



Letter from the Publisher

First of all, I would like to say HAPPY NEW YEAR! Time has passed so fast that a new year has arrived. Since the initial publication of *Asia-Pacific Today* in May 2005, we have received many encouraging words and suggestions. We have also been able to include articles from various authors. As a result of everyone's warmest support, we have found the time and energy out of our busy schedule to publish this periodical for your enjoyment. In response, on behalf of the staff, I would like to take this opportunity to thank our readers for their encouragement. In 2006, we will continue to work with dedication, in order to publish more insightful contents.

Since the *Asia-Pacific Today* focuses on bringing to you articles on issues of importance to APEC, I am going to relate some of the significant issues that have been discussed in APEC and some of the work programs it has implemented in 2005. In order to ensure the achievement of APEC's Bogor goals, the APEC Economic Leaders have endorsed the Busan Roadmap. The Roadmap consists of: 1) supporting the multilateral trading system; 2) strengthening collective and individual actions; 3) promoting FTAs/RTAs; 4) implementing Busan Business Agenda; 5) making a strategic approach to capacity building; and 6) promoting the Pathfinder Approach. In addition, APEC has worked on enhancing human security which includes: 1) strengthening counter-terrorism; 2) securing trade; 3) improving health security: avian and pandemic influenza; and 4) promoting energy security. The issue of APEC reform has also been a significant topic of discussion in APEC. The purpose is to make APEC more productive and efficient. APEC has approved the rise in members' annual contributions.

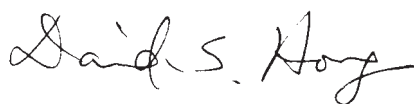
The overall assessment is that APEC has accomplished many things in 2005. The members of APEC have worked together in seeking to strengthen economic cooperation in the Asia-Pacific region. Some people might say that APEC members just hold too many meetings but have not produced substantive actions. In reality, a thorough examination of the work that APEC fora have completed would show that APEC has enhanced economic cooperation in our region. APEC merits our support and encouragement. The fact that APEC Economic Leaders' Meeting is now held every year indicates the importance of APEC.

In 2006, Viet Nam will be the host of APEC. The theme is: Towards a Dynamic Community for Sustainable Development and Prosperity. In addition, the sub-themes are: 1) enhancing trade and investment with the Busan Roadmap and the Doha Development Agenda; 2) strengthening economic and technical cooperation for gap bridging and sustainable development; 3) improving secure and favorable business environment; 4) promoting community linkages.

I am certain that APEC will continue to excel in all of its endeavors. However, there is always room for improvement. Scholars, government officials, businessmen and all stakeholders would need to provide their views and suggestions, so as to improve the ability of APEC to promote economic cooperation in the Asia-Pacific region. I believe that the *Asia-Pacific Today* is a wonderful place for disseminating information and for discussing APEC issues. Therefore, I hope our readers would send articles to us, so that we can all play a part in making the Asia-Pacific region more dynamic in the years ahead.

Once again, I wish our readers a Happy New Year and may all of your wishes come true in 2006!

Sincerely,



David S. Hong

President, Taiwan Institute of Economic Research



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Asia-Pacific Today is an open forum. The Editors welcome submission of theoretical, policy, commentary articles, research notes, and book reviews on Asia-Pacific Today. The periodical's fields of interest include economic affairs, political issues, international relations, business tendencies, and cultural analyses in Asia-Pacific area. Please be advised that articles published here will not receive remuneration.



East Asian Community: The Role of Taiwan

David S. Hong

Introduction

The concept of a community is related to the sharing of a common identity, culture, ideas, or beliefs. In this sense, there is at present no East Asian community *de facto*, since East Asia is characterized by great cultural, ethnic and political diversity, unresolved conflicts and different visions of the future. By comparison, because Europe is more culturally homogeneous than Asia, the challenges facing East Asia in the development of a regional community are greater than those faced by Europe in the post-war era. The fact that even after half a century of integration, Europe still faces many challenges would indicate that the road ahead for East Asia, should it decide to go forward with building a community, would be a long and difficult one.

East Asian Awareness

Regardless of the fact that building an East Asian Community is extremely challenging; East Asian economic cooperation has already started in the 60s. By adopting a “flying geese paradigm”, developed economies have interacted with developing economies in the region through trade and technology transfer. A set of complementary and interdependent relationships have been formed among East Asian economies with regard to exchanging economic factors such as capital, labor, land, technology, and resources. The set of relationships symbolizes a dynamic equilibrium of economic structures in East Asia.

Balanced by the natural law of demand and supply, the existing East Asian economic structure has been serving as a cornerstone of the global value chain. In order to prevent the 1997 East Asian Financial Crisis from happening again, economies in this region have realized the importance of

collaboration among economies in this region. Because the chain reaction in the regional scale is faster than that in the global scale due to the geographical factor. Therefore, a specific East Asian awareness motivated by the multilateral economic structure has emerged. The East Asian awareness is too significant to be ignored, and it has served as a driving force and paved the way for potentially constructing a future East Asian community.

Voluntary Community

In addition, the East Asian awareness that leads to the concept of a voluntary East Asian community is a recent one. Its emergence has been observed with respect to the following four factors:

1. The first factor is the development and deepening of regional integration efforts in Europe (the EU) and the Americas (NAFTA and FTAA), which have led to fears that East Asia may be excluded from these traditional markets. These fears indeed helped promote the idea of consolidating a market of our own.
2. The second factor is the growing economic integration and interdependence within the region, which have resulted in shared vulnerabilities to economic crisis, as demonstrated during the 1997 East Asian financial crisis. The crisis also served to promote the perception within the region that East Asian may not be able to rely on global institutions and outside countries to effectively assist them in difficult times.
3. The third factor is the consolidation of Southeast Asia under the umbrella of ASEAN, whose members have taken an active role, for the benefit of their own security and economic interests, in pursuing regional stability through community-building, through the ASEAN FTA, the ASEAN Regional Forum, the Asia-Europe Meeting and

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finally through ASEAN Plus Three.

4. The last factor but not the least is the emerging competition between Japan and China for leadership in this region. This has resulted from the rise of China as a major economic player, which has prompted both countries to respond positively to ASEAN's initiatives.

East Asia versus Asia-Pacific

An East Asian community playing a responsible role in the world would be desirable, as it would ensure peace and stability in the region, which in turn would help ensure continued economic development. It would also promote the competitiveness of Asian enterprises through the development of more efficient production networks and financial markets in the region. However, these are objectives that can also be met through a wider Asia-Pacific community that includes Australia, New Zealand, and North America, among others. For this reason, the two major community-building efforts in the region, one based on ASEAN Plus Three, and the other through APEC, continue to exist alongside each other.

From the standpoint of an Asia-Pacific community, the East Asian concept would seem to exclude economies in the Pacific and Americas. However, the fact is that East Asian economies have built strong economic ties with economies outside East Asia but within the Asia-Pacific region. The formation of an East Asian community as a result should be defined in a broader sense. The East Asian community ought to function as a building block or phase one for constructing a potential Asia-Pacific community. We shall then inspect the role of the East Asian community.

The Role of the East Asian Community

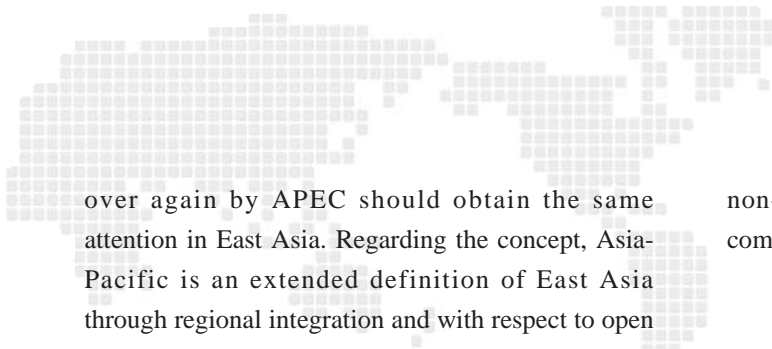
The goal needs to be examined before the role, whereas the goal of building a regional community is regional integration. There are in total four types of regional integration. Theoretically, they are free trade agreement, custom union, common market, and economic union. The European Union that operates in the form of a single market is a typical common market. The scale of economic integration of a common market is rather broader than a free trade

agreement. In a politically correct sense, the extent of a common market is between a custom union and an economic union. All contracting member economies of a custom union adopt a common set of tariffs towards non-members. However, an economic union would go one step further by allowing the free flow of goods, person, and capital within the contracted area whereas implementing collective fiscal and monetary policies in addition to a common set of tariffs. The European Union is an unprecedented example of the comprehensive economic integration, which is nearly an economic union. As I mentioned in the beginning of my presentation, the road ahead for East Asia is more testing than the road leading Europe to a union.

Lacking common ethnic and cultural roots, an East Asian community can only emerge if East Asians come to share a common vision of the future and are satisfied with their respective roles within that common vision. The present situation is such that East Asia is still far from achieving such a vision. There is much to resolve in Northeast Asia, including the relationships among Japan, China and Korea and the resolution of issues in the Korean Peninsula and across the Taiwan Strait. ASEAN is able to serve as a focal point of community-building efforts, but has only limited capabilities to influence the resolution of issues in Northeast Asia.

Can political conflicts be resolved or mitigated by economic incentives? As an economist, I firmly believe the answer is positive. People tend to forget the biggest reason causing conflicts in the first place is always based on economic basis. The role of the East Asian community for that reason should be to meet the needs of the present generation in the region without compromising the needs of the future generation. In short, sustainable economic development is the ultimate guideline defining the role of East Asian community. Furthermore, locating the common vision via economic incentives should be the key to the eventual establishment of the East Asian community.

Should East Asian and Asia-Pacific communities be two competing paradigms? I consider the relationship of this two is more of complementation and less of competition. The concept of "open regionalism" stressed over and



over again by APEC should obtain the same attention in East Asia. Regarding the concept, Asia-Pacific is an extended definition of East Asia through regional integration and with respect to open regionalism. If ASEAN is the foundation of East Asian community, I do not see why an East Asian community cannot serve as the basis for constructing an Asia-Pacific community.

The Role of Taiwan

Is there a missing link in the potential East Asian community? I honestly think so. As a dedicated member in this region, Taiwan is obviously striving to become part of all of the schemes that I mentioned. No matter what style of regional integration is currently taking place, we cannot ignore its potential benefits for contracting parties and likely impact on non-members. Like most of you, I am a firm believer of fair trade. No one should be left out of integration initiatives, especially when these initiatives serve the function of community building to optimize the benefits of globalization. Given its total trade amounting to more than US\$ 203 billion with other Asian economies, more than US\$ 200 billion with other East Asian economies and more than US\$ 264 with other APEC economies in the year of 2004, Taiwan is looking for and in my opinion deserves entry tickets when the shows begin.

Conclusion

In the end, until these issues are resolved and relationships based on trust are established among all East Asian countries, an East Asian community will remain unrealized. The other vision of an Asia-Pacific community will continue to offer a more attractive and viable alternative for East Asia. Seeking the common vision for East Asian integration thru economic channels and harmonizing the tension between East Asia and Asia-Pacific perspectives are the means to create a win-win situation for all. I would like to conclude the issue of “East Asian Community, into Reality” by stressing that community building is a sound paradigm to resolve potential anomalies; however,

non-exclusivity is the way to ensure successful community building.

The Development of Asia-Pacific Bond Markets

Julius Caesar Parrenas

Much attention has been focused on the role of long-term local currency bond markets in the region's development in the wake of the 1997-98 Asian financial crisis. This was prompted in large part by the attribution of the crisis' outbreak to the "double mismatch" problem in many of the region's emerging economies, i.e., the currency and maturity mismatch arising from the combination of massive short-term borrowing in US dollars and long-term lending in local currencies in the years leading up to the summer of 1997.

The double mismatch problem was conditioned by the underdevelopment of long-term local currency bond markets in the region. Indeed, debt securities play a much smaller role in Asia, where banks still represent the dominant source of financing, compared to other regions in the world. [Chart 1] Seeking to reduce their economies' vulnerability to financial crises, East Asian governments are undertaking serious efforts to deepen their local currency bond markets, and in addition are contemplating measures to promote the eventual emergence of a regional bond market.

The development of robust and liquid local currency bond markets is a goal that finds much support within the private sector, both within and

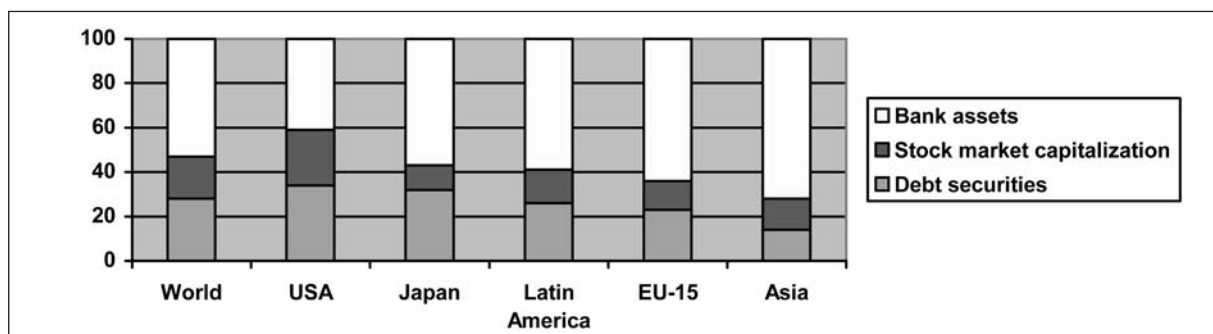
outside the region. It potentially addresses a number of issues for borrowers and investors, beyond the objective of a more stable financial system. These range from more efficient financing of infrastructure projects and small enterprises to wider investment choices, especially for the pension and mutual funds and insurance industries. The prospect of a regional bond market emerging, while seen as a very long-term development, is welcomed by the private sector.

Given the importance of this issue, the PECC Finance Forum has undertaken various efforts to contribute to the ongoing discussions on this issue. Harnessing the tripartite structure of PECC that brings together government, business and academe, the Finance Forum conducted surveys and studies and organized conferences and meetings for this purpose, often in collaboration with other regional groupings and international financial institutions and development organizations in the past few years. This report summarizes the results of these efforts.

REGIONAL COOPERATION AND THE WORK OF THE PECC FINANCE FORUM

APEC began substantial work on the

Chart 1: Sources of financing: regional comparisons of percentage shares of debt securities, stock market capitalization and bank assets, 2001



Source: International Monetary Fund, 2003, Global Financial Stability Report: Market Developments and Issues, Washington, D.C., IMF.



development of domestic bond markets in the wake of the Asian financial crisis. The APEC Finance Ministers compiled the Compendium of Sound Practices: Guidelines to Facilitate the Development of Domestic Bond Markets in APEC Member Economies and undertook initiatives in related areas such as credit rating practices, company accounting and financial reporting, and pension fund reform. Under the leadership of Thailand, the 2003 APEC Chair, the APEC Finance Ministers initiated work on the development of a regional bond market.

APEC's focus on the regional bond market in 2003 was accompanied by parallel work in other regional groups. The ASEAN Plus Three (APT) grouping launched the Asian Bond Market Initiative (ABMI) and established six working groups¹ for officials to discuss measures in various key areas, with technical assistance from Japan and the ADB. The Executives' Meeting of East Asia Pacific Central Banks (EMEAP)² launched a US\$1 billion-Asian Bond Fund (ABF) on 2 June 2003. During its meeting on 20-21 June 2003, the 18 members of the Asia Cooperation Dialogue (ACD)³ issued the Chiang Mai Declaration on Asian Bond Market Development, committing themselves to support and cooperate in promoting the ABMI.

