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Food Reserve/Food Aid in Meeting Emergency Food Needs

*Florencia Huang*¹ (黃富娟) and *Victoria Tsai* (蔡靜怡)

With advanced food production technologies, we have been able to enjoy stable and affordable food supply for decades. However, since the last food price spike in 2007 and 2008, various factors ranging from the demand and supply sides have contributed to food price levels. Among the various factors that underlie potential food price volatilities, macroeconomic factors, energy policies and climate shocks have significant influences on food production, which in turn will have effect on short-term food supply, and cause the rise of emergency food needs, particularly when it is not properly addressed, it could easily trigger social tension.

Surveys from the World Food Program (WFP) and the United States Agency for International Development (USAID) agreed that the needs for emergency food supplies are skyrocketing in recent years, especially after 2000 (Melissa & Charles, 2010). Specifically, statistics shows that in 2009 emergency food aids occupies 76% out of global 5.7 million tones, i.e. 4.33 million tons (WFP, 2009:19). In response to the increasing demand, international society reconsiders using food reserve/aid as means to meet the emergency food needs.

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Causes of Emergency Food Needs

Market factors that strike food security

Food security has raised huge concern over the past few years as a result of soaring food prices. The situation influences thousands of low-income population's diary food intake, and endangers their food entitlement (Sen, 1981). The soaring price is a consequence of the interaction of multiple factors, ranging from macroeconomic factors, such as currency volatility, monetary policy, and energy policy, etc.

Firstly, the global energy demand increases heavily. Energy prices are projected to increase by 45% between 2006 and 2030 (IEA, 2008). Several parts of the food system are particularly sensitive to higher energy cost - for example, the financial viability of fishing (particularly capture fisheries) is strongly affected by fuel prices.

Secondly, trade in many agricultural commodities is denominated in USD. Exchange rate policy has considerable effects on the way international food prices are translated into domestic prices. Depreciating USD causes dollar denominated international commodity prices to rise. The opposite occurs when the dollar appreciates. Increasing exchange rate volatility will have repercussions for the volatility of international prices of commodities.

Thirdly, financial speculation has aggravated the grain prices. The markets of agricultural commodity derivatives have grown dramatically in the past ten years. Though, there is a disagreement about the role of financial speculation as a driver of agricultural commodity price volatility, it is clear that well functioning commodity derivatives could play a significant role in reducing price volatility.



Fourthly, expanding population generates pressure for land to be used for other purposes, coupled with the diversion of food to bio-fuel have led to a reduction in land available for agriculture (IIASA, 2009). There are also strong environmental reasons for restraining expansion of agricultural land in the future. In particular, future conversion of rainforest to agricultural land should be avoided as it will increase emission.

Natural factors that impact food security

Climate change is a contributory factor to the food price crisis, and its impact on agriculture is expected to get more serious. Global warming amplifies extreme weather conditions, such as heat and waves, which in turn magnify seasonal stresses and cause extreme droughts and flooding. The extreme weather events further lead to sharp variations in food production in particular regions, increasing volatility in food production and prices.

Consequences: Time to put reserve on the table

Driven by a combination of high oil prices, macroeconomic policies, extreme weather disasters and investor speculation, emergency food needs have increased in the past years. This situation creates an atmosphere of future food shortage and poses a threat to food security.

In an attempt to minimize the unforeseen risks, economies are positioned to undertake measures such as boosting agricultural productivity, facilitating trade and investment to assure food security. However, there is increasing evidence showing that the food crisis is being made worse by malfunctioning of world grain markets. In face of the external challenge, some economies choose to raise national food reserve, impose export restriction and retail price control. Despite high cost, they are rebuilding their public stocks and

reconsidering the self-sufficiency policies. Given the fact that grain market is a thin market, the export restriction imposed by dozens of economies eventually resulted in additional food prices increase, and further exacerbated the food crisis (von Braun & Torero, 2008).

The food crisis² in 2007 to 2008 has aggravated food security. In that time, many existing public food reserves worked well to maintain food security by releasing public stock. A study from FAO agreed that those economies with reserve stocks were able to respond more quickly than those without reserves (FAO, 2009).

Since then, economies with cereal stocks-to-use ratios at a record low during the past years re-acted against the high cost of food imports by restocking public grain reserves. Thus, the issue of public food reserve is again back to the attention of policymakers (Willoughby & Parsons, 2009).

