階段的經濟體。而除了這四項因素之外，還有六項跟效率比較有關的因素。如果說你的經濟跟這些效率因子有關的話，那就是所謂由效率所驅動的經濟體。

最後，第三階段的發展就是某一些國家已經超越了以上的兩個層次，比如說中國它可能是以效率驅動的經濟體，那最後一個階段就是由創新所驅動的經濟體。某些經濟它們是由自己的產業環境，或者是產業發展所驅動的，這就是世界經濟論壇看待競爭力的方法。這個是他們的指標，總共有111項，講到競爭力相關的指標，我爲什麼要提出來給大家看，其實他們在衡量競爭力的時候，並不是很隨意的，不是說喜歡臺灣就給他很高的分數，而是透過數據的方式來衡量。譬如說在第五項之下，高等教育以及員工的訓練，其實就跟我們的這個主題很有關係，它就是其中的一項競爭力指標；另外一個指標，在第十二項指標下就是專利的數目，譬如說跟電力有關的專利，或是每一百萬人當中有多少項專利，這個也是競爭力的因子或指標，我們就是透過這些細項歸納出較大項的競爭力指標。

我們接下來就談一談各個不同的經濟體，這些是以生產要素驅動的經濟體，這些是根據效率來驅動的經濟體，那這些則是轉型中的國家，這邊則是以創新驅動的國家，大家看到這邊有臺灣、美國，效率的部分是有中國還有塞爾維亞。生產要素的部分，包括沙烏地阿拉伯，還有兩個基礎的經濟，包括東帝汶還有越南，我們很快地來看一下這幾個經濟體。

這兩條黑線是一樣的，黑線是什麼呢？就是在這群當中經濟體的平均分數，在這一組國家當中，他們的平均分數就是黑線，這些就是在第一個階段，根據生產要素驅動的經濟，左邊是東帝汶，右

邊是越南，藍線則是個別國家的評分，他們在這十二項重要指標上得到的分數。我們可以來看看這些圖表，這些國家他們目前做到什麼程度，還有他們跟同一組的國家相較表現如何，隨著國家不斷的發展，他們就會晉級到下一組的國家裡，跟其他的國家相比。比如說東帝汶他這邊的發展途徑其實相當困難，他裡面只有一項很高，就是他們的總體經濟環境，基本上是說東帝汶這邊有石油礦產，在東帝汶跟澳洲之間的海溝裡面，如果他們能夠善用石油資源，也許東帝汶可以成功，不然的話，我們會認爲東帝汶會永遠的落後。

但是大家看看越南，在每一個指數上，越南的分數都超過這組的平均，所以越南他現在有好的政策，可以再超前進行到下一段，這些都是生產要素驅動的經濟體，但是他們有不同的表現。再來是沙烏地阿拉伯和塞爾維亞，這兩個都是轉型中的經濟體，大家看一下沙烏地阿拉伯，在各項指標上面，他都超過該組的平均，而且超過的幅度相當的大，所以假設這個趨勢持續下去，沒有革命發生或沒有人自殺，沙烏地阿拉伯沒有傾亡等巨大事件發生的話，我們認爲沙烏地阿拉伯的經濟會越來越好。而塞爾維亞相較之下，他是藍線，在黑線裡面，他的分數是低於該組平均的，可以說是落後的國家，也就是說過去十五年來，塞爾維亞的政府政策他們都是鼓勵國族主義，而不是鼓勵發展的政策。過去四、五年來有了一些改變，這是在九〇年代還有 2000 年初期開始有一些政策改變，基本上，塞爾維亞還是落後的。兩個世界強國，中國跟美國，大家可以看到在市場規模上，這部分分數領先很多，大於十三億人口，這不用說。而美國方面，美國在市場這裡也表現得很好，中國在商業成熟度、創新等等方面都要加強。美國現在基礎方面落後，比如說五十年前美國表現很好的部分，現在卻落後了，這些事情是過去使美國成爲強國的因素，但是美國現在，在某些方面落後了，這是美國的挑戰。而中國的挑戰就是要把創新做得更好，所以政策是很重要的。

接下來談到競爭力跟創新，政策是很重要的，當然你也要考量到你目前的經濟體發展到什麼程度，比如說臺灣現在是在第三個階段，靠創新驅動的經濟體，所以我們的繁榮與否，取決於我們的創新程度，是否能夠成功就看你能不能夠創新。我們再來看一個圖表，這些藍點都表示各個不同的國家，這些點就代表他們的創新程度相較於每人平均的收入。我們看一下繁榮程度跟創新的關聯，大家可以看到，創新跟繁榮程度是息息相關的。這個是來自麥肯錫顧問公司的資料。政策很重要，麥肯錫報告告訴我們創新分成三個階段，首先你要有發想，然後你要執行這個想法，再來把這個想法商業化，這個是過去臺灣做得很好的一塊，在發想的部分，臺灣其實做的不是很好，商業化部分也不是做得很好，但是在執行這部分做的很好。創新會在某些特定的地點，特定的聚落發生。這是一個印度的地圖，上面顯現出來的高峰就是創新的熱點，這個則是從全球來說，一些創新的中心。這個圈圈越大，表示這裡的創造出來的專利越多，這裡也告訴我們創新會在特定的地方發生，比如臺北、臺中、新竹、矽谷等等，下面這些縮小的圈圈，像是紐沃克、芝加哥、盧克斯特等等，這些則是開始要越來越大的圈圈，像是班加羅爾、深圳等等，在這邊要再說一次，有些國家做得好，有些國家做不好，政策眞的影響很大。

麥肯錫顧問公司說，要能夠驅動創新，維持創新的因素其實就是看你有沒有素質高的人力資源，簡單來說就是人力資源。看人力資源，大家可以看到來自麥肯錫的圖表，裡面有幾個關鍵字，當中有些都跟國際有關，我們等一下會再細談。在人力資源這邊，人力其實對創新非常重要，什麼叫做國際教育呢？所謂國際教育，首先它是一種心態，它是比較樂觀的、行動力強的、開放的，也就是

很能夠容忍的。其次，國際教育它代表的也是一套技能，這些通常是跨領域的技能，而且是能夠做比較分析的。這邊可以分成三個部分，包括有溝通的技巧，釐清事情脈絡、上下文的能力，還有我們聽到之前的講者講到價值的部分，這些都是相關的，也都是國際教育所代表的，一個特定的心態、特定的技巧。

我這邊想要提出的論點是，我們知道國際教育很有效果，因此，接下來要在公務人力發展當中帶進國際教育的團結。其實這在臺灣應該要執行，執行之後會是很有效的政策，比如說傅爾布萊特基金會，這是我目前任職的機構，特別在這邊提一下，我今天所提出來的論點都是個人論點，跟 AIT 或者是傅爾布萊特基金會沒有關係。傅爾布萊特基金會基本上是傅爾布萊特提出來並建立的，他當初的政策其實非常的聰明，美國在二次世界大戰後物資太多，有過多的物資，如毯子、卡車、其他東西等等，我們要怎麼處理呢？我們就是把這些多餘的物資賣給當地人，那麼賺來的錢我們要做什麼呢？有很多學者散布在世界各地，我們可以用這筆錢把這些學者邀請到美國來研究，這是傅爾布萊特所提出來的法案，在 1960 年的時候簽署，1961 年甘迺迪總統覺得太好了，所以他又給了這個計畫更多的預算，這個就是傅爾布萊特基金會的願景，我們希望這個世界可以有更多的知識交流，這是我們的任務宗旨，要做這五件事情。

除此之外，他也象徵了臺美之間的關係，這個是我們的背景，在 1946 年開始是在南京簽約，然後因爲內戰的關係曾經中斷，後來 1957 年在臺灣重新開始，我們已經有 155 個全球的計畫，這些都是雙邊的計畫，比如說美國澳洲、美國日本、美國德國之間的雙邊計畫，當中有 50 個計畫，像是臺灣的，都是由基金會，也就是非營利的基金會來執行，我就是幫這個基金會做事，我並不是美國政府的公職人員，之所以這麼做是因爲，我希望這個過程是非常公開透明的，這對美國來說很重要。

這些是我們的董事會成員，這邊是我們的一些校友，一些傅爾布萊特的學者，我們會把臺灣人送去美國進修，把美國人送來臺灣進修，我們會送學者、學生，還有一些英語教師過來，我也希望鼓勵更多的公務人員來參與這個計畫。我們每年有兩到三位公務人員到美國進修，我們鼓勵大家多多來申請，這些都是得到美國傅爾布萊特基金會資助的。再來我們還有一些英語的助教，在高雄、金門等地區。這邊我要強調教育部其實最近才出了國際教育的白皮書，談到這方面的重要性，我希望在公務人力體系也能體驗到國際教育的重要性，這就是白皮書裡面說到一些臺灣的目標。那我們有提供什麼樣的誘因呢？其實誘因就是比如說臺灣的前一千大企業，他們在雇用員工的時候，百分之二十八的企業都要求一致的英語能力鑑定，但是你看其他國家，他們對英語能力的要求是比臺灣更高的。當然你也可以選德語，但是我想選英語還是比較有益。再來對教師或其他公務人員來說，我們還可以提供什麼其他的誘因呢？我們可以讓他們有一年時間到國外進修，也許進修之後，未來還有更多的升遷機會，目前這方面的機會比較少，也比較困難。再來我們也可以透過績效評估，比如說老師出國進修之後，回來教學的績效是否更好等等。

在馬來西亞他們有六大指標來衡量國際教育的效果，這些都是馬來西亞的關鍵績效指標，他們希望在國際教育達成這些指標。在美國我們則有來自美國外籍學生協會，所提出來的最佳實務，我在這邊就快速地講一些各國的作法。根據世界經濟論壇的全球競爭力指標，還有根據麥肯錫的報告，其實繁榮與否，富有與否跟創新其實相關，而創新又跟教育程度相關，只要一個國家能夠充分發展

國際教育，就能在這個地方做得很好。

另外，費里曼說到，有時候人家會問我，你除了自己的國家之外，你最喜歡哪一個國家，他就說臺灣。我想我在這邊要提一下，費里曼是美國最具影響力的專欄作家之一，那為什麼他選臺灣呢？因為他說臺灣這邊的文化習慣，就是不斷地加強人的素質跟技巧，所以人力資源對臺灣的表現非常重要。我們可以看到這些都是國際教育的表現，是臺灣在高等教育方面的整體表現。再來是看與其他學術機構的交流，這一部分看起來臺灣還有改善的空間。如果臺灣要改善排名的話，臺灣的學術機構要跟其他的學術機構還要有更多的交流與連結，這個是在全球競爭力指數上，臺灣的圖表所呈現出來的結果。臺灣未來的路其實是有一點困難的，因為目前的表現，也就是在同一組，創新驅動經濟體當中，跟平均分數差不多的，我們必須要表現優於平均，才能夠繼續進步。所以這個圖表目前看出來臺灣還有很多挑戰要克服，因為臺灣要改善不同的方面，才能夠維持現在的地位。

結論是政策非常的重要，具有很大的影響力。如同大家知道陽光很重要，國際教育亦是如此，大家應該要把這個認知融入臺灣競爭力的相關作法當中，要維持臺灣的繁榮，我們必須要使用各種的誘因，使用各種的指數，來鼓勵大家追求國際教育，讓大家能夠一方面追求全球化，同時又擴大在地化，謝謝大家。

八、與談人一：Monika Elschner 處長

你們好，午安。我在政府部門服務 20 年了，我自己沒有在私部門服務的經驗，但我會跟大家談談公部門當中，國際教育的重要性，且我會以德國的經驗來談。

剛才講到的全球化與在地化，也適用於德國聯邦的公務人員，我首先會先介紹德國，然後再談一談我們的學院，並且列舉一些我們目前所面臨的挑戰，因為德國目前所面臨的挑戰，也可以適用於臺灣。首先介紹德國，我來自德國的科隆，我們的學院是在安波拉，在這個地方，我們是一個聯邦代議制的民主共和國，共有 16 個邦，每一個邦都有各自的憲法，因為我來自聯邦的層級，我的業務跟各個邦並沒有相關。

這個是我們的照片，我們的學院隸屬於內政部，有一個委員會跟科學委員會。下一張圖表看到的只是聯邦層級的公務人員，我們的學院隸屬於聯邦層級，另外像軍人他們就有自己的聯邦學院。以下是我們公共行政聯邦學院的主要業務，我們會針對我們的客戶，符合他們的需求，最重要的業務就是要讓公共行政能夠更現代化，促進我們的制度，並加強公務員的能力與交流。

這個是我們的組織圖表，可以看到我們是屬於扁平式組織，就國際教育而言，我們有一個專屬的部門是第三部，也就是我們會利用刪減我們的人員來進行相關的行政，或者是其他相關的業務。在此，可以看到我們是非常重視國際教育的，而現在面臨的挑戰有哪些呢？礙於時間關係，我只會點出比較重大的挑戰。現在德國的問題是我們有八千萬人口，但我們的生育率正在下降，而這個缺口並沒有辦法因新移民而有所補足。以聯邦層級來說，我們官員的平均年齡是 48 歲，我們訓練結果的部份大家可以自行閱讀，不過現在我們也制定了一系列針對新移民的計畫，讓他們可以投入公務體系，因為大部分的移民，並不知道政府有一些職位適合他們，他們並不喜歡進入政府部門服務，

但其實我們是可以提供有吸引力的職缺給他們。除了這個之外，也要解決多元化的問題，要讓我們的政府組織能夠因應員工多元化的趨勢，這也是未來必須面臨的挑戰。

接下來要跟大家談的是全球化的趨勢，有一些人會到布魯塞爾去接受訓練。另外，我們會講到在地化，我們在歐洲議會所做出的決策，必須要在歐盟執行，而現在有越來越多聯邦政府的單位，他們也會跟執行歐盟的業務有關，所以我們就必須訓練相關人員，讓他們了解國際間相關的業務。

下一張跟大家談的，或許大家會比較出乎意外，爲什麼呢？我們一直講到資訊科技也越來越全球化，我們必須教導公務人員怎麼安全地使用網路。我自己的部門在過去三年，很重視資訊科技的安全，特別針對非技術人員去作訓練，教導他們資訊安全的基礎知識，而且成效還不錯。接下來是我們從中學到的重點，我非常同意剛才主講人述說國際教育對於訓練以及發展的重要性，對於未來，對於聯邦層級來說，皆是如此。

最後，我想要跟大家分享一點，就是我們訓練個別的人員以及團隊，透過這樣的訓練，或者這樣輔導的方式有不錯的成效。

九、與談人二：黃崇興副院長

各位貴賓，各位女士先生，有媒體報導我們 EMBA 的排名，臺大的 EMBA 排名下滑了，成績不如之前，我們的排名從原本的第四十名滑到第六十名，爲什麼會這樣子呢？爲什麼臺大 EMBA 的排名會下滑呢？其實就像剛才我們的主講人講到的，這是因爲臺灣的整體教育素質來說，我們表現不錯，但是我們在國際交流方面，其實是比較落後的。而金融時報給予我們的評比就是因爲我們的國際教育做得還不夠，也就是說，我們的 EMBA 學程受到很大的侷限，就像是剛才主講人的比喻一樣，我們一直在種很多的橄欖樹，而且好像看到不錯的結果，在過去十五年來說，種橄欖樹有不錯的結果，但是現在大環境改變了，除此之外，我也在思考國際教育的重要性。

每一年萊雅都會在臺灣的各個大學舉辦競賽，他們會從競賽的得勝隊伍當中，選出一組然後讓他們去巴黎，我知道在臺灣不管是政大或是中央大學，或者是臺大，不管是哪一個隊伍，在萊雅的競賽當中，從來沒有臺灣的隊伍進入前三名，爲什麼會這樣子呢？我覺得原因很簡單，通常評審的評語就是我們的學生並沒有辦法用一種全球化的觀點來看待市場，不是語言的問題，主要是因爲臺灣的學生受的訓練不足，沒有辦法做跨文化思考。

所以臺大的管理學院，每一學年都會有超過百分之六十的大學生以及研究生，參加交流計畫成爲交換學生，到各國去念書汲取學習經驗，我們希望可以讓我們的學生，用不同的方式思考，但我們是不是眞的有讓學生進行跨文化思考呢？其實我們的時間，可以說是很不足的。在過去兩年有很多 EMBA 的學員、學生，大部分都是臺灣各大企業的領導人，這些學生都會跟我們討論說他們的接班人是誰，這時候我們很難去回答他們的問題。爲什麼他們找不到接班人呢？我們一直說人是企業的資產，其實並非如此，人並不是企業最重要的資產，只有「人才」才是企業最重要的資產，我覺得重點在於人才。那我們需要怎樣的人才呢？我們需要不同的人才，我們需要把外面的元素融合，或是外面的物種，比如說蘋果樹或橘子樹等等其它的樹種，移到我們的土地，這樣子我們才能有新

的農地，才會有肥沃的土壤。所以我今天可以說，心情不是很振奮，我花了大概兩個晚上的時間，去讀金融時報的報導，而且從中獲益良多。我要特別謝謝傅爾布萊特基金會，也謝謝所有協助我在美國完成學業的各方人士，非常謝謝他們。

十、與談人三：吳重禮研究員

我很高興有這樣的機會，跟大家談一談剛才 William Vocke 博士的簡報。在開始之前，我要很坦白的說，其實我從他身上學到很多，我非常同意他剛才的論點，也就是國際教育及創新是非常重要的。Vocke 博士剛才也講到所謂的生產力驅動，到效率驅動，還有創新驅動的經濟體，因爲我們這個場次的主題是績效評估跟國家競爭力，所以我要談一談創新，它是關鍵，這個是我非常同意的。

其實我很難清楚地去定義何謂創新，但是有時候我們看到創新，馬上就可以認得出來。比如說幾年前，我們用的手機都是 Nokia、Motorola 這些廠牌，但是蘋果一推出 iphone 之後，我們就知道它是創新。除此之外，大家也知道現在有 GANGNAM STYLE 的韓國歌手 PSY，他大概三十幾歲，然後肚子非常的大，跳騎馬舞，這個也是創新，也就是我們看到創新的時候，馬上就認的出來。

所以重點是什麼呢？重點就是我完全同意創新相當關鍵，可是爲什麼創新那麼困難，特別在臺灣的情況，臺灣的環境，我們面臨什麼挑戰與困難？特別在整個官僚體制之下，爲什麼創新如此困難？我就來談一談有六個不同的元素或是要素，跟大家談爲什麼創新會面臨某一些障礙。我覺得臺灣具有素質最高的文官體系，通常是最優秀的學生，才能夠進入政府服務，成爲高階文官，成爲政府的公務人員，但是我們要問的問題是，即便在這樣的文官體系之下，爲什麼臺灣文官體系的實際運作往往沒有辦法發揮應有的功能或是角色呢？

大家都知道韋伯 (Max Weber)，我們講到官僚制度的時候，是所謂的 legal rational model 這樣的模型，我們會談到第一點專業，很多文官它們都有自己的專業，第二點因爲文官他們都非常的謹慎，不同的文官有自己的專業，也非常的謹慎，他們在做決策的時候，提供他們的專業或是他們的建議給更高階的官員。那麼在臺灣的文官體制當中，我們面臨什麼樣的問題呢？

第一個就是繁文縟節。繁文縟節與依法行政可能只有一線之隔，我不曉得有多少在場的同仁，會有這種感覺，他們在依法行政的時候，不曉得爲什麼一份公文需要經過這麼多的單位，這個就是非常典型的繁文縟節。第二點是齊頭式的平等主義。在臺灣，我們需要作出很多的決策，必需要思考兩點，要興利還是除弊。臺灣的決定通常在兩件事情中，第一件事情是協力，第二件事情是阻力。但這樣的結果就是，臺灣常到最後都是大家吃大鍋飯，彼此之間都是平等主義。第三點是國會裡面的打架，朝野對峙與惡鬥情形嚴重，那對這個體系會造成什麼影響呢？所有的錯都是別人的錯，所有的責備都是別人的，造成的結果就是，大家打開新聞看到朝野間彼此的惡鬥，這個是一個很實際的問題，大家知道所有文官體系夾雜在朝野惡鬥中，它是動輒得咎，我覺得這是在臺灣非常嚴重的問題。

另外一個問題是我不知道大家同不同意，我這樣講可能會得罪很多人，但我經常有一種感覺，政務官通常缺乏政治願景，其實我並不能夠責怪他，因爲我們很難想像所有的政務官須週週有亮點，

也就是必須一天到晚都有提案，這幾乎是不可能的，任何國家都做不到這樣的事情，我們是沒有辦法想像到的，這樣子造成的結果就是眾官不斷地交接下來，都是一些短期的願景，這是另外一個問題。

我喜歡這個用語，這個是我的助理幫我抓的一個圖，這個叫作 micro-management，也就是管小不管大，什麼叫作 micro-management 呢？在西方的文獻裡頭，他提到的是，文官體系在 micro-management 之下，有太多的人會直接侵蝕、干擾到文官體系的專業判斷。我可以舉幾十個例子給大家聽，舉個例子來說，請問一下興建蘇花高、蘇花改還是蘇花鐵，你我都知道，這是誰決定的？這應該是由文官體系決定，但是不論文官體系做了任何決定，我們可以看到很多立法委員或是民意代表或是縣市首長，會開始帶著一群民眾抗議包圍，要求說不行，那我們要做什麼。第二個請問大家核四要興建與否？這也是需要專業判斷。國光石化的興建，到底要不要興建？這其實也是文官體系基於自己專業的考量，還有裁量，但是一旦它做成任何決定之後，尤其是環境影響評估，類似這樣的問題，幾乎在所有的文官體系裡都會產生。

最後一個問題，就是狗仔隊的問題，事實上也不完全是這個問題，是關於大眾傳播的角色，大家知道大眾傳播在臺灣，它不只是傳播業，同時也是製造業，造成的結果就是只要發生一點點小小的事情，就會造成過度的渲染效果。

大家應該知道所有的文官考績都有一個叫創新，我總感覺創新是很單薄的，我的建議是：到底要怎麼做才能改善？第一個我認為要設立創新獎勵制度，一個獎項，或是給他一筆優渥的獎金可能兩百萬或三百萬，就是設立一種獎項給一些不論是在中央或是地方的文官體系。他是否眞正能夠提出來？就看他們能不能有創新的想法來提升公職的服務，我想這是具體可行的做法，我覺得我們現在的退場機制依然是被動的。

我們必須要重建社會資本，在大部分的國家，跟人之間的互信是很重要的，這個就是所謂的社會資本，那在臺灣過去幾十年來，我們的社會資本不斷地在下降，我們要怎樣重建社會資本呢？我覺得這很重要的。因為時間的關係，我就說到這裡，謝謝大家。

十一、綜合討論：

（一）提問

1. 提問人：邱玉蟾、教育部國際文教處、副組長

提問要旨：

我想回應 Vocke 博士的演講，他剛剛的演講給了我許多啓發，也鼓勵到我，我來自教育部，也負責撰寫教育部的國際教育白皮書，因此在這邊我想補充三點。首先，我要提到第九十七頁的內容， Vocke 博士說的，白皮書裡面有提到兩個領域，第一個是行動方案，另一個是國際教育的績效指標，我這邊想要釐清一點，這個行動方案其實在白皮書裡面有提到，中文版裡面有行動方案，但是英文版裡沒有，因為我們希望英文版的白皮書重點，放在政策部分，但在中文版的白皮書裡，的確是有包括行動方案、策略等等，寫的非常清楚。第二點我要提出來的是，我們教育部目前正在實施一套評估計畫，可以看教育部的各項政策。我們把績效指標放在兩個族群上，第一個是臺灣所有的學校，第二個族群則是有參加評鑑的學校，其實

要做評鑑是相當困難的，但我們現在正在執行。

2. 提問人：伍姿蓉、臺灣警察專科學校、組員

提問要旨：

我有一個問題要請教 Vocke 博士，我覺得國際教育非常重要，這一點我很同意，但是我們現在發現學生學業修成回國，充滿抱負想要大展身手，可能回國之後就受挫了，因爲目前的現況會帶來很多的打擊，就好像溫水煮青蛙一樣，問題越來越嚴重，遇到這樣的問題，我們怎麼樣解決才能讓這些學子回國後，眞的能夠貢獻，改變現狀呢？

3. 提問人：Abhishak Swami、印度國家文官學院

提問要旨：

我的問題是跟你剛剛提到的相關，我不是指跟 Vocke 博士相關，但是跟吳博士提到的也有關聯。今天的主題是創新，我不曉得創新這部分，我是不是可以說印度做得比較好，我想這是因爲大家有很多的討論，很多的爭辯，這些爭辯包括政治性的與政治文官的，這是我第一次到臺灣，我不了解臺灣的症狀與問題是什麼，吳博士剛剛提到，我們現在的作法需要做些調整，但我知道臺灣目前很強的地方是很有紀律，那是否創新與紀律間需要有取捨？不曉得在座的專家對這點有什麼樣的看法。

（二）回應

1. 回應人：演講人 William Vocke 執行長

回應內容：

(1) 我花一點時間回應一下。首先，因爲剛剛時間很緊迫，我忘了謝謝主辦單位，我很高興來到這裡，也很高興有這個機會發表這篇論文，所以想要趁這個機會感謝主辦單位。第二點，July 跟我其實是老朋友，所以我在這邊要說不好意思，我沒看過中文版，我想你在我的論文裡面也可以看到，就是我的書面論文裡有說。我認爲你剛提到的這兩件事情，不管中英文版有沒有放進去，其實重點都不在這裡，重點在於我很高興教育部這邊有考量到評鑑的方式，還有行動方案等等，我很高興這些計畫都在進行當中。其實你這樣說我一點都不意外，我相信教育部本來就是會做這些事情，我在這邊恭賀教育部。我還要提兩點，其中一點有些爭議。首先教育部的第一個目標應該透過教育來提高臺灣人民對國家的認同，其實二十年來這個事情是相當有爭議的。我想跟你舉例說明國家認同的問題對競爭力有什麼樣的影響，比如說我從我岳母家，蘆洲那邊開車開到我家新店，新店這個路牌拼音就有七個不同的拼法，而且當中很多路還是高速公路，假設我不知道新店是哪裡，那我如何找到新店，因爲這路標上面有很多種拼法都不一樣，這是很小的問題，但它也牽涉到臺灣的國家認同，在解決國家認同問題之前，可能臺灣沒有辦法決定好這個中文羅馬拼音要用哪一套方法。我當然很高興教育部把國家認同設定爲教育部的一大目標，這是非常困難的目標，但這也是教育部很重要的任務，在這邊我想要指出這一點，謝謝。

(2) 其實怎麼樣讓學子學成歸國有一些貢獻，有一些簡單的作法。首先，就是提供獎勵。我之前曾經在一些小的學術機構擔任職位，我們要如何讓學院國際化呢？我們得到一個體認，學生要國際化的話，老師要先國際化，那我們怎麼做呢？首先就是在升遷制度裡面寫進

去，如果學者曾經在國外進修的話，他可以得到比較好的升遷機會。再來是我們雇用的時候，也雇用在國外研究，有生活經驗的學者。另外一個就是在我們的體系裡面，大部分的交流計畫都在不同的時間點進行，比如說我們可以在五、六月的時候，把美國學者送去歐洲，可能在九月的時候把歐洲的學者請過來，這樣子學者間的交流也不會影響教學，透過這樣的交流計畫，我們可以有很好的相互交流，讓教職員對交流計畫更感興趣，我們只要稍微修改一些規則，就會讓這個學院更加國際化，我們的確在這方面做得很好，得到一些機構的讚賞。所以其實你可以設定一些簡單的獎勵，比如說你要招募的條件是什麼，你提供什麼樣的誘因等等。

(3) 說到創新跟紀律兩者間是否要有取捨，這個議題我不是很清楚，我不知道這方面相關的研究，但是我覺得不見得要作取捨，有些很有紀律的人，他也是非常創新的人。有一些作曲家他們很創新，但是他們也很有紀律，還有你看到一些電子工程師，他們在實驗室裡花二十小時的時間，想辦法讓我們手機的天線做得更好，所以我認爲不見得紀律跟創新之間是要做一個取捨的。

2. 回應人：與談人 吳重禮 博士

回應內容：

我覺得創新是一個雙面人，創新是一個改變，但是我們不知道創新是變得更好，還是更差。您說的一點都沒錯，現在要改變現狀的話，總是會有一些人抗拒這個改變，因爲有些人想要維持現狀，他們不了解爲什麼需要改變，他們會覺得我們已經依法行政了，爲什麼還要我們改變，我們改變之後眞的會更好嗎？我知道這很困難，也很難回答，我的建議是，要從高層做起，如果我們的高階官員夠聰明，夠有智慧，也願意採用你的創新做法解決問題，我想這才是最關鍵的。這邊我可以舉出上千個例子，我覺得高階的長官，比如說蔡主委，假設說他願意設立創新獎來獎勵中央政府級的官員，我覺得這就是一個好的誘因，那當然我也不確定這就是最好的解決方案。我的答案其實跟 Vocke 博士不太一樣，他覺得紀律跟創新不見得要做一個取捨，但是我覺得創新是一個雙面人。

3. 回應人：主持人 詹中原 考試委員

回應內容：

我自己也有一些關於國家競爭力的感想，我非常同意兩點：第一個是創新，我覺得一直以來，還有自從我擔任公職以來，我們的制度必需要改變或改善的，就是公務人員的創新，特別是創新的能力，當然創新跟價值有關，但是我覺得高層的領導人，應該是說創新的時候可能會面臨失敗，高層的領導人應該要從一體的兩面來看待創新這件事情。這是第一點，我非常同意剛才談到的創新。

第二點是剛才 William 還有幾位貴賓講到的國際教育，我覺得我們還有很大的進步空間，這點我也相當認同，臺灣是一個很友善的社會，也就是對外國人特別的友善，特別是外來觀光客或訪客來到臺灣，都能感受到臺灣人民的友善。但在這邊我也要提出，我自己覺得在法制方面，臺灣對於外國人卻不夠友善，就文化層面來講，我們對外來的人很友善，但是就制度、細節、規則，我覺得有的時候太過複雜，太多的繁文縟節，對外國人不夠友善，這是我覺得可以再改善的部分，我覺得我們可以貢獻大家的專長，來改變這樣子的情況。

十二、總結：與談人 黃崇興 教授

我非常榮幸有機會來做總結。我覺得臺灣的學生以及臺灣的未來還有業界，需要的不只是有相關的政策，也需要政府更多的投入來培養人才，如此我們才有更大的人才庫，也就是像四十年以來，這樣子的人才庫。我覺得在過去二、三十年來，我們的人才已經耗竭了，我們必須要行動得更快，採取進一步的行動，有更大量的投入，要進一步的投資，我們在教育方面的預算編列，占了 GDP 百分之十五，我覺得應該要以這樣的方向爲目標。