Since its establishment, the ABMI has achieved the following:

- increased focus on issuing local-currency denominated asset-backed securities (ABS) in Malaysia, regulations to allow Thai baht-denominated Asian bonds, and issuance of the Pan-Asia Bond, launching of CBO in Japan and Korea using SME bonds as underlying assets;
- completion of a study by the Thai finance ministry proposing three alternative ways to implement withholding tax exemptions on bond holding to promote liquidity and cross-border activity in APT debt markets;
- new regulations and approvals in Malaysia, the Philippines, Thailand and China to enable issuance of local currency bonds by multilateral development banks and foreign government agencies, followed by a number of local currency bond issuances by the ADB, the IFC and Japanese

corporations in APT markets;

- launching of the Asian Bonds Online website, the Asia Bond Monitor (an online publication) and Asia Bond Indicators (with a list of leading underwriters and book-runners in Asian local currency bond markets) by the ADB; and
- ongoing technical assistance on bond market development to developing economies in the region, particularly those in the earliest stages of bond market development.

In addition, there are continuing discussions on a framework for regional multi-currency bonds, a credit guarantee and investment mechanism, and linkage among clearing and settlement systems of APT member economies, as well as a program to strengthen practices in Asia's local credit rating agencies. The ABMI intends to undertake further work in four areas: creating new securitized debt instruments, credit guarantee and investment mechanisms, foreign exchange transactions and settlement issues and rating system. In support of this work, the ADB is conducting technical assistance for ongoing discussions on regional settlement linkages, guarantee mechanisms and multi-currency bonds.

While the ABMI is working on market supply and infrastructure issues, the Asian Bond Fund (ABF) focuses on building demand for bonds in the region. The first ABF (ABF1) was created to invest in a basket of US dollar denominated sovereign and quasi-sovereign bonds issued by developing member economies. Some financial experts have pointed out its limitations. First, in using the US dollar, it does not address the issue of currency mismatch. Second, the idea of monetary authorities buying and holding the Asian bond fund would not promote the development of a secondary market. Third, strict regulation of eligible securities for foreign reserves of central banks (which contribute funds to the ABF) would limit the market size of bonds in which the Fund could invest.⁴

The second ABF (ABF2) was launched in December 2004. ABF2 consists of a Pan-Asian Bond Index Fund (PAIF) and eight Single-Market Funds. The PAIF's mission is to invest in sovereign and

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quasi-sovereign local currency-denominated bonds, while the eight Single-Market Funds (for China, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Singapore and Thailand) are to each invest in sovereign and quasi-sovereign local currency bonds issued in the respective markets. Aside from introducing new products into the market, ABF2 is also accelerating improvements in market infrastructure through the accompanying introduction of transparent and replicable bond indices and its role in identifying and addressing regulatory and tax impediments to enable the fund's operation.

The paramount intention behind these initiatives has been to ensure access to a stable supply of long-term funds in the region's currencies that will help economies avoid the maturity and currency mismatches that caused the Asian financial crisis. In this light, efforts toward the long-term establishment of a regional bond market must go hand in hand with more immediate measures to accelerate the development of robust, deep and liquid domestic bond markets. The ABMI and the ABF are small initial steps in the right direction, and much more remains to be done, as governments recognize that private sector investors and issuers must eventually assume the lead role in the future.

PECC affirmed in its 2003 Brunei Declaration⁵ that "economies in East Asia or elsewhere embarking on financial cooperation and capital market integration must base those initiatives on reform of domestic institutions and their alignment with global standards." PECC also stressed that "the economic and technical cooperation agenda, based on strong public-private partnerships, must remain a central part of regional integration because it is the key to greater transparency, building capacity and managing and facilitating change."

From the private sector standpoint, the success of bond market development efforts will depend on the extent to which liquid and efficient markets adequately providing cost-effective long-term capital to firms and attractive financial instruments to investors are created. The private sector sees great benefits in the development of local currency bond markets along these lines, and supports regional bond market initiatives, in so far as they help

accelerate progress in local currency markets and open the long-term possibility of a robust regional bond market along the same principles.

During their meeting with the PECC Finance Forum and the APEC Business Advisory Council (ABAC) in September 2003 in Phuket, the APEC Finance Ministers called for greater private sector inputs to assist the public sector's efforts to develop local currency and regional bond markets. In response to this call, the PECC Finance Forum and ABAC, in partnership with the Asian Bankers' Association (ABA) and the Association of Credit Rating Agencies in Asia (ACRAA), convened a private sector-led conference in May 2004 in Taipei on the development of Asia-Pacific bond markets.

In this conference, private sector participants expressed their willingness to collaborate with the public sector to promote the development of the region's local currency bond markets and the emergence of a commercially viable regional bond market. They identified conditions that are necessary to promote private sector investment and issuance in these markets, and recommended measures to promote these conditions. These recommendations were endorsed by ABAC and PECC to the APEC Finance Ministers at their meeting in September 2004 in Santiago, Chile.

To move this process forward and build on the results of the Taipei conference, the PECC Finance Forum, ABAC and the Asian Development Bank Institute (ADBI) convened a second conference on June 21-22, 2005 in Tokyo, Japan. This conference brought together leading representatives from the private sector and the public sectors, including capital market regulators from a number of the region's economies.

Regulators from developing economies were invited to assess the current policy environment for private sector activity in their respective local currency bond markets. Regulators from developed economies were invited to discuss their experiences in bond market development and the lessons that can be applied to the case of emerging markets. The PECC Finance Forum and ABAC undertook a survey of private sector financial institutions in the region to complement the public sector's assessments.



The PECC Finance Forum also organized discussions among specialists and experts from academe, government and international development agencies, as well as public and private financial institutions on bond market development through its conferences. These conferences were held in Honolulu (2002), Hua Hin (2003) and Santiago (2004), as well as during the 15th PECC General Meeting in Bandar Seri Begawan (2003). All these discussions are reflected in a number of reports and publications, the content of which are summarized in the next sections.

INSIGHTS FROM THE WORK OF THE PECC FINANCE FORUM ON BOND MARKET DEVELOPMENT

The survey of financial institutions conducted in early 2005 by the PECC Finance Forum in cooperation with ABAC provided valuable insights on the current situation of local currency bond markets in the region, as viewed from a private sector perspective.⁶ This survey sought to measure the extent to which key objectives of an enabling policy environment for private sector participation in bond market development are met in APEC emerging markets. [See Annex A for a list of these key elements.]

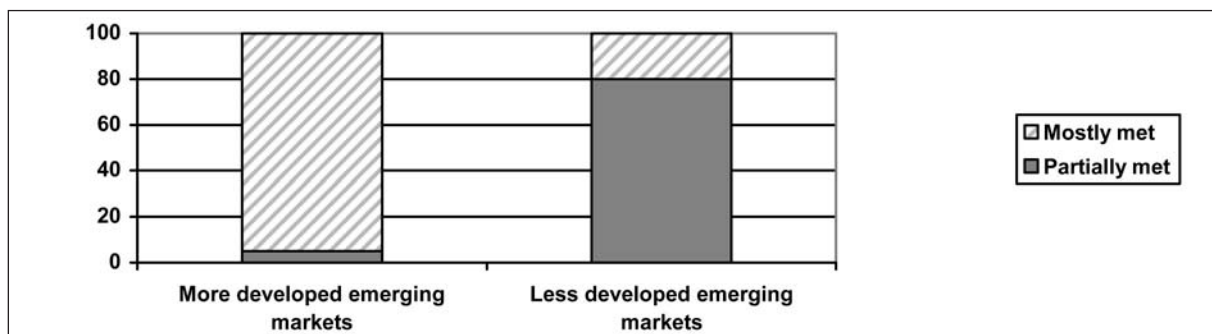
The results reveal wide disparities within the

region. A number of emerging markets in the region have made significant advances in developing relatively robust policy and regulatory frameworks, market infrastructure, and key components of deep and liquid bond markets. However, the majority of the region's emerging markets still belong to a second category where many of these requirements are far from adequately met, or where fundamental issues are yet to be sufficiently addressed.

In the first group, only 5% of all the key objectives for promoting private sector participation in bond market development in the region remain largely unmet, while in the second group, 80% remain substantially unattained, indicating that a considerable amount of work remains to be done in a number of emerging markets. [Chart 2]

The region has done relatively well in addressing issues related to the reporting framework as well as the political and macroeconomic environment, reflecting the impact of reforms undertaken in response to the 1997-98 Asian financial crisis. However, much remains to be done in many less developed emerging markets, to address market infrastructure issues and to build up key components of deep and liquid bond markets, such as derivatives and secondary bond markets, a significant domestic retail investor base, the variety of product types and credible credit rating systems.

CHART 2: Level of attainment of key objectives (number attained at each level as percentage of all 39 key objectives), average for the two groups and all markets



More developed emerging markets: Chile, Hong Kong, Korea, Malaysia, Singapore, Chinese Taipei
 Less developed emerging markets: China, Indonesia, Mexico, Peru, Philippines, Russia, Thailand, Vietnam

Source: ABAC/PECC 2005 Survey

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Less developed emerging markets have also lagged behind their more developed counterparts in the development of an adequate regulatory framework. A number of weaknesses continue to hinder greater private sector activity in local currency bond markets, particularly with respect to the legal framework governing asset securitization, effective enforcement of capital market rules, disclosure, the balancing of interests of market participants, and the consistency of tax rules with the goal of market development.

Some basic reforms are important in closing significant gaps between the less developed and more developed emerging markets. These include the improvement of the legal framework governing the protection of creditor rights and its enforcement, the progressive removal of restrictions on economic activities in all industries, the establishment of effective competition regulators, and further reforms to strengthen financial system stability.

For the more developed emerging markets, the main focus of concern will therefore be on enhancing market depth and liquidity. For the less developed markets, the focus will be on addressing more fundamental issues such as disclosure and accounting standards, reducing barriers to investment and issuance, protection of creditor rights, increasing the savings rate and enforcement of laws and regulations.

The experiences of economies where bond markets have grown rapidly underscore the importance of simultaneously developing three fundamental elements: the width of the market (the variety of product types), the depth of the market (the robustness of the investor base, including development of pension funds and the retail investor base), and market infrastructure (which include systems for clearing and settlement, as well as hedging and credit rating systems). Developing these three elements involve addressing a number of key issues.

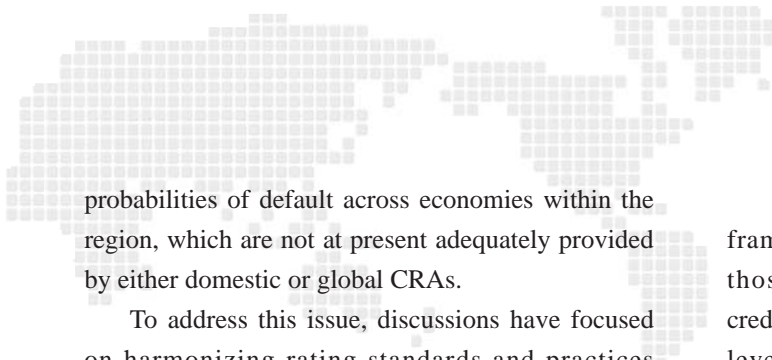
Expanding the region's institutional investor base. A number of key factors guide institutional investors' decisions to place funds in bond markets. The government has an important role to play in supporting the yield curve as a bond issuer and in providing the enabling environment. Key elements

that are of particular relevance to investment decision-making include creditor and shareholder rights; the harmonization of supervisory arrangements across the region; non-political credit rating standards and independent agencies; uniform and transparent reporting standards; enhanced corporate governance, financial controls and integrity; the absence of capital controls, avoidance of double taxation on interest and profits; active domestic investor participation in the market; reliable information flows; avoidance of moral hazard; and reflecting in a balanced way the interests of all market participants.

For a regional market to have significance to commercial participants and to facilitate genuine risk assessment and capital allocation functions, it should reflect commercial pricing. Otherwise, the market would involve a degree of moral hazard and detract from, rather than contribute to, regional financial stability. This principle should be taken into consideration in the implementation of schemes geared toward the development of a regional market, such as regional securitization and multi-currency bonds.

Developing a strong regional credit rating industry. Capacity-building measures are currently being undertaken, particularly by the Association of Credit Rating Agencies in Asia (ACRAA), with support from the ADB and the Government of Japan, to upgrade analytical skills and develop best practices in domestic credit rating agencies. However, other key areas need to be addressed to significantly improve the performance of credit rating agencies (CRAs) in a number of emerging markets. These include improving corporate governance, accounting standards and practices and regulatory oversight, as well as promoting open markets conducive to unbiased reporting.

The role of credit ratings in the development of a regional bond market is another major issue. While global ratings issued by global CRAs are useful to international fund managers looking at different economies worldwide, their value to domestic investors, especially in economies where they are not allowed to invest overseas, is limited.⁷ The development of a regional bond market would require sufficiently comparable information on



probabilities of default across economies within the region, which are not at present adequately provided by either domestic or global CRAs.

To address this issue, discussions have focused on harmonizing rating standards and practices among domestic CRAs in the region and the development of a regional credit rating agency that can issue regional ratings. A number of challenges make it difficult to harmonize rating standards among domestic CRAs in the region, although efforts have been started. The establishment of a regional CRA faces difficult problems. These include the lack of harmonized regimes in financial reporting, insolvency law and taxation within the region, as well as a lack of regional default studies.

For the present time, efforts should focus on supporting the work of harmonizing rating practices of domestic CRAs in the region to make their credit ratings more comparable and easier for regional and global investors to understand, thus laying the groundwork for the commercial and technical viability of regional ratings.

Promoting effective domestic and region-wide insolvency and creditor rights systems. There are three areas that are important to developing effective insolvency and creditor rights systems within the region - cross-border insolvency, the intersection between secured transactions and insolvency law regimes, and informal workouts. Approaches to addressing these issues have been developed under the ADB's regional technical assistance to promote regional cooperation in the development of insolvency law. APEC now needs to undertake measures to facilitate the adoption of these approaches.

Cross-border insolvency regimes are concerned with mechanisms for courts and institutions in one jurisdiction to recognize and support the conduct of an insolvency administration in another. This is relevant to the region, where a large number of businesses operate across borders. Within Asia, however, only Japan currently has a cross-border insolvency law. Korea and the Philippines have started the process of introducing laws to facilitate recognition of cross-border insolvency regimes.

Balance and consistency between legal frameworks relating to secured transactions and those relating to insolvency are essential for creditors to be able to assess their risks with a high level of predictability and confidence, and for facilitating reorganizations of financially troubled debtors. In most cases, they are formulated separately by different government agencies and are influenced by different policy considerations. Adoption by APEC economies of a set of principles, developed under the ADB's regional technical assistance to promote regional cooperation in the development of insolvency law, would help ensure balance and consistency between these two regimes.

An informal workout process provides a quick, less costly, more flexible and non-litigious alternative to a formal rehabilitation proceeding. Given its voluntary nature, it requires effective incentives for debtors and creditors to participate and abide by its results. Such incentives are provided by a strong formal insolvency process that can be conveniently and efficiently accessed, and other enforcement processes (including debt enforcement and enforcement of secured transactions).