Food reserves/food aids to meet emergency food needs

Food reserve has proved to be a vital tool in securing first aid. However, it remains controversial for its nature of market distortion. Given the fact that food reserve serves as a first defense line in emergencies, the argument is how to create a cost-effective and flexible stock.

The Controversy of Food Reserve

Food reserve has been an instrument used by policymakers to deal with food crisis. There are two main functions for publicly held grain reserves: Price Stabilization Reserves and Emergency Response Reserves (IATP,

² 83% rise in global food prices during 2007-2008, especially rice, wheat and maize spiked by between 127 and 170% over the short period of time. ActionAid, 2011:3.



2010). The former, targets at managing food supply by establishing a price-band mechanism to stabilize the extreme food price volatility in grain market; the latter stresses on the function of maintaining a smaller physical stock for immediate emergency food relief, induced by disasters, such as occurrence of famines or drought, etc (ActionAid, 2011).

The significance of food reserve relies on its capability to activate the emergency food relief when extreme disaster bursts and causes food crisis. Therefore, to some extent, food reserve serves as the first defense line for food security.

In spite of food reserve's advantages, it also receives severe criticisms. The main argument is its nature of affecting self-regulated market by sending wrong price signals to disturb market, and eventually leads to market distortion in some extent. Another criticism of food reserve comes from the cost of its management (Willioughby & Parsons, 2009:4).

Specifically, the first argument is based on the perspective of liberal market economy, advocating self-regulated market with minimum policy intervention. In this context, food reserve as a mean to mediate market supply and demand is considered not appropriate. However, the food reserve is designed as an instrument to compensate for what markets cannot achieve (ActionAid, 2011: 6-7). American scholars like Brian Wright is convinced that as long as food stock is in place, it helps smooth price peaks (FAO, 2009).

The second argument is about the cost of management and sustainability of food reserve. The maintenance of public food reserve has assumed to be expensive. The cost covers from food preservation, management to replenishment of staple foods. The derivative question from this argument is: how to achieve good governance, meanwhile, to keep the cost down.

Over the past 30 years, economies around the world have dramatically cut down food reserve volume or abandoned reserve programs, after concerning the potential market distortion effect, high running cost, and possible

corruption and rent seeking in management of food reserve (IATP, 2010). Instead, developing economies or least-developed countries (LDCs) are encouraged to rely on imports from global grain market (ActionAid, 2011).

Emergency Food Reserve/Food Aids

We would like to put particular emphasis on the increasing importance of Emergency Food Reserves for humanitarian purpose. Emergency food reserve is for targeted interventions to enhance immediate and direct access to food by the most needed. It refers to the programmatic means of intervening in emergencies to protect people suffering from transitory food insecurity (Kuo, 2011). For the most critical moment, emergency reserve is proved to be an irreplaceable tool to safeguard against food shock (ActionAid, 2011:15).

For a successful operation of an emergency food reserve to take place, management is vital. As discussed earlier, food reserve is a controversial issue, however, "to keep food reserve in small scale" has reached some consensus (G 20, 2011). On the other hand, adopting an earmarked reserve instead of stockpiled reserve is considered to be a better option, since it is not involved in huge and immediate food stocks. Hence, it is less possible to cause severe market distortion.

On the other hand, food aid is commonly used instrument to meet emergency food needs. Food reserve and food aid are complementary to each other. The emergency food aid normally comes from the public food reserve. The latter, serves as a "primary" emergency release channel for "first aid" in times of calamities. Immediate food aid released from public food reserve could shorten the delivery time and expedite the emergency assistance.

Food aid could be given by two forms: "concessional price" and "grant-form". If food aid is based on "needs-driven" and takes only "fully grant-form",



as proposed by World Trade Organization under Doha Round negotiation now, it will not have great effect upon the market. Moreover, emergency food aid could be locally and regionally procured (FAO, 2011: 370).

Recently, changes are occurring in the delivery of food aid. Food aid has been decoupled from the traditional source of food surpluses, and is allowed to be purchased to the needed location and shorten deliver time. This made food aid become much more efficient by reducing costs of reserve management and speeding up responses in meeting emergency food needs (Clark, 2011).