另外一點我想要強調的是，國際教育不只表示我們到美國去念書，雖然 William 代表的是美國，但是我覺得我們對歐洲的認識還不夠，我們對西歐、東歐的認識都還不夠，對日本的認識，或是南韓的認識也還不夠，我們必須要讓我們的眼界更加寬廣與開闊，不然我覺得就找不到出路了，謝謝。

Performance Management, International Education, & Taiwan's Competitiveness

William Vocke

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Analogy

- Lexus
  - Integration & globalization
  - Free-market liberalism

- Olive Tree
  - Fragmentation: local and personal
  - Mercantilism

- Purpose of IE: raise our eyes from the tree to …

3 11/28/2012 www.fulbright.org.tw

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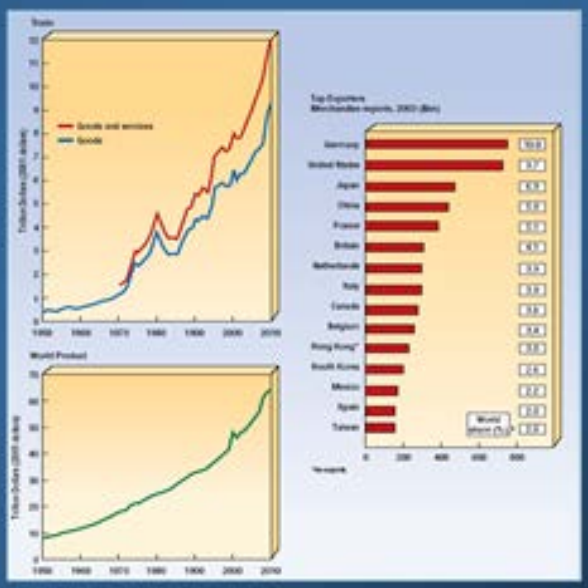
Globalization

Global Trade

World Product



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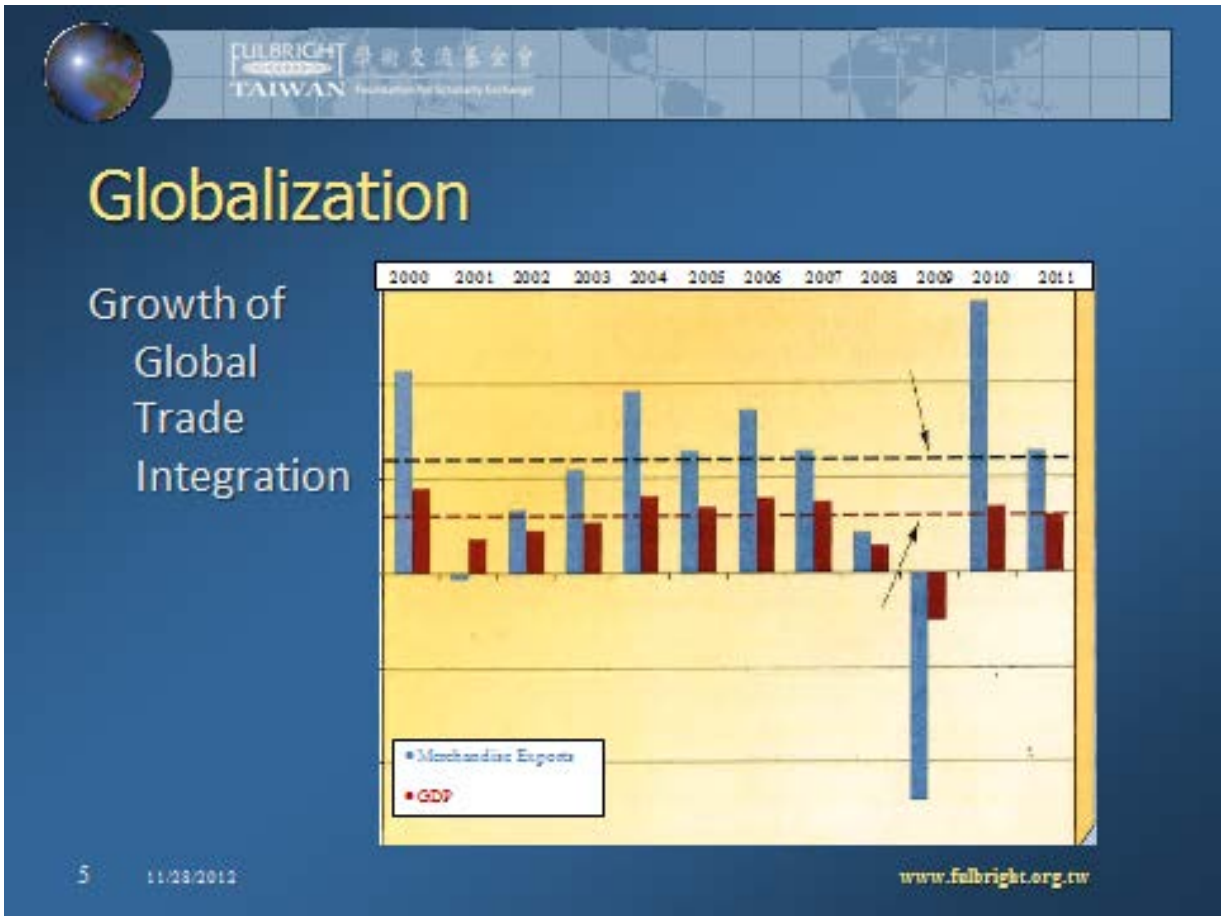
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Globalization
Growth of Global Trade Integration
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011
Merchandise Exports
GDP
5
11/28/2012
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Friedman: Drivers & Steroids
Drivers: Business Processes
Open-sourcing
Out sourcing
In sourcing
Offshoring
Supply chaining
Informing
Steroids: the accelerators
Digital
Personal
Mobile
Virtual
ups
WAL-MART
Google
6
11/28/2012
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Globalizing Economy
New Competitors
Rise of Global Standards
Disintegrating Borders
Internet & Information Technology
The Globalizing Economy
Privatization
Global Producers/ Customers
Growing Trade & Investment
7
11/28/2012
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Companies
• Domestic
• International
• Multinational
GEICO
UBS
P&G
Procter & Gamble
8
11/28/2012
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Levels of Analysis

- Individual
- Institutional
- National
- International
- Global (system)

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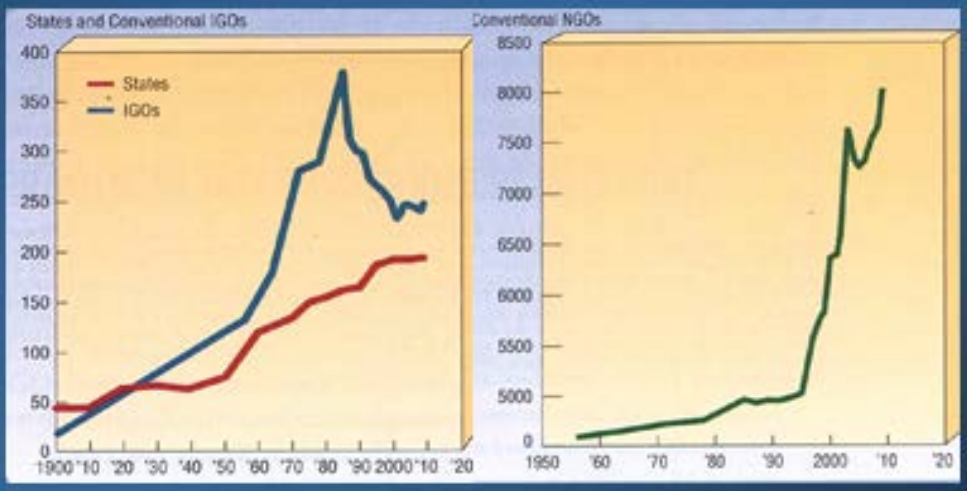
Nation-states/economies



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Global Competitiveness Index
Basic requirements
Institutions
Infrastructure
Macroeconomic environment
Health and primary education
Key for factor-driven economies
Efficiency enhancers
Higher education and training
Goods market efficiency
Labor market efficiency
Financial market development
Technological readiness
Market size
Key for efficiency-driven economies
Innovation and sophistication factors
Business sophistication
Innovation
Key for innovation-driven economies
11
11/28/2012
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World Economic Forum- GCI
Utility patents/ mil. Pop.
Extent of Staff Training
12
11/28/2012
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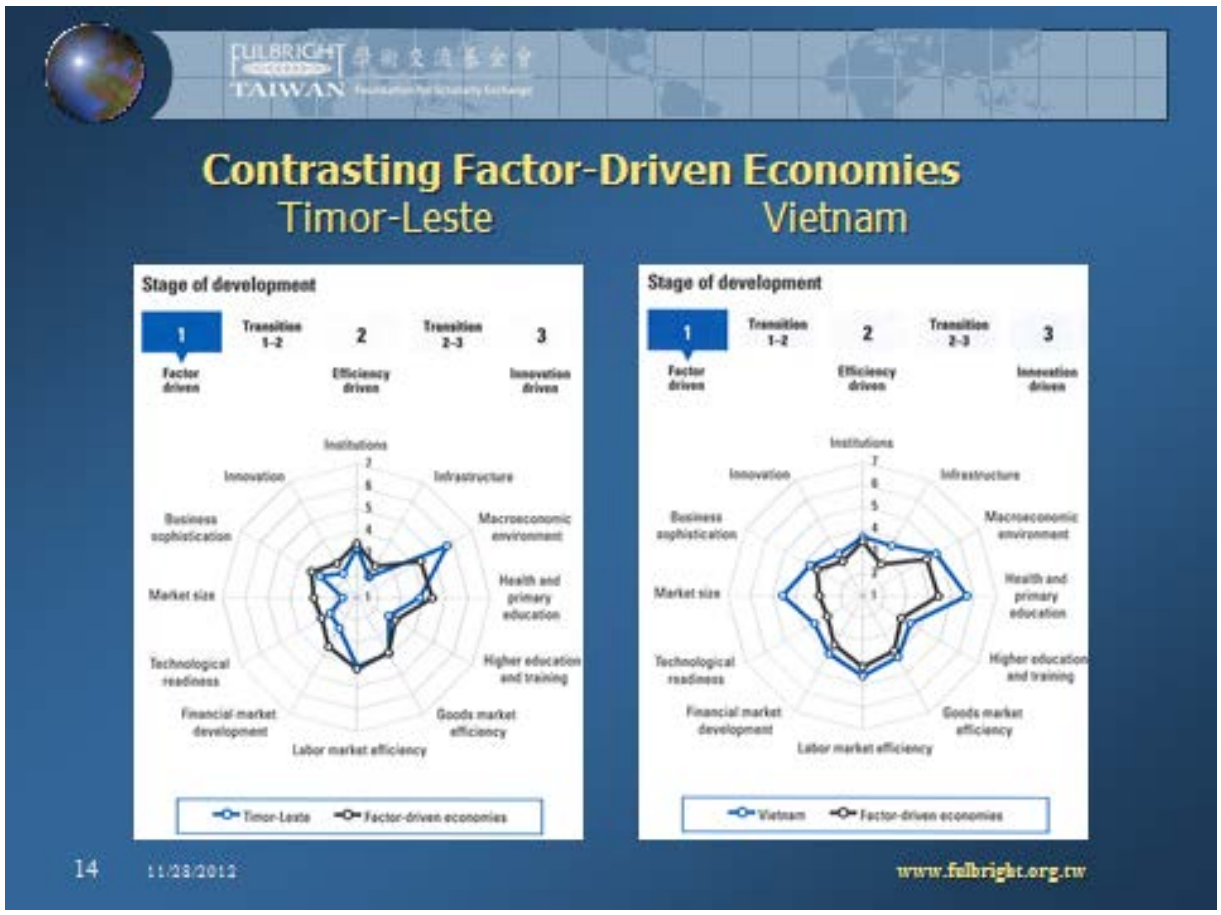
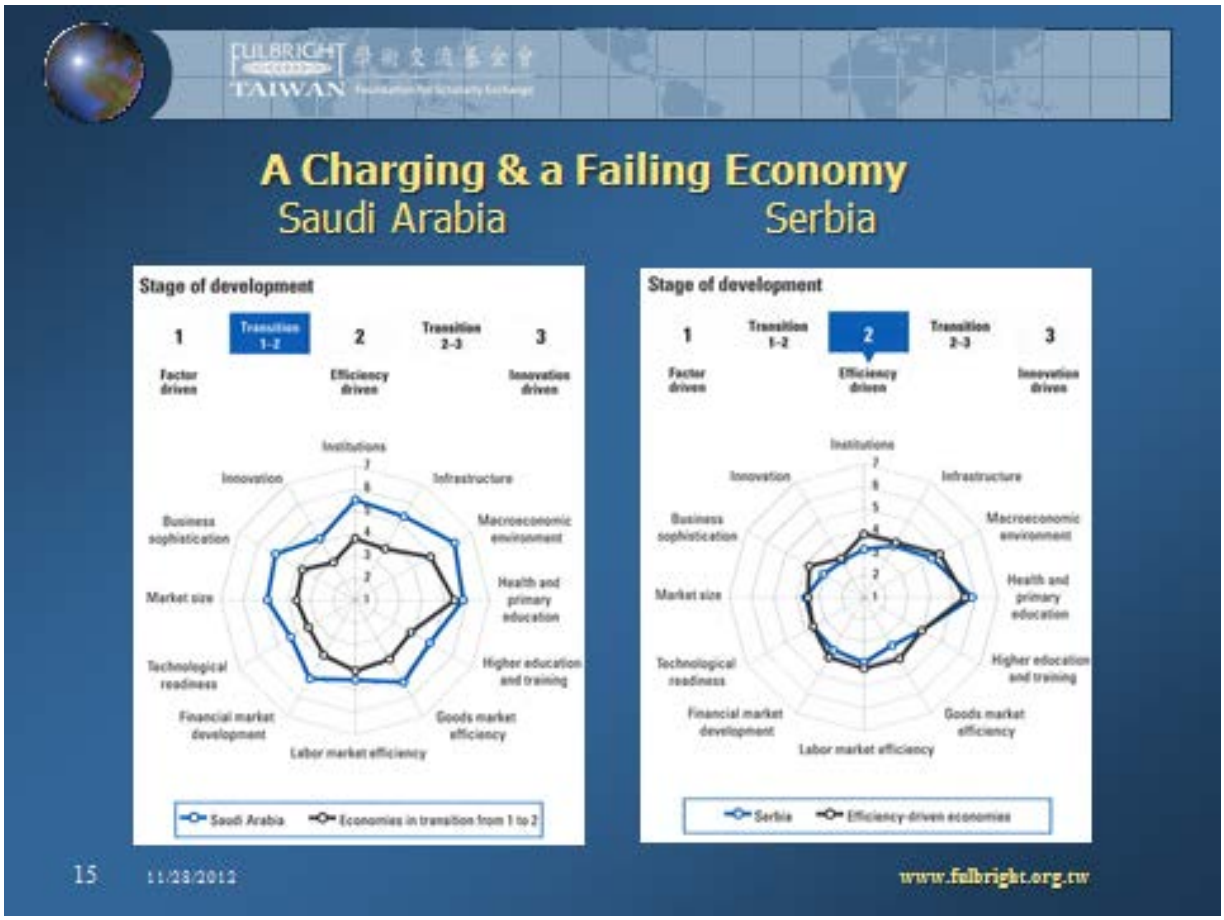
Stage 1 Factor-driven (37 economies)	Transition from stage 1 to stage 2 (24 economies)	Stage 2 Efficiency-driven (38 economies)	Transition from stage 2 to stage 3 (19 economies)	Stage 3 Innovation-driven (35 economies)
Bangladesh	Algeria	Albania	Argentina	Australia
Benin	Angola	Belize	Barbados	Austria
Bolivia	Armenia	Bosnia and Herzegovina	Brazil	Bahrain
Burkina Faso	Azerbaijan	Bulgaria	Chile	Belgium
Burundi	Botswana	Cape Verde	Croatia	Canada
Cambodia	Brunei Darussalam	China	Estonia	Cyprus
Cameroon	Egypt	Colombia	Hungary	Czech Republic
Chad	Georgia	Costa Rica	Latvia	Denmark
Côte d'Ivoire	Guatemala	Dominican Republic	Lebanon	Finland
Ethiopia	Guyana	Ecuador	Lithuania	France
Gambia, The	Honduras	El Salvador	Mexico	Germany
Ghana	Iran, Islamic Rep.	Indonesia	Oman	Greece
Haiti	Jamaica	Jordan	Poland	Hong Kong SAR
India	Kazakhstan	Macedonia, FYR	Russian Federation	Iceland
Kenya	Kuwait	Malaysia	Slovak Republic	Ireland
Kyrgyz Republic	Mongolia	Mauritius	Trinidad and Tobago	Israel
Lesotho	Paraguay	Montenegro	Turkey	Italy
Madagascar	Philippines	Morocco	Uruguay	Japan
Malawi	Qatar	Namibia		Korea, Rep.
Mali	Saudi Arabia	Panama		Luxembourg
Mauritania	Sri Lanka	Peru		Malta
Moldova	Syria	Romania		Netherlands
Mozambique	Ukraine	Serbia		New Zealand
Nepal	Venezuela	South Africa		Norway
Nicaragua		Suriname		Portugal
Nigeria		Swaziland		Puerto Rico
Pakistan		Thailand		Singapore
Rwanda		Tunisia		Slovenia
Senegal				Spain
Tajikistan				Sweden
Tanzania				Switzerland
Timor-Leste				Taiwan, China
Uganda				United Arab Emirates
Vietnam				United Kingdom
Yemen				United States
Zambia				
Zimbabwe				

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A Charging & a Failing Economy
Saudi Arabia
Serbia
Stage of development
1
Transition 1-2
2
Transition 2-3
3
Factor driven
Efficiency driven
Innovation driven
Institutions
Infrastructure
Macroeconomic environment
Health and primary education
Higher education and training
Goods market efficiency
Labor market efficiency
Financial market development
Technological readiness
Market size
Business sophistication
Innovation
Saudi Arabia
Economies in transition from 1 to 2
Serbia
Efficiency-driven economies
15
11/28/2012
www.fulbright.org.tw

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Global Leaders Facing Contrasting Issues
China
United States
Stage of development
1
Transition 1-2
2
Transition 2-3
3
Factor driven
Efficiency driven
Innovation driven
Institutions
Infrastructure
Macroeconomic environment
Health and primary education
Higher education and training
Goods market efficiency
Labor market efficiency
Financial market development
Technological readiness
Market size
Business sophistication
Innovation
China
Efficiency-driven economies
United States
Innovation-driven economies
16
11/28/2012
www.fulbright.org.tw

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Competitiveness & Innovation

- Policies Mater
- Depends on – Level of Development
- State 3 Economies (like TW)
  - Business Sophistication
  - Innovation
- Prosperity Depends on Innovation

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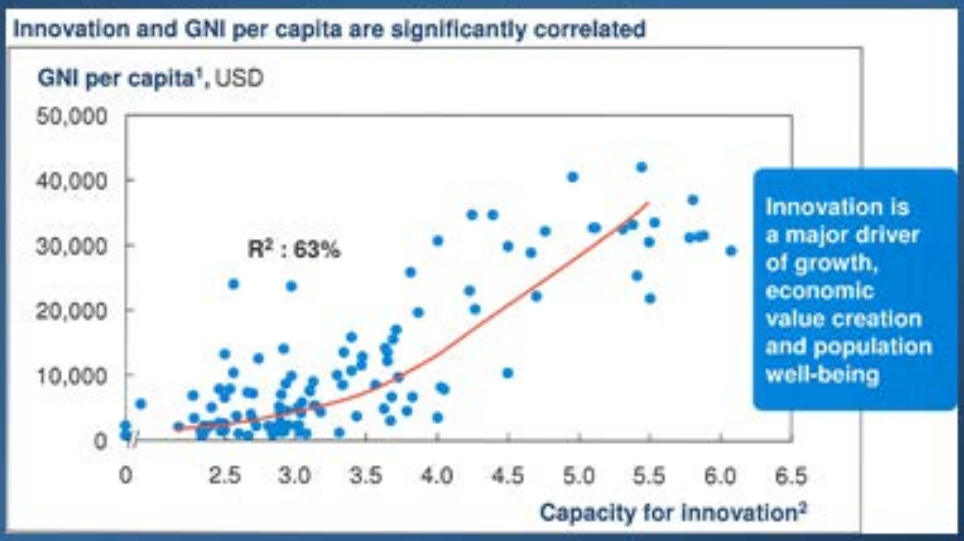
Prosperity & Innovation



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Innovation Process (McKinsey)

	Ideation		Implementation		Commercialization	
	Basic Research	Applied Research	Engineering/ Development	Business Creation	Initial Market Entry	Commercial Scaling
Critical Skills	Creative and scientific		Entrepreneurial and engineering		Business development, and marketing	
Sample Levers	• Universities and R&D centers • Quality of education • Access to global culture		• Availability of credit • Local supplier quality • Entrepreneurial culture		• IP protection • Access to markets • Distribution channels	
Possible Proxy Indicators	• Technical/journal publications, royalties and license fees		• Employment or manufacturing output in innovation intensive/non-commodity sectors		• Sector-specific economic value added • Proportion of economic value added from new products or services • Value of local brands	

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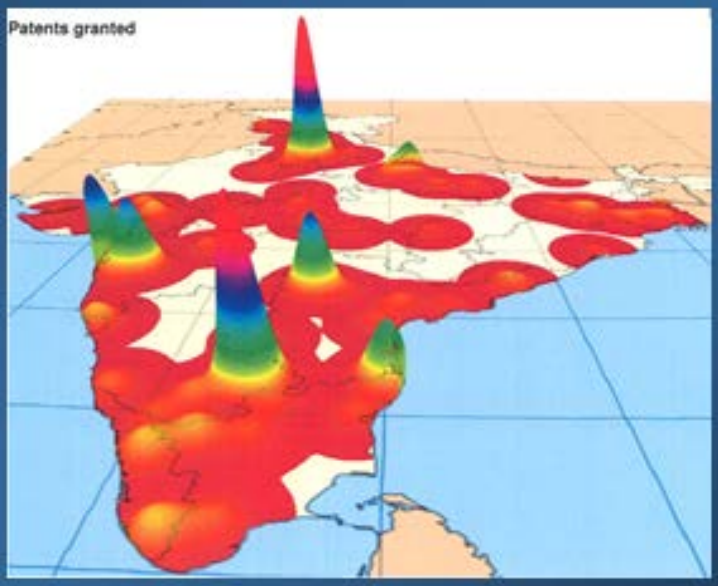
Innovation Clusters



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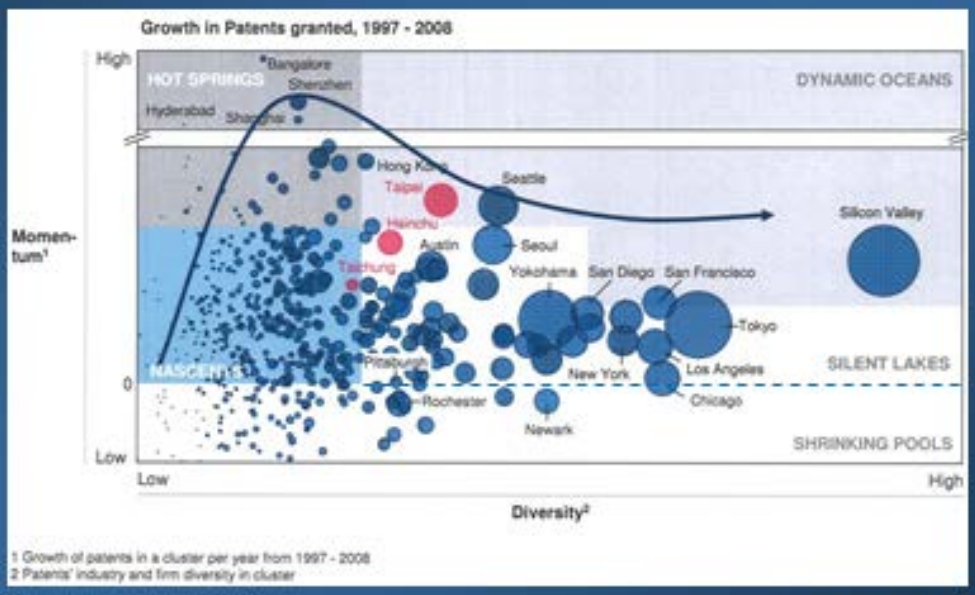
Geography of Innovation



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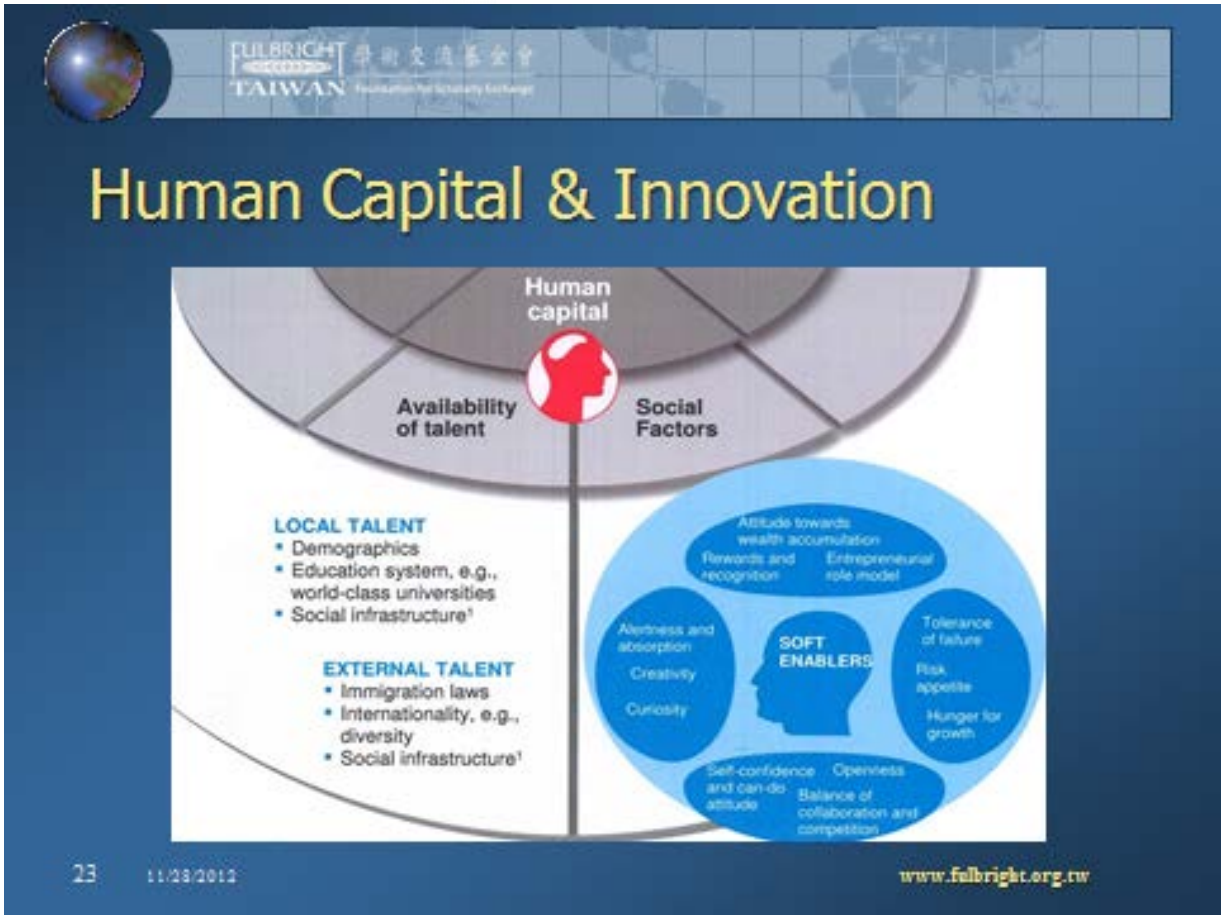
Human Capital

- McKinsey
  - "...the single common factor that drives – or, indeed, constrains – innovation across all sectors is the availability of a well-qualified and specialized talent pool."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Human Capital & Innovation
Human capital
Availability of talent
Social Factors
LOCAL TALENT
• Demographics
• Education system, e.g., world-class universities
• Social infrastructure
EXTERNAL TALENT
• Immigration laws
• Internationality, e.g., diversity
• Social infrastructure
Attitude towards wealth accumulation
Rewards and recognition
Entrepreneurial role model
Alertness and absorption
Creativity
Curiosity
SOFT ENABLERS
Tolerance of failure
Risk appetite
Hunger for growth
Self-confidence and can-do attitude
Openness
Balance of collaboration and competition
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International Education
• Mind-set
– Optimistic, mobile, open
• Skills
• Interdisciplinary
• Comparative
– Communications
– Intellectual/Contextual
– Personal
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Fulbright Taiwan

Vision:

a world with a little more knowledge &
a little less conflict

"The Fulbright Program aims to bring a little more knowledge, a little more reason, and a little more compassion into world affairs, and thereby increase the chance that nations will learn at last to live in peace and friendship."

Senator J. William Fulbright

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Fulbright Taiwan

Mission:

- Build Knowledge
- Exchange Cultures
- Establish Long-term Relationships
- Change Lives
- Symbolize American-Taiwanese Friendship

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FULBRIGHT TAIWAN 學術交流基金會

Background

- 1946-U.S. 1947-ROC 1957-Taiwan
- 155 Global Programs
- 50 Commissions ("Foundations")
- Bi-national jointly funded
  - U.S. State Dept. & AIT
  - MOFA & MOE

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Governance

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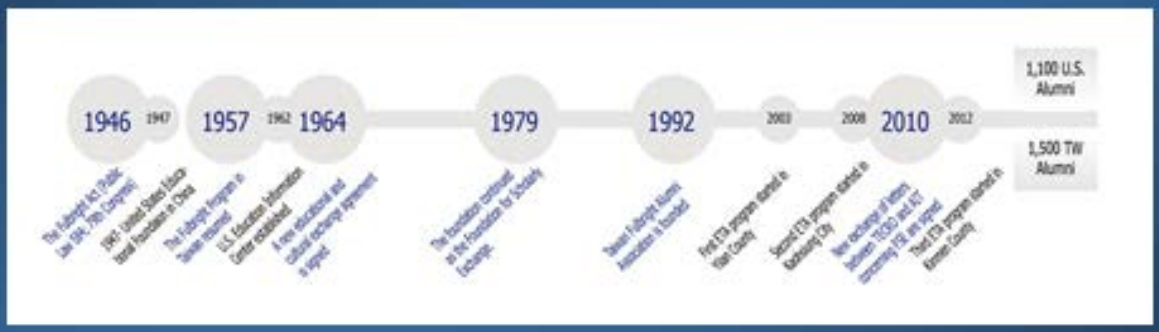
Timeline



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FULBRIGHT TAIWAN 富布萊基金會

Alumni

- Fulbright Taiwan
  - 1100+ Americans
  - 1500+ Taiwanese
    - 26 University Presidents
    - 4 current & 35 past Cabinet Members
    - 7 Grand Justices + 3 Examination Yuan members
- Globally
  - 43 Nobel Prize winners
  - 78 Pulitzer Prize winners

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Selected Taiwan Alumni

邱正雄 (Chiu Cheng-hsiung)	Chairman, Bank SinoPac
馬漢寶 (Herbert Han-pao Ma)	Former Grand Justice, Judicial Yuan
吳榮義 (Wu Rong-I)	Chairman, Taiwan Brain Trust
朱敬一 (Chu Ching-I)	President's National Policy Advisor
李念祖 (Nigel N. T. Li)	Board Member, Judicial Reform Foundation
林郁方 (Lin Yu-fang)	Legislator, KMT Member
吳靜吉 (Wu Jing-jyi)	Endowed Chair in Creativity, NCCU
林懷民 (Lin Hwai-min)	Founder, Cloud Gate Dance Theatre
吳興國 (Wu Hsin-kuo)	Well-known Theatre Artist
江宜樺 (Jiang Yi-huah)	Vice Premier, Executive Yuan

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Educational Exchange

Taiwanese to US
- Scholars
- Students
- Foreign Language (Chinese) Teachers

Americans to Taiwan
- Scholars
- Students
- English Teaching Assistants (ETA)

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Taiwanese Fulbrighters (50+ / year)

- Scholars
  - Senior
  - Experience America
  - Scholars-in-Residence
- Non-Academic Professionals
- Students to U.S.
  - Dissertation Research
  - Graduate Study
- Foreign Language (Chinese) Teaching Assistants (FLTA) in U.S.