Promoting region-wide convergence toward robust global accounting standards. There is an ongoing global effort toward convergence. In April 2001, the International Accounting Standards Board (IASB) began efforts to develop a single set of global accounting standards. Within the Asia-Pacific region, however, a number of key issues still need to be addressed. One major issue is the lack of capacity within a number of developing economies to undertake key measures toward implementation of the International Financial Reporting Standards (IFRS) and to generate greater domestic support for convergence.

Studies have already identified the technical impediments to convergence within APEC related to clarification, cost-benefit and theoretical issues. The major ones are (a) the complicated nature of particular standards; (b) disagreement with certain significant standards; (c) insufficient guidance on first-time application of IFRS; (d) satisfaction with domestic accounting standards among investors and

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users; (e) limited capital markets; (f) translation difficulties; and (g) tax-driven nature of the domestic accounting regime. In addition, there are impediments arising from the legal framework and the level of capital market development.

Convergence toward robust global accounting standards is a two-way process. It involves reflecting international views in the development of local accounting standards. It also involves reflecting local views in the development of global standards. Domestic accounting standard-setting bodies collaborating closely with the private sector locally and among each other at the international level would play a central role in this process. Regional coordination to develop common approaches to the development and adoption of global accounting standards is currently at a very early stage. APEC can play an important role in addressing these issues and accelerating the process of convergence within the region.

Addressing impediments to cross-border investment in the region's bond markets. At present, intra-regional cross-border investment and issuance in Asian bonds are insignificant, owing to various restrictions, omissions of law or practice and legal, fiscal and regulatory discrepancies. Restrictions that apply to foreign firms, which impede their participation in domestic bond market making processes, also contribute to the insignificant flow of investor funds and issuance. The most important factors are market liquidity in the case of cross-border investment, and swap markets in the case of issuance. Cross border investment and market liquidity are of course severely impacted by capital controls aimed at restricting the movement of capital in and out of markets.

Regional cooperation, particularly in promoting convergence toward common standards, supported by a peer review process and technical assistance, would be crucial in addressing these issues. Bond issuance by regional funds, such as the ABF2, can play a useful role in identifying and addressing impediments in individual markets. As capital account liberalization is required for promoting cross-border investment and issuance, a strong domestic financial system is also a prerequisite.


Promoting securitization and credit guarantee

markets. Securitization and credit insurance have great potential in helping address the lack of corporate bonds with credit ratings at investment grade within the region.⁸ Consumer finance, infrastructure development and new financial instruments will likely drive the growth of the market in coming years. In more developed markets, existing impediments will likely be overcome over the medium term through advances in technical knowledge, systems and analytical tools. There is considerable potential for the use of securitization to benefit small and medium enterprises (SMEs). Models have emerged for developing instruments with underlying SME assets, which with the passage of time can become viable without external guarantees.

A regional market in such assets, however, requires robust disclosure frameworks, adequate default data and harmonization of tax and legal regimes, and is not likely to develop in the short term without external credit enhancement. Credit enhancement would have to be limited in nature, transparent and avoid distorting the commercial price of risk. The development of securitization and credit guarantee markets in the region requires improvements in the market infrastructure and legal framework and the development of repurchase and derivatives markets, the institutional investor base and a credit culture.⁹

Developing a regional clearing and settlement system. Clearing and settlement systems are a key element of the capital market infrastructure. Significant improvements in such systems are still needed in a number of economies in the region. Wider cross-border bond market transactions and the successful emergence of a regional bond market would require cost-effective channels for cross-border securities that alleviate relevant risks, including Herstatt risk.

The development of a regional clearing and settlement mechanism is a long-term task. Differences arising from competing visions of the regional financial architecture, varying assessments of how far into the future current trends will persist, in particular the role of the US dollar as a preferred currency, and diverging views about the need to serve a cross-border market for local currency bonds



in the region, have yet to be resolved.

Minimizing foreign exchange settlement risks for a broader spectrum of investors would require regional solutions involving linkages among central securities depositories (CSDs). However, there is yet no consensus on how this should be achieved. For a number of emerging markets in the region, the establishment of linkages with other CSDs in the region is not yet feasible within the foreseeable future, as significant improvements in the infrastructure and the deregulation of foreign exchange controls are still needed before such linkages become viable.

In addition to the above, the success of efforts to develop bond markets will also depend on the fulfillment of the following fundamental requirements.

- Regulation should focus on maintaining and enhancing transparency and market integrity, which are important for the soundness of market-based structures with multiple participants such as bond markets, as well as for investor confidence. This involves maintaining a robust system of clear, complete, timely and meaningful disclosure; promoting good corporate governance; as well as formulating and strictly enforcing clear and sound market rules and regulations.
- Markets will attract investors if there is competition among market participants and if they are open to many players, both domestic and foreign. Such conditions ensure that market prices for risk are properly reflected and provide fair returns. Ideally, jurisdictions should have a competition regulator with full authority to intervene against anti-competitive market activity.
- Taxation treatment is highly influential in market players' decisions, and should be reviewed to determine whether tax regimes are conducive to the holding and trading of bonds. It is an important factor in the growth of repo markets and in market liquidity.

The emergence of a regional bond market is a long-term process that faces a number of formidable obstacles, including the low level of intra-regional investments and potential costs to borrowers of an

additional financial infrastructure at the regional level. A future regional bond market would only be viable as long as it is attractive to investors and issuers from within and outside the region. This factor would eventually determine the characteristics of such a market, including where bonds are issued, traded, cleared and settled, and in which currency they are denominated.¹⁰

Competition among a number of markets aspiring to become regional financial centers, as well as cooperation among governments and between governments and investors to develop regional infrastructure and increase the supply of and demand for regional bonds, will play important roles in this process.¹¹ In addition, the emergence of a regional bond market is dependent on open capital accounts and flexible exchange rate arrangements.¹²

The emergence of a regional bond market should be preceded by the strengthening and deepening of local-currency bond markets, which can effectively mobilize the region's huge amount of savings and address the double mismatch problem. In practical terms, a number of Asian economies do not have the scale required for a deep and efficient domestic market, and would have to rely on regional and global bond markets for long-term capital.¹³ These smaller economies could benefit from the development of regional markets, where the pooling of borrowing needs might be securitized and reflected in bond issues denominated in a basket of currencies.¹⁴

Developing local currency bond markets and a regional bond market is a complex issue, involving a broad range of policy areas and sectors and a large number of institutions and market players. Properly sequenced concomitant reforms and capacity-building measures, undertaken in partnership with the private sector, are therefore needed in these areas. This requires effective coordination among government agencies as well as close public-private sector partnership. In many emerging markets, banks are the major sources of finance and the most significant players in bond markets, and should be involved in the early stages of bond market development. Current efforts to strengthen banks'

prudential qualities should therefore also be sustained.

Bond market initiatives in the region are entering a critical stage. First, governments are moving beyond goal-setting and into technical issues, where private sector inputs are of paramount importance. Successful resolution of these issues would be needed to sustain the momentum of these initiatives. Second, there is currently a multiplicity of initiatives involving different regional organizations and institutions. Although they presently complement each other, it is important to ensure continued consistency and coordination, as well as the consistency of all these efforts with APEC's vision of free and open trade and investment throughout the broader region.

The role of APEC in this process is crucial. Public-private sector partnership under all these initiatives usually involve participation of individual private firms, but currently only APEC maintains broad institutionalized interactions with organized regional private sector groups, such as ABAC and PECC, which can ensure more continuity and objectivity in the process. In addition, the experiences of advanced APEC economies in promoting private sector activity in their local-currency bond markets have generated useful lessons and a body of continuously evolving international best practice that could benefit emerging markets. These experiences could help emerging markets avoid costly mistakes and accelerate the development process.

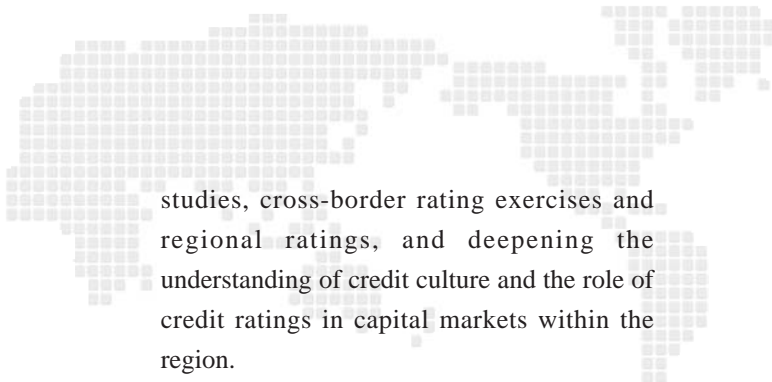
RECOMENDATIONS

I. Principles. Bond market development efforts in the region should be based on the following basic principles:

- A. Robust and liquid local currency bond markets, reform of domestic institutions and their alignment with global standards as the foundations for a future regional bond market.
- B. Simultaneous efforts to achieve a sound institutional framework and market infrastructure, a robust investor and issuer base, a sufficient number of market makers, a wide variety of financial instruments and

sound macroeconomic policies.

- C. Effective coordination among government agencies at the domestic level, among economies at the regional level, and public-private sector partnership.
 - D. Enhancing transparency and market integrity.
 - E. Promoting competition among market participants.
 - F. Ensuring that tax regimes are conducive to the holding and trading of bonds.
 - G. Movement toward open capital accounts and flexible exchange rates.
 - H. Enabling the appropriate pricing of risk by market participants.
- II. Issues.** Addressing the following issues will help promote the rapid growth of domestic and regional bond markets:
- A. **Expanding the region's institutional investor base.** APEC should undertake policy dialogue and cooperation involving the private sector to encourage broader cross-border investment by institutional investors in domestic bond markets. These efforts should focus on helping economies provide an enabling environment with respect to government bond issuance program to support the yield curve, tax regimes, documentation and practices in markets, the environment for assessing risk and return in traded instruments and regulations governing markets and settlement systems.
 - B. **Developing a strong regional credit rating industry.** APEC should strengthen the credit rating industry in the region and lay the groundwork for the commercial and technical viability of regional ratings. Efforts should focus on analytical skills and best international practices in domestic credit rating agencies; and key areas crucial to the performance of rating agencies (corporate governance, accounting standards, disclosure, regulation and open markets). To make ratings more comparable and understandable to cross-border investors, APEC should promote the harmonization of rating practices in the region, cooperation among domestic rating agencies to develop regional default



studies, cross-border rating exercises and regional ratings, and deepening the understanding of credit culture and the role of credit ratings in capital markets within the region.

C. *Promoting effective domestic and region-wide insolvency and creditor rights systems.*

Much has been done to identify measures and develop principles for improving insolvency and creditor rights systems within the region. APEC should focus on promoting the timely adoption of these measures and principles with respect to cross-border recognition of insolvency administrations; balance and consistency between the secured transactions and insolvency law regimes; the environment for informal workouts; and capacity-building projects involving education and training, access to information, best practice guidelines, public-private sector partnership, and voluntary efforts by individual economies to undertake reforms.

D. *Promoting region-wide convergence toward robust global accounting standards.*

APEC should address issues related to the development and adoption of global accounting standards and to accelerating convergence with these standards within the region. These efforts should include promoting a regional forum of domestic accounting standard-setting bodies within APEC to help expand regional inputs into the further development of global accounting standards; a common policy statement on convergence; and a policy initiative to help document domestic convergence plans, develop a regional convergence plan, identify capacity-building resources, and provide technical and financial support for region-wide convergence.

E. *Addressing impediments to cross-border investment in the region's bond markets.*

While the context for reforms will be different for each market, given the wide differences in levels of development within

the region, a set of common reform objectives may be considered. These would include the standardization and broadening of the range of available instruments and consolidation of benchmarks across a range of maturities at the level of individual markets and the region. They would involve the removal of restrictions on the participation of foreign firms as bond market players to encourage capital into the market, expertise and market making technology and competition and removal of trading restrictions, including those imposed on repurchases of investment-grade issues, short-selling and interest rate and currency derivatives. They should include enhancement and standardization of clearing and custody systems; requiring full transparency of market makers in providing benchmark liquidity to end users and strengthening of property and creditor rights, particularly with respect to asset and credit transfer mechanisms. They should also include the reduction of regulatory restrictions on investment in debt securities, subject to harmonized credit rating floors; and the removal, standardization or simplification of relevant taxes, particularly withholding taxes and duties on securities and collateral assets, and ensuring the consistent application of these to all investor classes.

F. *Promoting securitization and credit guarantee markets.*

There is ample scope for accelerating the development of securitization in the region through efforts in a number of key areas. The market infrastructure should be developed through improvements in corporate governance and transparency, common financial disclosure and registration rules for bond issuers, standardization of bond contracts and clearing and settlement procedures and harmonization of market regulation and taxation. Contract enforcement should be strengthened and predictability in the resolution of contractual disputes enhanced. A repurchase market that functions

multilaterally for all market participants should be developed. Regulation and supervision systems should be put in place to encourage the development of financial derivatives markets. A more diversified range of institutional investors should be developed to complement the banks. Credit culture should be developed through enhanced protection of creditor rights, a larger role for credit ratings and a competitive environment for credit rating agencies.

G. Developing a regional clearing and settlement system. Significant improvements in the infrastructure and the deregulation of foreign exchange controls would be needed in a number of the region's emerging markets for the development of a regional clearing and settlement system. Such a system would have to be backed in a consistent way by laws in individual economies. Its development would require strong leadership from the public sector particularly in setting clear goals, which should be announced by high-level officials, in supporting research on market practices, and in developing systems. The recommendations of the Group of Thirty, the International Securities Services Association (ISSA), and the guidelines of the International Organization of Securities Commissions (IOSCO) and the Committee on Payment and Settlement Systems (CPSS) would be most helpful in this process. In the meantime, further discussions of existing and new proposals within an institutional framework involving both public and private sectors should continue to be pursued.

III. Process. An effective process is needed to ensure progress and consistency, especially given the multiplicity of current initiatives to develop bond markets in the region.

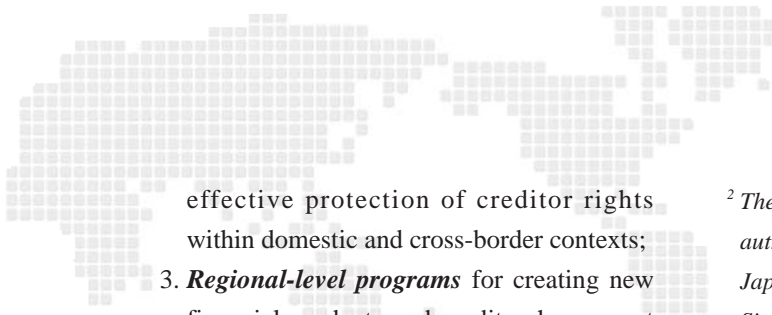
A. Voluntary action plans by developing economies. The APEC Finance Ministers should include in their work program an action plan process for bond market development. It should involve the development of voluntary action plans by individual developing economies, with

timelines, to develop their respective local currency bond markets. They would be subject to periodical peer review, involving all APEC member economies, the private sector and relevant international and regional financial institutions. These action plans could focus on the following priority areas:

1. Relaxing regulations on market participation, new financial products, repo transactions, short-selling and the use of derivatives.
2. Reform of accounting and investment rules, tax and insolvency laws, banking and capital market regulations and administrative procedures, as well as pension systems.
3. Addressing basic issues such as judicial independence, the application and enforcement of laws and property rights.
4. Frequent regular issuance of public sector bonds to build a benchmark treasury yield curve across a broad range of maturities.
5. Improving coordination among domestic agencies involved in bond market development.
6. Undertaking concrete steps toward flexible exchange rate regimes.