This is to say, emergency food aid could be "bought in" in spot market in times of emergencies (Willoughby & Parsons, 2009). To this effect, it will conform to market rules, meanwhile achieve food security. Hence, there is no attempt to diminish the importance of public food reserve, since it is the primary channel to release "first aid". Given the fact that "timely delivery" is essential, to keep small scale reserve in different places is considered. To achieve this end, it depends heavily on international cooperation based on mutual assistance and collective self-reliance principles, as states on ASEAN Plus Three Emergency Rice Reserve (APTERR).

In this sense, we are convinced that a fully grant-form food aid released by earmarked reserve is the best practice to meet emergency food needs. For it is in small scale, it could expedite the release process to meet first aid, meanwhile have less effect on market distortion.

The existing international cooperation in emergency food needs

There are several ongoing efforts to address emergency food needs in international cooperation, among them, the Group of 20 (G20), the WTO Doha Round negotiation, the ASEAN Plus Three Emergency Rice Reserve

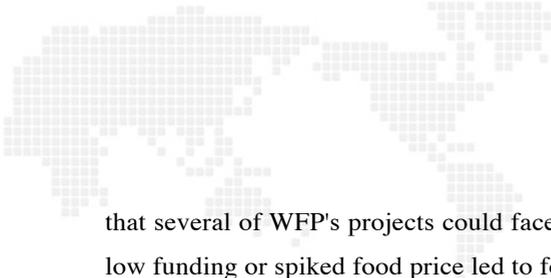
(APTERR) and the World Food Programme (WFP) are the most commonly noticed practices.

With regard to food reserve/food aid in meeting emergency food needs, G20 and APTERR show their intention to formulate regional food reserve. However, the target group for G20's reserve is for chronic hunger, not for emergency food needs; while, APTERR is the only international arrangement that covers both objectives of poverty alleviation and emergency food needs.

Based on 2004-2007 Pilot Project of East Asia Emergency Rice Reserve (EAERR), ASEAN countries with Japan, South Korean and China have decided to establish ASEAN Plus Three Emergency Rice Reserve (APTERR) as a permanent mechanism to promote regional cooperation in safeguarding food security and meeting emergency food needs. The APTERR is based on the principle of mutual assistance and collective-self reliance, and is designed to achieve objectives, namely, for natural disasters and chronic poverty (ADB, 2009; EAERR, 2009).

On the other hand, WTO as a major multinational trade institution, is initiating new discipline as part of WTO Agreement on Agriculture (AoA) under the Doha Round negotiation to govern international food aid practices. The general disciplines proposed to be applicable is based on "needs-driven" and "fully grant-form" (FAO, 2011: 370). The objective is for poverty reduction, not for emergency food need.

The WFP is the only multinational organization devotes to deliver emergency food aids. However, the operation of WFP does not cover all economies of the region. Besides, a recent survey from WFP reveals that the volume of food aid deliveries has declined in the past ten years, from 13.2 million metric tons in 1990 to 5.7 million in 2009 (WFP, 2011). In contrast, the needs for emergency food aids continue to grow, from 63% in 2005 to 76% of total food aids (WFP, 2006:19). Furthermore, the WFP has also stated



that several of WFP's projects could face a break in food supplies because of low funding or spiked food price led to food aid shortage.

Conclusion

In sum, the decline of international food aid underlines the international institutional arrangements for meeting emergency food needs are not enough to cope with the unforeseen crisis. An international solution to address the need for reliable emergency food supplies may be costly (von Braun & Torero, 2000), unless a network of a decentralized earmarked food stocks is formulated to provide emergency food aids in fully grant-form. The coordinated system offers economies facing extreme food emergencies a supportive buffer to acquire needed food through commitment and mutual assistance. In this case, it should be a cost-effective way to address challenge based on collective self-reliance and risk-sharing principles.

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Economic Competition between Korea and Taiwan

Darson Chiu (邱達生)

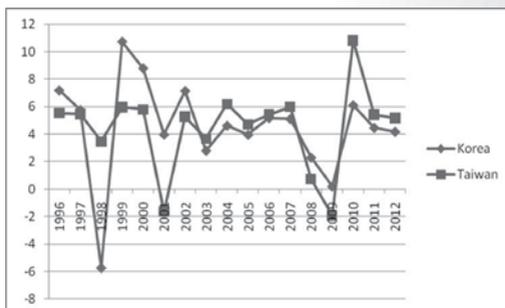
The global attention is on China, the leading economy of world emerging markets. However, China is not the only economy in this region achieving great economic performance. Republic of Korea (ROK) is also constantly on the rise, advancing from a developing to a modern and developed economy. Moreover, Korea has been competing with Taiwan for global market share.