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American Fulbrighters (20+ / year)

- Scholars
  - University Lecturers
  - Senior Researchers
- Senior Specialists
- Students / Junior Fellows

each has a local HOST institution

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2012-13 ETAs (33)

- Indirect Funding from US
- Direct Funding
  - FSE +
  - Yilan (16)
  - Kaohsiung (11)
  - Kinmen (6)

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Make a Difference

- Life changing experience: students, ETAs, LETs, schools, & communities
- Enhance understanding and friendship between U.S. and Taiwan

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International Education in TW

- Ministry of Education

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National Goals

1. National Identity
2. International Awareness
3. Global Competitiveness
4. Global Responsibility

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Incentives Individuals – Example

- Businesses
  - Require English test for employment
  - Example for 1,000 largest firms

	TOEIC Require	TOEIC Level	Average TOEIC
Taiwan	27.9%	550	542
Japan	83.4%	550	510
Korea	100%	700	626

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Incentives Institutions – example

- Teachers & Civil Servants
  - Easily take 1 year for IE
  - Job when they return
  - Perhaps subsidized
  - Rewarded in future promotions & income

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Performance Indicators

- **Individual**
  - Knowledge
  - Attitudes
  - Skills
  - Behavior
- Survey of Teacher Training
  - Professional Role
  - International Perspectives
  - Personal Development
  - Intellectual Development

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Performance Indicators

- **Institutional**
  - Malayasian Higher Ed.

Full time equivalent	**Student mobility**	**Research and development**	International collaboration
Study abroad programmes			International funding
Internships			International organisations
Exchange programmes			
International staff	**Staff mobility**	**Governance and autonomy**	Vision
International mobility programmes			Mission
			Structure
			Planning
			Resources
International recognition	**Academic programmes**	**Social integration and community engagement**	International students and local students
Credit transfer			International students and local community
English as medium of instruction			Among the international student community

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Key Performance Indicators (KPI)

- **National**
  - Malayasia KPI
    - # international students
    - # international staff
    - # students in international mobility programs
    - # staff in inbound mobility programs
    - # staff in outbound mobility programs
    - # students sponsored by others

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U.S. Best Practices – NAFSA

- 2010 – Assessment & Evaluation for International Educators
- 2012 – Measuring & Assessing Internationalization

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IE & Prosperity

- WEF – Global Competitiveness Index
- McKinsey – Innovation
- Analogies
  - Holland/ Amsterdam (after 1598)
  - Spain (after 1492)
  - U.S. (19th century)

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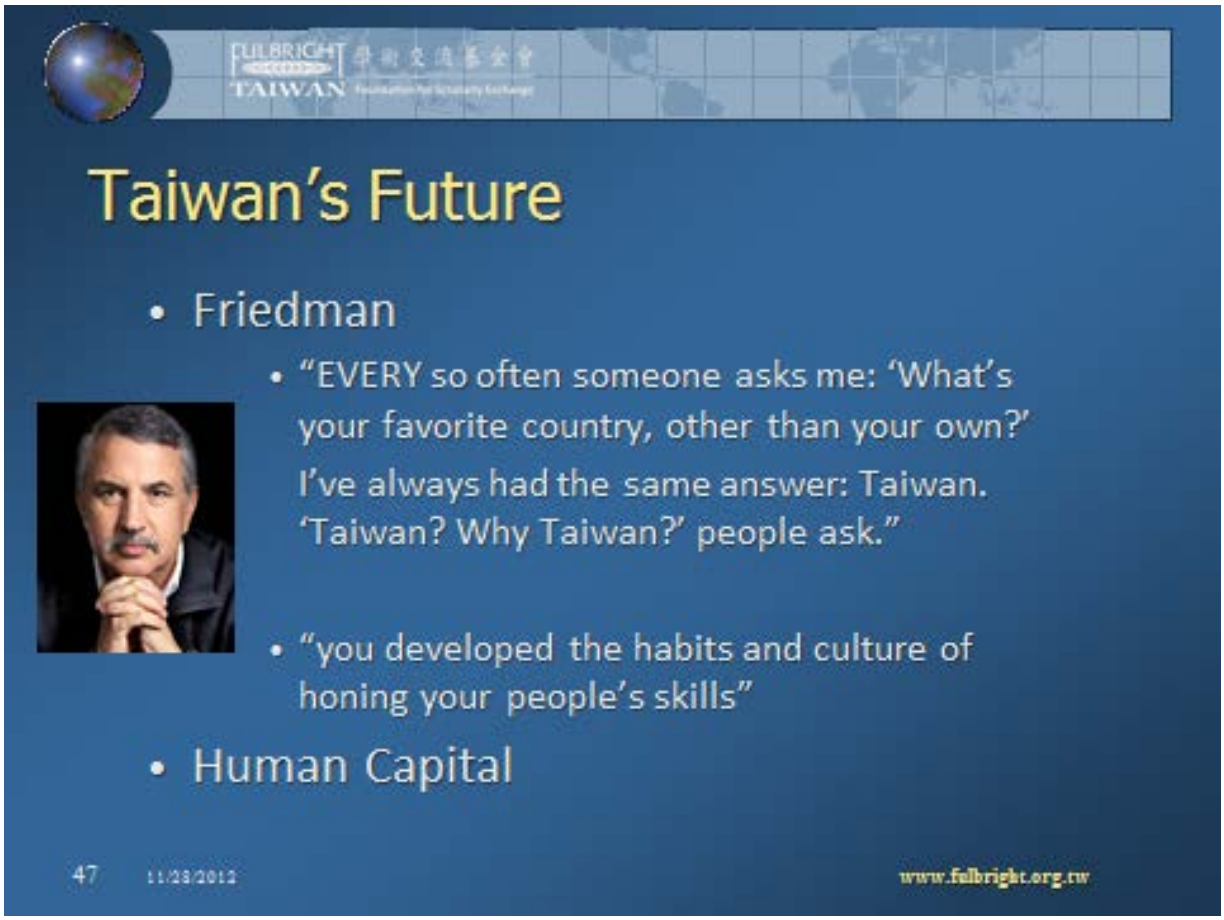
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Taiwan's Future
• Friedman
• "EVERY so often someone asks me: 'What's your favorite country, other than your own?' I've always had the same answer: Taiwan. 'Taiwan? Why Taiwan?' people ask."
• "you developed the habits and culture of honing your people's skills"
• Human Capital
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National Higher Education
• Rankings by
- Resources
- Environment
- Connectivity
- Output
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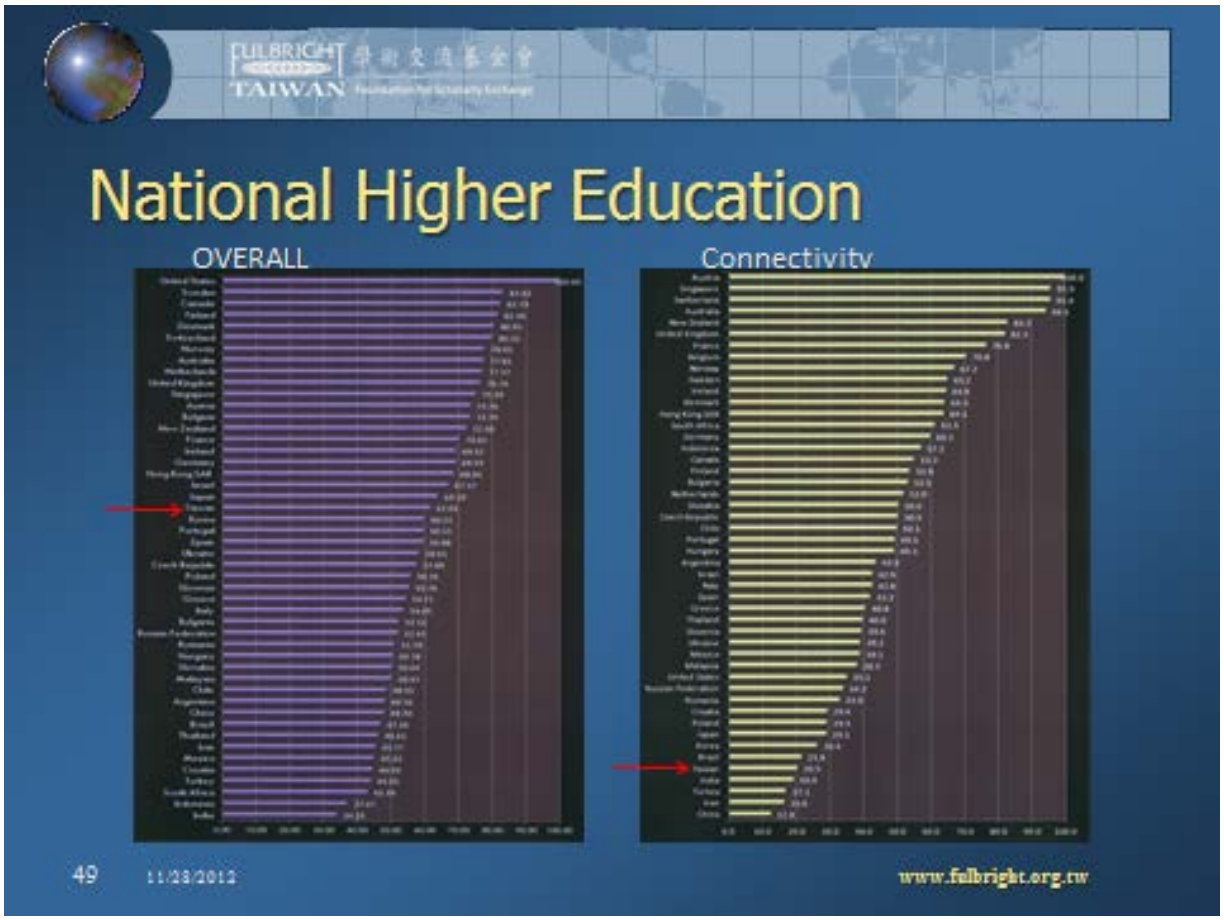
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National Higher Education
OVERALL
Connectivity
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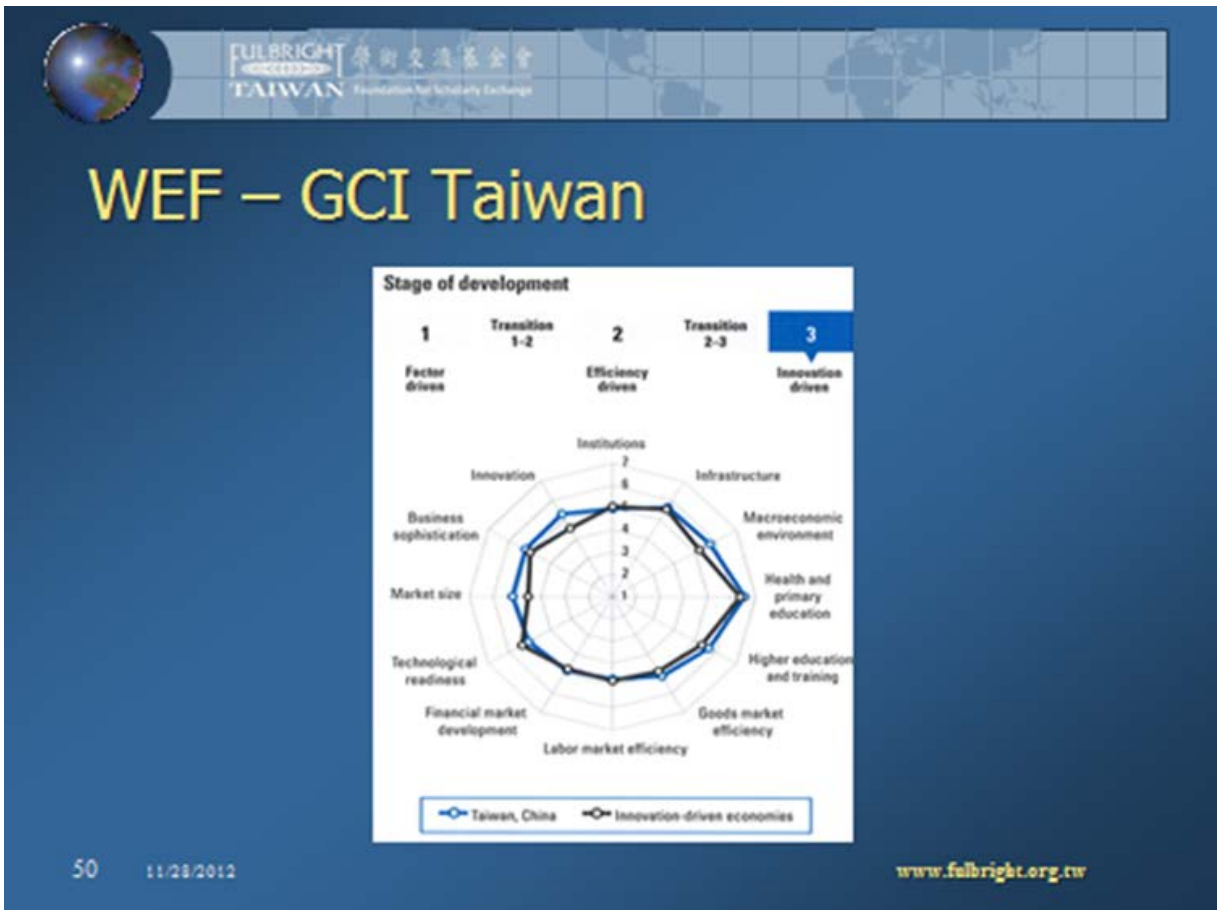
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WEF – GCI Taiwan
Stage of development
1
Transition 1-2
2
Transition 2-3
3
Factor driven
Efficiency driven
Innovation driven
Institutions
Infrastructure
Macroeconomic environment
Health and primary education
Higher education and training
Goods market efficiency
Labor market efficiency
Financial market development
Technological readiness
Market size
Business sophistication
Innovation
Taiwan, China
Innovation-driven economies
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Conclusion

- Policies Matter
- Taiwan's Prosperity

- IE – play a key role
  - Incentives
  - Indicators

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Challenge

- Embrace the Lexus

- Hold on to the Olive Tree

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The 2012 International Conference on Human Resource Development in the Public Sector - Quality Training & Excellent Performance

October 15, 2012

Conference Paper: Session 1
Performance Management & Nation's Competitiveness

"International Education:
Performance Indicators for National Competitiveness"
Or
"International Education and Taiwan's Continuing Success"

William C. Vocke, Jr.
Executive Director
Foundation for Scholarly Exchange
(Fulbright Taiwan)

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Abstract

Introduction

I. Rationale: The Importance of International Education
II. Globalization
III. Global Competitiveness
A.Nation-states are the Foci for Competition
B.Economic Development and Prosperity
C.Illustrations of Divergence
Contrasting Factor-driven Economies
A Charging & a Failing Economy
Global Leaders Face Contrasting Issues
D.Relationship between Prosperity and Innovation
IV. Drivers of Innovation
A.Innovation Means
B.Innovation Locations
C.Innovation and People
V. International Education
A.International Education Defined
B.Illustrating International Education: Fulbright Taiwan
C.International Education in Taiwan
D.Performance Indicators of International Education
a.Individual
b.Institutional
c.National
d.Best Practices: NAFSA Evaluation Suggestions
VI. Relating International Education to Prosperity
VII. Taiwan’s Future
VIII. Conclusion

Bibliography

Appendices

1.Global Competitiveness Index in Detail for Taiwan
2.Subindex Weights and Income Thresholds for Stages of Development
3.Global Competitive Index 2011-2012
4.Global Competitiveness Index and the Stages of Development
5.Five Accelerators of Innovation
6.Ministry of Education Overview Chart
7.Ministry of Education International Education Organization
8.Ministry of Education Implementation Chart
9.International Education and the World Wrestling Entertainment: Leo
10.Tables of Questions Assessing Individuals Experience in International Education
11.Key Aspects, Internationalization of Malaysian Higher Education
12.Indicators in Measuring Internationalization of Malaysian Higher Education
13.Overall Rankings of Institutions of Higher Education
14.Connectivity Ranking of Institutions of Higher Education

Abstract

This paper makes a relatively simple argument. For Taiwan's economic miracle to continue it must focus more clearly and effectively on international education. The argument is summarized as:

- The world is becoming ever more global.
- States/economies remain the basic competitive units.
- Economies must interact in a global framework which is increasingly competitive.
- Competitiveness is definable and can be developed.
- Economic Development and Prosperity are dependent upon competitiveness.
- Increases in Prosperity are not linear and are reversible; hence policies matter.
- A, perhaps the, crucial component of competitiveness is innovation.
- Innovation is not random but clustered and requires a nurturing environment.
- Again, policies matter.
- A, perhaps the, key component promoting a very complex innovation process is people, developing human capital.
- An underemphasized part of human capital development is the centrality of international education.
- International education is not well understood or measured.
- In particular, developing individual, institutional, and national Performance Indicators of international education and applying them are a significant opportunity.
- Again, policies matter.
- Taiwan is at a crucial turning point in development and international education offers a major advantage.

While international education is important, other policies are also vital if Taiwan is to sustain its economic miracle. However, international education offers remarkable opportunities for relatively little investment. In diplomatic terms it is part of the 'soft power' of development as opposed to the 'hard power' of infrastructure, finance, and law. The keys to successfully developing and deploying the soft power of international education are effective performance indicators and relatively inexpensive incentives. The Ministry of Education is making significant progress along this path, which is crucial for the 21st Century.

Introduction

International education is a little like sunshine.

We know sunshine is good for people. Sunshine clarifies our vision, raises our spirits, and metabolizes basic vitamins essential for life. We can all understand the clarification of sight by light, even if briefly blinded or obscured by dark shadows. However, sunshine's other benefits are a mystery to most people. Scientific researchers are more likely, than people taking an afternoon

stroll, to understand the physical processes behind changed modes and improved health.

Anecdotally, I know international education works, like sunshine. I taught on sabbaticals during a year in France and a year in Germany. This is my second time living in Taiwan, earlier 3 and now 1 ½ years. Both daughters spent a year between high school and university studying in Europe. Again, while at Brown, the older daughter spent a year in East Germany, and, while at Cornell, the younger daughter spent a year in Paris. It was a blessing for us all.

I began dealing with international students and sending students abroad 35 years ago. Study abroad also changes their lives, 99% of them for the better. I remember one young student. I taught her in 4 classes, she was an advisee, and she became a family friend. She grew more in a junior year abroad than in all my interactions with her. Clearly, international education could bring about more change than I.

Taiwan understands the power of international education. For instance, President Ma Ying-jeou in a speech at Wenzao Ursuline College on the September 15th urged students to "develop global perspectives." (The China Post, 12) Taiwan's human capital, its people, and their global skills have underpinned Taiwan's success. "Ma said that Taiwan has built a solid presence in the world in the absence of abundant natural resources or strong military power." That presence has been built on skills honed through international education. Perhaps it was study in the US or a practical crash course on doing business in China. In any case, Taiwan also anecdotally understands international education.

Unfortunately, unlike sunshine, the importance and positive impact of international education is not as well documented by researchers. Nowhere in the world has more to gain than Taiwan from fully understanding and implementing policies aimed at promoting international education.

Taiwan is beginning that process through a comprehensive While Paper (MOE, 2012) published by the Ministry of Education (MOE) and the International Education for Primary and Secondary School Students (IETW). This publication and the initiative behind it demonstrate MOE's commitment to a more international Taiwan. Importantly it emphasizes the critical connection between international education and Taiwan's prosperity. The key to long term effectiveness now is in the implementation.

The purpose of this presentation is to urge the development, in Taiwan, of a comprehensive approach to measuring the impact of international education. These implementation strategies have to be both effective and affordable. My organization, The Foundation for Scholarly Exchange (Fulbright Taiwan), is ready to play its small part.

I. Rationale: The Importance of International Education

The rationale for understanding and then promoting the role of international education in Taiwan is prosperity. Put bluntly, Taiwan's prosperity depends on its successful adaption to global economic forces beyond its control.

The phenomena of globalization is well documented, but not as well understood. The most insightful popular commentator is perhaps columnist Thomas Freidman, op-ed writer, of The New York Times. In 1999 Friedman powerfully argued that there are actually two forces at work in the world today: integration and fragmentation. He succinctly symbolized these using the Lexus and the Olive Tree. (Friedman, 1999)

The Lexus automobile represents integration and globalization. From its design, to the parts supply chain, to the manufacture and assembly, to the eventual global sales, the Lexus represents a worldwide, multidimensional phenomenon. Today we could single out the new iPhone 5 as a similar global process and product. Clearly the iPhone touches hundreds of millions of lives through production, sales, ownership, and stock prices. Apple products are synonymous with global integration.

However, the Olive Tree is rooted in a particular location, perhaps your backyard. It is someone's. Trees sprout, grow, bear fruit, and are harvested in one spot. While the pressed olive oil may have a global market, the trees are intensely rooted in their history and location. If trees become scarce, they also become the source of conflict between neighbors who hunger for their resources.

Analogously, there are forces in communities and nations that have the same roots and the same local focus. Conflicts, for instance, are usually and inherently localized; although they can be feed by global actors. The East China Sea dispute and the riots in China against Japan are neighborly examples. In other words, there are forces of fragmentation at work alongside the global economic forces of integration.

A different perspective on the tension between integration and fragmentation uses two competing value sets that are the basis for dramatically different interpretations of international affairs. These approaches are sometimes called free market liberalism and state mercantilism. They both have strong proponents and reconciling them is awkward at best. Figure 1 identifies the primary differences between these approaches.

	Liberalism	**Mercantilism**
Economic Relations	Harmonious	Conflictual
Major Actors	Households, Firms	States
Goal of Economic Activity	Maximize global welfare	Serve the national interest
Priority	Economics determines politics	Politics determines economics
Explanation for global change	Dynamic, ever-adjusting equilibrium	Product of shifts in relative distribution of state power

Figure 1. Key Differences (Kegley, 2013)

While these suggest irreconcilable differences, they usually coexist within both the bosoms of individuals and within the policy process of states. Reconciling of general interest and private good is a complementary dilemma to the symbolism of the Lexus and Olive Tree. Attaining a balance between the Liberal and the Mercantile views of international affairs is vital in both personal perspectives and state action.

On a philosophical level, the **fundamental purpose of international education** is to raise our vision from the Olive Tree in our back yard to a broader environment. The trick is to do this without losing sight of the tree or diminishing its beauty and importance. Balancing an appreciation of the tree and an understanding of the forest is one of the central contributions of international education.

Switching analogies, for a fly fisherman who spends hours casting to specific ripples in a trout stream, the dilemma is captured by a paraphrase of Henry David Thoreau's Journal, "Many men go fishing their entire lives without knowing it is not the fish they are after," i.e. how do you embrace the general without losing the specific? We come back to this issue at the end of the paper.

Three fundamental issues have to be embraced. These are the foundations which make Taiwan's likely success different from many other places. The first cornerstone is an appreciation of the continuing and accelerating impact of globalization. The second cornerstone is an appreciation of the factors that make nations competitive. The third cornerstone is an appreciation of Taiwan's distinctive place in international economic relations and the role of international education.

II.Globalization

The evidence for globalization is overwhelming. Perhaps the striking thing is the acceleration, the trends. While the 2008-09 Financial Crises briefly altered these trends, they show no signs of abating. In Figure 2, simply look at the steep slope of trade

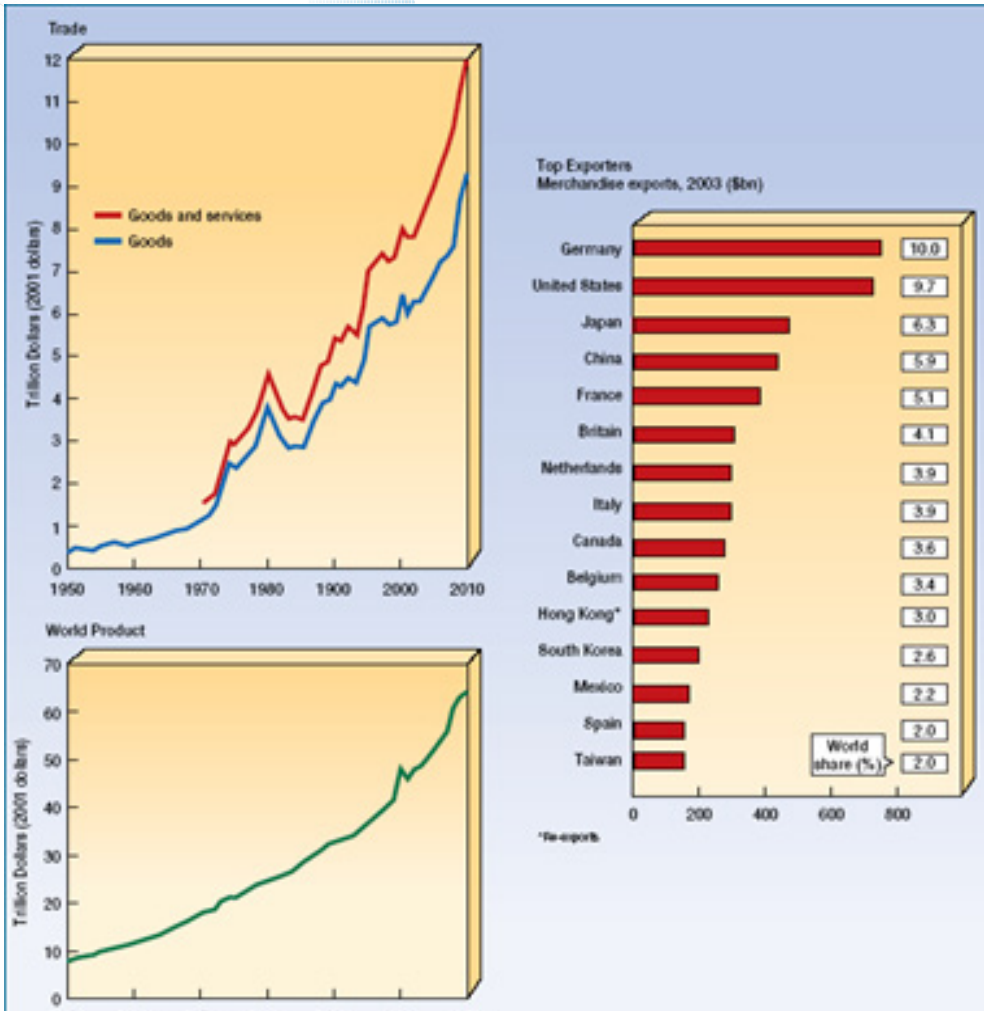


Figure 2: Globalization Indices (Kegley, 2007, 327)

lines at the top-left and note the similarity to World Product on the bottom-left. Note also how widely distributed trade is among many exporters on the right.

Globalization occurs when the world’s economies become borderless and intertwined. One symptom is the development of global products and of customers who look first at the product and not at the national origins. Symptomatic of globalization is when American fast-food is found as easily on the Champs-de-lyses in Paris as baguettes or when Japanese sushi is easily found in a small Ohio farm town. Then, you have clear indications of a global economy.

Rapid growth of exports compared to domestic economic growth is also a key indication of increased economic integration. Figure 3 shows the growth of Merchandise Exports compared to GDP growth. The black dotted line is the average growth of exports compared to the red dotted line which is the average growth of GDP. Trade is growing faster than economies. Increased interdependence occurs when we are exporting things faster than making them. Only 2001 and 2009 show the reverse, when trade fell faster than economies declined. While 9/11 and the Financial Crisis caused everyone to look first at their local markets for both goods and buyers, this is the exception.