B. Collective initiatives. APEC should undertake collective initiatives to facilitate greater cross-border investment and issuance in the region's local currency bond markets, complementing other regional initiatives. These could focus on the following areas:

1. **Technical assistance** for the reform of legal frameworks governing capital markets (including asset securitization) and the protection of creditor rights, and for promoting region-wide convergence of credit rating, accounting and credit guarantee systems.
2. **Regional-level policy dialogue** among capital market regulators, relevant officials, industry representatives, private sector experts and market players, to share experiences and expertise on the development of secondary, derivatives and asset-backed securities markets and the



effective protection of creditor rights within domestic and cross-border contexts;

3. **Regional-level programs** for creating new financial products and credit enhancement facilities, promoting investor education, deepening awareness and expertise among policy makers and regulators on global best practices in capital market rules and regulations, and strengthening risk management practices in financial institutions and corporate governance; and
4. **Initiatives to develop the domestic retail investor base** with broad participation from public and private sectors, including banks, mutual funds and public sector entities issuing paper of interest to retail investors.

C. General principles for region-wide bond market development efforts. The APEC Finance Ministers should develop, for their adoption in 2006, general principles for Asia-Pacific bond market development cooperation. These would be robust principles to guide and promote consistency among the various bond market development initiatives in the region, and to ensure the consistency of their outcomes with the broader APEC vision. The general principles would be presented for consideration by other regional organizations (e.g., APT, EMEAP) undertaking relevant initiatives.

¹ These working groups deal with the following six issues: (1) creating new securitized debt instruments (chaired by Thailand); (2) credit guarantee mechanisms (chaired by Korea); (3) foreign exchange transactions and settlement issues (chaired by Malaysia); (4) issuance of bonds denominated in local currency by multilateral development banks, foreign government agencies and Asian multinational corporations (chaired by China); (5) local and regional rating agencies (co-chaired by Singapore and Japan); and (6) technical assistance coordination (co-chaired by Indonesia, the Philippines and Malaysia). Source: Department of Finance, Republic of the Philippines, Chairman's Press Release on the Asian Bond Markets Initiative (Manila, 7 August 2003).

² The eleven members of EMEAP are the central monetary authorities of Australia, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, and Thailand.

³ These are Bahrain, Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, Pakistan, the Philippines, Qatar, Singapore, Thailand, and Vietnam.

⁴ Takatoshi Ito, "Promoting Asian Basket Currency Bonds," in Ito and Park (Eds.), Takatoshi Ito and Yung Chul Park (Eds.), **Developing Asian Bond Markets**, Canberra, Asia-Pacific Press 2004, p.70.

⁵ Pacific Economic Cooperation Council, *The Brunei Declaration*, Bandar Seri Begawan, Brunei Darussalam, September 3, 2003.

⁶ *Improving the Policy Environment for Private Sector Participation in the Development of Local Currency and Regional Bond Markets in APEC: Report of a Financial Sector Survey [A Joint Project of the APEC Business Advisory Council and the Pacific Economic Cooperation Council]* June 2005.

⁷ Domestic (local currency) ratings differ from global ratings in that the latter considers foreign currency repatriation risk, and hence global ratings for corporate bonds are limited by a sovereign rating ceiling, i.e., could not be higher than the sovereign rating of the particular economy. While sovereign rating ceilings result in a compression of ratings in economies with low sovereign ratings - as in most emerging markets in the region - domestic rating scales for local currency bonds allow greater differentiation of credit risks, and thus have higher information value for investors primarily focused on such markets. *Developing Bond Markets in APEC: Moving Forward through Public-Private Sector Partnership. Report of a Conference Jointly Organized by the APEC Business Advisory Council and the Pacific Economic Cooperation Council in partnership with the Asian Bankers' Association and the Association for Credit Rating Agencies in Asia, May 10-11, 2004, Taipei*, p. 11.

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¹⁰ S. Ghon Rhee, *Developing an Asian Bond Market: Rationale, Concerns and Roadmap (Issues@PECC)*. Singapore, Pacific Economic Cooperation Council 2004, pp.3-4.

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¹² *Developing Bond Markets in APEC: Moving Forward through Public-Private Sector Partnership*, p. 3.

¹³ Park and Park, pp. 52-53.

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The Development of Taiwan's S&T Intermediary Mechanism in Wireless Communication Industry

By Xin-Wu Lin

Introduction

Science and technology (S&T) has become one of the major drivers to world economic development. Within APEC region, much attention has also been paid to the policy of science and technology for years, especially after “Knowledge-Based Economy (KBE)” was raised as an economic development stage next to industrial economy and become many economies’ common vision. Under the way of pursuing KBE, both increasing the size of R&D expenditure and improving the performance of “National Innovation Systems (NISs)” are two critical policy objectives. However, as the budget for R&D is limited, how to enhance the efficiency of resource usage and how to improve the institutional linkages in NISs are even more important issues.

Wireless communication industry, one of the high-tech industries defined by OECD and one of the most explosive industries in near future, many economies have been trying to foster it. However, to foster the industry in a late-coming economy like Taiwan to catch up those technology-leading economies the needs of a high performance NISs is much more important than R&D investment. As a new entrant to wireless communication industry that has majored in OEM of the industry, Taiwan has been trying to find ways to improve the performance of the NISs of wireless communication industry.

In this paper, based on the economic rationales to explain why institutional linkages in a high performance NISs are necessary, the case of the development of wireless communication industry in Taiwan will be reviewed. In this case study, we will describe how Taiwan has been trying to improve the institutional linkages by forming intermediary mechanisms, and will propose the key factors that are important to improve institutional linkages in the NISs.

Except this section, the economic rationales of

government involvement in the policy of science and technology will be simply reviewed in the second section. These economic rationales also can explain why the institutional linkages are very important to the performance of NISs. In the third section, some major features of wireless communication industry are described and some policy implications will be derived from the economic rationales already mentioned. Then, the case of how Taiwan built up proper intermediary mechanisms step-by-step into the NISs of wireless communication industry in the fourth section. Finally, the relationship between different intermediary mechanisms and why the mechanism could work well will be characterized in the fifth section.

Economic Rationales of Government Involvement in S&T Policy

From the theoretical perspective, the economic rationales of government involvement in the policy of science and technology have been analyzed before. (Norgren and Hauknes, 1999) The most important two are “market failure” and “system failure.” “Market failure” rationalizes public R&D supports and providing incentives to induce more private R&D investment, and “system failure” points out why developing appropriate framework conditions for the generation and diffusion of innovations is very important.

Market failure causes by imperfect appropriation of returns and uncertainty. The imperfect appropriation of returns means that the social rates of return from R&D are commonly higher than the private rates of return. This is because the innovator is able to appropriate only part of the gains with the rest mostly accruing to its competitors. The effect is also called externality or spillover effect, which lead to reduce the motivation of private firms to do innovate and then less resources are devoted to

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innovation activities than would be socially desirable. (OECD, 1998) As for uncertainty, it is because the difficult to predict the cost and duration of an R&D project and the commercial success of its outcome. Therefore the private investor value future returns less, and totally will invest too little in to R&D from society's perspective.

Both fundamental economic reasons of market failure support that innovation activities will under invest if let market work alone. The policy implication is that the removal of the sources to market failure in order to create optimal conditions for investing in innovation activities is necessary. Indirectly, these economic rationales also give the reason that public financed R&D institutions, like public research centers, should exist to share some R&D activities as well as doing R&D for SMEs.

The economic rationales of market failure argument are based on the assumptions of a given set of tastes and some given stock of technological knowledge. (Rosenberg, 1994) However, with the assumptions, a rudimentary feature of the dynamics of advanced economies was misrepresentation. It is technology change and innovation. (Metcalf and Georghiou, 1998)

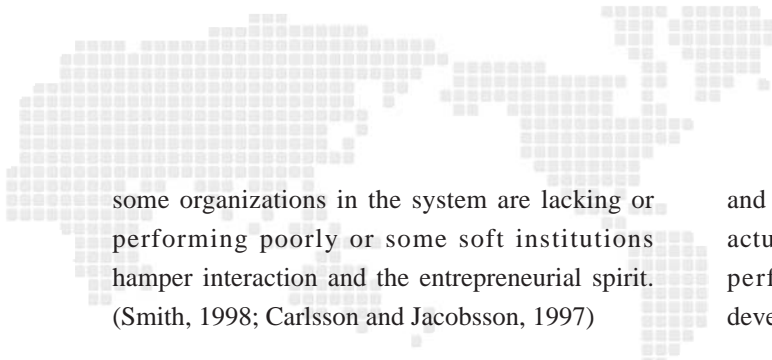
According to the approach to economic change, variety generation and adaptation are basic ingredients of a dynamic economics system, where innovation is the source of variety and diffusion is the process of adaptation. Innovation and diffusion are complementary processes. In this system, technological change could be presented as a two-stage process: one stage for generating variety in technology (innovations) and one stage for selecting across that variety to produce patterns of change (diffusion of innovations). Furthermore, technological change can also be seen as a learning process, which is gradual and cumulative in character and leads to a relatively ordered pattern of innovations (technology trajectories). Firms build upon their existing knowledge base when they search for new innovation opportunities, but they also use external sources of knowledge in this search. As a result, technological change and diffusion are characterized by constant interplay and mutual learning between different types of knowledge and actors. Then, overall performance is thus not only dependent on how specific actors

perform but also on how they interact with each other as elements of an innovation system (Metcalf and Georghiou, 1998; Carlsson and Jacobsson, 1997). Therefore, asymmetric information in an innovation system is very essential to the performance of the innovation system. That is why mismatches between elements in an innovation system are by OECD defined as "systemic failures" (Norgren and Hauknes, 1999).

System failure rationales do not raise any contradictory argument to market failure rationales. Rather they provide additional domains of policy intervention (Lipsey, 1998). That means, besides the market, institutions and networks are other elements that exist in NISs influence the process of technology advance and might also exist institutional failures or network failures.

Then, what symptoms of system failure really are that public policies have to overcome and then to increase the performance of NISs? There are two approaches to identify them. One is derived from the mismatches between the elements in NISs (Malerba, 1998) and the other one is directly look at the possible failures in the whole system. (Smith, 1998; Carlsson and Jacobsson, 1997) Overall, the major types of system failures can be summarized as follows:

- Lock-in failures (learning failures): firms may be locked into existing technologies, thus be unable to jump to other new technologies; or the socio-economic system can be locked-in to particular technological paradigms. (Malerba, 1998; Smith, 1998)
- Appropriation traps (transition failures): too stringent or narrow of appropriation ability may limit the diffusion of advanced technological knowledge. (Malerba, 1998; Smith, 1998)
- Dynamic complementarities failures: some complementary activities may be required for a successful innovation but the activities may not be present within an innovation system or they are present, but may not be connected. (Malerba, 1998)
- Institutional failures: there are two types: hard institutions and soft institutions. Organizations are hard institutions, such as firms, research institutes and universities; laws, regulations, culture etc are soft institutions. Institutional failures mean that



some organizations in the system are lacking or performing poorly or some soft institutions hamper interaction and the entrepreneurial spirit. (Smith, 1998; Carlsson and Jacobsson, 1997)

The Features of Wireless Communication Industry and NISs

According to the International Telecommunications Union (ITU), the number of mobile cellular subscribers was estimated to exceed the number of fixed-line phones in 2002. This is really a breakthrough since the first generation of mobile service introduced in early 80s. The breakthrough was mainly because the second generation of mobile technology has been digitalized and expanded its capacity of service in late 80s. Besides the breakthrough in high density of subscribers, more convenient and higher quality of mobile data services is expected in the coming future.

This advancement of wireless communications has formed the nature of development of communication industry. Firstly, it is because at the physical and service layers, mobile telephony has standards, spectrum allocation and spectrum assignment issues that fixed-line telephony has largely avoided. Especially, the standards issues affect services offered, network compatibility and coverage, business models and market structure. For example, there are four digital wireless standards that were recognized as 2G: CDMA/IS-95, GSM, TDMA and iDEN, and mainly three standards were recognized as 3G: cdma2000 (cdma2000 1xEV-DO, cdma2000 1xEV-DV), WCDMA and TD-SCDMA. Secondly, the technology of wireless communication hasn't matured yet. Some more advanced ideas (e.g. smart antennas and/or smart codes) are proposed and under developing. Parallel to the trend of digital convergence, the integration of all current systems is another approach to improve those state-of-art wireless communication systems (i.e. 3G + WLAN + BlueTooth + UWB + Zigbee). (Lee, 2004) These trends mean that while the development of 3G services is still in early stage, much further possible advancement of wireless communication technologies also keeps developing.

These two features, various standards co-exist

and further wireless technologies keep developing, actually have considerably large impacts on the performance of the innovation system for the development of wireless communication industry.

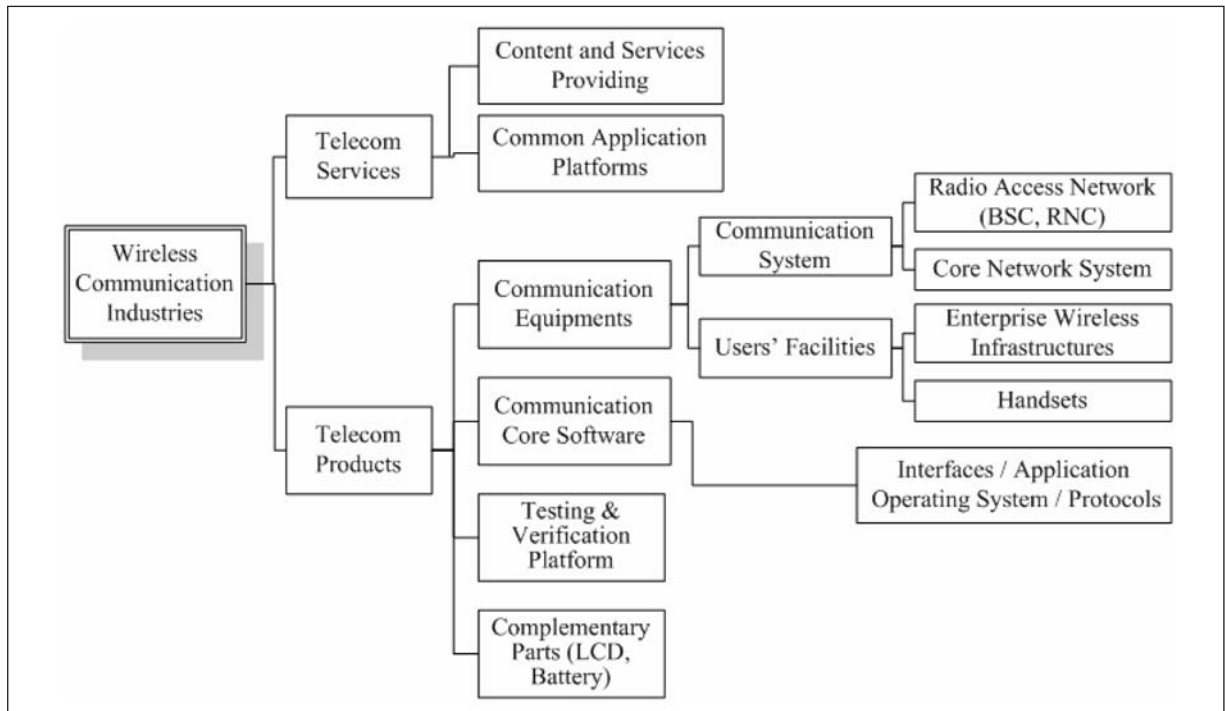
Basically, when a wireless service introduces to final market, all players in the industry have to follow the same rules for better communicating, or either the service of quality is very bad, or even the service cannot be fulfilled. However, given any specific standard (for example, WCDMA in 3G), providing any wireless final service will involve many value chains. The main value chains include: communication system providers (radio access network, core network system), users' facilities providers (enterprise wireless infrastructures, handsets), communication core software (Interfaces / Applications / Operating System / Protocols), mobile service providers, content providers and many other new service providers.