Political Constraints Facing Korea and Taiwan

Once a colony of the Empire of Japan some time before the Second World War, the ROK was officially set up after the war. Korea is a democratic country located in the southern half of the Korean Peninsula, whereas North Korea, a Communist country occupying the northern half of the peninsula. The situation of Korea is somewhat similar to that of Taiwan. Taiwan used to be a colony of Japan, and WWII changed that situation and also freed Taiwan from the Japanese. After WWII, Korea was involved in the Korean War from 1950 to 1953. Nevertheless, the Chinese Civil War took place from 1947 to 1949, a little bit earlier than the Korean War. These two military conflicts have respectively resulted in major political constraints facing Korea and Taiwan since then.

What geographically breaks up Taiwan and China is the Taiwan Strait, and a demilitarized zone at about the 38th parallel separates Korea and North Korea. Tensions between both sides of the Taiwan Strait would be equally serious as the inter-Korean relations. Recently, the Ma Ying-Jeou administration of Taiwan has more successfully relieved the hostility of cross-Strait relations with a preferential trade agreement known as the Economic Cooperation Framework Agreement (ECFA). By comparison, President Lee Myung-bak and his cabinet have had a very tough time dealing with North Korea experiencing tragic incidents that include the sinking of Korean warship in March and artillery attack in November of 2010. However, the Lee administration has pursued a policy of global engagement despite of failing to lift the tensions in the Korean Peninsula. Korea hosted the G-20 summit in November 2010. G-20 has been considered as the major entity that can effectively address the global economic crisis; therefore, hosting G-20 actually signified a Korea's multilateral victory. Compared with Korea's multilateral accomplishment, the Ma administration has been more successful on dealing with cross-strait issues. The highlight would be the ECFA signed by Taiwan and China in June 2010.

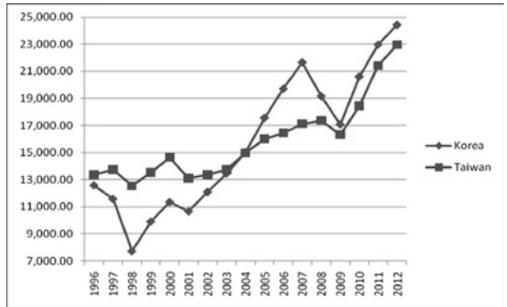
Figure 1. Real GDP Growth Rates of Korea and Taiwan 1996-2012 (%)



Source: IMF, World Economic Outlook Database, April 2011.

The Korean economy has been more resilient ever since its recovery from the East Asian financial crisis happened in 1997 and 1998. After the crisis, two most recent external shocks would be the burst of Dot Com bubble in 2001 and the global economic crisis in 2008 and 2009. During these two worldwide recessions, Korea was less injured than Taiwan. Although Korea had a serious downturn in 1998, Taiwan suffered from two major dips in 2001 as well as 2009.

Figure 2. Per Capita Income of Korea and Taiwan 1996-2012 (US\$)



Source: IMF, World Economic Outlook Database, April 2011.

Despite the fact that Korea has a larger economic size and bigger population, Taiwan used to be proud of her much higher personal income level. In the 80s, the 10-year-average of Taiwan's per capita income was about US\$ 3,994.82 that was much higher than Korea's per capita income of the same period, US\$ 2,878.88. In the 90s, Taiwan's 10-year-average per capita income was US\$ 11,665.6 doing better than Korea's US\$ 9,308.38 per capita income. Basically, Taiwan's lead in per capita income continued in the early period of the new century until the year of 2004. In the year of 2004, Korea has obtained a per capita income of US\$ 15,028.82 higher than Taiwan's US\$ 14,985.79. It was the first time in modern history that Korea

has a higher personal income than Taiwan does. Korea was ahead of Taiwan in 2004 and she never looks back, since the IMF even forecasted that Korea will continue to prevail in this category for the next 5 or more years.

GDP is what used to measure the economic power of a country. GDP growth is used to measure if a country's economic performance is consistent. Per capita income is the indicator used to distinguish developed and developing countries. From the above comparisons, Korean economy has been more powerful, steadier in terms of growth, and more developed than the economy of Taiwan. By the way, both Korea and Taiwan are short of natural resources. That means human capital would be the most important resource for both economies.