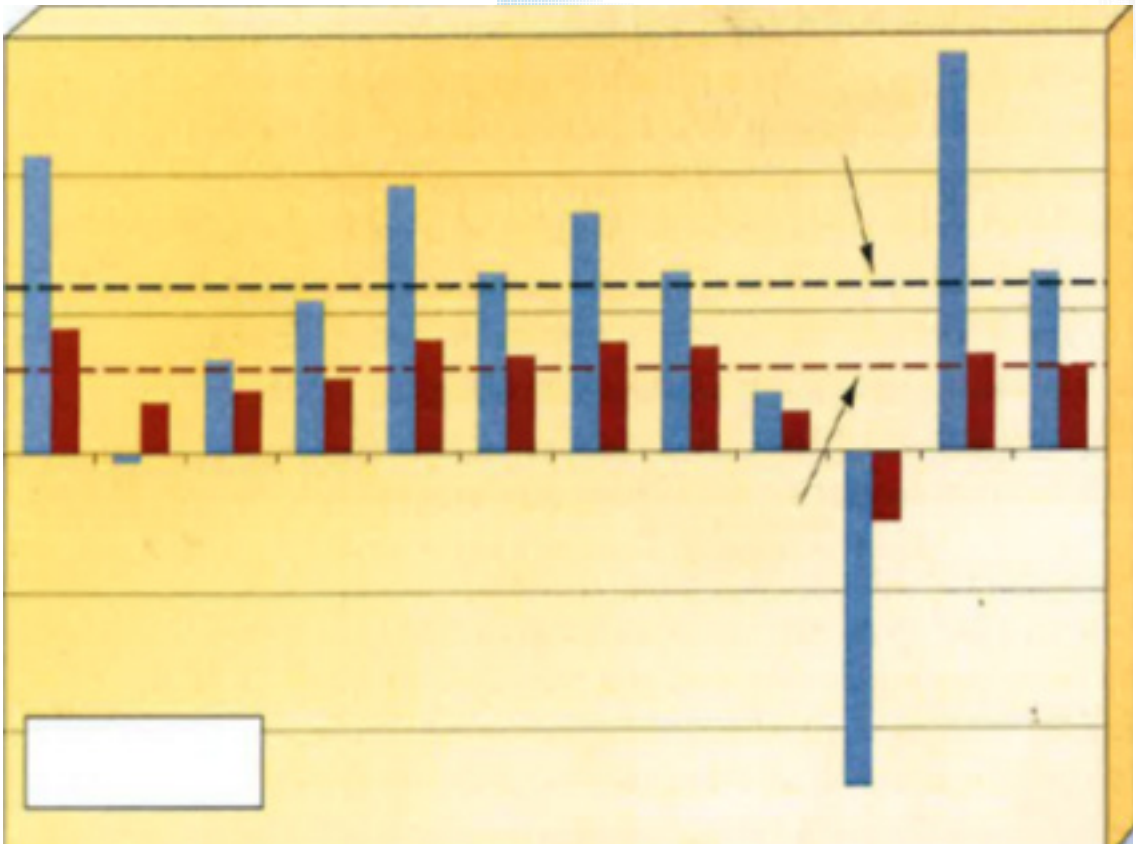


Figure 3: Growth of Global Trade Integration

(adapted from Kegley…, 2013, 358)

The globalization process is of course more complicated that just trade. There are multiple way to look at this process of globalization and to understand its roots. In The World is Flat, Friedman (2005) identifies six causal factors, the drivers of globalization. These are business processes that dramatically changed in the last decades. Friedman believes that the development of new ways of doing business is the key to globalization. Additionally for Friedman, these processes are accentuated by four steroids, the business accelerators. The Drivers and Steroids are:

Drivers

- Open-sourcing: " …thousands of people around the world coming together online to collaborate in writing everything from their own software to their own operating systems…"
- Out sourcing: "…taking some specific, but limited, function you're your company was doing in-house and having another company perform that…," (research, call centers, accounting, etc.) hence doing less yourself
- In sourcing: bringing other companies inside your business model to provide logistics and normally proprietary service, co-mingling
- Offshoring: " …when a company takes one of its factories… and moves it offshore…" to another country
- Supply chaining: " …a method of collaborating horizontally – among suppliers,

retailers, and customers
– to create value…" and forcing "the adoption of common standards…"

- Informing: " …all have the same basic access to overall research information that anyone has."

Steroids: the accelerators, how everything works "…from photography to entertainment to communications to word processing to architectural design to management of my home…"

- Digital: the digitization of all content and processes
- Personal: manipulated by you
- Mobile: anywhere
- Virtual: quickly and with ease

A more fundamental or underlying version of the "driving forces of the new world economy" looks at process of globalization from a structural perspective. Cullen and Parboteeah (2005) in Figure 4 present an interesting diagram depicting the seven factors that are changing the global economic environment. Rather that business practices identified by Friedman, these are changes in the framework within which business works.

Perhaps the most striking thing about this framework is how small a role the nation-state has in these changes. These are all forces operating across, around, independent of, and through borders.

One key change has been in terminology. Twenty years ago in the U.S. we spoke of domestic and international companies. In that context, international meant exporters, domestic companies that sold goods overseas. Alternatively, international meant trading companies that bought goods overseas for sale in the domestic market, importers. International companies were essentially domestic companies based in one country, but their market or source of goods was foreign.

Figure 4. The Globalizing Economy (Cullen…, 2005, 8)

Now a third category of business has developed and we talk about domestic, international, and multinational companies, truly globally based enterprises. Multinational companies, in contrast, have capabilities and facilities spread around the world. Toyota makes cars in many countries, sources parts internationally, and sells everywhere. Nike acquires cloth, sews clothes, makes shoes, rents stores, and sells products all over the world. Similarly, many back offices functions for companies like GE are performed in India or the Philippines, their factories are scattered around the globe, and their parts come from a global supply chain. Even firms like Boeing, whose huge products require gigantic capital investments, set up assembly plants in multiple countries.

Like olive trees, multinationals have roots in one country and their head office is in one physical location. Nevertheless, they are truly global. In Taiwan, Hon Hai Precision Industry Co. Ltd. (Foxconn) is a good example. Foxconn's "clients include major American, European and Japanese electronics and information technology companies, … and Foxconn has factories in Asia, Europe and South America, which together assemble around 40 percent of consumer electronics products in the world." (Wikipedia, 2012)

This differentiation of firms can most clearly be seen in Figure 5 which is a interesting attempt

to first describe the Global Business Environment and then to relate this to chapters of a text. We can think of this as four basic levels of analysis: Local (the Firm), National, International, and Global. As we move out from the center, each level has gained importance over the last decades. While many small and medium sized enterprises (SMEs) continue to be focused on local domestic markets, most businesses now flirt with the global marketplace.

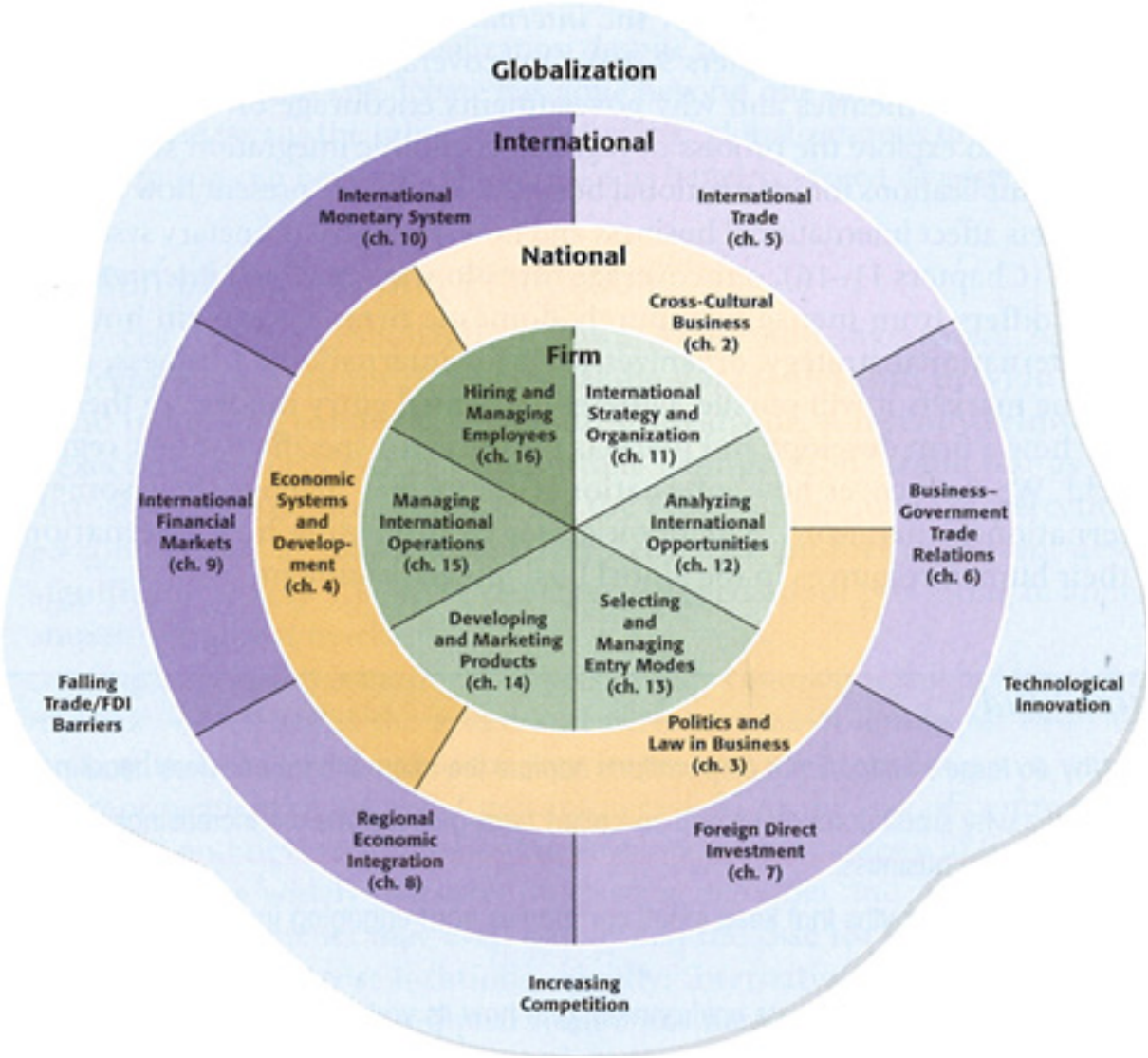


Figure 5. The Global Business Environment (Wild…, 2006, 31)

In international relations, this perspective becomes an analytic tool called the 'levels of analysis.' Like the levels in Figure 5, analysts often speak of from 3 to 5 levels, and each provides a divergent perspective on international affairs. Understanding these levels of analysis in a personal and bone-deep way is one of the impacts of international education.

For instance, why has China reacted so forcefully to what is in reality only a minor change in

the status of the Taioyutai or Senkaku Islands? The Japanese national government already owned several of islands, and has administered all the islands since 1972. It bought more to prevent their purchase by the more nationalist Mayor of Tokyo.

Here are perspectives on China's reaction from each of five levels:

- Individual – The Chinese reaction is about personal politics. The upcoming 10-year change of power among the leadership places a premium on leaders appearing strong. Leadership contests in authoritarian systems can be deadly.

- Institutional - The dispute between China and Japan has become hostage to the domestic political process and politics. Since the abandonment of Marxism, the two pillars of the Communist Party are economic growth and nationalism. Nationalism is a fundamental regime support, and as a consequence, leaders must play to the rhetoric. The domestic political conflict is between more hard-line, traditional, elements often lead by the military and more modernizing, free-market, international elements lead by economic elites within the Party.

- National – The island dispute is primary about national wealth and power. Exclusive Economic Zones mean that rocky islands actually determine ownership of vast seabed. Oil, natural gas, and fishing are all at stake. The potential is gigantic and is magnified by the huge imports of both energy and food that both China and Japan require. The dispute is nothing less that long-term survival.

- International – The dispute is primarily an issue of sovereignty dating back to the inconclusive ending of WW II. This is a legal and territorial issue whose roots go back centuries. Like Alsace Lorraine between France and Germany before WWI, this strikes at the heart of each nation's integrity. On its cover, the Economist (2012) recently asked, "Could China and Japan really go to war over these (rocks)?", and answered "Sadly, yes."

- Global (system) – The dispute is the manifestation of a rising power (China) straining against the constraints of the current dominant East Asian powers (Japan and the U.S.). If not these islands, then another focus or issue would bring the conflict to a head. The control of these is both symbolically and militarily significant. They represent access to the open ocean, beyond the first island chain which contains China. Containment is the underlying strategic conflict.

The aim of international education is to help develop an appreciation of these levels of issues and events, these multiple interpretations. If people and states remain local, this appreciation may not be developed or needed. However, globalization is a real, powerful, growing, omnipresent force with which nations and individuals must cope. It is no longer enough to be competitive within your domestic market. Competitiveness is global.

III. Global Competitiveness

A.Nation-states are the Foci for Competition

If globalization is the overwhelming economic force in the 21st century, the underlying political dimension of international relations has changed much less. There has been a rapid growth of international organizations (IGOs) and non-governmental organizations (NGOs) as illustrated in Figure 6. Some sovereignty has been transferred to these IGOs

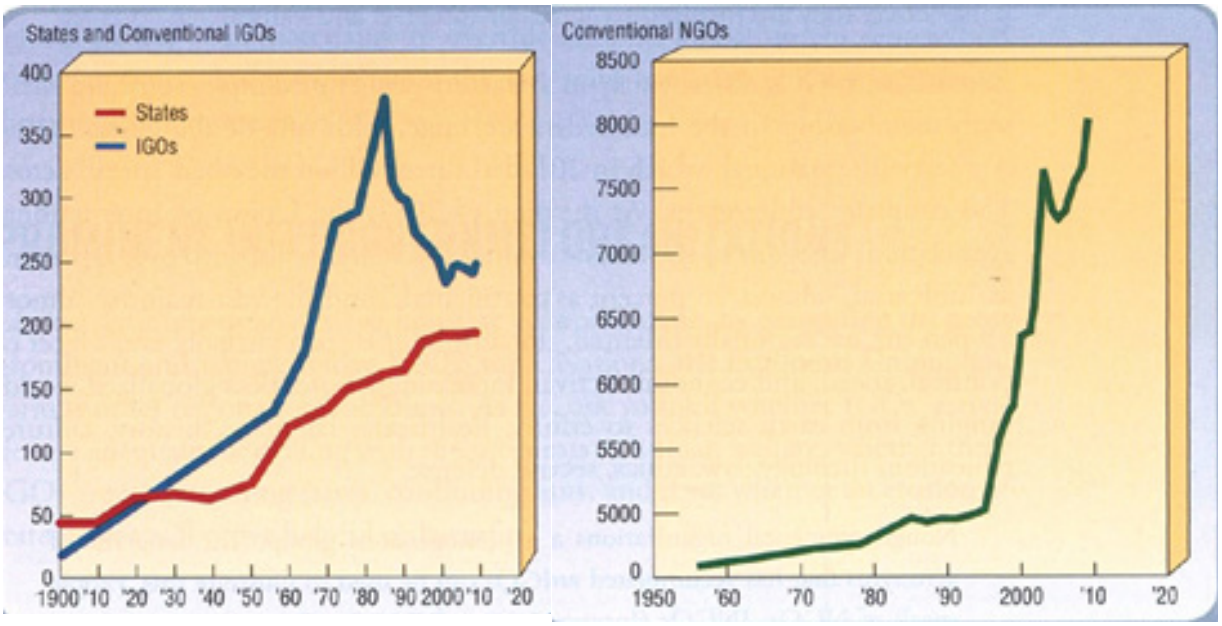


Figure 6. Trends in IGOs, States, and NGOs (Kegley…, 2013, 139)

by national governments, and NGOs have increasingly made their policy preferences known in decision making at the national level. Nevertheless, nation-states continue to be the dominant political structures in international affairs. For instance, only thirty-five IGOs span more than one continent and have "universal membership." Nation-states continue to set the economic rules of world commerce, to make the key decisions about political matters, and to hold a near monopoly on the legitimate use of military force.

Competitiveness, therefore, is normally measured in national terms. Of course the issue of national status is a controversial one, especially across the Taiwan Strait. This paper takes no position on sovereignty, reflecting the American position that there is "one China with differing interpretations." [2]

B. Economic Development and Prosperity

Each year the World Economic Forum (WEF) issues "The Global Competitiveness Report"

(Schwab 2012) which develops the Global Competitiveness Index (GCI). One-hundred-forty-two (142) economic entities are given an index of their relative level of competitiveness.

Competitiveness is measured on twelve pillars and each pillar has from two to twenty-one measurements for a total of one-hundred-eleven (111) indices of competitiveness. Figure 7 shows the twelve pillars and their relationship to three stages of economic development: 1) factor-driven economies, 2) efficiency-driven economies, and 3) innovation-driven economies.

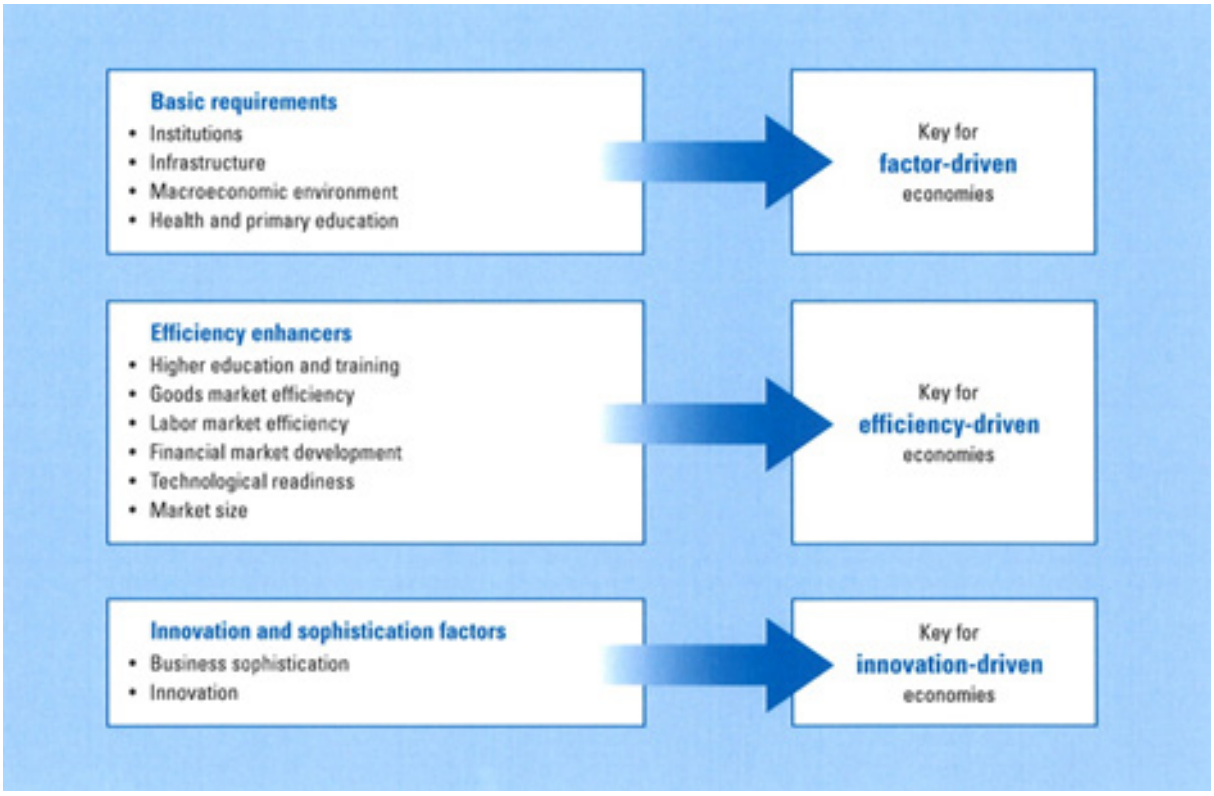


Figure 7. The 12 Pillars of Competitiveness (Schwab, 2012, 9)

These Stages of Development are based on two criteria. The first is GDP per capita which measures absolute levels of economic development. The second is the extent to which each country is "factor-driven." More developed economies should be less reliant on exports of basic natural resources and on 'basic requirements.' Hence, economies are penalized if they remain factor-driven as GDP per capita increases.

These twelve pillars are not mutually exclusive. Some or all can operate at the same time and economies can maximize their potential by focusing on multiple pillars or indices. The list of economies shown in Figure 8 identifies them by the three (3) Stages of Development and the two (2)

2. The World Economic Forum treats Taiwan as an 'economic entity.'

3. For a list of the 111 indexes and Taiwan's relative score see Appendix 1.

Transition Stages. Arrows point to several, which are specific targets of discussion regarding their competitiveness.

Stage 1: Factor-driven (37 economies)	Transition from stage 1 to stage 2 (24 economies)	Stage 2: Efficiency-driven (28 economies)	Transition from stage 2 to stage 3 (18 economies)	Stage 3: Innovation-driven (35 economies)
Bangladesh	Algeria	Albania	Argentina	Australia
Benin	Angola	Belize	Barbados	Austria
Bolivia	Armenia	Bosnia and Herzegovina	Brazil	Bahrain
Burkina Faso	Azerbaijan	Bulgaria	Chile	Belgium
Burundi	Botswana	Cape Verde	Croatia	Canada
Cambodia	Brunei Darussalam	China	Estonia	Cyprus
Cameroon	Egypt	Colombia	Hungary	Czech Republic
Chad	Georgia	Costa Rica	Latvia	Denmark
Côte d'Ivoire	Guatemala	Dominican Republic	Lebanon	Finland
Ethiopia	Guyana	Ecuador	Lithuania	France
Gambia, The	Honduras	El Salvador	Mexico	Germany
Ghana	Iran, Islamic Rep.	Indonesia	Oman	Greece
Haiti	Jamaica	Jordan	Poland	Hong Kong SAR
India	Kazakhstan	Macedonia, FYR	Russian Federation	Iceland
Kenya	Kuwait	Malaysia	Slovak Republic	Ireland
Kyrgyz Republic	Mongolia	Mauritius	Trinidad and Tobago	Israel
Lesotho	Paraguay	Montenegro	Turkey	Italy
Madagascar	Philippines	Morocco	Uruguay	Japan
Malawi	Qatar	Namibia		Korea, Rep.
Mali	Saudi Arabia	Panama		Luxembourg
Mauritania	Sri Lanka	Peru		Malta
Moldova	Syria	Romania		Netherlands
Mozambique	Ukraine	Serbia		New Zealand
Nepal	Venezuela	South Africa		Norway
Nicaragua		Suriname		Portugal
Nigeria		Swaziland		Puerto Rico
Pakistan		Thailand		Singapore
Rwanda		Tunisia		Slovenia
Senegal				Spain
Tajikistan				Sweden
Tanzania				Switzerland
Timor-Leste				Taiwan, China
Uganda				United Arab Emirates
Vietnam				United Kingdom
Yemen				United States
Zambia				
Zimbabwe				

Figure 8. Countries/economies at each Stage of Development (Schwab, 2012, 11)

Placement in these Stages of Development is not fixed. Countries do not stay static. Some may rise some may fall. Countries are involved in a global competition. However, the overall level for all can also go up. The competition is not zero-sum. There do not have to be permanent losers, only relative ones. No economy is destined to remain factor-driven. Some are unlikely to reach the level of Switzerland or Singapore, and there will always be a "poorest." However, the GCI shows that people in even that poorest country can also prosper given good policies.

Leaders matter. Public policy decisions make a difference. Choices or failures to choose have consequences. Prosperity is closely linked to not only the basic natural wealth of an economy but to how well that economy invests in its future.

C. Illustrations of Divergence

The World Economic Forum defines "competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be earned by an economy. The productivity level also determines the rates of return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates. In other words, a more competitive economy is one that is likely to grow faster over time." (Schwab, 2012, 4)

All economies are not only driven by their competitiveness, but by large, external economic and political forces. The Financial Crisis, 9/11, regional conflict, European debt leverage, etc. can all be external determinants of a country's prosperity. Similarly new discoveries of natural resources or new technologies allowing improved exploitation can change an economy's fortunes. Nevertheless, domestic decisions by leaders regarding these 12 pillars matter greatly.

Contrasting Factor-driven Economies: (Figure 9)

Timor-Leste **Vietnam**

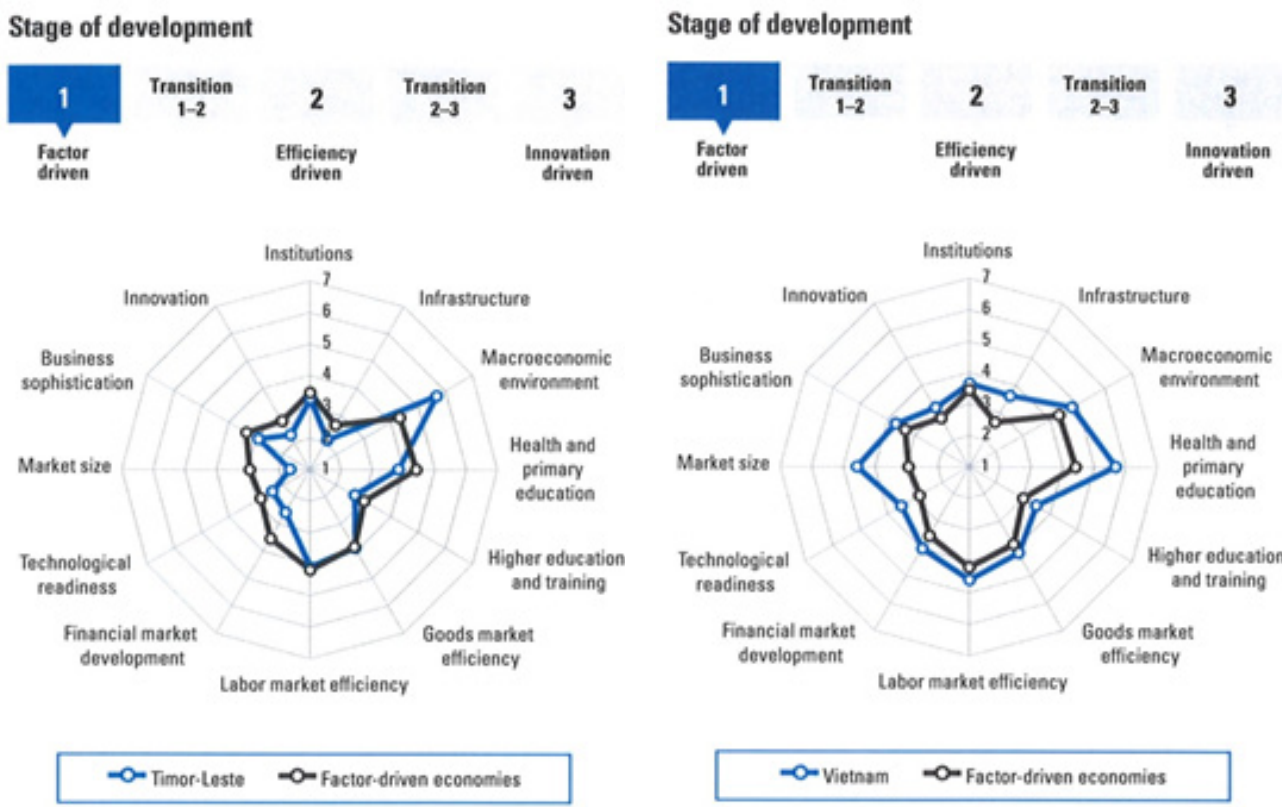


Figure 9. Contrasting Factor-driven Economies (Schwab, 2012, 346 & 368)

Timor-Leste is one of the world's poorest countries and has one of the steepest grades to climb to move ahead. In Figure 9, the black line is the average score for all the Stage 1, factor-

driven economies. Timor-Leste is the blue line on the left, and in terms of

competitiveness, it has very few current advantages. Its only real advantage is in the ‘macroeconomic environment’ which indicates low levels of debt and high relative levels of government income. This results from large oil and gas reserve in the East Timor Sea. Nevertheless, Timor-Leste is poised to fall increasingly behind. Wise choices by leaders, however, could turn this one advantage into a more competitive future.

In contrast, Vietnam is also at Stage 1, but every pillar scores above the group average. The blue line surrounds the black. Vietnam is poised to grow and prosper. However, as the news recently demonstrated, this growth can be hampered or reversed by corruption, poor planning, excessive regulation, etc. Vietnam too faces important domestic choices which determine future prosperity. The current prospect is not as bright as the potential.

A Charging & a Failing Economy: (Figure 10)

Saudi Arabia is in Transition 1-2, from a factor-driven to an efficiency economy. Because of vast wealth based on oil and gas combined with wise policies, the Kingdom appears to be ready to move rapidly ahead. On every competitive pillar, it has a significant advantage over its peers.

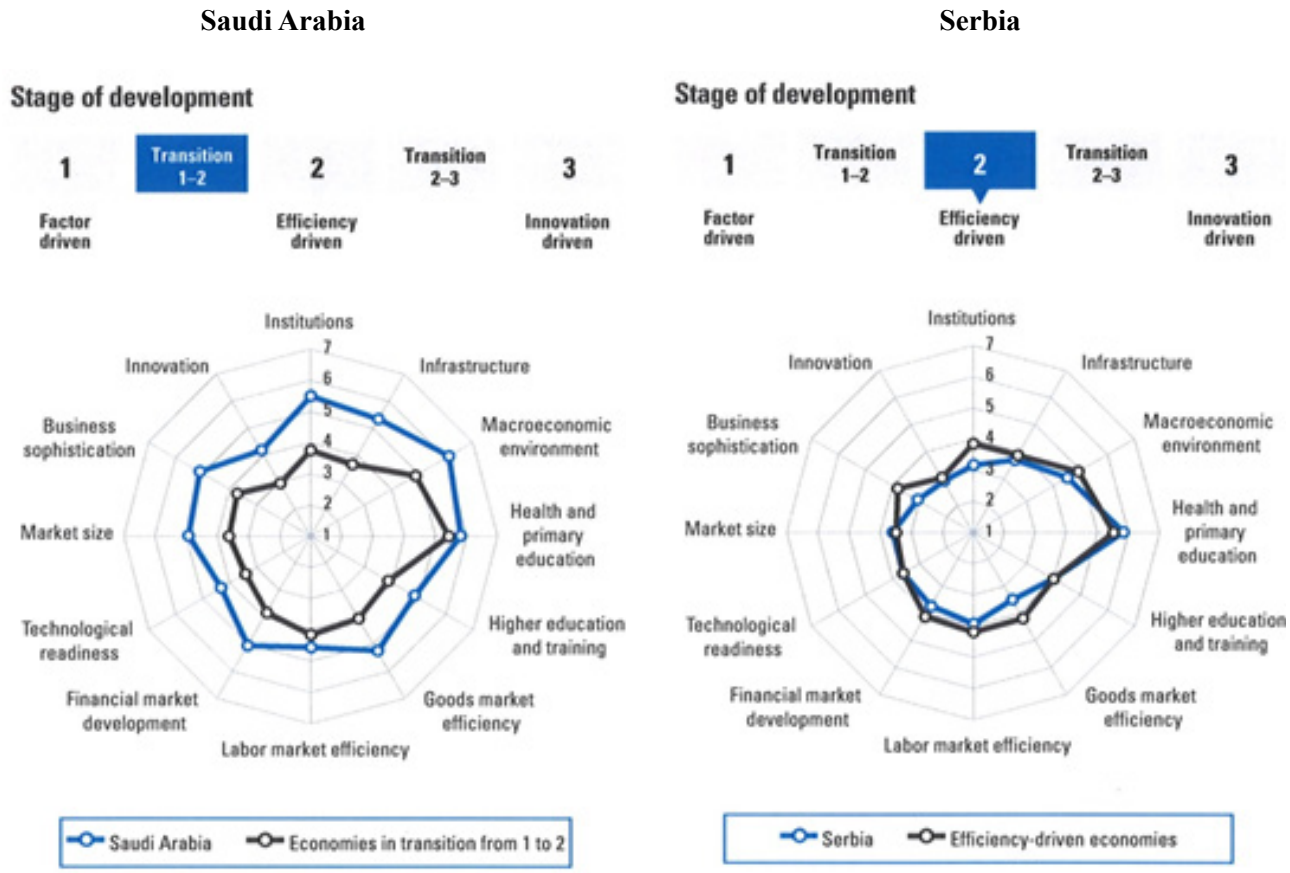


Figure 10. A Charging and a Failing Economy (Schwab, 2012, 310 & 314)

In contrast, Serbia appears to be a lagging economy. On only one dimension, health and primary education, does it hold an advantage over its peer group. Beginning with the breakup of Yugoslavia in the 1990s, Serbian leaders regularly made choices based on nationalism rather than on economic prosperity. In ten years we may see Serbia falling back a stage and Saudi Arabia moving ahead.