With so many value chains, there are two extreme cases: either all these value chains are integrated in a single company, or to fulfill the value chains need many players. As a new comer into wireless communication industry, Taiwan wouldn't have the capability to integrate all these value chains in a single company. However, in the other case, as many players are involved in developing the wireless communication industry, before introducing any wireless service to final market, i.e. in the process of R&D, the problem of asymmetry information must be very serious. Existence of any asymmetry information may highly possible cause that the R&D resources to develop the value chains are not in the same direction or highly possible overlap. That is, the problem of mismatches (system failures) that proposed by OECD would happen in many situations in the NISs of wireless communication industry in Taiwan.

Therefore, it is very important to identify those potential mismatches (system failures) as developing or upgrading the wireless communication technological capability and find ways to solve these system failures in Taiwan. These are the key issues to improve the performance of NISs in developing the wireless communication industry.

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Figure 1: Wireless Communication Industries



How Taiwan Built Up the Intermediary Mechanisms

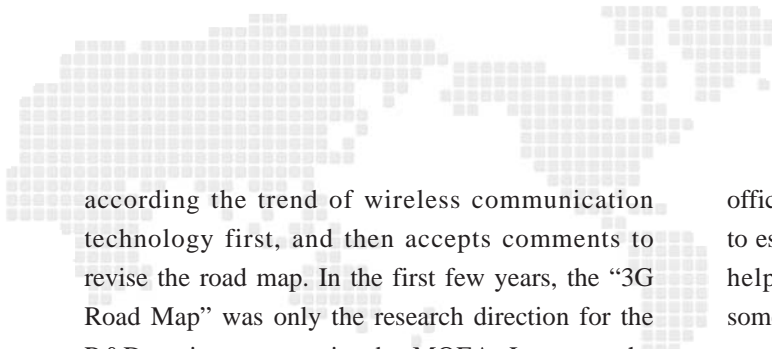
Although identifying the problem of system failures in the NISs and solving them are very critical to improving the performance of NISs in developing the wireless communication industry, related policies were not implemented at the same time in Taiwan. Actually, since 1998, there have been some Intermediary Mechanisms implemented with support from the government or from private sector. These Intermediary Mechanisms mainly focused on solving different types of system failure. Examples are as follows:

- The NTP — solving **the lock-in failures**: By 1998, IT industry was very successful in Taiwan, but not much attention on communication industry then. The National Science Council (NSC) proposed “National Telecommunication Development Program” (NTP). The objective of this program was coordinating the research effort among various organizations on wireless communication and broadband Internet. Its goals mainly are: 1). Enhancing the research coordination mechanism among Ministries and Councils; improving the effectiveness and efficiency of telecommunication research; and 2). Training needed talents in telecommunication industry. Under the program, both human

resources policy and research efforts were coordinated by the mechanisms such as project review, monitor and evaluation.

- The world leading technological consulting team — solving **dynamic complementarities failures**: The NTP already pointed out that the directions of telecommunication industry are wireless communication and broadband Internet. However, as we mentioned in last section, “standards” play a very critical role in wireless communication. This means that the R&D projects under NTP need a more clear and specific goal for each project. The consulting team was led by a world wide famous CDMA expert, Dr. William C.Y. Lee, and formed in 1999. The goals of the consulting team are: 1. Evaluate worldwide state of art wireless communication technologies and set forth possible future direction. 2. Consult and audit the wireless communication R&D projects supporting by MOEA (Ministry of Economic Affairs). 3. Introduce any helpful foreign cooperation chance and expert in to Taiwan.

The major tool of the consulting team to consult the R&D projects is technology road map. Until 2003, the consulting team has proposed four versions of “3G Road Map” and one version of “B3G guideline”. The team itself did not design all these technology road maps but the team proposes a draft



according to the trend of wireless communication technology first, and then accepts comments to revise the road map. In the first few years, the “3G Road Map” was only the research direction for the R&D projects supporting by MOEA. Later on, the consulting team also became the consulting team of NTP and consulted all R&D projects reviewed under NTP. This means, the consulting team is guiding the wireless communication R&D projects in industries, government and academia sectors. The technology road maps became the common direction of the NIS of wireless communication industry in Taiwan.

■ **The Promotion Office for Wireless Communication — solving appropriation traps (transition failures):** As we have mentioned before, NTP is mainly for coordinating the public resources (government and academia) and the consulting team is also only for the projects supporting by MOEA before 2001. The linkage between public sector and private sector was neglected and was very weak. The R&D output of these public supporting projects have been still not diffused to private sector though many experienced researchers in public research institutes had migrated to private companies. To solve the transition failures, MOEA formed a task force “Promotion Office for Wireless Communication” in 2001.

The goals of the office are: 1. Assist and encourage private companies to establish R&D and innovation centers. 2. Assist and encourage related private companies to form research consortiums. 3. Introduce and encourage related foreign companies establish research center in Taiwan. 4. Help to build up the linkage between private R&D centers and public research institutes. The first three goals mainly are assist private sector to establish R&D capability and then might have capability to coordinate with public research institutes or accept technologies from public research institutes. That is, to achieve the objective of technology diffusion.

By the end of 2003, the office had successfully assisted about 40 companies to establish R&D and innovation center and have been assisting about 7 research consortiums (including private companies and public research institutes). Furthermore, the

office also successfully assisted 3 foreign companies to establish research center in Taiwan and have been helping many other foreign companies in which some are drafting their proposals.

To fulfill these goals, what the office needs is not the knowledge of wireless communication, but the industrial information about what are the majors and capability of each related company. With the industrial information and the information about the supporting programs providing by government, the office could introduce proper opportunities from public sector to each private company.

Finally, because the office had aggregate abundance of industrial information and relationship in both private and public sectors in Taiwan, the office became a bridge between the other countries. The office became the first stop of foreign companies and investors that are interested in the wireless communication industry in Taiwan. In 2003, there were companies or investors from British, France, Japan and New Zealand that came to the office and looked for opportunities of cooperation.

■ **The “3G Club” — solving soft institutional failures:** Comparing to the three Intermediary Mechanisms mentioned above, “3G Club” is totally founded by private sector. Under the assistance from the Promotion Office, many research consortiums have been forming. However, when different organizations (either private or public) work together to development new technologies, some issues need a purely business platform to coordinate, such as the rule of intellectual property sharing, what are more specific detail of developing objectives and culture differences between organizations. That is, the main goal of “3G Club” is to assist research consortium to transform as a formal SIG (special interest group). Until the end of 2003, there were three research consortiums had successfully transform into SIGs.

Furthermore, other than its main goal in transforming research consortium into SIG, “3G Club” is also a cluster that gathers many related enterprises with the same objective. In the cluster, there are some unexpected benefits before “3G Club” formed. For example, the interactions between

enterprises might stimulate some new ideas, new R&D cooperating opportunities or some policies suggestion proposal to the government. Secondly, though the deregulation of telecommunication in Taiwan already made a lot of progresses, for reforming a more proper environment to foster the third generation mobile service, “3G club” had collected the opinions from private sectors and then to communicate with the regulator.

Thirdly, as we mentioned before, standards is very important to wireless communication. Before building up enough R&D capacity, the companies in Taiwan did not have any negotiation power comparing to any other foreign company or country. However, after related companies devoting the R&D in wireless communication for years, collective within “3G club”, the enterprises already aggregated enough R&D capacity to negotiate with foreign companies or even other economies.

Key Success Factors in the Intermediary Mechanism

As pursuing KBE as major vision of economic development, improving the performance of NISs is a very important S&T policy objective. In this paper, by literature review, we found that how to solve “system failure” is critical to the performance of NISs. From the case study of the development of wireless communication industry in Taiwan, some different intermediary mechanisms had built up for solving different types of system failure. That is, intermediary mechanism has been implemented as a tool to solve system failure and a way to improve the performance of NISs.

In the previous sectors, different intermediary mechanisms were characterized as the roles to solve

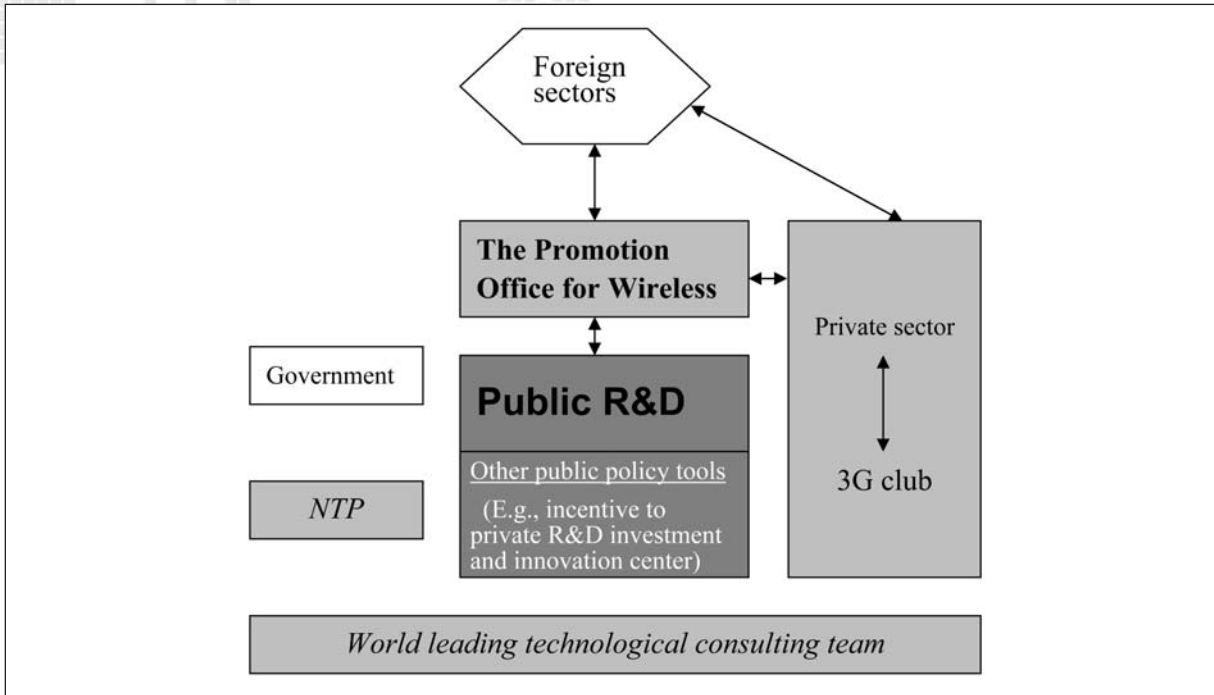
different types of system failure. However, the intermediary mechanisms could find their positions between different players in a NIS. We depict the picture that includes these intermediary mechanisms and different players in a NIS as figure 2. In this figure, NTP mainly is the coordinator of public resources. The Promotion Office is the interface between public sector, private sectors and foreign sector. The 3G Club is the representative of the private sector. Finally, the consulting team is the foundation of the NIS because it set up the common goal for the system.

From their roles to a NIS and their positions between players in a NIS, we can intuitively try to propose some key success factors for each intermediary mechanism. Firstly, as a coordinator in public R&D resources like NTP, it needs the bureaucratic power. Secondly, to propose the R&D guideline for a NIS, the consulting team needs world leading technological vision and public recognition. Thirdly, to play a better interface between many different sectors, the promotion office not only needs to aggregate the industrial information (including, public policy, behaviors in private and public sector) of different sectors, but also needs enough capability to manage the complicate relationships between different sectors. Finally, as a representative of private sector, it also needs abundant industrial information and the capability to coordinate different interests in private sectors. Furthermore, it also needs public recognition. This means the KSF of promotion office and 3G club both need very good capability to manage relationships between different sectors. To sum up, we can summarize the ideas in the following table:

Table 1:

Intermediary mechanisms	Type of system failure to solve	KSF
NTP	Lock-in failure the public sector of the system	Bureaucratic power
Consulting team	Dynamic complementarities failures	World leading technological vision Public recognition
Promotion Office	Appropriation traps (Transition failures)	Abundant industrial information Relationships management
3G Club	Soft institutional failures	Abundant industrial information Relationships management Public recognition

Figure 2: The Intermediary Mechanisms and Players in a NIS



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Digital Opportunity Initiative for Indigenous Peoples in Taiwan

Lancelot Lu and Christine Lee

Introduction

In order to ensure that the Digital Opportunity Initiative (DOI) conforms to the Plan of Action in World Summit on Information Society: Phase One (WSIS I), Council of Indigenous Peoples, Executive Yuan of Taiwan (CIP) endeavored and established a successful showcase for bridging digital divide and enhancing digital opportunity for indigenous peoples on this island. This is for stakeholders to consider local, regional and national needs and concerns in developing and implementing national e-strategies so that the benefits of the DOI undertaken can be maximized and the concept of sustainability can be included in the Information Society.

Expecting to explore the viability of establishing multi-stakeholder portals for the sake of indigenous peoples at the national level, this initiative was designed as an eight-month project, proposed to CIP by Taiwan Institute of Economic Research (TIER), in collaboration with public or private partners under a multi-sector partnership (MSP) mechanism. The following figure presents Taiwan's MSP framework, which is encouraged in the Plan of Action in WSIS I.

Digital Divide and Digital Opportunity

Digital divide is a lost opportunity, which refers to a lack of computers, accesses as physical connections and training exacerbated by ineffective government policies. However, the problem will solve itself in time. Disadvantaged groups, such as indigenous peoples are unable to effectively take advantage of information and communication technologies (ICTs) to improve their lives, reflecting the lack of basic literacy, information literacy, poverty, health and other social issues in the information society.

In contrast, digital opportunity refers to an economic development, cultural empowerment and/or community sustainability benefit resulting

from the implementation and application of ICTs to education and skills training initiatives. In this initiative, Indigenous peoples in Taiwan were found to not only face digital divide, but also lack digital opportunity.

However, it is important and a major challenge to recognize how to raise indigenous peoples' awareness of ICTs and upgrade information literacy, given that the target communities are highly skeptical about the value of ICTs in their daily life. Thus digital cameras, webcams, pen tablets, projectors, multi-functional machines (all-in-ones with printer, fax machine, scanner and copier) were supplied as ancillary equipments in Tribal Library Information Centers (TLICs) in the indigenous communities as Digital Opportunity Centers (DOCs). New facilities are to ensure each DOC is able to offer sufficient ICT assistance to its users, in other words, indigenous citizens in the target tribes.

This initiative has the goal of transforming digital divide into digital opportunity for the indigenous peoples, ICTs are applied in order to assist them to fulfill four objectives as listed below:

1. Create employment and economic development opportunities for indigenous peoples.
2. Promote the acquisition of knowledge and development of essential skills and attitudes in order for each indigenous individual to become self-sufficient, valued and contributing members of the knowledge community.
3. Preserve their languages and cultures so that indigenous cultures can have exchanges with other cultures.
4. Enable indigenous peoples to participate in the knowledge and information technology economy.