Table 1. Korea vs. Taiwan- Structure of GDP and Factor Cost Ratios

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Structure of GDP (%)												
Korea-Private consumption	54.8	55.9	56.7	54.8	52.6	53.8	54.5	54.4	54.7	54.1	52.5	53.3
Taiwan-Private consumption	58.8	60.7	59.9	59.8	59.9	60.4	59.2	58.1	60.3	60.8	58.0	58.7
Korea-Gov't expenditure	12.0	12.7	12.6	13.0	13.3	13.9	14.5	14.7	15.3	16.0	15.4	15.5
Taiwan-Gov't expenditure	13.4	14.0	13.6	13.2	12.7	12.5	12.0	11.8	12.4	13.0	12.2	12.2
Korea-Gross fixed investment	30.0	28.8	28.6	29.3	29.2	28.9	28.7	28.5	29.3	29.1	28.6	27.6
Taiwan-Gross fixed investment	24.8	20.5	19.8	19.8	22.8	22.4	22.3	22.0	21.1	18.9	21.7	22.2
Korea-Exports	38.6	35.7	33.1	35.4	40.9	39.3	39.7	41.9	53.0	49.7	52.4	59.0
Taiwan-Exports	52.9	50.0	52.2	55.5	61.4	62.5	68.0	72.1	73.0	62.5	73.7	77.6
Korea-Imports	35.7	33.5	31.7	33.1	36.7	36.6	38.3	40.4	54.2	46.0	49.6	55.9
Taiwan-Imports	50.8	44.5	45.0	48.5	57.7	58.1	61.9	64.1	68.1	53.9	66.5	71.2
GDP factor cost ratios (%)												
Agriculture/ GDP	Korea	4.6	4.4	4.0	3.7	3.7	3.3	3.2	2.9	2.7	2.8	2.5
	Taiwan	2.0	1.8	1.7	1.6	1.6	1.6	1.6	1.5	1.6	1.6	1.3
Industry/ GDP	Korea	38.1	36.6	36.2	36.7	38.1	37.7	37.2	37.1	36.5	36.8	40.0
	Taiwan	28.6	27.4	28.0	27.5	26.8	26.4	26.3	27.2	24.6	30.1	32.3
Services/ GDP	Korea	47.4	48.6	48.9	48.7	47.5	48.1	48.6	49.0	49.7	49.4	47.7
	Taiwan	67.9	70.0	69.2	69.2	68.9	69.6	69.5	69.2	71.7	69.1	66.7

Source: EIU Data Services.



Structure of GDP can reveal the economic story of an economy. From table 1, we can see that Taiwan has been more relying on private consumption than Korea has. However, Korea has had relatively more gross fixed investment than Taiwan has. The exposed fact is that the domestic demands of both economies over their respective economic sizes are almost equivalent. Nevertheless, Korea has a tradition since the 60s that this country has been working hard for industrialization and production automation, whereas the practice is reflected in gross fixed investment. Both Korea and Taiwan have been adopting "modernization" and "outward-looking" strategies for two reasons: a) relatively small domestic markets and b) short of resource endowments. The difference is that the Korean government support big firms all the way making a company like Samsung with an annual gross around 20% of Korea's total GDP. Quite the opposite, Taiwanese companies do not have the government support like the Koreans do; 98% of Taiwanese firms are small and medium enterprises. There are different advantages regarding big firms versus SMEs. One obvious benefit of big firms would be the economy of scale that can help reduce production costs. And the advantage for SMEs would be that operations of SMEs can be more flexible when addressing financial crisis. Furthermore, the structure of GDP also indicates that Taiwan depends more on exports of goods and services. When the economy is in a boom, there's nothing wrong with relying on external demands. However, the reliance on external demands makes an economy more vulnerable as the global demand shrinks due to crisis.

Comparing Korea's and Taiwan's GDP factor cost ratios, we found that Korea has a proportionally bigger agriculture sector. It was 4.6% of GDP in 2000 and 2.6% in 2010. Korea also has a relatively larger industry sector. It was 38.1% over GDP in 2000 and 39.3% 10 years later. Taiwan has a rather large services sector; it was 67.9% over GDP in 2000 and has remained

similar ratios through the past decade.