Global Leaders Face Contrasting Issues: (Figure 11)

China is striving toward an innovation-driven economy and America is striving to remain one. Both American and China are well positioned, and have the advantage of large domestic markets. China also outshines its peers on all the other pillars. In contrast, America merely matches its peers on most of the other pillars. The impression of a charging China and a static America holds much truth.

However, a closer look suggests that America' s and China' s strengths and weaknesses are almost mirror images. China' s great strength' s aside from market size are policy driven, macroeconomic environment, and health and primary education. This has often been referred to as the Beijing Model of Development, authoritarian regimes making difficult but wise policy choices. However, China is less advanced in areas associated with innovation. China needs to become less dependent on making things and more reliant on efficiency and especially on innovation. Market size combined with the 'basic requirements' on the right have driven the economy. The other pillars need attention.

China

United States

Figure 11. Global Leaders Face Contrasting Issues (Schwab, 2012, 148 & 362)

America by contrast already relies on the two pillars of innovation, along with market size. It is well ahead of its peers in the areas driving a Stage 3 economy, business sophistication and innovation. However, it is struggling with the basics. America does a particularly poor competitive job with three areas in which it used to shine. In institutions, infrastructure, and macroeconomic environment, all basic requirements, the U.S. was the global leader fifty year ago. Today America lags its peers in each of these pillars. America needs to fix the basic requirements for prosperity. All twelve pillars are important, but these two giants have to focus on divergent problems if they are to prosper in the years ahead.

D.Relationship between Prosperity and Innovation: (Figure 12)

The basic point of this section is to demonstrate that Prosperity depends on Policy. Perhaps the best illustration is provided by data relating 113 countries average gross national income (GNI) to their development of original technology (versus licensed). If your economy creates things and can apply them, your citizens are more likely to be rich (see Figure 12). Increasing the capacity for creation and application has immense economic benefit. This becomes a central policy goal of developed economies, of which Taiwan is one.

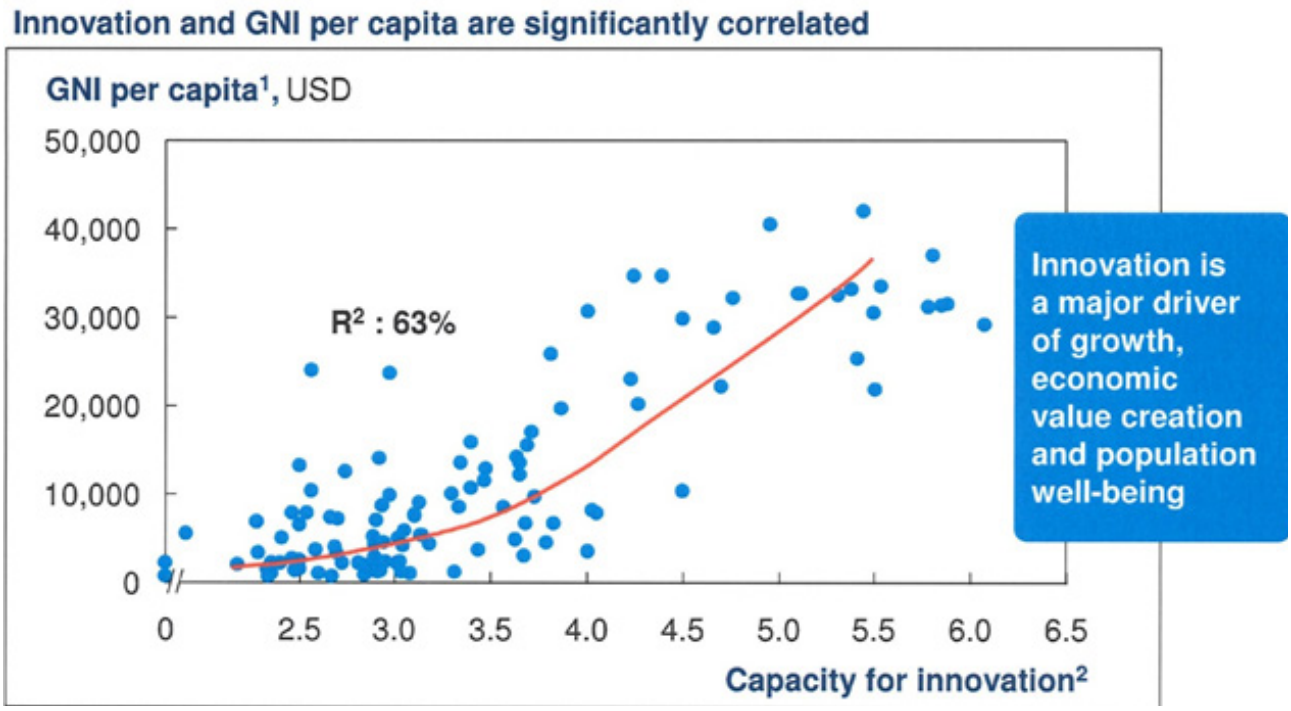


Figure 12. The Policy Implication of Innovation (Pires, 2012, 4)

Source: OCED stat; WEF Executive Opinion Survey 2008/2009, McKensey Innovation Heatmap

The WEF complete listings of economies and how they rank can be found in Appendices 3 and 4. Appendix 3 provides the simple overall rankings on the Global Competitiveness Index (GCI) compared with last year. Appendix 4 provides a breakdown of the GCI into its three primary components of competitiveness for each country: 1) Basic requirements, 2) Efficiency enhancers, and 3) Innovation and sophistication factors.

IV. Drivers of Innovation

This section discusses those factors crucial to innovation in more depth. These are the central features for developed economies like Taiwan and their relationship to international education is central to this argument.

A. Innovation Means: (Figure 13)

Looking at Figure 8, the WEF places Taiwan among the 35 economies of the world that are designated "Innovation-driven." For Taiwan to continue to be successful it must focus on innovation. What does that really mean?

The WEF identifies two pillars that are the drivers of innovation: 1) Business sophistication and 2) Innovation itself. WEF then expands the categories, listing nine (9) indexes for the first and seven (7) for the second. These are identified in Appendix 1. These sixteen are empirical reflections of an idea, innovation. Using these sixteen to capture the essence of innovation is one approach to understanding an innovation-driven economy and what it means regularly to improve your innovation quotient.

A more accessible understanding of innovation is provided by McKensey & Company (Pires, 2012, 6). McKensey suggests that innovation has several components (see Figure 13). Normally we think of innovation simply as creation, McKensey's term for this first component is 'Ideation.' This is our normal understanding: innovation means coming up with new insights, new ideas, new products, new things, etc. The central point is NEW. This perhaps equates to the distinction between Pure and Applied research. Innovation results from Pure research.

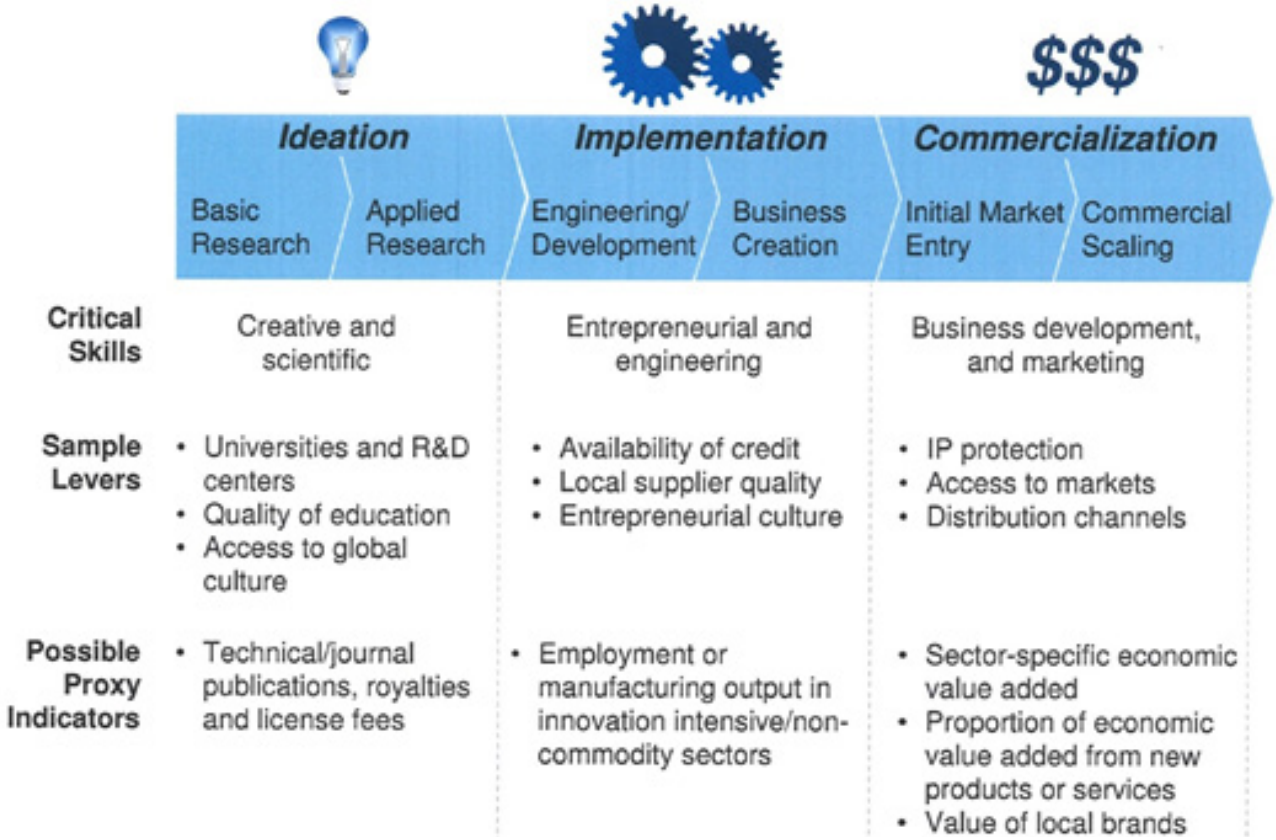


Figure 13. Innovation Process (Pires, 2012, 6)

However, McKensey suggests that this is not a broad or deep enough understanding of innovation. Innovation must also occur between the Pure researcher and the customer in order to bring any product to market. McKensey defines the next two steps in the innovation process as ‘Implementation’ and ‘Commercialization.’ Innovation is not simply the discovery of the NEW. Rather it includes all the creative steps necessary to bring that new knowledge or product into mainstream life.

For our purposes, the potential relationship of international education, especially to Ideation and Implementation, is crucial. A hint peaks out through the emphasis on culture in the “Sample Levers” row of Figure 13, and the Figure clearly identifies the entire innovation process.

B. Innovation Locations

Although it is based on creativity, innovation is not random. Innovation is not mysterious. Innovation does not simply spring up and amaze by it brilliance. Sunshine does not just happen, even if a beam of light breaking through the clouds during a week of rain may appear magical.

Innovation does not occur uniformly across economies or regions. Rather innovation occurs in clusters. Places that have nurtured an environment for innovation produce innovation. Then

the process becomes almost self-sustaining, and innovation breeds more innovation. McKensey & Company developed an analysis of these phenomena, and Figure14 illustrates just how those innovation clusters developed in India. Figure 14 is

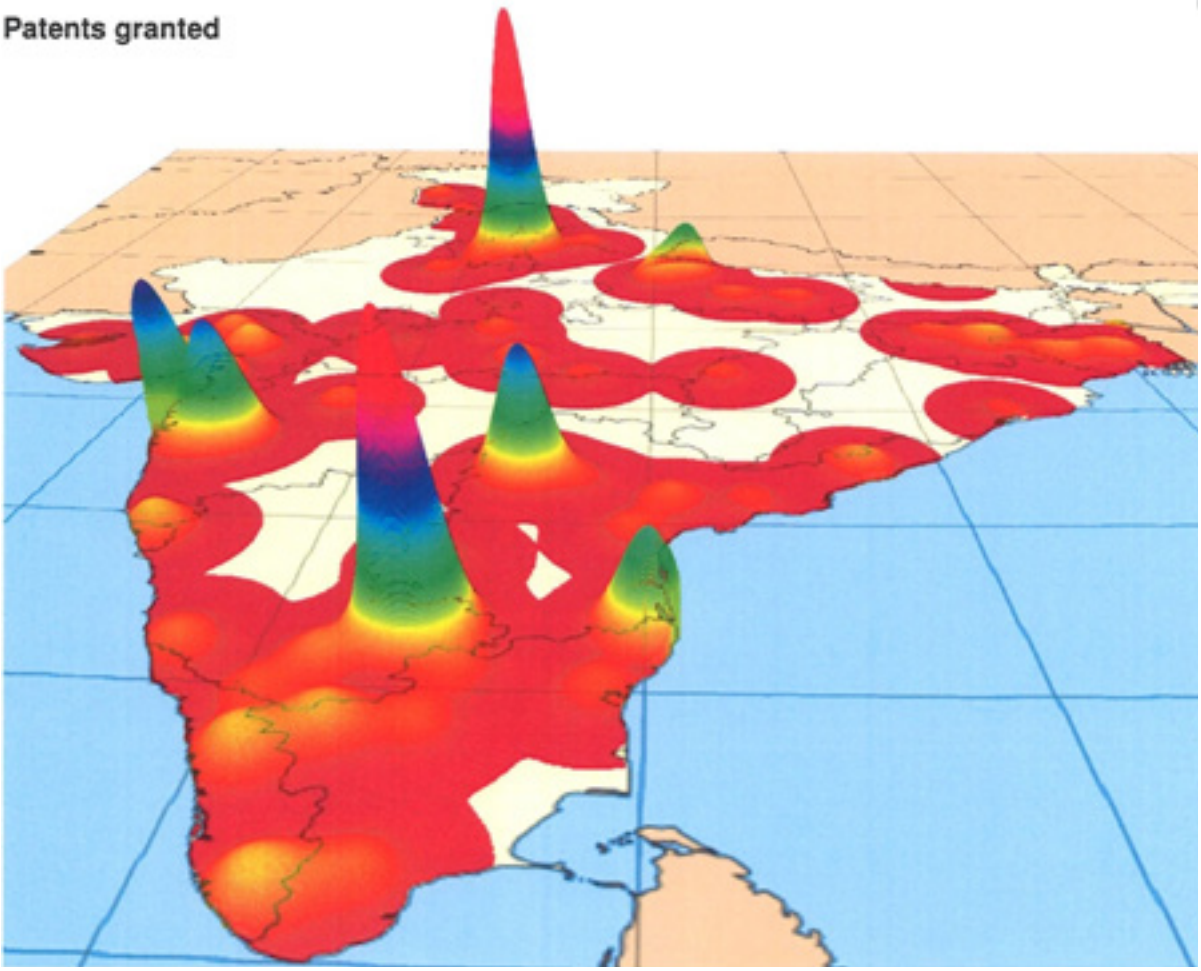
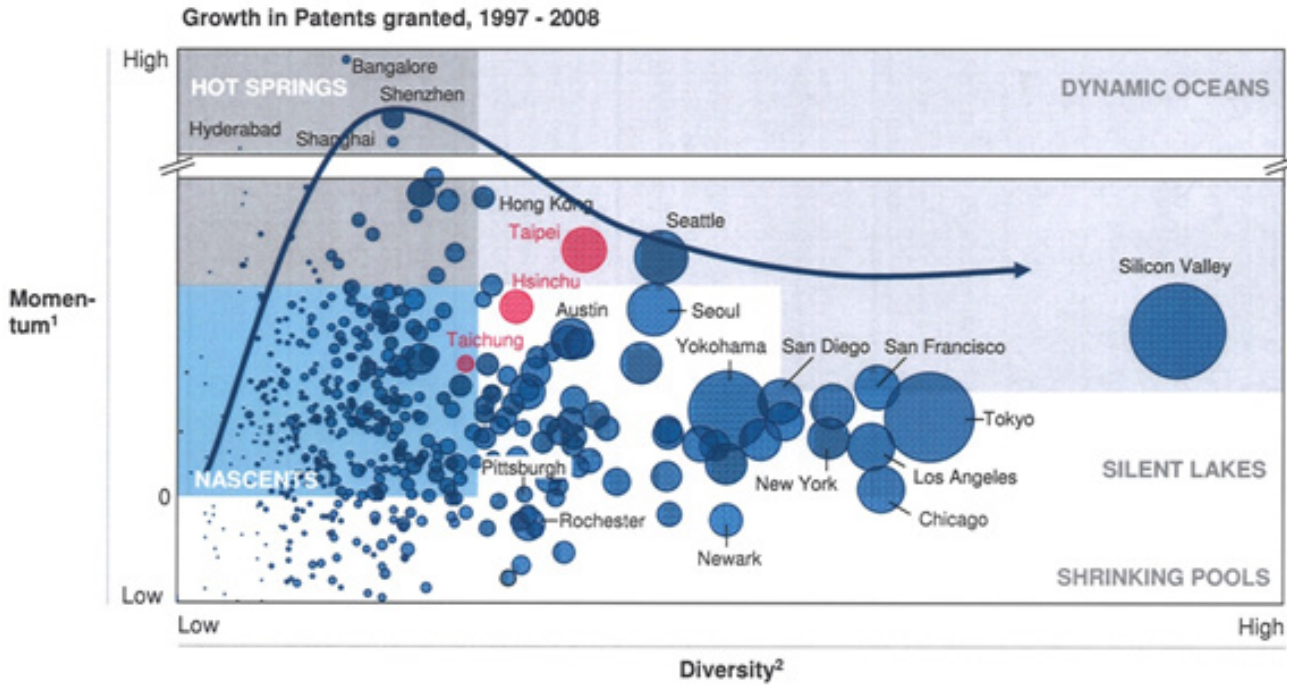


Figure 13. Patents Granted in India (Pires, 2012, 2)

Source: Patent data provided by the IP Solutions business of Thomson Reuters using Derwent World Patent Index; McKensey analysis

based on patent data, one of the better indices of innovation.

Innovation occurs most frequently and most consistently when the foundation has been prepared, when environment is most conducive, when the ground has been plowed. Of course, innovation may come from infertile fields or unexpected locations. That is normally not the case.



1 Growth of patents in a cluster per year from 1997 - 2008
2 Patents' industry and firm diversity in cluster

specialized talent pool. While a hub's initial success can often be fueled by relying primarily on local talent, the importance of attracting, developing, and retaining a vibrant base of world-class talent increases as clusters mature and grow in complexity." "…Emerging Asian economies while able to draw from a very large demographic pool, need to train a larger proportion of their population to reach world-class levels. They also must increase the attractiveness of their hubs to better compete for top global talent." (Andonian, 2009, 1) McKensey suggests five accelerators of innovation and people are the base. [4]

In other words, people, their education, their experiences, and their development are at the heart of innovation. People and their capabilities are the nurturing soil. Without a clear and strong focus on developing human capital it is futile to invest billions of dollars in the infrastructure of roads, broadband, laboratories, ports, facilities, etc. The people create the innovation. Everything else facilitates the creation.

McKensey suggests that Human Capital, the fifth accelerator of innovation portrayed in Figure 16, is a key. Look closely and notice how many of these have an international education component. The Soft Enablers and the External Talent can all be enhanced by international education.

4. The other accelerators are viewed in Appendix 5.

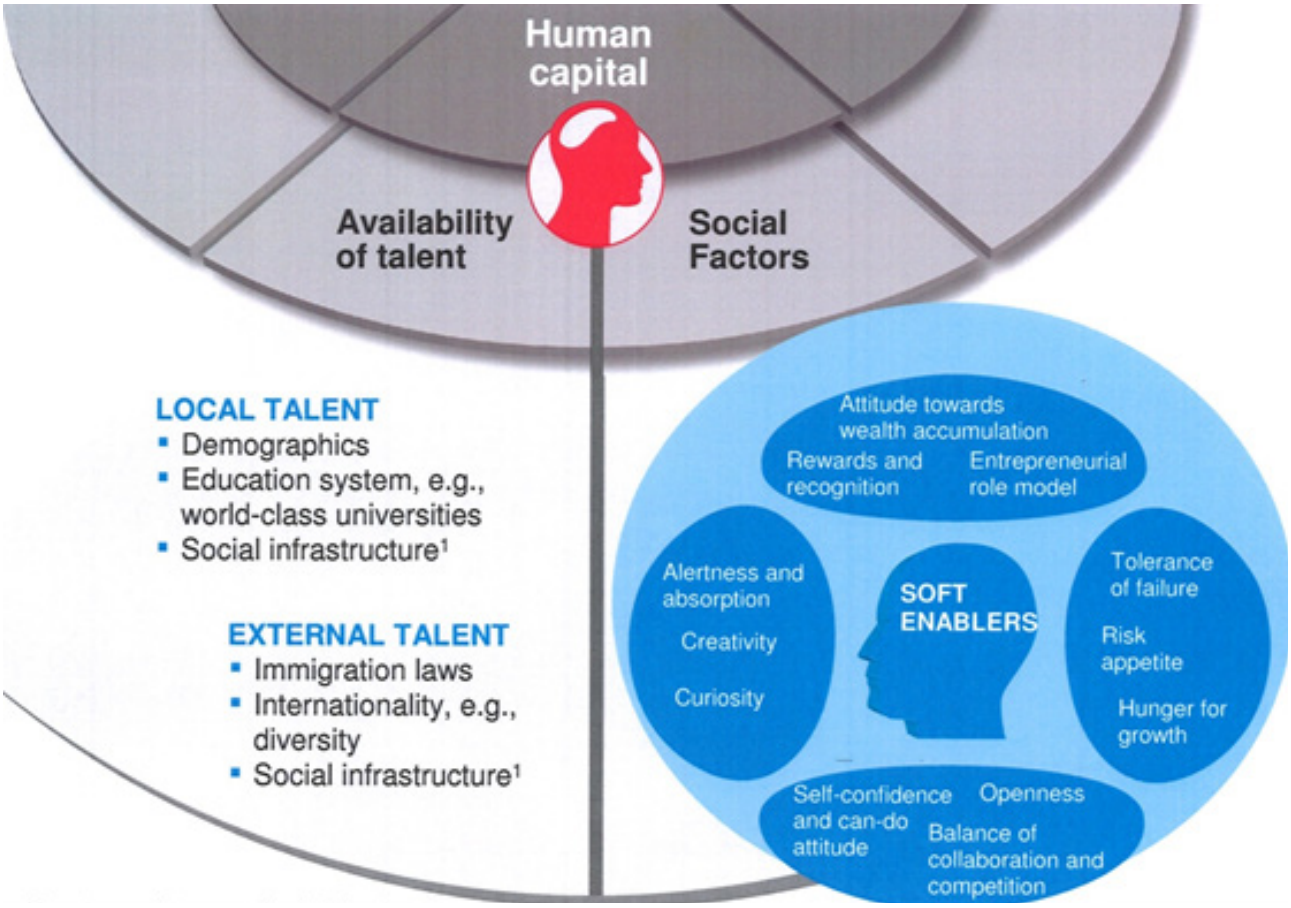


Figure 16. Human Capital and Innovation (Pires, 2012, 18)

Source: McKensey Innovation Heatmap

V. International Education

A. International Education Defined

One definition of international education is offered by Uraneck (2002) in a publication that was designed to impact primary and secondary education in the state of Wisconsin. International education:

- is about lives and contexts of people elsewhere
- promotes immersion experiences
- explores interactions and connections among nations
- creates awareness of interdependence
- acknowledges the complexity of the world's peoples
- calls for infusion of global perspectives in
    - all disciplines
    - all grade levels
- is a thread woven into the entire school curriculum.

Note the lack of specificity, of measureable variables, of performance indicators. This reflects a general presumption that, like sunshine, international education is good. It doesn't need to understood or empirical. It simply needs to occur.

This definition also actually helps underscore some basic, underlying problems regarding international education. These problems lead to a perception that international education is really a luxury, or perhaps a fuzzy mind-set. These include:

- Lack of a "canonical body of knowledge" like history, physics, etc.
- Seems to have no core of its own, but rather is an accessory; since, like writing, it can be infused into most disciplines
- Frequently a third tier priority behind serious endeavors like math, science, reading, history, etc.
- Rarely thought of as skill development

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5. A second definition of international education is offered by the International Baccalaureate program at http://www.ibo.org. This includes the following equally fuzzy items (with which I fully agree):

- Developing citizens of the world in relation to culture, language, and learning to live together
- Building and reinforcing student's sense of identity and cultural awareness
- Fostering student's recognition and development of universal human values
- Stimulating curiosity and inquiry
- Equipping students with the skill to learn and acquire knowledge and to apply these across a broad range of area.

- Appears attainable by just traveling abroad (not true)
- Is just learning another language
- Easily caricatured and often equated with mind-sets deemed 'fuzzy' or 'impractical.' A common caricature is young people, holding hands, singing Kumbaya, hoping this will promote peace.

In truth, international education does often have a touch of fuzziness about it.

In international politics terms as defined in Figure 1, this view of international education is often closer to Liberalism than Mercantilism. For instance, the rationale behind the Fulbright Program was expressed by Senator Fulbright as, "The Fulbright Program aims to bring a little more knowledge, a little more reason, and a little more compassion into world affairs, and thereby increase the chance that nations will learn at last to live in peace and friendship." (FSE, 2012) While suggesting only improved possibilities for peace, there is optimism and hope imbedded in Fulbright's great construction.

The fuzzy mind-set, the softness, of international education is perhaps uncomfortable for the cynic or Machiavellian. Perhaps scholars of hard power who emphasize the importance of the military and economics in world affairs would scoff at the centrality of international education to a country's or an economy's success in the 21st century.

Nevertheless, a certain optimism, a belief in the possibility of peaceful interchange, a fuzziness, if you will, is part of the baggage of international education.

However, **along with a fuzzy mind-set**, international education also involves **testable skills**. WEF and McKensey believe that human capital plays a central role in prosperity. Their work also indicates that <u>knowledge, skills, attitudes, and behavior</u> are central to long term competitiveness and innovation.

In the mercantile world of the late 1700s in Europe it may have been possible to argue that the skills developed by international education were unimportant for any but the elite. That is not true in 2012. Those skills are essential. What are they?

The skills promoted by international education have two defining characteristics. These two aspects are present in any activity. By their nature international education activities require **interdisciplinary skills** and **comparative skills**. One of the problems of international education, its lack of a "canon of knowledge," is also a strength. International education forces people to put together divergent ideas from different disciplines. This is one of the key components behind the capacity for innovation.

Similarly, international education forces people outside their own cultural milieu and forces them to compare. Interacting with a new culture forces the creative reexamination and evaluation of tradition assumptions. Again, this uncovering of basic assumptions and delving into new possibilities is a motive force behind creative innovation.

Different activities in international education, but not all, also build three additional skill sets. The first is **communications skills**. These consist of listening skills, interpersonal skills, team-building skills, and language acquisition. These become key ingredient in developing human capital in an internet age. Most MBA curriculum highlight the first three of these, and these are central among the WEF' s indices.

A second set of skills are **intellectual and contextual skills**. This is acquisition of new knowledge, new information, new perspectives. These are the knowledge building skills forced upon someone when they need to understand and survive in a new environment. Culture and change require new political, historical, geographic, religious, artistic sensibilities. In the process of acquiring new knowledge needed to thrive, new skills are learned which undergird innovation.

Personal skills are the third set developed. Among them are increased curiosity, the capacity to plan more effectively, an enhanced flexibility, toughness, an ability to make difficult decisions, compassion for others, and some humility about individual talents and gifts. All are enhanced by international education.

Most discussions focus on how to do international education. Equally importantly is, what does it develop? In summary, international education creates the following:

- Positive Mind-set
- Skills
    - Interdisciplinary
    - Comparative
    - Communications
    - Intellectual/Contextual
    - Personal

B. Illustrating International Education: Fulbright Taiwan

One small illustration of international education at work is The Foundation for Scholarly Exchange (FSE) or Fulbright Taiwan. Like most international education organizations FSE has focused most of its efforts on doing. The assumption has been that international education, almost by definition, is good and worthwhile. There are hundreds of anecdotal stories providing evidence for this belief. [6]

However, very little research has been done to document those suppositions. MOE's White Paper initiative is preparing for "the next stage of its globalization vision." Similarly, FSE is prepared to help develop more effective measures and instruments for the 21st century.

The Fulbright program was establish in 1946 in the aftermath of WWII, as an initiative of Senator J. William Fulbright of Arkansas, who believed that a program of educational and cultural exchange between the people of the United States and those of other nations could play an important role in building lasting world peace.

The purpose of the program is "to enable the government of the United States to increase mutual understanding between the people of the United States and the people of the other countries." Grants are made to U.S. citizens and nationals of other countries for a variety of educational activities, primarily: university teaching, language teaching, advanced research, graduate studies, and non-academic professional programs in specified fields.

Since 1946 over 250,000 talented people worldwide have been awarded Fulbright Scholarships. Figure 17 also illustrates the history in Taiwan. Fulbright is now the largest and one of the most prestigious, education scholarship programs in the world and operates between the U.S. and more than 150 countries. It is "American's most

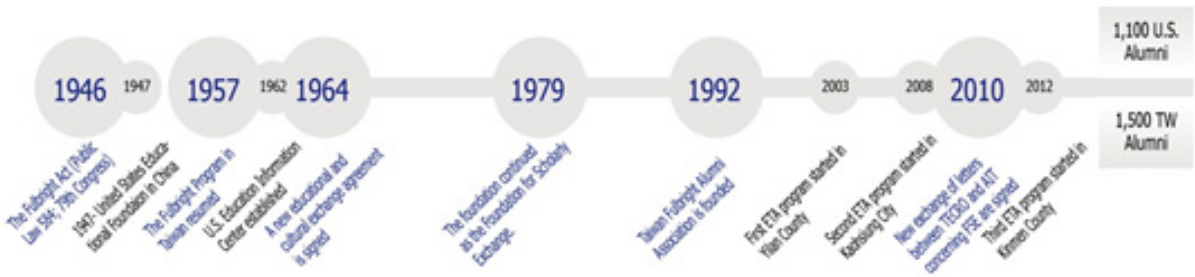

Figure 17. Timeline of Fulbright Taiwan

prestigious international scholarship program."

FSE is supported primarily by the American Institute in Taiwan (AIT), the Taiwan Ministry of Foreign Affairs (MOFA), the Taiwan Ministry of Education (MOE), and the County governments of Yilan, Kaoshiung, and Kinmen.