Digital Opportunity Initiative (DOI)

In May 2005, CIP Taiwan accepted TIER's proposal and sponsored the DOI project, which

started to transform four of forty-seven TLICs into DOCs within almost a year. The objective of DOI is to explore whether those current DOCs in tribe-concentrated areas could serve as MCTs and operate within a sustainable module for further scaling up.

Accordingly, four DOCs in Paiwan-populated townships in Pingtung County were selected as pilot targets of the DOI. All these four DOCs chosen are located in the remote and rural areas. Indigenous peoples in these four areas are mostly farmers and blue-collar workers with 12-grade educational level in average. The majority of them were considered as having low-income that is under the average salary

level, compared with most Taiwanese.

The preceding figure demonstrates the fishbone diagram of developmental courses for indigenous peoples in Taiwan. Four specific development models with training courses on information literacy and entrepreneurship were designated into the operation of those TLICs. The models of e-agriculture, tourist industry, indigenous culture & industry, technological education were introduced in these local communities with a total of 160 courses and 480 hours executed by forty-seven professors from the National Pingtung University of Education and the regional universities nearby.

Figure 1: Fishbone Diagram of Developmental Courses for Indigenous People In Taiwan

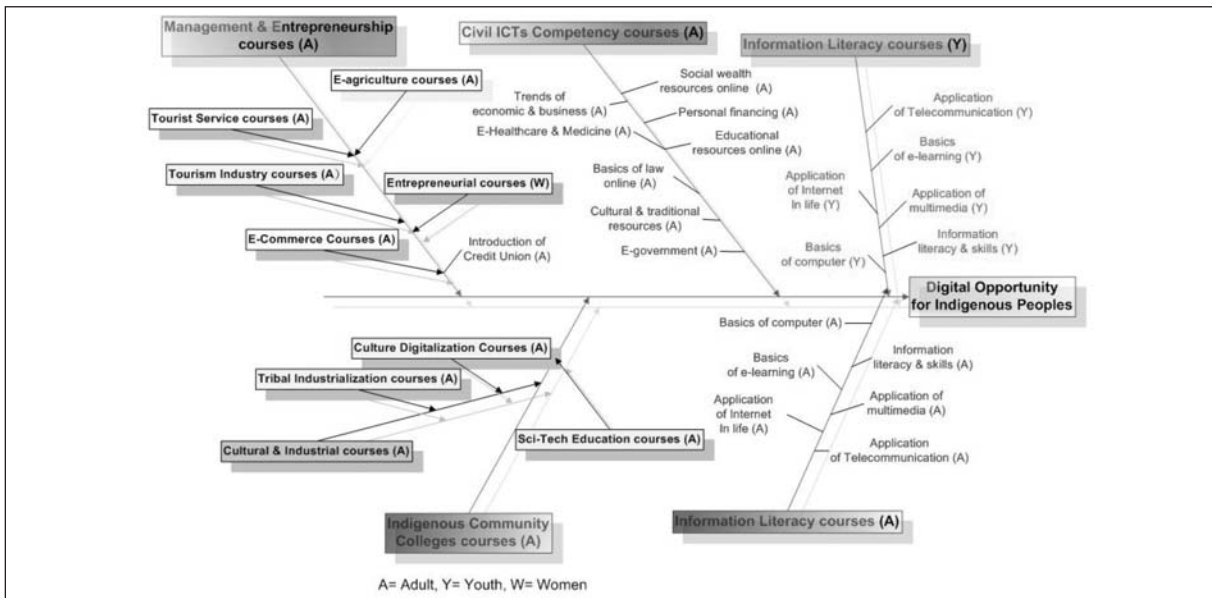
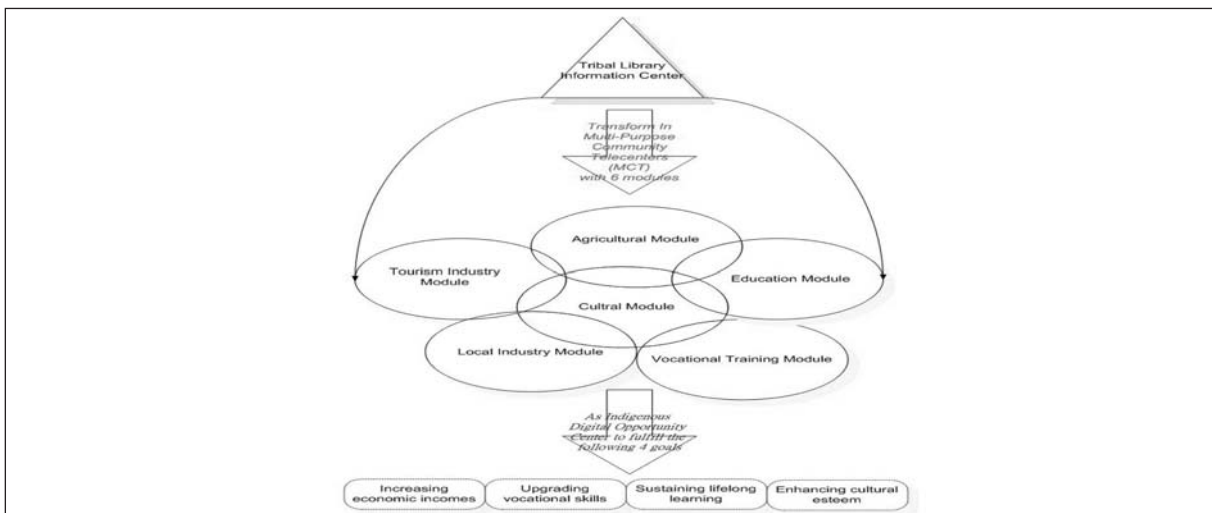


Figure 2: Tribal Library Information Center Transforming Into IDOC (as MCT)



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The courses were divided into two types, ICT for the Youth and ICT for the Adult. The courses for the youth were focused on basic information literacy including computer basic skills, e-learning, multimedia, and network literacy. And the courses for adults were separated into three subcategories: information literacy, civil information, and expertise for specific developmental models. The most unique thing is that the civil information courses for adults contain subjects like e-government, basic law, e-health, personal finance, educational resources online, information of social welfare, trends of economics and business, online resources of indigenous tradition and culture. These courses are to help adults participate in the information society with confidence and knowledge, while the expertise courses are for blue-collar workers with competent knowledge to carry an indigenous identity in mind. In the figure above, illustrating how the Tribal Library Information Centers can be transformed into Digital Opportunity Centers by applying six modules consisting of agricultural, tourism industry, local industry, cultural vocational and education.

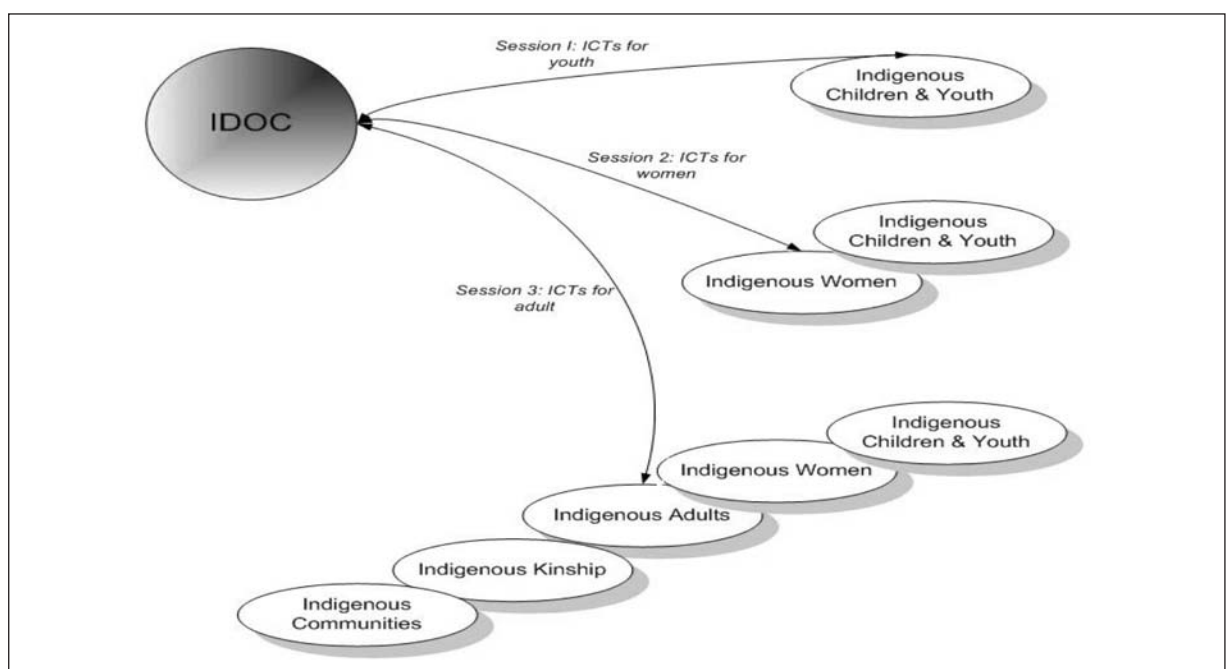
Five workshops and briefing seminars have been offered in those four townships selected. The coverage of topics includes e-agriculture, e-procurement network, online shops, tourism development, agricultural product marketing. The

sale of indigenous artifacts is deemed as the major task of the DOI project as well as for educational concerns.

By the end of September 2005, there were more than fifty grown-ups and eighty youngsters completing the courses. All the participants have expressed their interests in attending more advanced ICT training courses, particularly ones about job-training and certificate-obtaining. The subsequent figure presents how e-learning pals in a family learns and how the sessions work in the digital opportunity center, named Tribal Library Information Centers in this initiative.

As part of this DOI project, professors were requested to not only submit teaching syllabuses but also provide research proposals based on their fields of expertise and recommendations for the development of particular information centers. Therefore, central and local governments can be assured that there will be many university faculty members becoming profoundly involved with indigenous communities after the familiarization with the situations and needs after having these lessons. The following figure manifests the incentives for development proposals; course instructors from cooperative universities go through consecutive steps under the mechanism.

Figure 3: E-Learning Pals in Family with IDOC



In sum, the professors and the participating indigenous learners all indicated that using the existing facilities in the original DOCs as an interface for social transformation truly shows the possibility for DOCs to persist their self-sustainability via project financing.

Sustainability Concerns of Tribal Library Information Centers

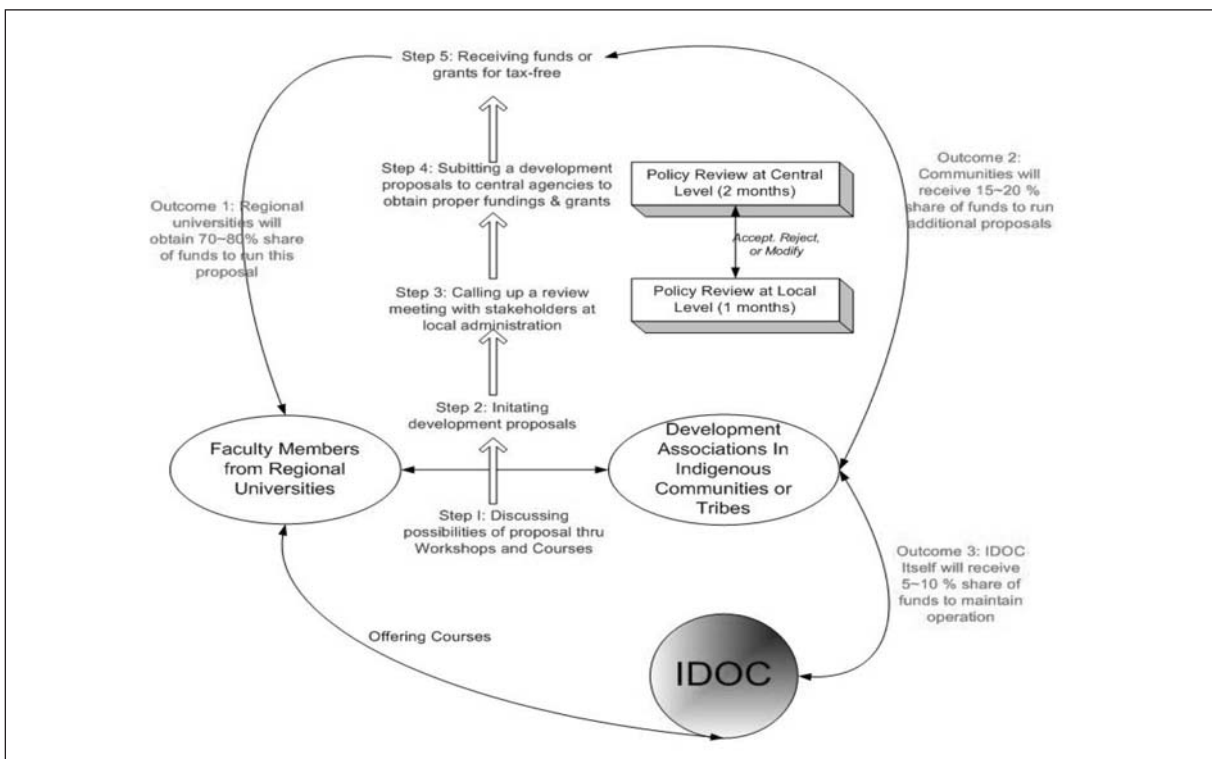
Recognizing that the application of MCTs is recommended by International Telecommunication Union (ITU) as a viable solution for improving the situation of digital divide in rural areas, CIP of Taiwan sets up forty-seven Tribal Library Information Centers (TLICs) in the DOI projects from the year 2003. Each of those centers was provided with approximately 15 to 20 PCs and TFT monitors, a printer and the ADSL service funded by CIP of Taiwan.

Same as basic multi-purpose telecenters, Tribal Library Information Centers were originally designated to offer free access and usage to the residence in those certain areas at a community

level. It is the DOI project that started the plan to transform the original spots into DOCs and even MCTs, according to CIP's documentation, so that these centers could serve as a vehicle for bridging digital divide of indigenous peoples in remote and rural areas. However, a criticism is that even after several ICT training sessions have been conducted for the operation of the centers, the centers simply lacked supporting institutions and adequate management.

The main challenge to be tackled is how the operator of each center could come up with a feasible model of self-sustainability. Sustainability includes social sustainability (E-Learning Pals in Family, Women Cooptation Networks, Incentives for Development Proposals), technological sustainability (Business Operation and Circuiting Mobile Maintenance Service) and financial sustainability (Full Financial Sustainability = Revenues > Capital costs + Recurrent Costs, and, Operational Sustainability = Revenues > Operational Costs). These are issues for those who will be involved in relevant management.