Table 2. Indices of Comparative Advantage of CJKT

	Taiwan	Korea	China	Japan
Agriculture	0.08	0.07	0.62	0.03
Livestock	0.43	0.07	1.42	0.06
Woods	0.09	0.03	0.27	0.03
Fisheries	1.08	1.51	1.42	0.13
Food	0.31	0.35	0.60	0.11
Beverage & Tobacco	0.06	0.15	0.60	0.14
Textile	2.79	3.06	2.68	0.50
Garments	0.71	0.84	4.82	0.10
Leather	1.37	1.39	5.97	0.05
Petroleum	0.88	1.07	0.58	0.77
Mineral Products	0.19	0.10	0.49	0.20
Metal Products	1.22	1.28	0.75	0.88
Machinery	1.09	0.74	0.81	1.69
Electric Equipment	2.90	2.26	1.13	1.91
Transport	0.35	1.23	0.16	1.91
Construction	0.47	0.06	0.47	2.37
Services	0.47	0.69	0.93	0.69

Source: TIER Study, 2005.

Although Korea has a relative large agricultural sector, Korean agriculture does not possess comparative advantage. Table 2 listed comparative advantages of all major sectors of Taiwan, Korea, China, and Japan for comparison. Compared with Taiwan, Korean economy is more competitive in sectors such as: fisheries, food, beverage & tobacco, textile, garments, leather, petroleum, metal products, machinery, transport, and services. Taiwan however owns comparative advantages in sectors like agriculture, livestock, mineral products, electric equipment, and construction. Even so, the readings of those sectors are very much alike. Therefore, Korea and Taiwan must have a very similar degree of trade structures.

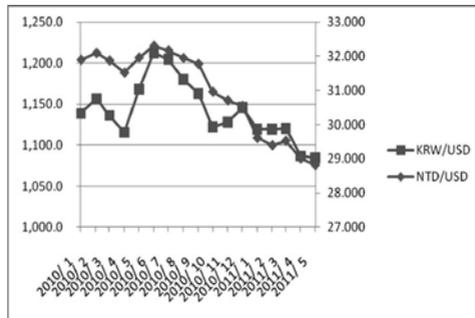
Table 3. Similarity Degree of Trade Structures

	Taiwan	Korea	China	Japan
Taiwan	1	0.84	0.66	0.70
Korea	0.84	1	0.66	0.76
China	0.66	0.66	1	0.56
Japan	0.70	0.76	0.56	1

Source: TIER Study, 2005.

Table 3 identifies the similarity degree of trade structures of Taiwan, Korea, China, and Japan. A higher degree means that the associated two economies are in a more serious competition. A lower degree means that the two associated economies have more room for cooperation. From table 3, we can conclude that the trade competition between Taiwan and Korea is even more severe than the competition between Korea and Japan. In addition, China and Japan have more room to cooperate. Taiwan and Korea are in equal status to cooperate with China.

Figure 3. KRW/USD vs. NTD/USD



Source: Central Bank of ROC (Taiwan).

Korea is ahead of Taiwan, but it is not impossible for Taiwan to pick up the pace and catch up with this long time economic rival. These two

economies have similar trade structures as well as similar comparative advantages by sector. However, Korea has been more successful conducting bilateral and multilateral free trade agreements (FTAs). These FTAs involve Taiwan's major export destinations such as China, ASEAN, Europe, and the US markets. Of course, these FTAs will weaken Taiwan's trade competitiveness against Korea. Therefore, rising Korea is more of a problem than rising China to Taiwan. In addition to FTAs, KRW/USD exchange rates have been moving side by side with the rates of NTD/USD.

Conclusions

Both Taiwan and Korea depend intensively on human capital; Taiwan may upgrade the quality and quantity of her human capital. To improve the quality, Taiwan needs to advance the education system and make it more employment-, production-, and creation oriented. To meet the needs of labor, Taiwan needs to evaluate the labor mobility policies adopted on nearby economies including China.

Unlike Korea, Taiwan is not able to freely negotiate FTAs with major trading partners. North Korea seems more belligerent in this region; however, China is definitely more influential in the world. It is hard to measure which one is more troublesome, dealing with North Korea or China. Make a good use of cross-Strait relations could be a good idea. ECFA is a good start for Taiwan, because it involves the Chinese market that has great potential. Taiwan needs to continue the momentum and seek other partners to negotiation tables.