There are over 150 bilateral Fulbright exchange programs worldwide. FSE is one of approximately 50 non-profits established specifically to administer a local program. For example in

6. Please see Appendix 9 for a wonderful anecdote about a dyslexic fourth grader and an ETA.

Taiwan, FSE is an independent, legal, international non-profit registered in Taiwan. The other 100+ Fulbright programs are administered by U.S. embassies.

Since 1957, FSE has financed over 1500 Taiwanese Fulbright grantees to the U.S. and more than 1100 U.S. grantees to Taiwan. They include established scholars and beginning Ph.D. students, are in every academic discipline, and are at every level of education. Today's Taiwanese Fulbright alumni are an impressive group including, for instance, four members of the President's Cabinet and creative artists like the Founder of Cloud Gate Dance Company. This year among scholars and students there are fifteen (15) Americans in Taiwan and fifty-one (51) Taiwanese in America.

Starting in 2003, FSE has cooperated with County/City governments to organize the Fulbright English Teaching Assistant (ETA) Program. This brings young Americans to Taiwan to teach full-time for a year in elementary school classrooms alongside a Taiwanese Local English Teacher. The program is a remarkable success story. The ETAs are not only local instruments of international education, they also are changed by their year and take a new perspective back to America. The Program began in Yilan County, expanded to Kaoshiung in 2008, to Kinmen in 2012, and will expand to Taichung and Taipei in 2013. Next year we expect to have 53-60 ETAs serving in local schools.

Similarly under the Foreign Language Teaching Assistant (FLTA) Program, Taiwanese English teachers are sent to American colleges or universities for a year to assist in Mandarin education. There are five Taiwanese teaching Mandarin in America this year.

Finally, in 1962, FSE started the U.S. Education Information Center for Taiwan students who need information about studying in the U.S. That service continues and has helped thousands of students understand and engage in international education.

Hopefully in the future the mission of FSE will be enhanced by a new emphasis on evaluating the impact of international education. This research would supplement the ongoing, complicated, difficult tasks of actually moving people and ideas internationally. This new focus fits nicely with Taiwan's new emphasis on the importance of international education.

C.International Education in Taiwan

This spring the Ministry of Education (MOE) issued a 16-page White Paper entitled, "Developing 21st Century Competencies for Our Next Generation." (MOE, 2012) The report is impressive. It is a comprehensive look at the structure and process for designing and implementing an International Education Policy for Taiwan.

The report identifies four goals for international education because, "…the global market

approach to competition has shifted from cost efficiency and mass production, to fostering human resources and creativity." (MOE, 2012, 3) This rationale is remarkably like the discussions above by WEF and McKensey.

Central to the White Paper and tailored to Taiwan are four goals. These are particularly well stated and powerful. The first goal, National Identity, also meets a critical need specific to Taiwan. International education can help cope with this identity issue identified by novelists, politician, artists, political scientists, etc. The four goals are:

1. National Identity: strong and securely grounded
2. International Awareness: of cultural and global issues and appreciative of diversity
3. Global Competitiveness: (undefined)
4. Global Responsibility: mutual respect and promotion of peace, human rights, and conservation

These are commendable, complementary, effective goals and are capable of being operationalization.

The White Paper is designed as a ten year plan. Its message is developed into three summary charts which clearly lay out the complicated and comprehensive nature of the exercise. These are an Overview of International Education Policy (see Appendix 6), the structural responsibility for implementing that policy as an Organizational Chart of the National Network, (see Appendix 7), and a road map or An Organizational Chart for Implementation of the Policy of International Education (see Appendix 8).

The White Paper is less complete in two areas, and elaborating them was neither its purpose nor its place. Rather the Paper was a call and plan for action. First, like the definitions of international education above, the White Paper simply assumes the casual linkage between international education and the four goals. Part of the purpose of this paper is to elaborate the role international education can play by discussing the components of Prosperity.

Second, the White Paper necessarily leaves the task of creating performance indicators for international education to later, more professional bodies as outlined in Appendix 8. Again, the purpose of this paper is part to suggest some potential indices.

In summary, international education in Taiwan may be about to enter new and exciting phase. Taiwan has undergone economic, political, and medical/technological miracles since the 1950s. Taiwan's human capital has driven those miracles.

Much of that success was accentuated by education that Taiwanese received abroad and brought back. Some was driven by investments of foreign aid in Taiwan by the United States. Foreign

templates of democracy and social responsibility were also important factors. In short, international education was crucial in Taiwan's development.

Today a new form and focus on international education can be a part of Taiwan's future. A central issue is how to measure what we know exists without losing the essence of doing international education. The more fundamental point is how to become globally minded without losing our roots. Here we are back to our dilemma of balancing the Lexus and Olive Tree.

D. Performance Indicators of International Education

This section simply hints at solutions which assess the impact of international education. Developing measurements is one of the main tasks facing the new International Education Center, referenced as perhaps the key player in MOE's Organization Chart for the Implementation of the Policy of International Education (Appendix 8).

Gutierrez (2012) suggests in reference to study abroad assessment that some of the methods involved in assessment include: "surveys and longitudinal data, comparative case studies, interviews and focused groups, and observations and judgments." He further quotes Tsapogas (2008) regarding the importance of measurement at different levels, "individual, institutional, and 'knowledge environment."

This brings us back to the discussion of levels of analysis at the beginning of the paper. Effective development of performance indicators for international education has to happen at least at three levels.

a. Individual

International education at its base needs to change people. If education is effective, people are different afterwards. Normally that difference can be observed as a change in knowledge, attitudes, skills, or behavior. Often an educational experience or activity will change more than one of these, sometimes all four. One study of undergraduates surveyed them to see if their international education experience in a teacher train program enhanced their preparation for their subsequent careers. (Sandell, 2012)

Following other researchers, Sandell argues, "There are at least four primary areas in which international education is considered to have an impact (on teachers): professional role, international perspectives, personal development, and intellectual development" (italics added). She uses survey research techniques to assess student development. While the sample is small and the results probably not conclusive, the questions asked are interesting.

The questions are listed in Tables 1-4 in Appendix 10 and provide one insight into what and how information could be collected on the changes that take place in knowledge, attitudes, skills, or behaviors of people engaged in international education.

b. Institutional

An equally important component is internationalizing the institutions that deliver education: the schools, institutes, and universities. The objective, of course, is to change people. However, that change is not usually self-generated. Rather, educational institutions engender or facilitate that change. Changing institution is the best way to reach large numbers of people and is likely to be the only way that the process of change can be embedded long-term among the people of a nation.

Abd Aziz (et.al, 2011) provides some insight on measuring the impact of internationalization on institutions. Specifically, the authors focus on higher education in Malaysia, but similar schemes can be developed for other levels of education.

The authors develop a comprehensive set of assessment tools based on numerical data (much of which is longitudinal), data extracted from existing institutional reports, and survey data that is both short response and stakeholder feedback. An overview of the key aspects of internationalization in Malaysian higher education is presented in Appendix 11 and the actual performance indicators and data sources are presented in Appendix 12.

The authors recognize, like in Taiwan, that this is an exercise requiring extensive time and continued renewal. They suggest in conclusion, "The indicators presented are far from adequate and may not reflect the real picture of internationalisation in Malaysian higher education. More research, particularly in identifying institution's understanding on internationalisation as well as the capacity and current operations of internationalisation activities, should provide better insight in developing indicators with better accuracy and relevance to Malaysian higher education institutions." (Abd Aziz, 2011, 15)

As with the individual performance indicators presented above, these institutional indicators are an illustration of the type of assessment that can and needs to be done to promote and understand international education in Taiwan.

c. National

The authors (Abd Aziz, 2011, 4) also indicate that, currently at the national level, Malaysia is using a set of six key performance indicators (KPIs) to assess the progress of internationalization. These were developed from strategic working groups as an initial assessment tool at the national level. The six KPIs for Malaysian higher education which are measured nation-wide are:

1. Number of international students enrolled
2. Number of international staff employed
3. Number of students involved in an international mobility program
4. Number of students sponsored by foreign governments/agencies
5. Number of staff involved in inbound mobility programs
6. Number of staff involved in outbound mobility programs.

While incredibly rough, the changes in these indices overtime would give a picture of how much success Malaysia is having in getting more students into its higher education international programs and in getting more Malaysians to study abroad.

Again, these performance indicators are simply meant to be provocative. The key in assessing international education is to develop tools that 1) work at all three levels: individual, institutional, and national; 2) are longitudinal; and 3) can be related to measures of competitiveness.

d. Best Practices: NAFSA Evaluation Suggestions

Perhaps the best overview of evaluation is provided by NAFSA, formally the National Association of Foreign Student Advisors. NAFSA is the premier U.S. non-profit dealing with study abroad, international students, and international education in the U.S.

The issues of assessment and evaluation are playing an increasingly important role in NAFSA activities. In 2010 a major task force published their report, *Assessment and Evaluation for International Educators*. According to the report, "One of the most pressing challenges comes in devising strategies for treating these multiple levels of assessment, and/or in the interaction between the levels." (NAFSA, 2010, 5)

Similarly NAFSA published another major study by Green (2012) on *Measuring and Assessing Internationalization*. Green focuses on both the individual and the institutional levels in discussing performance indicators and reaches the conclusion that "There is no doubt that assessing student learning is the more challenging of the two measurement frameworks and the least rewarded in terms of prestige and ranking, but that does not negate their importance as a measure of institutional quality." (Green, 2012, 19)

These publications may become the basis for the development of performance indicators for international education. One fundamental difference and a distinct advantage for Taiwan is that U.S. education is highly decentralized. Hence, the development and implementation of national standards and indicators can be more suggestive than directive. Taiwan's educational system sometimes suffers paralysis from centralization, but a more centralized system also offers the opportunity to develop and implement a comprehensive and effective program. Taiwan can construct national level

measures.

The argument of this paper is echoed by Green. We argue, as she does, that the development of performance indicators for international education "…will take on greater importance as they continue to become more central to the definition of quality…"

VI. Relating International Education to Prosperity

The final argument is the most difficult. Neither the data nor the indicators for the impact of international education exist in a complete and longitudinal set. With a fully developed and implemented set of performance indicators, there should be little problem relating internationalization to prosperity. Rather we are forced back to partial or logical or anecdotal evidence.

For instance, the McKensey analysis cited earlier places human capital at the base of innovation formation and hence eventually prosperity. A significant number of the factors they list as crucial are impacted positively by international education experiences.

Similarly, improvements in the skills discussed above (page 24) are all likely to increase the quality of human capital and to build a base for prosperity.

Discussing innovation and reviewing McKensey's Figure 13 indicates that 'culture' is an important part of the innovation process. Indeed, coming to terms with culture in a personal sense is one of the fundamental lessons learned during an overseas international education experience. Experiencing and overcoming Culture Shock is a challenge that faces everyone who studies abroad. Looking at the Figure 16 and relating this cultural achievement to the Soft Enablers of human capital is an easy logical jump. 'Tolerance failure' and 'risk appetite' are both prerequisites for and outcomes of study abroad. Similar observations are true regarding McKensey's other enablers.

In a different vein, we can look at all 111 indices of the Global Competitiveness Index (GCI) developed by the WEF. Sixteen indices are identifiable that might reasonably be impacted by international education (see red arrows, Appendix 1). In particular, the two pillars, upon which innovation rests, have a relatively large number of indices which are likely to be positively impacted by international education.

Historical analogies provide other evidence of the linkage between international experience and innovation; although again these are interpretive. The emergence of Holland as a major power in Europe and Amsterdam as a hub of creativity, finance, trade, exploration, and commerce was in part related to settlement there of many Protestants after their expulsion from France by the 1598 Edict of Nantes. The slow decline of Spain in the 16th and 17th centuries has been associated

by some with the Expulsion of the Sephardic Jews and other foreigners in 1492. America's growth, resilience, and success is closely linked with immigrants who by definition are engaged an international educational experience.

In other words, both our instincts and some evaluations indicate that international education has a potentially close and profound link with prosperity. Of course, this could be wrong. Until we develop the indices, track them overtime, and then compare them with indices of competitiveness and innovation we won't know. Perhaps it's wishful thinking, but we bet the relationship is real.

VII. Taiwan's Future

Taiwan has had a remarkable run. Its miracles mentioned above are well documented and were fueled in part by international education. Taiwan's achievements were recently summarized by one of America's most famous commentators, Thomas Friedman (2012).

> EVERY so often someone asks me: "What's your favorite country, other than your own?"
>
> I've always had the same answer: Taiwan. "Taiwan? Why Taiwan?" people ask.
>
> Very simple: Because Taiwan is a barren rock in a typhoon-laden sea with no natural resources to live off of — it even has to import sand and gravel from China for construction — yet it has the fourth-largest financial reserves in the world. Because rather than digging in the ground and mining whatever comes up, Taiwan has mined its 23 million people, their talent, energy and intelligence… How did you get so lucky? … you developed the habits and culture of honing your people's skills, which turns out to be the most valuable and only truly renewable resource in the world today….

Figure 19. Taiwan

Will this be true in 20 years? In contrast, Taiwan looks less competitive in one survey of National Higher Education Systems (Williams 2012). The authors develop a composite ranking of forty-eight (48) higher education systems based on twenty-two

indices. The indices are clustered into four major headings:

- Resources
- Environment
- Connectivity
- Output

Taiwan’s overall ranking is okay, #21 of 48, with only Singapore, Hong Kong, and Japan ranked above it in Asia (see Appendix 14).

One dimension, connectivity, is essentially international education and is based on both international students and international research collaboration by faculty. Taiwan’s ranking on connectivity is awful, #45 of 48 (see Appendix 15). Although connectivity (international education) forms a smaller part of the equation used to create the overall ranking, it is Taiwan’s weak link and dramatically decreases Taiwan’s rank. At least for this research, international education is important and Taiwan falls very short.

Taiwan’s good economic fortunes may also be coming to an end without clear and effective policies to reverse the decline. Recent news shows Taiwan growing slower than its neighbors, and in fact slower than most emerging markets.

Perhaps most telling is the pattern developed by WEF in their Global Competitiveness Index. Looking closely at Taiwan (see Figure 19), most of the pillars of competitiveness are barely equal to the average of the group of 35 innovation-driven economies.

Taiwan while still doing well has a struggle ahead if it is to maintain its position and prosperity. WEF summarizes Taiwan’s strengths and weaknesses as follows:

…Taiwan displays a consistent performance across the pillars of the GCI, although it enters the top 10 in only two of them. Its prowess in innovation is undeniable. Taiwan ranks 10th in higher education and training (in contrast to Williams 2012). …Among the country’s relative weaknesses, its labor market is characterized by much rigidity (98th); the situation has been deteriorating over the past two years…. Room for improvement also exists in public and private institutions….

Remember both the American and Chinese graphs in Figure 11 where significant pillars of blue were outside the black line of group average. The visual impact of Figure 19 should reinforce Friedman’s quotation about the attention human capital requires. Having successfully relied on human capital is a wonderful achievement.

However, there is a down side. Relying on human capital demands continual attention and improvement. Others are always catching up and new ways of moving from ideation to

implementation to commercialization are continually being formed.

In a fundamental sense, natural resources are always there. They are in the ground. Human resources require constant attentiveness. A bad set of textbooks, used for several years, may undermine the potential of a generation.

A failure effectively to embrace international education, as it comes into its century, may risk a similar generational decline.

VIII. Conclusion

The success of the place where you live is closely correlated with personal success. They are self-reinforcing, a virtuous circle. Personal and regional prosperity both depend on being competitive. Individuals have more opportunity if their homeland is competitive. Places are more competitive if their people are also.

As the WEF and McKensey material illustrate, competitiveness and its corollary innovation are highly dependent on human capital, on people's knowledge, attitudes, skills, and behavior.

An important part of innovation and competitiveness is enhanced by international education. International education promotes the traits that lead to competitiveness. How?

- Acquiring knowledge in many areas
- Investigating the New
- Learning a language
- Learning tolerance and perspective
- Confronting difference
- Growing and changing as a person
- Connecting issues and ideas across disciplines
- Living in an another culture
- Dealing with culture shock
- Developing a strong, resilient, adaptable personality
- Solving problems

A simplistic dichotomy based on Friedman's analogy, while distorting, helps clarify the challenge facing people, economies, and international education.

Some people are inherently mobile, moving to jobs and opportunities. These are the 'Lexus' people. They may never drive a Lexus, but their life stories are shaped by the same forces that drive globalization and integration. These people understand globalization and strive to make themselves competitive in that market place. They seek growth and opportunity, and understand the global

marketplace for human resources. These are multinational people, and they often long for roots.

The majority of people are Olive Tree people. They have roots and place. They don't stray too far from their base, their home. Like international companies these people are necessarily part of the global environment. It touches them and they are aware of it, but not part of it. They are like importers or exporters. They interact with the global environment by buying and selling, taking and giving, but not necessarily engaging.

The key for international education is to focus on Olive Tree people. A focus on Lexus people is preaching to the converted. They are already on the road to being mobile, global, international, competitive. Rather, the core of Taiwanese society must be encouraged to understand and embrace an international education perspective. For Taiwan, international education should become a foundation for the entire society, embedded in its basic institutions.

Taiwan already has a good start. Almost everyone seems to have a friend, classmate, or relative living overseas. There are almost 500,000 foreigners living in Taiwan. Language education begins in the third grade. A million Taiwanese live in China and have heavily invested there (though some might not see it as another culture). MOE has an ambitious plan for the next ten years.

However, Taiwan also has a long way to go. One simple symbolic indicator, that is deeply annoying to visitors, is the lack of a common system for Romanizing Chinese. From my house to my mother-in-laws, I can see nine different versions of Xindian. Of course, this confusion is closely linked to the National Identity question identified by MOE as one of its four key goals.

How do you get people to look up from the local debate to the broader issues? A single system of Romanization of Chinese is simply a necessary and practical device. It need not have political, identity, and national overtones. Using Arabic numerals, 1-2-3-4-etc. does not endorse the Muslim religion.

Creating a more internationally minded Taiwan society and Taiwanese people requires two things: Incentives and Performance Indicators.

Olive Trees need incentives, fertilizers, to spread their branches. For instance, incentives for international education should be built into promotion and reward structures for all public and private organizations.

Teachers should find that they can easily take a year's leave, or even sabbatical, to study or work overseas. If they do, they should be rewarded by movement up the promotion ladder. The same should be true for bureaucrats. Companies should keep places open for people who go abroad to seek a degree. They could be encouraged to do so with tax incentives. Today, taking that year's

leave or holding that job open, is often difficult.

Incentives need to be combined with performance indicators. Otherwise international education can seem to be simply extended vacation or personal time.

The opportunity exists to create performance indicators for individuals, institutions, and the nation that will help stimulate a more global perspective. Investing in the international dimension of human capital on a society wide basis is an easy and relatively cheap way to prepare Taiwan for 21st century competitiveness.

For Taiwan to be successful; for its bureaucrats, teachers, and business people to be successful; for jobs at the local level to be rewarding, Taiwan needs a more concerted and concentrated approach to international education.

The right words are there. From the President to the elementary school teacher, Taiwan talks about international competitiveness. Taiwan knows how to invest in the hard economies of high-speed rail, ports, science parks, world class universities, sports facilities, etc. Taiwan needs to give more thought to the soft power of human capital. As noted on page 22, international education suffers from a number of problems which interfere. Overcoming that interference is crucial.

In summary, the central issue is how to incentivize and measure what we know exists without losing the essence of doing international education. The more fundamental point is how to become globally minded without losing our roots. Here we are back to our dilemma of balancing the Lexus and Olive Tree

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Appendix 1. Global Competitiveness Index in Detail for Taiwan (Schwab, 2012, 339)

	INDICATOR	VALUE	RANK/142
	1st pillar: Institutions		
1.01	Property rights	5.8	14
1.02	Intellectual property protection	5.0	29
1.03	Diversion of public funds	4.7	34
1.04	Public trust of politicians	4.2	27
1.05	Irregular payments and bribes	5.2	34
1.06	Judicial independence	4.7	44
1.07	Favoritism in decisions of government officials	4.1	28
1.08	Wastefulness of government spending	3.9	35
1.09	Burden of government regulation	3.8	30
1.10	Efficiency of legal framework in settling disputes	4.2	44
1.11	Efficiency of legal framework in challenging regs.	4.3	34
1.12	Transparency of government policymaking	5.8	5
1.13	Business costs of terrorism	6.1	34
1.14	Business costs of crime and violence	5.7	28
1.15	Organized crime	5.7	45
1.16	Reliability of police services	5.4	32
1.17	Ethical behavior of firms	4.9	35
1.18	Strength of auditing and reporting standards	5.5	30
1.19	Efficacy of corporate boards	4.9	34
1.20	Protection of minority shareholders' interests	5.0	25
1.21	Strength of investor protection, 0–10 (best)*	5.3	60
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	5.6	25
2.02	Quality of roads	5.6	25
2.03	Quality of railroad infrastructure	5.4	12
2.04	Quality of port infrastructure	5.2	35
2.05	Quality of air transport infrastructure	5.2	51
2.06	Available airline seat kms/week, millions*	877.1	27
2.07	Quality of electricity supply	6.3	25
2.08	Fixed telephone lines/100 pop.*	70.8	1
2.09	Mobile telephone subscriptions/100 pop.*	119.9	43
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-4.9	91
3.02	Gross national savings, % GDP*	32.3	24
3.03	Inflation, annual % change*	1.0	1
3.04	Interest rate spread, %*	2.0	10
3.05	General government debt, % GDP*	39.7	71
3.06	Country credit rating, 0–100 (best)*	81.3	20
	4th pillar: Health and primary education		
4.01	Business impact of malaria	N/Appl.	1
4.02	Malaria cases/100,000 pop.*	0.0	1
4.03	Business impact of tuberculosis	5.7	57
4.04	Tuberculosis incidence/100,000 pop.*	81.0	83
4.05	Business impact of HIV/AIDS	5.8	34
4.06	HIV prevalence, % adult pop.*	0.2	54
4.07	Infant mortality, deaths/1,000 live births*	4.1	25
4.08	Life expectancy, years*	79.0	28
4.09	Quality of primary education	5.7	8
4.10	Primary education enrollment, net %*	98.0	23
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	100.3	25
5.02	Tertiary education enrollment, gross %*	83.8	5
5.03	Quality of the educational system	4.9	19
5.04	Quality of math and science education	5.8	5
5.05	Quality of management schools	5.1	23
5.06	Internet access in schools	6.1	13
5.07	Availability of research and training services	5.2	21
5.08	Extent of staff training	4.6	30

	INDICATOR	VALUE	RANK/142
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	6.1	1
6.02	Extent of market dominance	5.5	5
6.03	Effectiveness of anti-monopoly policy	4.8	24
6.04	Extent and effect of taxation	4.2	22
6.05	Total tax rate, % profits*	41.9	80
6.06	No. procedures to start a business*	6	34
6.07	No. days to start a business*	15	63
6.08	Agricultural policy costs	4.4	26
6.09	Prevalence of trade barriers	4.6	55
6.10	Trade tariffs, % duty*	5.6	69
6.11	Prevalence of foreign ownership	5.4	26
6.12	Business impact of rules on FDI	5.3	20
6.13	Burden of customs procedures	5.3	11
6.14	Imports as a percentage of GDP*	67.0	31
6.15	Degree of customer orientation	5.6	9
6.16	Buyer sophistication	4.6	7
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	5.2	17
7.02	Flexibility of wage determination	5.6	24
7.03	Rigidity of employment index, 0–100 (worst)*	46.0	118
7.04	Hiring and firing practices	3.8	80
7.05	Redundancy costs, weeks of salary*	91	118
7.06	Pay and productivity	5.4	3
7.07	Reliance on professional management	5.2	28
7.08	Brain drain	4.7	22
7.09	Women in labor force, ratio to men*	0.75	79
	8th pillar: Financial market development		
8.01	Availability of financial services	5.7	24
8.02	Affordability of financial services	6.0	1
8.03	Financing through local equity market	5.2	2
8.04	Ease of access to loans	3.6	26
8.05	Venture capital availability	3.9	15
8.06	Soundness of banks	5.5	51
8.07	Regulation of securities exchanges	5.5	15
8.08	Legal rights index, 0–10 (best)*	4.0	89
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.7	37
9.02	Firm-level technology absorption	5.9	13
9.03	FDI and technology transfer	5.0	39
9.04	Internet users/100 pop.*	71.5	23
9.05	Broadband Internet subscriptions/100 pop.*	22.7	28
9.06	Internet bandwidth, kb/s/capita*	21.2	32
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	4.9	19
10.02	Foreign market size index, 1–7 (best)*	6.0	11
	11th pillar: Business sophistication		
11.01	Local supplier quantity	5.8	5
11.02	Local supplier quality	5.7	12
11.03	State of cluster development	5.6	1
11.04	Nature of competitive advantage	5.2	18
11.05	Value chain breadth	5.0	17
11.06	Control of international distribution	4.7	22
11.07	Production process sophistication	5.6	16
11.08	Extent of marketing	5.3	19
11.09	Willingness to delegate authority	4.2	34
	12th pillar: Innovation		
12.01	Capacity for innovation	4.7	15
12.02	Quality of scientific research institutions	5.2	19
12.03	Company spending on R&D	5.0	9
12.04	University-industry collaboration in R&D	5.2	12
12.05	Gov't procurement of advanced tech products	4.5	11
12.06	Availability of scientists and engineers	5.5	5
12.07	Utility patents granted/million pop.*	355.7	1

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*). For further details and explanation, please refer to the section "How to Read the Country/Economy Profiles" on page 89.

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Appendix 2. Subindex Weights and Income Thresholds for Stages of Development (Schwab, 2012, 10)

	STAGES OF DEVELOPMENT			
	Stage 1: Factor-driven	Transition from stage 1 to stage 2	Stage 2: Efficiency-driven	Transition from stage 2 to stage 3
GDP per capita (US$) thresholds*	<2,000	2,000–2,999	3,000–8,999	9,000–17,000
Weight for basic requirements subindex	60%	40–60%	40%	20–40%

Appendix 3. Global Competitive Index 2011-2012 (Schwab, 2012, 15)

Country/Economy	GCI 2011-2012 Rank/142	GCI 2011-2012 Score	GCI 2011-2012 rank among 2010 countries	GCI 2010-2011 rank
Switzerland	1	5.74	1	1
Singapore	2	5.63	2	3
Sweden	3	5.61	3	2
Finland	4	5.47	4	7
United States	5	5.43	5	4
Germany	6	5.41	6	5
Netherlands	7	5.41	7	8
Denmark	8	5.40	8	9
Japan	9	5.40	9	6
United Kingdom	10	5.39	10	12
Hong Kong SAR	11	5.36	11	11
Canada	12	5.33	12	10
Taiwan, China	13	5.26	13	13
Qatar	14	5.24	14	17
Belgium	15	5.20	15	19
Norway	16	5.18	16	14
Saudi Arabia	17	5.17	17	21
France	18	5.14	18	15
Austria	19	5.14	19	18
Australia	20	5.11	20	16
Malaysia	21	5.08	21	26
Israel	22	5.07	22	24
Luxembourg	23	5.03	23	20
Korea, Rep.	24	5.02	24	22
New Zealand	25	4.93	25	23
China	26	4.90	26	27
United Arab Emirates	27	4.89	27	25
Brunei Darussalam	28	4.78	28	28
Ireland	29	4.77	29	29
Iceland	30	4.75	30	31
Chile	31	4.70	31	30
Oman	32	4.64	32	34
Estonia	33	4.62	33	33
Kuwait	34	4.62	34	35
Puerto Rico	35	4.58	35	41
Spain	36	4.54	36	42
Bahrain	37	4.54	37	37
Czech Republic	38	4.52	38	36
Thailand	39	4.52	39	38
Tunisia	40	4.47	40	32
Poland	41	4.46	41	39
Barbados	42	4.44	42	43
Italy	43	4.43	43	48
Lithuania	44	4.41	44	47
Portugal	45	4.40	45	46
Indonesia	46	4.38	46	44
Cyprus	47	4.36	47	40
Hungary	48	4.36	48	52
Panama	49	4.35	49	53
South Africa	50	4.34	50	54
Malta	51	4.33	51	50
Sri Lanka	52	4.33	52	62
Brazil	53	4.32	53	58
Mauritius	54	4.31	54	55
Azerbaijan	55	4.31	55	57
India	56	4.30	56	51
Slovenia	57	4.30	57	45
Mexico	58	4.29	58	66
Turkey	59	4.28	59	61
Montenegro	60	4.27	60	49
Costa Rica	61	4.27	61	56
Iran, Islamic Rep.	62	4.26	62	69
Uruguay	63	4.25	63	64
Latvia	64	4.24	64	70
Vietnam	65	4.24	65	59
Russian Federation	66	4.21	66	63
Peru	67	4.21	67	73
Colombia	68	4.20	68	68
Slovak Republic	69	4.19	69	60
Rwanda	70	4.19	70	80
Jordan	71	4.19	71	65
Kazakhstan	72	4.18	72	72
Morocco	73	4.16	73	75
Bulgaria	74	4.16	74	71
Philippines	75	4.08	75	85
Croatia	76	4.08	76	77
Romania	77	4.08	77	67
Albania	78	4.06	78	88
Macedonia, FYR	79	4.05	79	79
Botswana	80	4.05	80	76
Trinidad and Tobago	81	4.00	81	84
Ukraine	82	4.00	82	89
Namibia	83	4.00	83	74
Guatemala	84	4.00	84	78
Argentina	85	3.99	85	87
Honduras	86	3.98	86	91
Algeria	87	3.96	87	86
Georgia	88	3.95	88	93
Lebanon	89	3.95	89	92
Greece	90	3.92	90	83
El Salvador	91	3.89	91	82
Armenia	92	3.89	92	98
Moldova	93	3.89	93	94
Egypt	94	3.88	94	81
Serbia	95	3.88	95	96
Mongolia	96	3.86	96	99
Cambodia	97	3.85	97	109
Syria	98	3.85	98	97
Gambia, The	99	3.84	99	90
Bosnia and Herzegovina	100	3.83	100	102
Ecuador	101	3.82	101	105
Kenya	102	3.82	102	106
Bolivia	103	3.82	103	108
Benin	104	3.78	104	103
Tajikistan	105	3.77	105	116
Ethiopia	106	3.76	106	119
Jamaica	107	3.76	107	95
Bangladesh	108	3.73	108	107
Guyana	109	3.73	109	110
Dominican Republic	110	3.73	110	101
Senegal	111	3.70	111	104
Suriname	112	3.67	n/a	n/a
Zambia	113	3.67	112	115
Ghana	114	3.65	113	114
Nicaragua	115	3.61	114	112
Cameroon	116	3.61	115	111
Malawi	117	3.58	116	125
Pakistan	118	3.58	117	123
Cape Verde	119	3.58	118	117
Tanzania	120	3.56	119	113
Uganda	121	3.56	120	118
Paraguay	122	3.53	121	120
Belize	123	3.52	n/a	n/a
Venezuela	124	3.51	122	122
Nepal	125	3.47	123	130
Kyrgyz Republic	126	3.45	124	121
Nigeria	127	3.45	125	127
Mali	128	3.39	126	132
Côte d'Ivoire	129	3.37	127	129
Madagascar	130	3.36	128	124
Timor-Leste	131	3.35	129	133
Zimbabwe	132	3.33	130	136
Mozambique	133	3.31	131	131
Swaziland	134	3.30	132	126
Lesotho	135	3.26	133	128
Burkina Faso	136	3.25	134	134
Mauritania	137	3.20	135	135
Yemen	138	3.06	n/a	n/a
Angola	139	2.96	136	138
Burundi	140	2.95	137	137
Haiti	141	2.90	n/a	n/a
Chad	142	2.87	138	139