Figure 4: Incentives for Development Proposals



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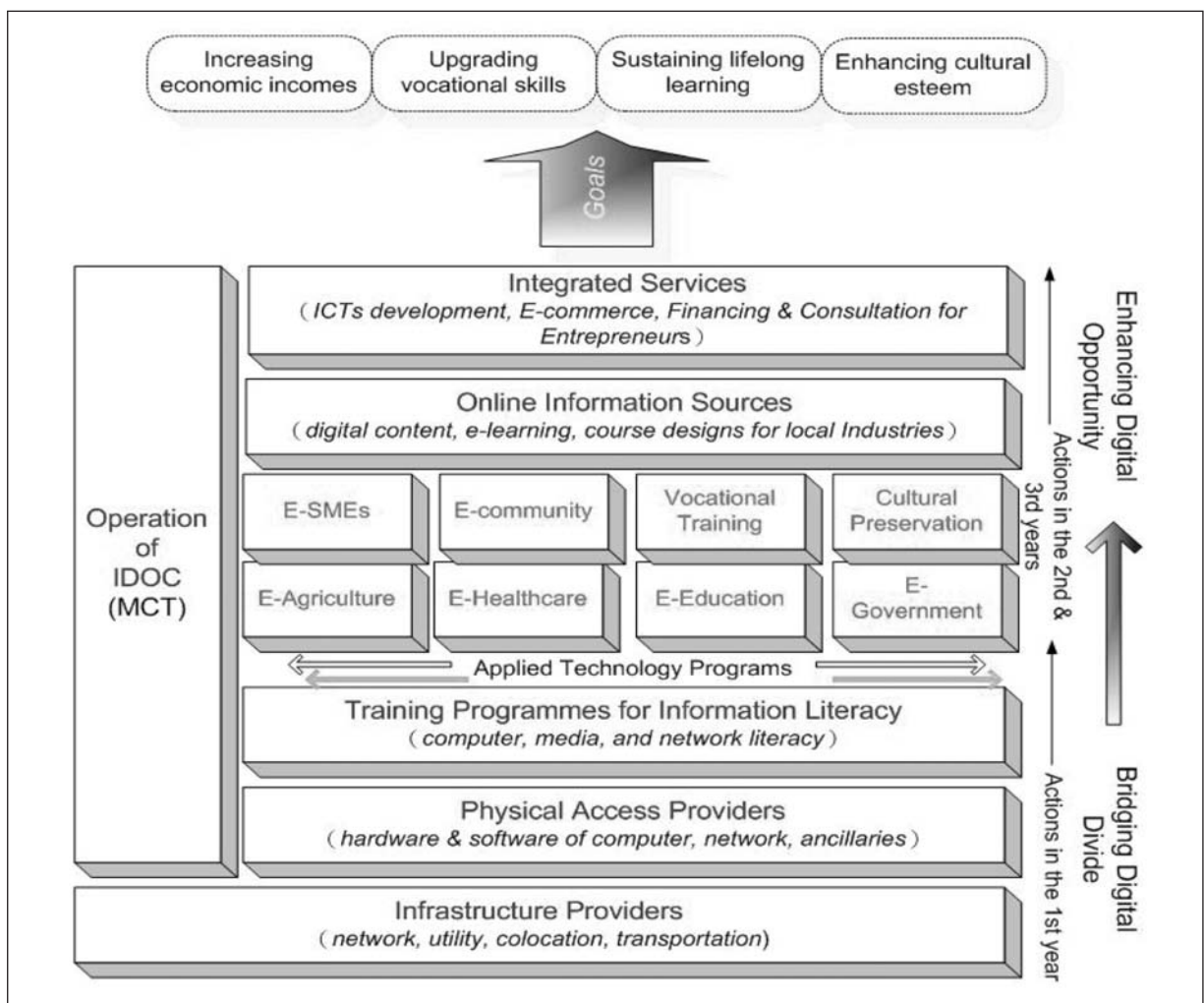
Outcomes of Tribal Library Information Centers

The DOI project has been proven to be remarkable since the facilities in the DOCs have been widely used and familiarized by a large number of the indigenous users from the surrounding communities. Participants were also satisfied with the courses and additional workshops and seminars of the DOI project. Most of the attendees are looking forward to having more workshops and information sharing of practical experiences. Therefore, a roadmap for bridging digital divide and creating digital opportunity for further action on a one-to-three-year basis has been created to pursue more

successful accomplishments (see the subsequent figure).

During the execution of the DOI project, there are three important issues needed to be noted. First, considering the information illiteracy among the adult participants, the courses designated previously need a certain delicate modification for attendees to have an appropriate learning. Second, translation and interpreters are often necessary for a better communication between teachers and attendees. Third, it is certainly a successful case and a precious experience in Taiwan, which can prove that there is no difficulty of transforming more DOCs into MCTs on the basis of the Plan of Action in WSIS I.

Figure 5: Roadmap for Bridging Digital Divide, & Enhancing Digital Opportunity



Source: Lancelot Lu (2005) originated from Bridgesorg. (2001)



Rules of Origin and Production Sharing in East Asia

Tsai-Lung Hong, (Honigmann)

As a late comer for regionalism, East Asian trade diplomacy has focused recently on bilateral / regional preferential trade agreements (PTAs). For instance, the Agreement of Japan-Singapore for a New Age Economic Partnership (JSEPA, 2002) and the ASEAN-China Comprehensive Economic Cooperation Framework Agreement (2002) for a Free Trade Area by 2010.

Despite of the benefits of economic integration, the proliferating web of PTAs is raising new barriers and trading costs due to the nature of partial/discriminatory trade preferences, above all in the form of “rules of origin”. Its implications are bountiful for market access and regional integration in East Asia.

The economic justification for the preferential rules of origin (ROO) is to curb trade deflection-to avoid products from non-PTA members from being transshipped through a low-tariff PTA partner to a high-tariff one. ROO, to varying degrees, by itself can restrict trade, misdirect investment and distort decisions on production and location that reduce welfare from levels otherwise attainable.

However, the GATT / WTO does not place any discipline on the ROO used in the PTAs, i.e. the preferential ROO. They are being increasingly recognized as a hidden form of trade protection. While non-preferential ROO are loosely governed by WTO and being harmonized under the Uruguay Round Agreements, preferential ROO are a key element in the Doha Round on regional agreements (Estevadeordal and Suominen, 2005).

Actually, the “preferentiality” of preferential trade agreements consists of two related components. The first one is the “margin of preference” measures the difference between MFN (most-favored-nation treatment) and preferential tariff rates in a PTA economy. The second one refers

to rules of origin which are the criteria used to define where a product was made and therefore used to determine goods that may enter a country under preferential treatment.

Furthermore, the proliferation of PTAs will result in the well-known “spaghetti bowl phenomenon” (Bhagwati, 1995), which for a given product there are several different tariff rates depending on what origin is assigned to it. The “spaghetti bowl effect” emphasizes the results of overlapping and diverse rules of origin which would add compliance and administrative costs incurred by business and government.

Since ROO is an inherent part of PTAs, it is at the heart of many ongoing PTA negotiations. The design and implementation of PTAs especially the restrictiveness of ROO will to a certain extent decide whether PTAs are complementary to a non-discriminatory multilateral system or not (World Bank, 2005). Even the Asia-Pacific Economic Cooperation (APEC) forum, which is based on a principle of open regionalism, is now developing approaches to achieving simplified and consistent ROO in PTAs.

Rules of origin are gaining concerns for the following reasons. Firstly, ROO are widely considered a trade policy instrument beyond the efforts to avert trade deflection and can work to offset the benefits of tariff liberalization (Krueger, 1993; Estevadeordal & Suominen, 2005). To a large degree, the development of “globalized” international economy should have rendered traditional notions of national origin of goods senseless. However, on the contrary, the ROO now are more arbitrary and generally do more harm than good.

Secondly, it’s one of the side effects variations and innovation in “New Age” PTAs (often called

“closer economic partnerships”).¹ On one hand, it highlights comprehensive approach to liberalization. On the other hand, it also takes some approaches to treat the “sensitive sectors”, especially restrictive rules of origin to make PTAs politically more acceptable (Scollay, 2005).

Lastly, not only the expansion of preferential trade agreements in number but also the increasing fragmentation of trade / production sharing in the past decade made rules of origin more important (Lloyd, 2001). One of the reasons is that fragmentation is characteristic of intermediate goods trade (Jones and Kierzkowski, 1990). The increasing production sharing / fragmentation that a product can be processed in several countries before it is ready for the market has made the determination of origin more complicated.

The growing international integration of production, especially trade in intermediate inputs, has been significantly since late 20th century, especially in East Asia. In a nutshell, it's crucial to discuss the effects of ROO in terms of the linkage of final goods and intermediate goods.

Table 1: NOTIFICATIONS OF RTAs IN FORCE TO GATT / WTO

(As of 8 July 2005)

	Accessions	New RTAs	Total
GATT Art. XXIV (FTA)	4	113	117
GATT Art. XXIV (CU)	5	6	11
Enabling Clause	1	20	21
GATS Art. V	2	29	31
Total	12	168	180

Source: WTO (http://www.wto.org/english/tratop_e/region_e/summary_e.xls, (accessed on 20 October 2005))

¹ The “New Age” PTAs cover usually not only goods but also services and investment; they tend to have strong emphasis on facilitation, disciplines in new areas: intellectual property, government procurement, competition policy, sometimes labor and environment; strong focus on “behind-the-border” issues, and dispute settlement. See Scollay (2005).

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The Effects of Improving U.S.- India Relations on Asia

Chen-Sheng Ho

A New State of Affairs

In recent years, one of the most positive and dramatic changes in relations between the U.S. and countries in Asia has been the rising improvement in U.S.-India bilateral relations. In the past, U.S. and India had not been in friendly terms with each other. During the Cold War, India had considered itself to be a non-aligned nation and had purchased most of its weapons from the former Soviet Union. The bottom line was that the U.S. did not consider India to be a friend of the U.S. Instead, the U.S. had been supportive of Pakistan, who had been a strong rival of India.

With the end of the Cold War, political and economic relations between the U.S. and India begin to improve at a very small rate. The downfall of communism that had accompanied the breakdown of the former Soviet Union had led to the rise of capitalism. Many countries around the world begin to acknowledge the importance of capitalistic ideas, such as making their economy more open and to liberalize trade. India recognizes that the changing global political and economic landscape following the Cold War means the need to improve its relations with the U.S. The impressive result of China's openness towards the West in general and the U.S. in particular has also served as an example for India. However, U.S.-India relations only improve dramatically in recent years. In this article, a description of current events will be given to give readers a clear understanding of the improving bilateral relationship between U.S. and India. In addition, this article will analyze the effects of the present U.S.-India relations on Asia.

Problems in the Past

It would be hard to find any scholar or diplomat who would say that U.S.-India relations had been

warm from the Cold War era until the end of the 1990s. During a speech to the Asia Society, Mr. Nicholas Burns, U.S. Undersecretary for Political Affairs, had said that during the Cold War era, when Americans mentioned Asia, they were talking about China, Japan, South Korea and Southeast Asia. Americans did not think of countries in South Asia, such as India, Pakistan, Afghanistan, Sri Lanka, and Bangladesh. The U.S. had not considered the South Asia region to be of importance (Burns, 2005).

The major reason for the cold bilateral relations is that the U.S. and India had looked at the world from different angles. The two countries had held different political, ideological and economic views. During the Cold War, India had been a non-aligned nation, which meant that it did not take the side of the U.S. against the former Soviet Union. Additionally, since the 1980s, U.S. has been concerned about India's nuclear weapons program (Burns, 2005).

Robert Blackwill, the U.S. Ambassador to India, had stated that for a long time, India had not been considered a friend of the U.S. The result had been the imposition of U.S. nuclear sanctions against India in 1998. The U.S. regarded India not as a partner for assisting with solving international problems. Instead, the U.S. thought of India to be one of the problems. The U.S. believed that India's nuclear weapons program should not exist. The reaction of India had been not to follow the U.S. Thus India's nuclear weapons program was the only important issue that the U.S. and India had talked about in the past (Blackwill, 2003).

From the standpoint of India, it had also stated that its relationship with the U.S. had not been smooth. India believed that it had done nothing wrong. Former Prime Minister of India, Atal Bihari Vajpayee, said that India held the view that a world

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without nuclear weapons would be the best way to enhance global security. Since India lived in an environment in which nuclear weapons and missiles existed, it became necessary for India to have nuclear weapons. Most importantly, he stated that India's military policy had been defensive in nature (Vajpayee, 2000).

In summary, the relationship between the U.S. and India had not been smooth during the Cold War era. The problematic relationship had continued with the end of the Cold War and lasted until the end of the 1990s. A significant reason is that India had not supported the U.S. during the Cold War period, since it was a strongly non-aligned nation. In addition, the U.S. had wanted to control India's nuclear weapons program and nuclear policies. India, however, did not listen to the U.S. The bottom line is that it was difficult for the two countries to have good relations in the past when they adopted opposite positions and refused to move them.

The Turning Point in Relations

In order for U.S.-India relations to change for the better, it is necessary for them to seek compromise. The most important event that signaled the beginning of a new and promising era in the relationship between the U.S. and India occurred in 2000 when President Clinton visited India. President Clinton stated in his speech to the Indian Parliament that U.S. and India are natural allies. Both countries have promoted democratic ideas, peace and prosperity, so that they could serve as starting point for building a better relationship (Clinton, 2000).

In addition, President Clinton said that there are four major challenges that the U.S. and India must overcome, so as to enhance their relationship. First, U.S. and India must improve their economic relationship. The U.S. has applauded the opening of India's economy and has supported India's economic growth. The second challenge is to sustain global economic growth, such as through an open global trading system. Third, it is necessary to ensure that the growth and prosperity of the information age also include protecting the environment and reversing climate change. The fourth challenge is to protect the benefits of democracy and development from forces that try to destroy them (Clinton, 2000).

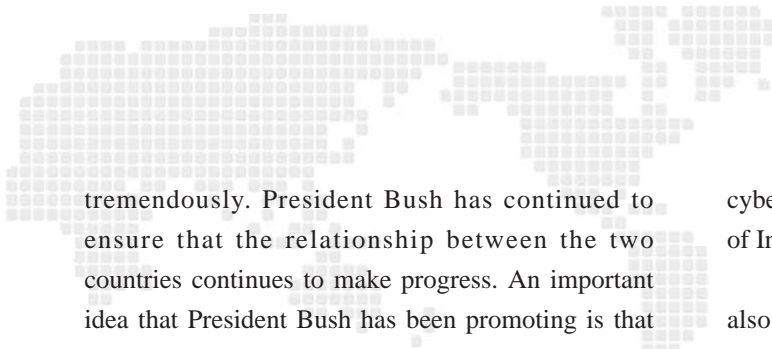
After the speech of President Clinton to the Indian Parliament, Indian Prime Minister Atal Bihari Vajpayee stated that democracy in India has been established for a long time and India has been willing to accept different views. Furthermore, India has been pursuing international peace and security. He also said that peaceful dialogue is the best way to find solutions to differences in today's world. The use of force is no longer acceptable in international relations. India and the U.S. must focus their vision, so as to make significant improvement in bilateral ties. Prime Minister Vajpayee further emphasized the issue of terrorism. He is pleased to see that India and the U.S. have started to cooperate in addressing the problem of terrorism (Vajpayee, 2000).

We can say that President Clinton's trip to India in 2000 is the turning point that signals the beginning of the improvement in U.S.-India relations. From the speech of President Clinton, we are able to see that the U.S. wants to improve its relationship with India. The speech indicates that the U.S. is willing to adopt a soft position towards India. President Clinton mentioned about the similarities that existed between the two countries. Most importantly, both are democratic countries. Additionally, President Clinton related that India is a partner of the U.S. for addressing global challenges.

The analysis of Prime Minister's comments regarding President Clinton's speech to the Indian Parliament shows India has adopted a more conciliatory stance towards the U.S. The Indian Prime Ministers stated that India has been a democratic country for a long time. The point is to indicate that India and the U.S. should be friends because of their democratic traditions. It is a fact that the U.S. has been the strongest promoter of democracy around the world. Additionally, the speech also related that there is a need for more dialogue between India and the U.S. and that the issues to be discussed should be more focus. In summary, the main point of Prime Minister's comments is that India wants to strengthen its ties with the U.S.