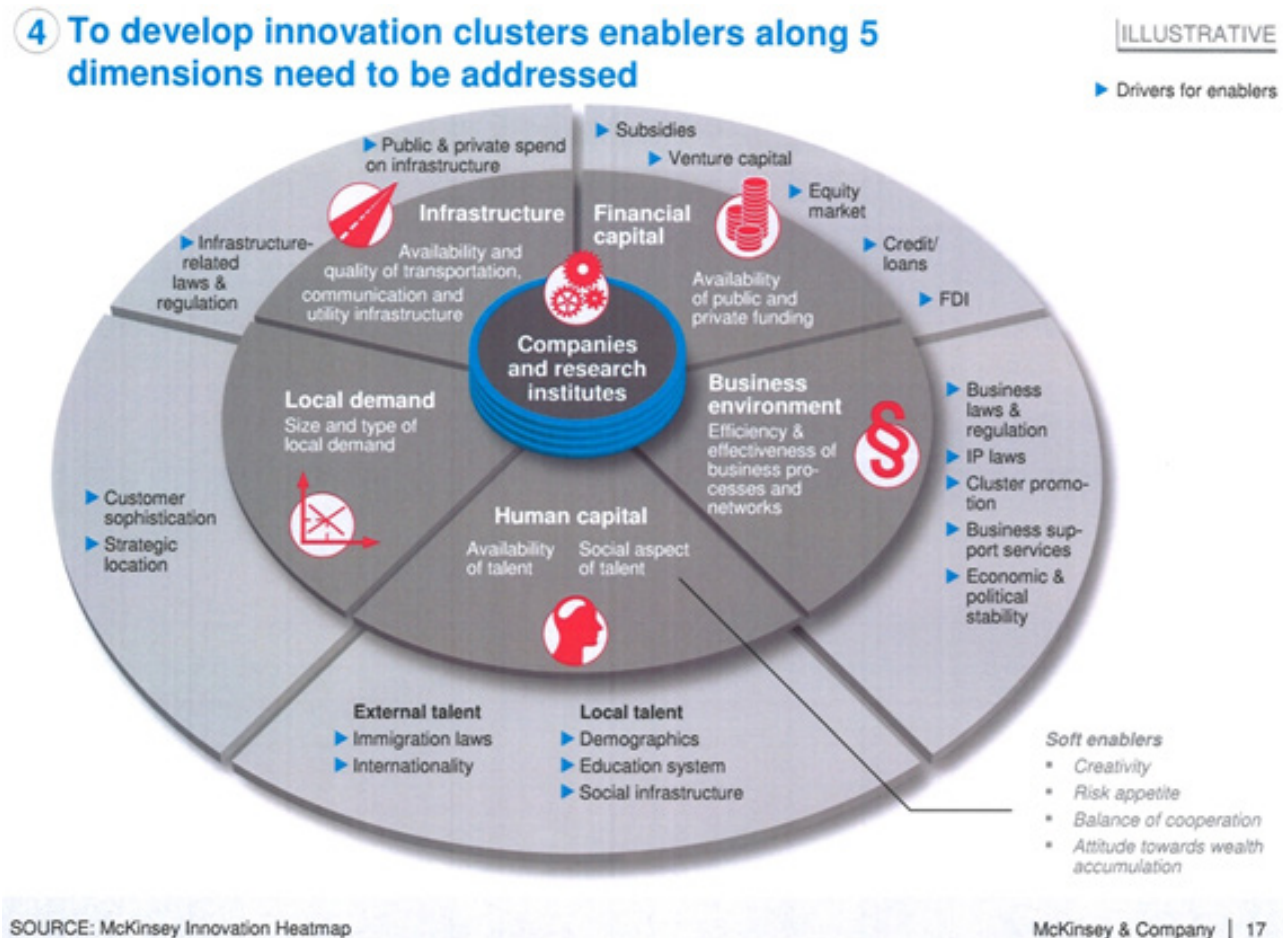
Appendix 4. Global Competitiveness Index and the Stages of Development

			SUBINDEXES					
	OVERALL INDEX		Basic requirements		Efficiency enhancers		Innovation and sophistication factors	
Country/Economy	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Switzerland	1	5.74	3	6.18	2	5.53	1	5.79
Singapore	2	5.63	1	6.33	1	5.58	11	5.23
Sweden	3	5.61	4	6.06	7	5.33	2	5.79
Finland	4	5.47	5	6.02	10	5.19	4	5.56
United States	5	5.43	36	5.21	3	5.49	6	5.46
Germany	6	5.41	11	5.83	13	5.18	5	5.53
Netherlands	7	5.41	7	5.88	8	5.29	9	5.30
Denmark	8	5.40	8	5.86	9	5.27	8	5.31
Japan	9	5.40	28	5.40	11	5.19	3	5.75
United Kingdom	10	5.39	21	5.60	5	5.43	12	5.17
Hong Kong SAR	11	5.36	2	6.21	4	5.48	25	4.58
Canada	12	5.33	13	5.77	6	5.36	15	4.99
Taiwan, China	13	5.26	15	5.69	16	5.10	10	5.25
Qatar	14	5.24	12	5.81	27	4.68	16	4.98
Belgium	15	5.20	22	5.58	15	5.13	14	5.06
Norway	16	5.18	9	5.85	14	5.15	19	4.78
Saudi Arabia	17	5.17	16	5.66	24	4.82	24	4.64
France	18	5.14	23	5.57	17	5.09	17	4.93
Austria	19	5.14	18	5.65	19	4.94	13	5.12
Australia	20	5.11	14	5.74	12	5.18	26	4.57
Malaysia	21	5.08	25	5.45	20	4.88	22	4.65
Israel	22	5.07	35	5.23	21	4.86	7	5.32
Luxembourg	23	5.03	6	5.90	23	4.86	20	4.75
Korea, Rep.	24	5.02	19	5.65	22	4.86	18	4.87
New Zealand	25	4.93	17	5.66	18	4.99	28	4.34
China	26	4.90	30	5.33	26	4.70	31	4.15
United Arab Emirates	27	4.89	10	5.84	25	4.78	27	4.43
Brunei Darussalam	28	4.78	24	5.48	71	4.03	73	3.45
Ireland	29	4.77	37	5.20	28	4.67	23	4.65
Iceland	30	4.75	31	5.31	33	4.57	21	4.67
Chile	31	4.70	29	5.37	34	4.54	42	3.88
Oman	32	4.64	20	5.62	45	4.33	44	3.87
Estonia	33	4.62	27	5.41	36	4.52	37	3.98
Kuwait	34	4.62	34	5.25	67	4.05	66	3.51
Puerto Rico	35	4.58	41	5.09	35	4.53	29	4.32
Spain	36	4.54	38	5.18	32	4.58	33	4.03
Bahrain	37	4.54	26	5.42	31	4.59	46	3.86
Czech Republic	38	4.52	45	4.90	29	4.63	32	4.09
Thailand	39	4.52	46	4.88	43	4.38	51	3.75
Tunisia	40	4.47	42	5.08	58	4.11	43	3.87
Poland	41	4.46	56	4.70	30	4.61	57	3.64
Barbados	42	4.44	33	5.25	49	4.28	47	3.86
Italy	43	4.43	47	4.84	40	4.41	30	4.18
Lithuania	44	4.41	49	4.82	48	4.31	50	3.78
Portugal	45	4.40	44	5.00	39	4.42	38	3.98
Indonesia	46	4.38	53	4.74	56	4.18	41	3.90
Cyprus	47	4.36	32	5.26	46	4.32	48	3.83
Hungary	48	4.36	55	4.72	42	4.39	52	3.75
Panama	49	4.35	50	4.81	57	4.13	54	3.68
South Africa	50	4.34	85	4.32	38	4.44	39	3.93
Malta	51	4.33	40	5.12	47	4.32	49	3.83
Sri Lanka	52	4.33	65	4.61	69	4.03	34	4.03
Brazil	53	4.32	83	4.33	41	4.40	35	4.02
Mauritius	54	4.31	48	4.83	68	4.04	60	3.62
Azerbaijan	55	4.31	59	4.68	77	3.99	67	3.51
India	56	4.30	91	4.25	37	4.46	40	3.92
Slovenia	57	4.30	39	5.12	51	4.23	45	3.87
Mexico	58	4.29	67	4.59	53	4.21	55	3.65
Turkey	59	4.28	64	4.61	52	4.22	58	3.62
Montenegro	60	4.27	57	4.69	63	4.07	59	3.62
Costa Rica	61	4.27	70	4.54	61	4.09	36	4.02
Iran, Islamic Rep.	62	4.26	51	4.80	88	3.76	83	3.37
Uruguay	63	4.25	43	5.04	75	4.00	65	3.51
Latvia	64	4.24	66	4.60	54	4.20	64	3.53
Vietnam	65	4.24	76	4.41	66	4.05	75	3.44
Russian Federation	66	4.21	63	4.61	55	4.19	97	3.24
Peru	67	4.21	78	4.38	50	4.25	89	3.32
Colombia	68	4.20	73	4.47	60	4.10	56	3.65
Slovak Republic	69	4.19	60	4.66	44	4.38	71	3.46
Rwanda	70	4.19	72	4.53	95	3.71	68	3.51
Jordan	71	4.19	61	4.65	78	3.95	70	3.48

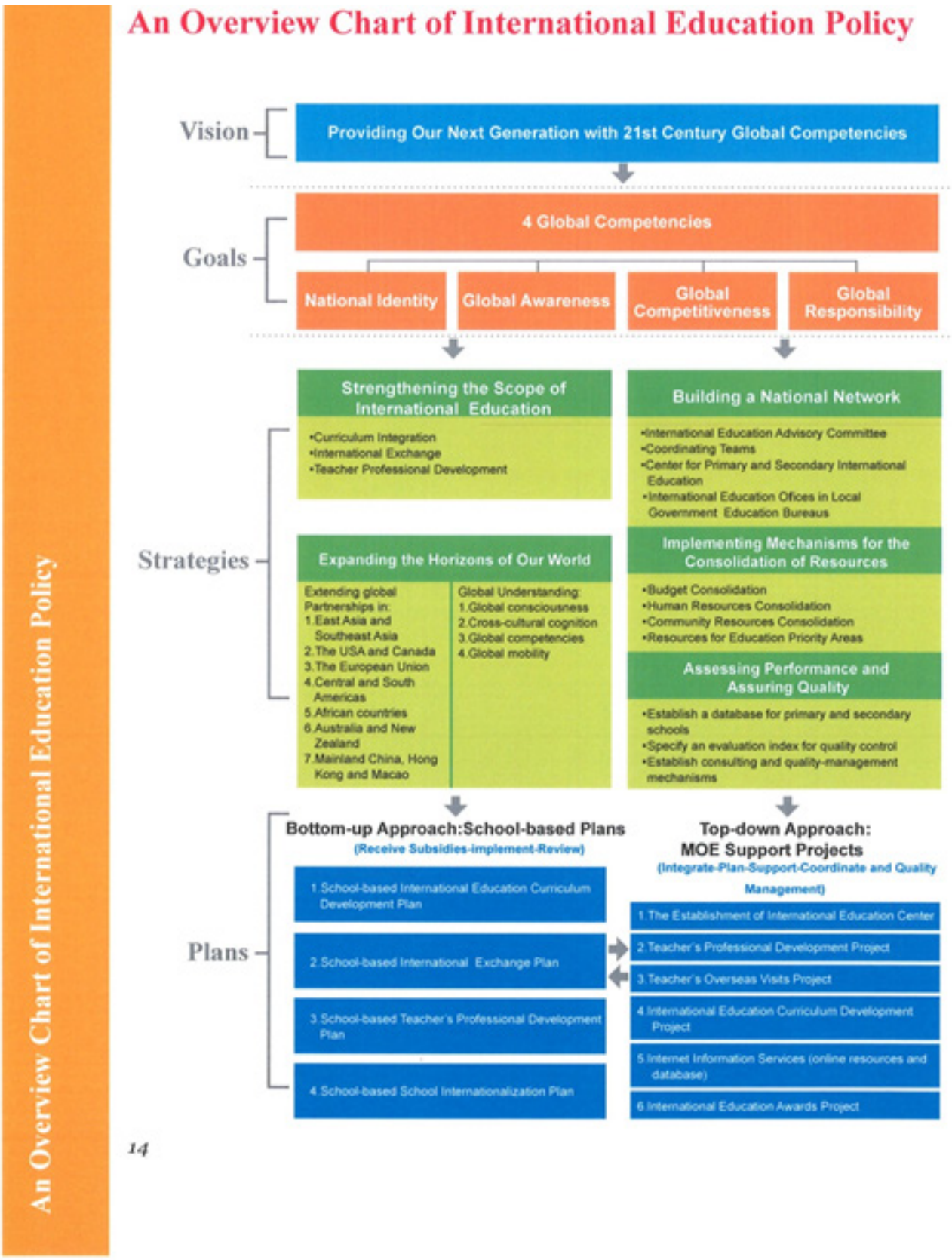
			SUBINDEXES					
	OVERALL INDEX		Basic requirements		Efficiency enhancers		Innovation and sophistication factors	
Country/Economy	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Kazakhstan	72	4.18	62	4.64	76	4.00	114	3.04
Morocco	73	4.16	54	4.74	83	3.86	79	3.40
Bulgaria	74	4.16	74	4.46	59	4.10	96	3.24
Philippines	75	4.08	100	4.17	70	4.03	74	3.45
Croatia	76	4.08	52	4.76	72	4.01	82	3.37
Romania	77	4.08	89	4.28	62	4.09	99	3.20
Albania	78	4.06	71	4.53	82	3.87	102	3.18
Macedonia, FYR	79	4.05	69	4.55	87	3.83	104	3.14
Botswana	80	4.05	81	4.35	86	3.83	94	3.26
Trinidad and Tobago	81	4.00	58	4.68	79	3.89	76	3.44
Ukraine	82	4.00	98	4.18	74	4.00	93	3.29
Namibia	83	4.00	68	4.56	97	3.70	95	3.25
Guatemala	84	4.00	93	4.24	81	3.87	63	3.53
Argentina	85	3.99	84	4.33	84	3.85	77	3.43
Honduras	86	3.98	90	4.25	104	3.60	90	3.31
Algeria	87	3.96	75	4.44	122	3.35	136	2.65
Georgia	88	3.95	86	4.32	89	3.74	117	3.01
Lebanon	89	3.95	109	3.97	64	4.06	78	3.43
Greece	90	3.92	80	4.36	65	4.06	81	3.39
El Salvador	91	3.89	87	4.31	96	3.71	106	3.14
Armenia	92	3.89	94	4.24	91	3.73	110	3.09
Moldova	93	3.89	102	4.13	103	3.62	127	2.86
Egypt	94	3.88	99	4.17	94	3.71	86	3.33
Serbia	95	3.88	88	4.28	90	3.73	118	2.99
Mongolia	96	3.86	101	4.16	105	3.56	112	3.04
Cambodia	97	3.85	108	3.99	98	3.69	91	3.31
Syria	98	3.85	77	4.41	109	3.51	111	3.06
Gambia, The	99	3.84	103	4.08	111	3.48	61	3.55
Bosnia and Herzegovina	100	3.83	92	4.25	102	3.63	108	3.13
Ecuador	101	3.82	82	4.35	107	3.53	103	3.17
Kenya	102	3.82	118	3.72	73	4.01	53	3.72
Bolivia	103	3.82	95	4.21	125	3.24	107	3.13
Benin	104	3.78	107	4.02	117	3.43	88	3.33
Tajikistan	105	3.77	106	4.03	118	3.42	100	3.19
Ethiopia	106	3.76	105	4.06	121	3.37	120	2.92
Jamaica	107	3.76	116	3.76	85	3.84	84	3.36
Bangladesh	108	3.73	112	3.81	99	3.69	113	3.04
Guyana	109	3.73	104	4.07	110	3.50	87	3.33
Dominican Republic	110	3.73	110	3.90	93	3.71	109	3.12
Senegal	111	3.70	113	3.81	108	3.53	62	3.54
Suriname	112	3.67	79	4.37	124	3.27	122	2.91
Zambia	113	3.67	115	3.77	106	3.54	80	3.40
Ghana	114	3.65	122	3.64	92	3.72	98	3.20
Nicaragua	115	3.61	111	3.85	123	3.31	129	2.81
Cameroon	116	3.61	114	3.78	120	3.37	101	3.19
Malawi	117	3.58	120	3.68	116	3.43	85	3.35
Pakistan	118	3.58	130	3.53	100	3.68	72	3.45
Cape Verde	119	3.58	96	4.19	126	3.22	124	2.87
Tanzania	120	3.56	123	3.64	113	3.47	92	3.29
Uganda	121	3.56	127	3.55	101	3.64	105	3.14
Paraguay	122	3.53	117	3.75	114	3.47	125	2.86
Belize	123	3.52	97	4.18	130	3.14	131	2.78
Venezuela	124	3.51	125	3.62	112	3.48	128	2.82
Nepal	125	3.47	121	3.67	127	3.22	132	2.73
Kyrgyz Republic	126	3.45	131	3.52	115	3.44	138	2.57
Nigeria	127	3.45	139	3.19	80	3.88	69	3.49
Mali	128	3.39	126	3.59	134	3.10	116	3.02
Côte d'Ivoire	129	3.37	135	3.41	119	3.38	121	2.92
Madagascar	130	3.36	128	3.53	131	3.14	123	2.90
Timor-Leste	131	3.35	119	3.70	138	2.88	137	2.59
Zimbabwe	132	3.33	132	3.49	133	3.10	119	2.93
Mozambique	133	3.31	133	3.43	129	3.16	115	3.02
Swaziland	134	3.30	124	3.63	128	3.17	134	2.67
Lesotho	135	3.26	134	3.42	135	3.08	133	2.69
Burkina Faso	136	3.25	136	3.37	132	3.12	126	2.86
Mauritania	137	3.20	129	3.53	141	2.71	135	2.67
Yemen	138	3.06	138	3.21	137	2.91	141	2.33
Angola	139	2.96	141	2.98	136	3.04	142	2.23
Burundi	140	2.95	137	3.25	142	2.51	140	2.44
Haiti	141	2.90	140	3.03	140	2.76	139	2.44
Chad	142	2.87	142	2.88	139	2.87	130	2.81

(Schwab, 2012, 16-17)

Appendix 5: Five Accelerators of Innovation (Pires, 2012, 17)

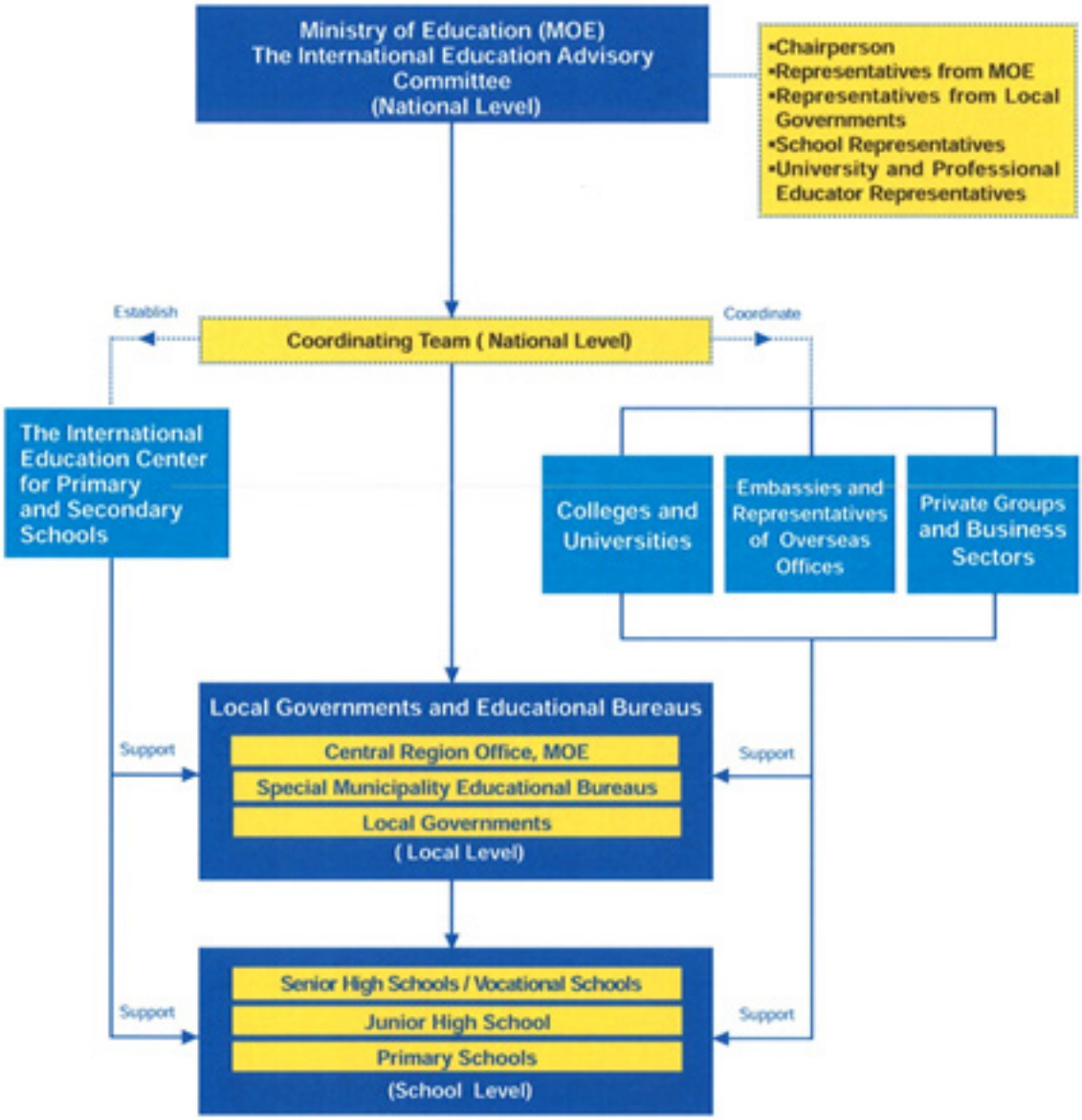


Appendix 6: Ministry of Education Overview Chart (MOE, 2012, 14)

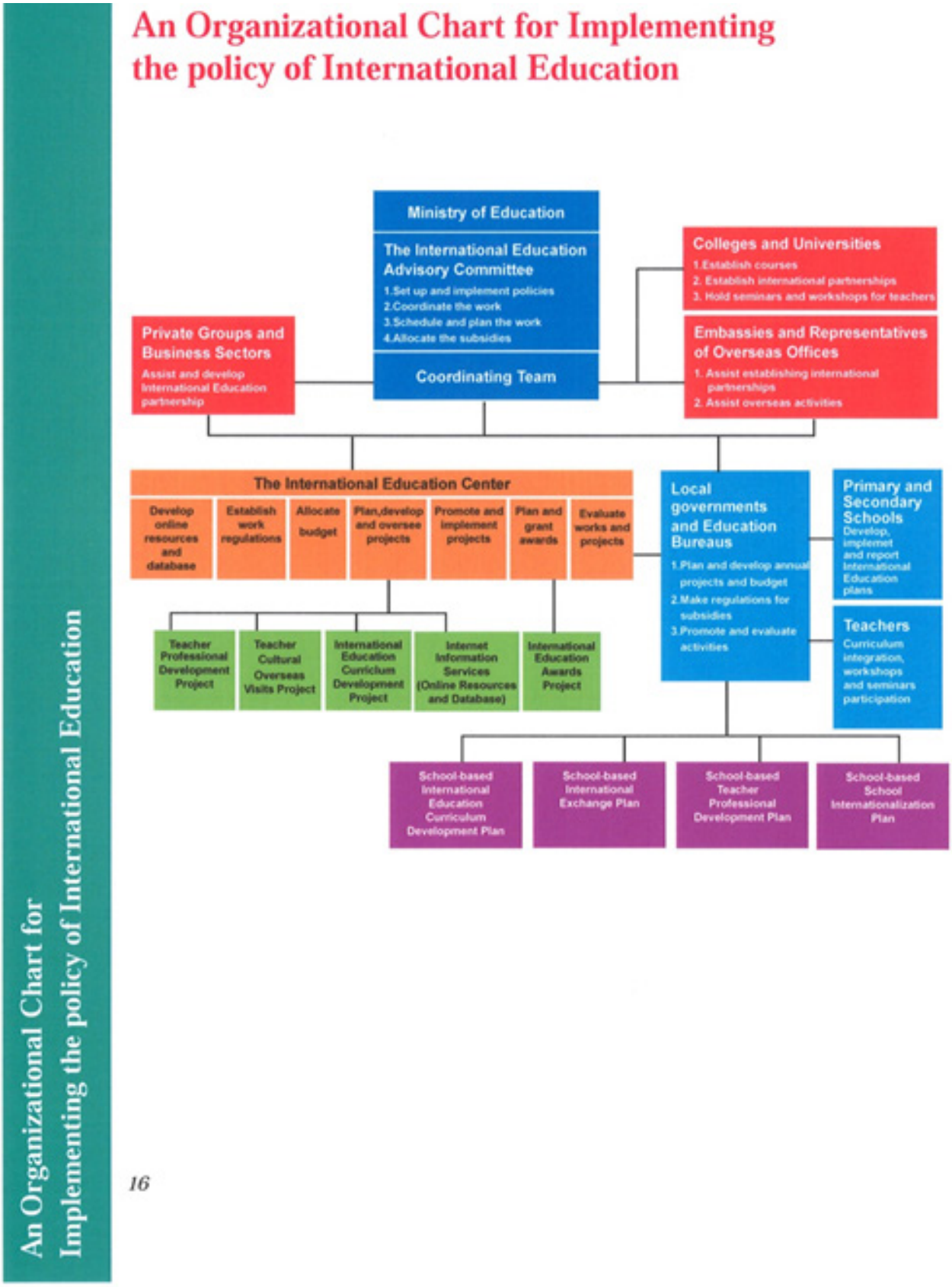


Appendix 7: Ministry of Education International Education Organization (MOE, 2012, 15)

An Organizational Chart of the National Network



Appendix 8: Ministry of Education Implementation Chart (MOE, 2012, 16)



Appendix 9: International Education and World Wrestling Entertainment: Leo

By Dan Severson

Fulbright English Teaching Assistant, Yilan County, 2011-12

Smack, crackle, pop! These are not the innocent sounds of cereal. They are bodies abused, battered, and flung mercilessly against the mat, the pole, the ring. For much of the past year, World Wrestling Entertainment was my Monday night mainstay. After teaching all day in Taiwan and studying Chinese at night, I scooted home past rice paddies, tea shops and stray dogs, picked up takeout beef noodles, and tuned into the 10 p.m. battle royal. I got hooked on WWE not because I love gratuitous violence—I don't—or because I'm impressed by high-octane theatrics—I'm not —but because Leo loves it. I didn't expect wrestling could be an important educational tool.

Leo was a fourth grader last year and one of my 300 students in 14 classes at Sinsheng Elementary School in Yilan, Taiwan. Leo had fallen through the cracks. On a good day, he fidgeted and complained. More often, he wandered in the middle of the lesson, distracting other students. His helpless ("But I can't!") attitude sometimes erupted into tantrums, antics that threatened to derail class. I knew he was smart because I could coax him into completing his workbook accurately, but I had to stand at his desk and translate nearly everything. This wasn't going to work in a classroom of 30 students, all deserving—and their parents expecting me to give them—my attention.

Taiwanese culture reveres education. If they can afford it, parents send their children to "cram" schools to keep them one year ahead in math, Chinese and English. However, in Yilan—a fishing and farming community on Taiwan's underdeveloped east coast—most families don't have those resources. The result is mixed level classes; some students can carry full conversations in English, while others can't name basic colors. The inclusion of special needs students in standard classrooms compounds the challenge.

I tried to keep everyone learning and make English more relevant even to the kids who struggled the most. I started teaching weekly sentence patterns focusing on colloquial English. We covered everyday phrases like "What's up?" and "Let's hang out," that were fun, new material for everyone. I made progress among most students, especially by engaging them in role play, but I couldn't get Leo to concentrate and invest.

In fact, he stubbornly refused to participate. One day, in an especially aggressive outburst, he swiped his markers all over the floor. He sat at the front of the class. I couldn't simply ignore him and move on with the lesson. All eyes were on me. I asked him to clean up his materials immediately. He balked. I took him outside and switched to Chinese. I asked him what the trouble was; he wouldn't answer me. I implored him to cooperate. I threatened to talk to his parents.

Finally, I consulted the homeroom teacher. "Don't worry about him, as long as he doesn't disturb other students," she said. I learned that, like many kids in Taiwan's low-income areas,

Leo's mother comes from Southeast Asia and doesn't speak Chinese. Stress at home meant his parents were not engaged. The homeroom teacher properly emphasized the overall class' interests. But I had come to Taiwan to connect with children as a teacher, role model and cultural ambassador. I was eager to actually practice public diplomacy; mostly, I just couldn't give up on Leo.

Nor, as it turned out, had Leo given up on me. A couple of frustrating weeks later, I passed him in the playground. "Teacher Dan, Teacher Dan! Look. Cobra." Leo cupped his hand, cocked it back, and then pounced on me with serpentine lethality. "What's Cobra?" I asked, bewildered. He spoke excitedly about "Cena" and "WWE." After school, I tore straight to YouTube where I discovered this boy's hero was John Cena, a pro wrestler with popping veins and a neck the size of my thigh. I was dismayed. Surely such trash television only fed negative stereotypes of the U.S. I was surprised how often I had to answer unsettling questions ("Do all Americans own guns?" or "If I go to America, will I experience racism?"), and I didn't want Leo to misconstrue America. Then I recalled how when I was ten years old a teaching assistant from France captivated my attention with French rap. The lyrics—slang about discrimination in the banlieues—were arguably inappropriate, but they piqued my interest, helped me develop my vocabulary, and sparked my drive to fluency. Perhaps this was my opening to Leo.

The next day, I invited Leo to the teacher's lounge, anxious to show him the wrestling move I had practiced the night before. I had never seen him so excited. Over the rest of the semester, Leo taught me the classic Smackdown, the Camel Clutch, and the Spinebuster. I parried with Killswitch and the Atomic Drop. Our gesticulations raised eyebrows among other faculty, but I knew we were making progress. After simulating the "play of the day," I got Leo to write the English word in the back of his textbook. Soon he had a full arsenal of moves and, to my delight, a large repertoire of English words. I taught him how to break apart the meanings of words, and he loved recombining them. In the process, I also performed a little Attitude Adjustment. (And, no, I don't mean John Cena's signature back flip!) In his excitement, Leo forgot he was learning. He started raising his hand and cooperating in class. His test scores rose. Without his previous distractions, my other students were thriving, too.

While I loved nearly all of my interactions at school—from conducting the wind band and performing a Chinese pop song to coaching reader's theater—bonding with Leo was one of my most rewarding experiences in Taiwan. Perhaps my proudest moment came at the end of the year when Leo presented me with an envelope addressed to Mr. Cena. Inside was a fan letter using our weekly sentence patterns! I beamed. I could hardly wait to pop it in the mail.

I may never know what Leo decides to be when he grows up, or even if he continues learning English. But I hope he will remember our time playfully reenacting (and spelling) Jawbreakers – and that exhilarating feeling of mastering something. Keeping an open mind and practicing just a little bit of diplomacy allowed me to reach Leo on his level. I am grateful for that opportunity.

Appendix 10. Tables of Questions Assessing Individuals Experience in International Education (Sandell, 2012, 12-15)

Table 1

Impact of International Education Experience on Professional Role

Survey Item	5 = Big		6 = Large		7 = High		Total	
Had a long-term impact on your practice as a professional?	6	19.35%	10	32.26%	8	25.81%	24	77.42%
Been relevant to your professional career?	4	12.90%	8	25.81%	9	29.03%	21	67.74%
Enhanced your effectiveness as a professional?	4	12.90%	10	32.26%	9	29.03%	23	74.19%
Improved your efficiency as a professional?	3	9.68%	14	45.16%	4	12.90%	27	87.09%

Table 2

Impact of International Education Experience on International Perspectives

Survey Item	5 = Big		6 = Large		7 = High		Total	
Shaped and influenced your evaluation of world issues?	3	9.68%	5	16.13%	20	64.52%	28	90.32%
Enhanced your understanding of U.S. culture?	4	12.90%	6	19.35%	16	51.61%	26	83.87%
Enhanced your understanding of U.S. politics?	7	22.58%	7	22.58%	9	29.03%	23	74.19%
Influenced your understanding of professions in countries other than the U.S.?	6	19.35%	9	29.03%	11	35.48%	26	83.87%
Influenced your discussion with other people about international and trans-cultural issues?	3	9.68%	10	32.26%	14	45.16%	27	87.09%
Affected your interaction with people from other cultures?	1	3.23%	9	29.03%	18	58.06%	28	90.32%
Affected your travel or study abroad since that experience?	6	19.35%	2	6.45%	17	54.84%	25	80.64%
Facilitated an international or intercultural dimension in your work activities?	3	9.68%	6	19.35%	12	38.71%	21	67.74%
Increased the likelihood that you would practice your profession in another country?	4	12.90%	6	19.35%	14	45.16%	24	77.42%
Influenced your practices in your profession?	6	19.35%	7	22.58%	8	25.81%	21	67.74%
Influenced you to encourage all university students to participate in international education experiences?	3	9.68%	5	16.13%	20	64.52%	28	90.32%

Table 3

Impact of International Education Experience on Personal Development

Survey Item	5 = Big		6 = Large		7 = High		Total	
Made you reassess your outlook on your life in the U.S.?	2	6.45%	7	22.58%	17	54.84%	26	83.87%
Affected your family decisions (spouse, parenting, living arrangements, and so forth)?	5	16.13%	9	29.03%	9	29.03%	23	74.19%
Affected your interpersonal relationships (friends, family, and neighbors)?	4	12.90%	8	25.81%	12	38.71%	22	70.96%
Influenced career decisions you have made since your international education experience?	4	12.90%	11	35.48%	8	25.81%	23	74.19%
Facilitated an international dimension in your volunteer activities?	6	19.35%	5	16.13%	9	29.03%	20	64.52%
Facilitated an intercultural dimension in your volunteer activities?	6	19.35%	4	12.90%	9	29.03%	19	61.29%
Facilitated an international dimension in your social or religious activities?	5	16.13%	5	16.13%	10	32.26%	20	64.52%
Facilitated an intercultural dimension in your social or religious activities?	5	16.13%	7	22.58%	8	25.81%	20	64.52%
Contributed to your level of self-confidence?	2	6.45%	11	35.48%	12	38.71%	25	80.64%

Table 4

Impact of International Education Experience on Intellectual Development

Survey Item	5 = Big		6 = Large		7 = High		Total	
Affected your selection of reading materials?	8	25.81%	7	22.58%	4	12.90%	19	61.29%
Affected your ability to speak/read languages other than your first language?	4	12.90%	2	6.45%	11	35.48%	17	54.84%
Influenced your intellectual development?	4	12.90%	9	29.03%	13	41.94%	26	83.87%
Enhanced your motivation and/or ability to learn another language after returning to the U.S.?	5	16.13%	4	12.90%	13	41.94%	21	67.74%

Appendix 11. Key Aspects, Internationalization of Malaysian Higher Education (Abd Aziz, 2011, 18)

Aspect break-down			Aspect break-down
Full time equivalent	**Student mobility**	**Research and development**	International collaboration
Study abroad programmes			International funding
Internships			International organisations
Exchange programmes			
International staff	**Staff mobility**	**Governance and autonomy**	Vision
			Mission
International mobility programmes			Structure
			Planning
			Resources
International recognition	**Academic programmes**	**Social integration and community engagement**	International students and local students
Credit transfer			International students and local community
English as medium of instruction			Among the international student community

Appendix 12. Indicators in Measuring Internationalization of Malaysian Higher Education

(Abd Aziz, 2011, 19-20)

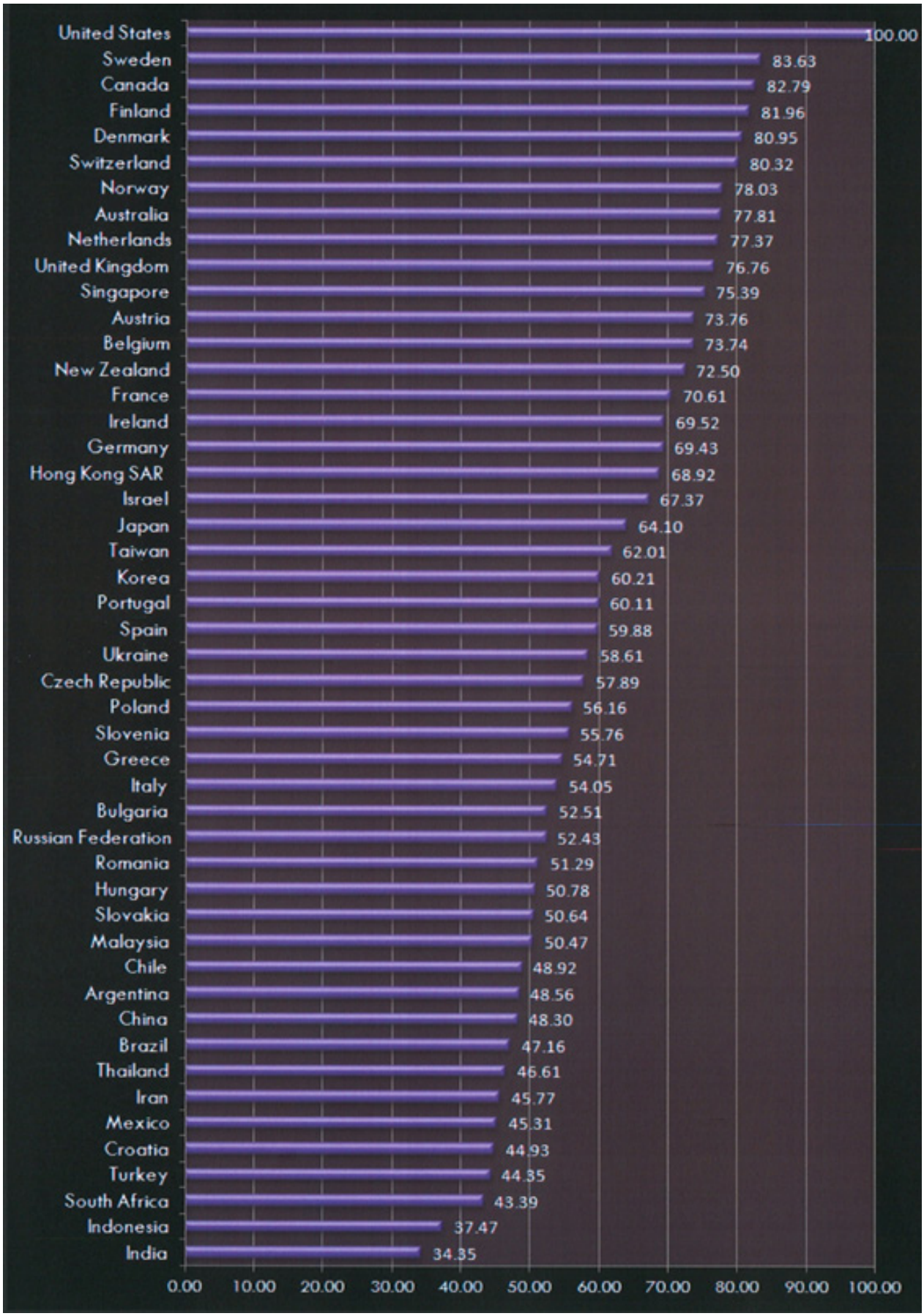
Legend:
Time series: Indicators which can be used to track internationalisation over a period of time
** Existing indicator used at central level*
◆ Numerical data
★ Data extracted from existing documentation
• Short response: Yes / No
▲ Satisfaction index / Feedback or response from stakeholders involved

Aspect		Indicator	Total	Time series	Type of indicator			
					◆	★	•	▲
Institutional standing on internationalisation	1	Availability of vision, mission, goals and objectives on internationalisation	5			✓	✓	
	2	Availability of internationalisation strategy				✓	✓	
	3	Availability of specialised structure / personnel managing internationalisation				✓	✓	
	4	Availability of resource (finance and manpower) in managing internationalisation activities				✓	✓	
	5	Availability of monitoring mechanisms in tracking progress of internationalisation in institution				✓	✓	
Student mobility	1	No. of full-time international students (undergraduate, per academic semester)*	10	✓	✓			
	2	No. of full-time international students (postgraduate, per academic semester)*		✓	✓			
	3	No. of nationalities of international students (per academic year)		✓	✓			
	4	No. of international students sponsored by international agencies / international funding bodies (per academic semester)*		✓	✓			
	5	No. of students participating in study abroad programmes not exceeding 3 months in duration (inbound, per academic semester)*		✓	✓			
	6	No. of students participating in study abroad programmes not exceeding 3 months in duration (outbound, per academic semester)*		✓	✓			
	7	No. of students participating in credit-bearing study abroad progammes (inbound, per academic semester)		✓	✓			
	8	No. of students participating in credit-bearing study abroad progammes (outbound, per academic semester)		✓	✓			
	9	No. of students doing practical training internationally (inbound, per academic semester)		✓	✓			
	10	No. of students doing practical training internationally (outbound, per academic semester)		✓	✓			
Staff mobility	1	No. of international staff (per academic year) *	4	✓	✓			
	2	No. of nationalities of international staff (per academic year)		✓	✓			
	3	No. of staff participating in mobility programmes (inbound, per academic semester)		✓	✓			

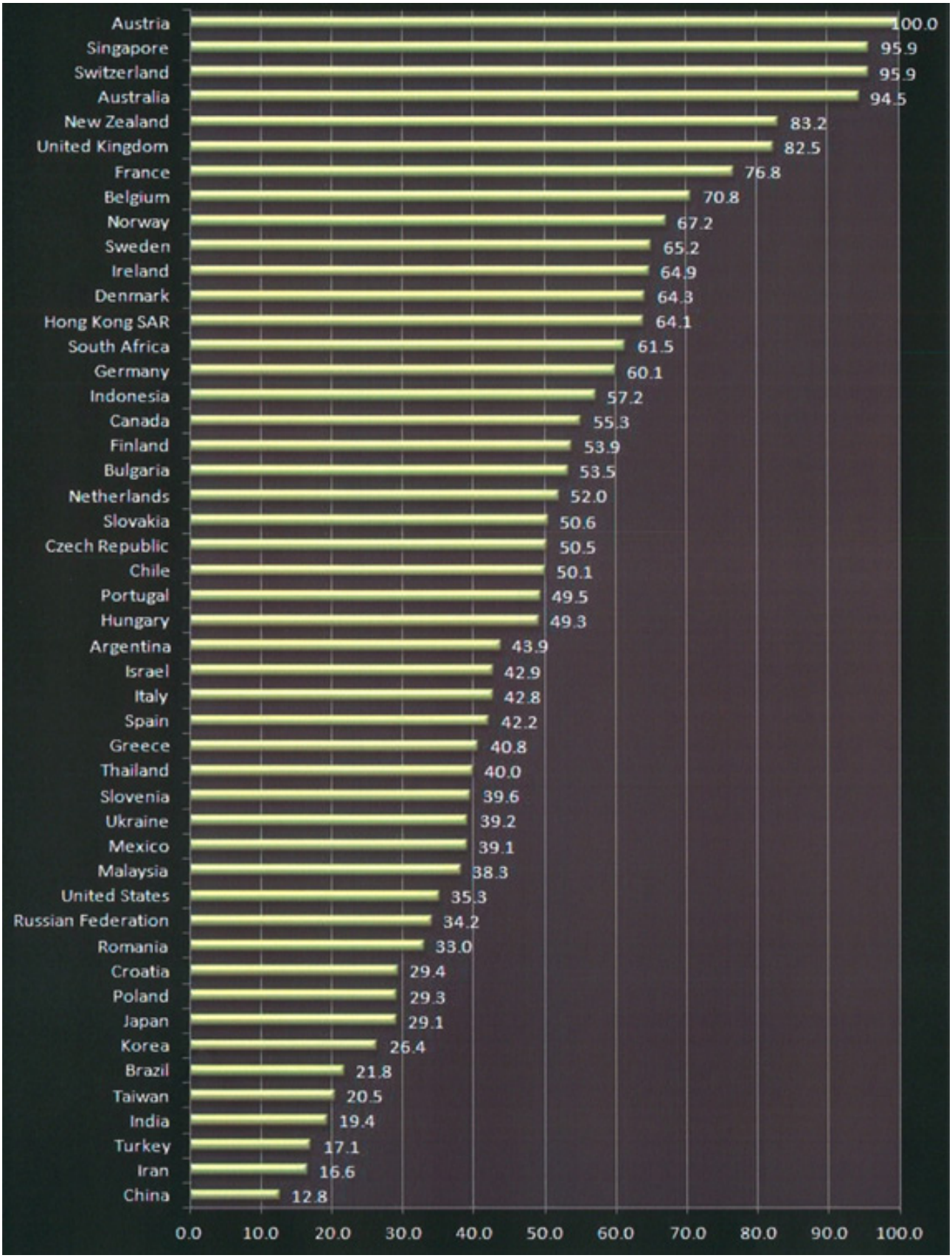
Global Higher Education Forum 2011

	4	No. of staff participating in mobility programmes (outbound, per academic semester)		✓	✓			
Academic programme	1	No. of academic programmes receiving international accreditation (per academic year) *	5	✓	✓			
	2	No. of academic programmes jointly conducted with foreign institutions (per academic year)		✓	✓			
	3	No. of academic programmes allowing international credit transfer (per academic year)		✓	✓			
	4	No. of subjects being taught by international staff (per academic year)		✓	✓			
	5	No. of subjects being taught in English (per academic year)		✓	✓			
Research and development	1	No. of research projects with international collaborations (per academic year)	3	✓	✓			
	2	No. of research projects funded by international agencies / international funding bodies (per academic year)		✓	✓			
	3	No. of research projects in collaboration with international organizations (per academic year)		✓	✓			
International network	1	No. of international institutional linkages (per academic year)	1	✓	✓			
Student support services	1	Availability of standard operating procedure for international student support	2			✓	✓	
	2	Satisfaction level of support services offered to international students (per academic year)		✓				✓
Publication	1	No. of articles published internationally (per academic year)	4	✓	✓			
	2	No. of books published internationally (per academic year)		✓	✓			
	3	No. of languages the articles / books are translated into (per academic year)		✓	✓			
	4	No. of articles / books published with international collaborators (per academic year)		✓	✓			
International activities (meetings, workshops, conferences)	1	No. of international conferences / meetings / workshops organised (per academic year)	5	✓	✓			
	2	No. of participants in international conferences / meetings / workshops organised (per academic year)		✓	✓			
	3	No. of nationalities of participants in international conferences / meetings / workshops organised (per academic year)		✓	✓			
	4	No. of students going for international conferences / meetings / workshops (per academic year)		✓	✓			
	5	No. of staff going for international conferences / meetings / workshops (per academic year)		✓	✓			
International students' interaction with local students and community	1	No. of activities involving international students and the local community (per academic semester)	3	✓	✓			
	2	No. of cross-cultural integration programmes involving local students and international students (per academic semester)		✓	✓			
	3	Satisfaction level of international students with programmes conducted (per academic year)		✓				✓

Appendix 13. Overall Rankings of Institutions of Higher Education (Williams, 2012, 22)



Appendix 14. Connectivity Ranking of Institutions of Higher Education (Williams, 2012, 20)



The international Conference of Human Resource Development in the Public Sector –Quality Training and Excellence Performance Program

Monika Elschner

Federal Ministry of the Interior

The International Conference of Human resource Development in Public Sector – Quality Training and Excellence Performance Program

Taiwan

Monika Elschner

Leader of Training Division 5

Federal Academy of Public Administration

at the Federal Ministry of the Interior (Germany)

Federal Ministry of the Interior

Overview of Germany

- **Germany is in Western and Central Europe, with Denmark bordering to the north, Poland and the Czech Republic to the east, Austria and Switzerland to the south, France and Luxembourg to the southwest, and Belgium and the Netherlands to the northwest.**
- **Germany is a federal, parliamentary, representative democratic republic.**
- **Germany comprises sixteen states that are collectively referred to as *Länder*.**
- **Each state has its own state constitution.**
- **As of 2009 Germany is divided into 403 districts (*Kreise*) on municipal level, these consist of 301 rural districts and 102 urban districts.**

http://en.wikipedia.org/wiki/Germany

Federal Ministry of the Interior

The Federal Academy of Public Administration (BAköV)

The Federal Government's central institution for further training

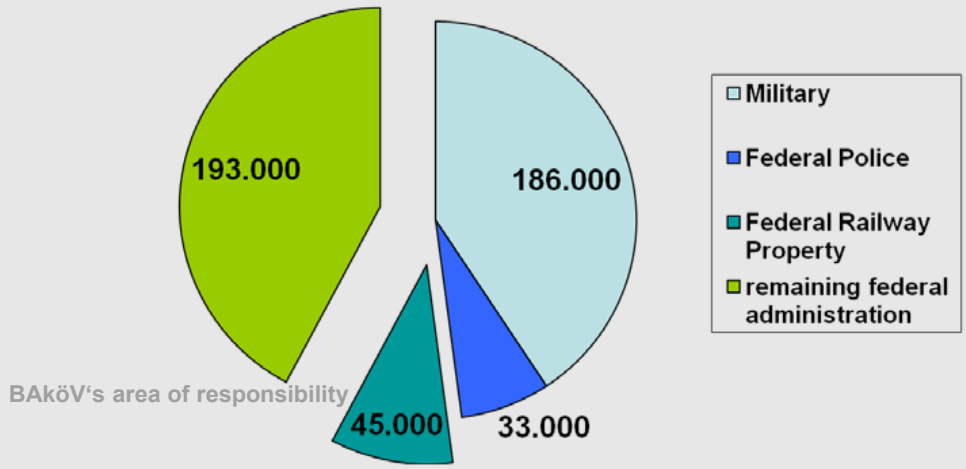
Federal Ministry of the Interior

The Federal Academy of Public Administration

- The Federal Government's central, interdepartmental institution for further training
- Provides qualification services to all Federal authorities
- Organizational unit of the Federal Ministry of the Interior
- Supported by an advisory board and scientific committee

Federal Ministry of the Interior

Our clients – Federal officials



BAköV's area of responsibility

Federal Ministry of the Interior

Main Task of the Federal Academy

- Provide further training and qualification to Federal officials
- Provide consultancy to Federal authorities in matters related to personnel development and further training
- Support the policy of the Federal Government
- Enhance the efficiency of the Federal Administration
- Support the exchange of experience and internal communication within the Federal Administration

Federal Ministry of the Interior

Our Goals

- Preserve and enhance the efficiency of the Federal Administration.
- Support the policy of the Federal Government.
- Enhance the technical and social competences of Federal officials,
- Strengthen their motivation and
- Promote the exchange of experience among them.

Federal Ministry of the Interior

BAköV Structure

President

Training Division 1

Training Division 2

Training Division 3

Training Division 4

Training Division 5

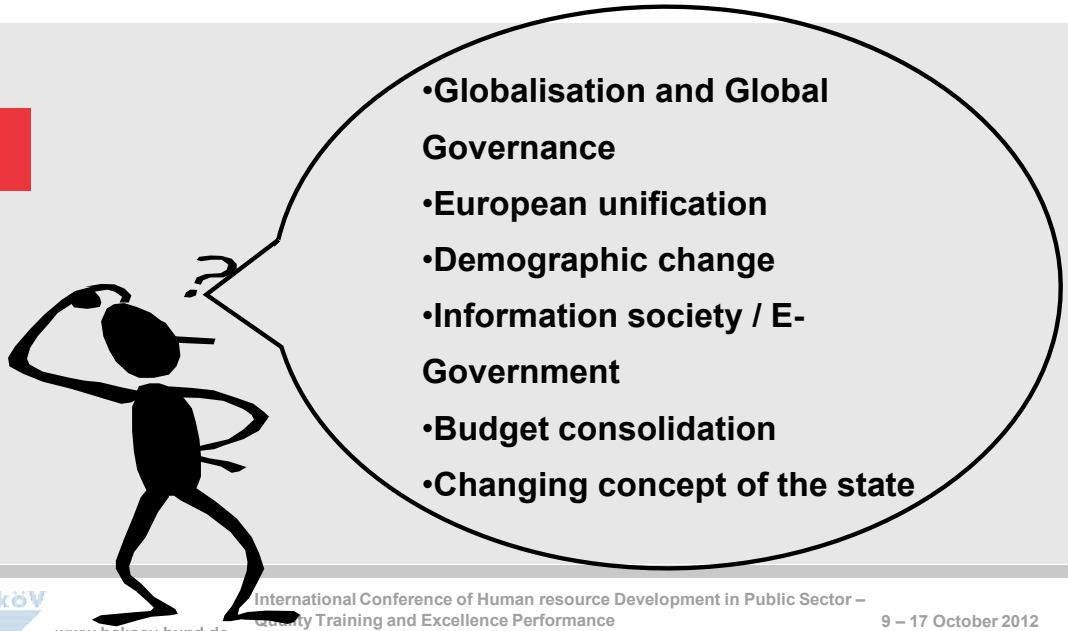
Training Division 6

BAköV www.bakoev.bund.de
International Conference of Human resource Development in Public Sector – Quality Training and Excellence Performance
Taiwan, Monika Elschner
9 – 17 October 2012

Federal Ministry of the Interior

Current challenge and solution

Trends in state and administrative change: posing challenges to training



Federal Ministry of the Interior

Current challenge and solution

Demographic Change

Description of trends

An aging society reduces the personnel available. Older employees represent a steadily growing proportion of the workforce.

Consequences for training

- **Promoting lifelong learning**
- **Learning to learn**
- **Age-appropriate learning**
- **Health management**
- **Controlling age and qualification structures**
- **Using knowledge management to secure valuable expertise**

Federal Ministry of the Interior

Current challenge and solution

European Unification Process

Description of trends

Changing dynamic in European integration with the focus on the Lisbon Strategy and the Bologna Process

Consequences for training

- **Targeted qualification of all staff concerned with EU issues**
- **General knowledge of EU**
- **EU competences for activities in Brussels**
- **European training standards and certification**
- **Transparency through an orientation on the European Qualifications Framework**
- **Intensifying an exchange of experience on programmes and innovation**

Federal Ministry of the Interior

Current challenge and solution

Sensibilisation in IT security

- **Training of IT Security Officer (since 2005)**
  - Task and authorities
  - Tasks range from the analysis of risks to the creation and implementation of a security concept to raise user awareness in matters relating to information security
  - Module training in three weeks
- **Security Awareness Campaign "Sicher gewinnt!" (since 2010)**
  - 200 Awareness projects accomplished
  - 60,000 participants
  - 70 Live Hacking Events with executives and all employees

Federal Ministry of the Interior

Learnings 1

- Traditional forms of training have to adapt faster to changes in the state and the society with special regards to the international development
- Use of workplace learning and learning process monitoring to improve the dovetailing of qualifications and work
- Paradigm shift from supply to demand orientation
- Strong link between training and personnel development
- Focus on key and core competences

Federal Ministry of the Interior

Current challenge and solution

Learnings 2

- Linking training to the actual federal modernisation policy
- Increase training in collaborative Leadership
- coaching of individuals and teams
- establishing cross-ministerial networks
- Tailor-made in-house training and consulting to organisations in change

Federal Ministry
of the Interior

Thank you for your attention.

Monika Elschner
Leader of Training Division 5
Federal Academy of Public Administration
at the Federal Ministry of the Interior (Germany)

績效管理與國家競爭力

吳重禮

績效管理與國家競爭力

吳重禮 研究員
中央研究院 政治學研究所

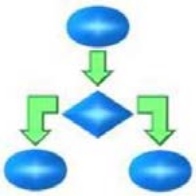
我國文官體系現況

- 台灣具有素質最高的文官體系

- 為什麼我國文官體系實際運作往往無法發揮應有功能與角色

我國文官體系的可能問題

- 1. 繁文縟節



- 2. 齊頭式平等主義

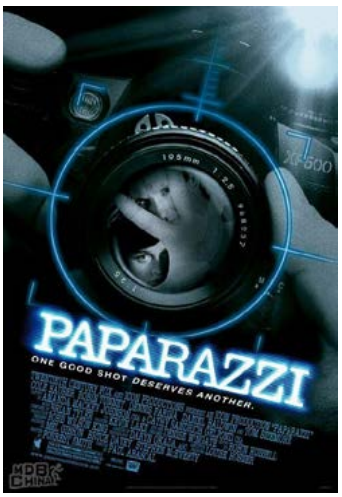
我國文官體系的可能問題

- 3. 朝野對峙與惡鬥情形嚴重

- 4. 政務官缺乏政治願景

我國文官體系的可能問題

- 5. Micro-Management



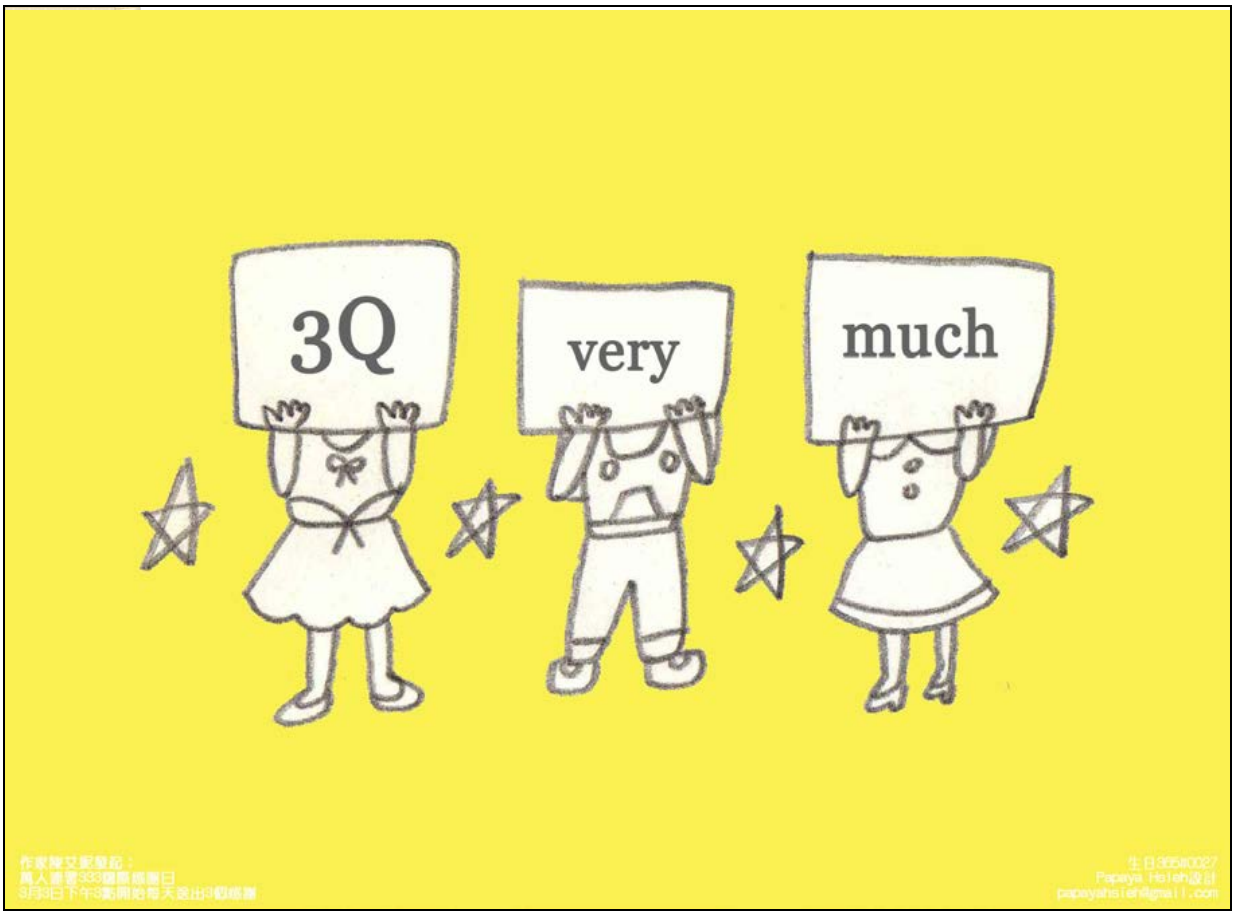
- 6. 公眾媒體過度渲染效果

未來可能改善方式

- 1. 設立創新獎勵制度

- 2. 改善既有退場機制

- 3. 重建社會資本


3Q
very
much