Present U.S.-India Relations

Since President Clinton's visit to India in 2000, U.S.-India relations have been improving



tremendously. President Bush has continued to ensure that the relationship between the two countries continues to make progress. An important idea that President Bush has been promoting is that with the U.S. and India working closely together, they can make the world freer, more peaceful and more prosperous. The most significant reason for the U.S. to treat India as an important ally is that they are democratic countries. It is also the emergence of the belief that India is a rising world leader. The result is that President Bush has waived the 1998 U.S. nuclear sanctions against India. In such a short time, the two countries have transformed their relationship for the better (Blackwill, 2003).

India also believes that there is significant improvement in U.S.-India relations. According to the Indian Embassy in the U.S., it states that there has been major transformation in U.S.-India relations. India has become a global leader and has common interests with the U.S. India is now an important partner of the U.S. in implementing U.S. efforts to ensure stability in the Asia-Pacific region, maintain freedom of the sea lanes, and fight against terrorism. India also welcomes the creation of a new India Caucus in the U.S. Senate. The India Caucus will serve as a forum for U.S. Senators and Indian business leaders to discuss strategic and economic cooperation between the U.S. and India. Senator John Cornyn and Senator Hillary Clinton are Co-Chairs of the India Caucus (Embassy of India, 2005).

As a result of the rise in the importance of fighting against terrorism, both the U.S. and India have been working closely together in this area. The Joint Working Group on Counterterrorism has been created to combat terrorism. In addition to the cooperation in the area of anti-terrorism training, both countries have been sharing intelligence. Cooperation in fighting against cyber-terrorism has also been started, as it has become problematic. Additionally, the issue of cyber security has also resulted in cooperation between the U.S. and India. The specific areas for cooperation are the fight against cyber-crime, cyber security research and development, information assurance and defense cooperation, standards and software assurance, and

cyber incident management and response (Embassy of India, 2005).

Bilateral trade between the two countries has also increased tremendously with the improvement in U.S.-India relations. The total bilateral trade in goods has increased from US\$5.60 billion in 1990 to US\$21.65 billion in 2004. There was a growth rate of 287% within a period of 14 years. India's exports to U.S. grew at 10% from US\$11.82 billion in 2002 to US\$13 billion in 2003. During 2004, India's exports to U.S. rose by 20% to reach US\$15.56 billion. An examination of the growth rate of the top 20 non-oil exporting countries to U.S. shows that India's growth rate is second only to China. India is the 18th largest exporter to the U.S. On the other hand, U.S. exports to India showed an increase of 21% from US\$4.1 billion in 2002 to US\$4.98 billion in 2003. U.S. exports to India during 2004 indicated a slightly higher growth rate of 22% with exports totaling US\$6.1 billion. India continues to be the 24th largest export destination for U.S. goods (Embassy of India, 2005).

Another important indication of the current warm relationship between the U.S. and India is the creation of the Next Steps in Strategic Partnership (NSSP) initiative. NSSP was announced in January 2004 for the purpose of increasing cooperation in civilian nuclear activities, civilian space programs, high-technology trade, and missile defense. The two countries have made efforts to promote discussions on nuclear regulatory and safety issues, cooperation in missile defense, peaceful uses of space technology, and creation of appropriate environment for increased high-technology commerce. The U.S. Department of State has announced the completion of NSSP. Presently, the U.S. and India are seeking new ways to strengthen cooperation in strategic, energy security, and economic matters (U.S. State Dept., 2005).

The most significant event in U.S.-India relations in 2005 is the development of an agreement to promote nuclear energy cooperation. This event is extremely important because the U.S. is going against the Nuclear Non-Proliferation Treaty (NPT) by assisting India's nuclear energy program. One of

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the major principles of NPT is that nuclear countries would only give assistance in nuclear energy technology to countries that signed the NPT. India has not signed the NPT. Therefore the U.S. is telling the world that India has become an important ally. President Bush is working hard to ensure that the U.S. Congress will approve the agreement in early 2006, so that the U.S. government and the U.S. private sector can cooperate with India (Embassy of India, 2005a).

In summary, we can say that U.S.-India relations have improved significantly and that both countries will continue to strengthen their ties. India believes that it is a global leader and the U.S. has stated that this is true. Furthermore, the U.S. has indicated that it would like India to play a bigger role in international affairs but one that is supportive of the U.S. Thus the U.S. would surely seek to cooperate more closely with India at present and into the future. The joint statement that was announced during the visit of Indian Prime Minister Manmohan Singh to the U.S. in July 2005 provides a clear description of the areas for cooperation. The joint statement states that both countries will fight terrorism together. In addition, both countries will seek to cooperate in the area of economy; energy and the environment; democracy and development; non-proliferation and security; and high technology and space (Embassy of India, 2005b).

Effects on Asia


Keohane and Nye have described world politics as characterized by complex interdependence. One important characteristic of complex interdependence is the existence of multiple channels connecting societies. Another characteristic is the absence of hierarchy among issues. Governments no longer are preoccupied with issues of military security. The sets of issues that governments are concerned with have become more diverse. Economic, environmental, population, and energy issues, to name a few, have emerged as important issues for governments to consider. The third important characteristic of complex interdependence is that the role of the military force has become minor. The use of force has been considered not an appropriate way for achieving national goals (Keohane and Nye, 1989).

The world today is certainly a complex interdependent world as is described in the above paragraph. The main issue of concern for the U.S. and Asian countries is how to achieve greater economic development. The improvement in U.S.-India relations can be said to have a positive impact on Asia because it would lead to greater peace and prosperity for the region. A reduction in the number of conflicts would have beneficial effect for the U.S. and Asian countries. It would be easier to promote economic development when the area is at peace. Therefore, the U.S. has realized that it is necessary to improve its relationship with India.

Once India becomes a friend of the U.S., the U.S. would have greater influence on India regarding India's relationship with Pakistan. The U.S. has been considered a friend of Pakistan. India has also become a friend of U.S. It would be easier for the U.S. to reduce the tensions that existed between India and Pakistan. The reason is that friends would have greater influence on each other. Certainly, the U.S. would use its friendship with India and Pakistan to promote peace in South Asia.

China is another country that is greatly anxious about the rise of India. In the past, India and China had fought a border war with each other. Therefore, tensions between the two countries have existed even until today. It is a common belief that the main reason for the U.S. to make India become an important ally in Asia at this time is to counter the rising influence of China. According to Professor Stephen Cohen, a leading expert on India, the U.S. had considered India to be an important ally in the 1960s when India fought with China. Furthermore, he has also stated that some people in both sides think that China is a threat and that the friendship between the U.S. and India serves as an insurance against China's possible hostility. However, Professor Cohen believes that the threat from China is exaggerated (Sales, 2005). The Indian Prime Minister Singh has stated that U.S.-India ties will not negatively affect India's relations with China and Pakistan. He has also said that the world is big enough to accommodate the interests of India and China (People's Daily, 2005).

The reality is that China should not worry about better U.S.-India relations. In today's complex



interdependent world, the major issue is economic development. The U.S. also would like to improve its economy through increasing its exports to the world. In Asia, both China and India have enjoyed high level of growth rate in recent years, so that they would be able to trade more with the U.S. Furthermore, wars between Asian nations are less likely today in a complex interdependent world. An improvement in U.S.-India relations does not mean China's security will decrease. The intention of the U.S. is to promote global peace and prosperity. In the Asian region, the U.S. has been seeking to seek better ties with both China and India. At the same time, China and India has also been improving their relationship. In addition, India may not necessarily support the U.S. in any type of conflicts with China. India has always been maintaining a strongly independent position in international affairs.

Another issue of current concern for the U.S. is terrorism. This is the reason why the U.S. and India have been cooperating with each other to fight terrorism. The cooperation in this area could be strengthened to include China and Pakistan as the next step. Eventually, other Asian nations could also join in their efforts. The increase in cooperation would lead to greater trust and reduce tensions. Thus the improvement in U.S.-India relations would certainly result in peace and prosperity in the Asian region.

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Content Analysis on APEC Leaders' Declarations

Darson Chiu

Introduction

"Content analysis is a technique for gathering and analyzing the content of text" (Neuman, 2003, p. 310). This article intends to use the technique of content analysis to investigate a regional organization's most important documents and analyze their implications. The regional organization selected for this study is Asia-Pacific Economic Cooperation (APEC).

About APEC

APEC is a regional organization founded in 1989 and its purpose to promote free trade and economic cooperation. APEC has 21 member economies and they are: Australia, Brunei Darussalam, Canada, Chile, China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, The Philippines, Russia, Singapore, Chinese Taipei (Taiwan), Thailand, United States of American, and Viet Nam. APEC organizes events to gather leaders, senior officials and leaders from these member economies to exchange views every year. These events include three senior official meetings, one ministerial meeting, and one economic leaders' meeting (APEC, 2005). The management structure is a top-down mechanism that leaders instruct ministers whereas ministers direct senior officials to take certain actions. The functioning structure is a bottom-up mechanism that senior officials propose to minister while minister submit action plans to leaders.

Data Sources

Leaders announce leaders' declaration after the economic leaders' meeting at the end of each year. The declaration summarizes and review actions taken in the past and sets objectives for the future. The declaration is an important guideline for

ministers and senior officials to refer to and follow. This study includes five data sources from a single entity, APEC. These five data sources are APEC leaders' declarations of 2000, 2001, 2002, 2003 and 2004, namely, leaders' declarations of the 21st century. APEC launched the first leaders' meeting in 1993 initiated by the US former President William Clinton (APEC, 2005). Among all 12 declarations, the author selected the most recent five declarations for this content analysis study.

Manifest and Latent Coding Methods

By adopting the methods of manifest coding and latent coding (Neuman, 2003), this content analysis intends to analyze APEC leaders' leadership style shift before and after a major event. The major event chosen for this study is 9-11 terrorist attack occurred in the year of 2001. Did leadership style change after the terrorist event? "[C]ontent analysis can reveal messages in a text that are difficult to see with casual observation" (Neuman, 2003, p.312). Known the potency of content analysis approach, the author places a great emphasis on the characteristic of frequency to measure identified verbs used in data sources.

Research Method and Results

APEC leaders use verbs in their declarations such as: instruct, commit, endorse, agree, support, expect, urge, encourage, commend, welcome, recognize, note and acknowledge indicating their attitude towards actions review or proposals outlook. The manifest coding method used in this study is identifying verbs of instruct, commit, endorse, agree, support, and expect as the high level of commitment from APEC leaders. In addition, verbs of urge, encourage, commend, and welcome represent medium level of commitment. Verbs of recognize, note and acknowledge symbolize low level of



commitment (Liao, 2005).

The second step of manifest coding method used in this study is counting verbs relevant to different degrees of commitment appearing in each of the six APEC leaders' declarations. Table 1 that also serves as a recording sheet shows the data obtained and counted from six APEC leaders' declarations.

From table 1, I further design a formula to calculate the scale of commitment for this study. By adding three points for a verb of high level of commitment used one time, adding two points for a verb of medium level of commitment used one time, and one point for a verb of low level of commitment used one time, we can calculate the aggregate points for each APEC leaders' declaration. Divided by associated word counts, we can obtain ratios. The author defines the ratio as the scale of commitment of an APEC leaders' declaration shown as table 2. Table 2 also shows the numerators and denominators used to calculate ratios.

The latent coding method used in this study is explaining for the implied connotation in the content of declaration by comparing with important regional events. Table 3 highlights the chronology of key events of the region of Asia-Pacific.

Implications of Outcomes

By comparing coded data shown in table 1 and table 2 with regional events displayed in table 3, we can see a changing APEC with respect to its leaders' commitment degrees. The 2000 APEC leaders' meeting held in Brunei Darussalam with the theme, Delivering to the Community, is the first APEC leaders' meeting in the 21st century (APEC, 2000). The verb used the most in the 2000 APEC leaders' declaration is encourage. As a regional organization with the particular non-binding feature, APEC leaders tended to adopt verbs of medium level of commitment more. The estimated scale of commitment of 2000 APEC leaders' declaration is 0.04 as shown in table 2. The 2001 APEC leaders gathered in Shanghai, China, and the meeting was held about one month after the 9-11 terrorist attack (APEC, 2001). As an economic forum, APEC was

not ready to define its role in response to a key event like 9-11 terrorist attack, but APEC increased using the verbs of high-level commitment in 2001. The theme designed for 2001 APEC leaders was: Meeting New Challenges in the New Century (APEC, 2001). The estimated scale of commitment of 2001 APEC leaders' declaration is still 0.04.

Starting from 2002, APEC has covered more non-economic issues in response to the 9-11 incident, and anti-terrorism has been recognized as an indirect economic issue in APEC agendas (APEC, 2002). The scale of commitment increased tremendously in the year of 2002 with the rate of 0.07. The 2003 APEC leaders' meeting was held in Bangkok, Thailand with the theme of Partnership for the Future (APEC, 2003). Although the theme is relatively softer than the theme adopted right after the 9-11 incident, the estimated scale of commitment is still high (0.07). In addition, the word count of leaders' declaration dropped significantly in 2003 indicating APEC leaders wished to make their declaration more concise. The 2004 APEC leaders met in Santiago de Chile and also adopted the format with lower word count for the declaration (APEC, 2004). The estimated scale of commitment slightly dropped from 0.07 to 0.06. It is noteworthy that APEC leaders cut their usage of low-level commitment verbs since 2003. A concise declaration in 2003 did not any low-level commitment verb, whereas the declaration in 2004 used only one low-level commitment verb, recognize, once.

The results of this content analysis show that APEC leaders have enhanced their commitment level after the 9-11 incident. The manifest coding approach used in this study generating data for table 1 and table 2, and the latent coding approach used here comparing manifest coded data with regional key events to search for implicit meanings.

From this analysis, APEC leaders' declarations tend to enhance their commitment level with regard to external impacts. In addition to the increase of commitment level, APEC leaders tend to decrease using low-level commitment verbs when the new format of a lower word count was introduced.

Table 1: Frequency of Verbs of Commitment Used in APEC Leaders' Declarations

Year of declaration announced	2000	2001	2002	2003	2004
Word count	2,916	3,115	2,797	1,458	1,574
Verbs of high-level commitment	23	26	42	32	26
Instruct	6	2	4	5	3
Commit	6	10	10	6	9
Endorse	2	1	6	1	5
Agree	5	4	14	11	6
Support	4	9	8	9	2
Expect	0	0	0	0	1
Verbs of medium-level commitment	24	21	23	6	15
Urge	4	4	1	1	0
Encourage	9	1	2	1	3
Commend	3	3	4	0	2
Welcome	8	13	16	4	10
Verbs of low-level commitment	8	5	25	0	1
Recognize	0	2	9	0	1
Note	6	2	8	0	0
Acknowledge	2	1	8	0	0

Table 2: Scale of Commitment

Year of declaration announced	2000	2001	2002	2003	2004
Aggregate point (numerator)	125	125	197	108	109
Word count (denominator)	2,916	3,115	2,797	1,458	1,574
Scale of commitment	0.04	0.04	0.07	0.07	0.06

Table 3: Key Events of APEC

Year	Key events
2000	The begin of the new century and the overcome of Y2K.
2001	9-11 terrorist attack occurred in the United States of America.
2002	APEC celebrated its 10th Economic Leaders' meeting.
2003	The outburst of Severe Acute Respiratory Syndrome (SARS). Operation Iraqi Freedom began in March.
2004	World oil price started to rise in April.

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