APEC's Innovation Growth and Entrepreneurship

Eric Chiou (邱奕宏)

In history, innovation has been one of key components in moving economy forward, and entrepreneurship has been playing an indispensable role in leading innovation. Recognizing the importance of innovation, in 2009, APEC leaders called for the enhancement of economic growth through innovation and a knowledge-based economy. In 2010, APEC developed the APEC Growth Strategy with five attributes and innovative growth was one of them.

In the "APEC Leaders' Growth Strategy," innovative growth was defined as creating an economic environment that promotes innovation and emerging economic sectors. One of important actions that need to be fulfilled is to develop skillful, adaptable, and professional APEC workforces in the region. APEC intend to enhance technical training and vocational education to cultivate more skilled personnel and to enrich human resources. In fact, high-quality human resources have been the core of innovation and entrepreneurship is a catalyst to transform innovative ideas into actual commercial products, leading to job creation and economic growth. Given that the 2008-9 global financial crisis has resulted in severe recession in the world economy and most APEC members have weathered economic hardship, the significance of innovative Small, Micro, and Medium Enterprises (SMMEs) has been increasingly recognized and been regarded

as key drivers of economic growth and job creation. As a result, many APEC members have initiated policies to facilitate innovative SMMEs and promote entrepreneurship by improving their business environments and providing more financial support and incentives.

In fact, the significance of SMMEs to economic growth has been recognized by the OECD. As early as in June 2000, OECD members and non-member economies adopted the Bologna Charter on Small and Medium Enterprise (SME) Policies, pointing out the importance of improving SMEs' ability to manage innovation, reducing the financial barriers to SME innovation, and facilitating SMEs' access to national and global innovation network. Building on this foundation, in November 2010, the OECD Working Party on SMEs and Entrepreneurship (WPSMEE) held the "Bologna +10" High-level Meeting to investigate and seek agreement on the policies needed to harness the potential of entrepreneurship and innovative SMEs in the aftermath of the global financial crisis.

In addition to emphasizing the contribution of innovative SMEs and entrepreneurship to job creation and economic growth, the meeting also identified a number of barriers that may constrain entrepreneurship and the creation of innovative SMEs, so as to facilitate the ability of economies to achieve full employment and economic growth. These barriers include: 1.poor adapted framework conditions; 2.obstacles to accessing international markets and knowledge flows; 3.weak intellectual asset management by SMEs; 4.lack of entrepreneurial human capital, and 5.insufficient exploitation of public research and procurement opportunities.

Hence, for promoting job creation and innovative growth as well as SMMEs development, the OECD WPSMEE contends that policies should be focused on tackling market, system and government failures that impede the growth of SMEs and the practices of innovative ideas. It



also lists policy priorities, including: 1.create a conducive entrepreneurial business environment; 2.facilitate the internationalization of SMEs and entrepreneurship; 3.improve SME intellectual asset management; 4.enhance entrepreneurship skills; and 5.increase the exploitation of public research and procurement opportunities.

The above OECD's policy prescriptions provide an excellent benchmark to evaluate the progress that APEC economies have made so far in terms of facilitating SMMEs' innovative development and promoting entrepreneurship. By reviewing APEC members' related official documentation, websites, and reports regarding relevant policies during the 2010-2011 period, five noteworthy characteristics in APEC region can be summarized.

First, the majority of APEC economies are willing and able to create conducive environments in which entrepreneurial business can grow and prosper. Most APEC economies emphasize the importance of maintaining macroeconomic stability and intend to provide financial measures, such as tax cut or subsidies, to help SMMEs survive in this global financial crisis.

Second, more and more economies recognize the important role of SMMEs in the international market. Hence, many policies initiated by APEC economies have a common goal of encouraging SMMEs' participation in the global market. These policies aim to integrate SMMEs into the global supply chains and reduce barriers for SMMEs to export.

Third, despite its significance, improving SMMEs intellectual asset management has not elicited many policy responses from APEC economies. Only a few have explicit policies to call SMMEs' attention to the protection of intellectual property rights (IPR). No developing economies emphasizing the importance of IPR may indicate that their SMMEs are still relatively low-tech. Therefore, IPR is not a crucial issue for these SMMEs.

Fourth, many APEC economies recognize the importance of

entrepreneurship in facilitating economic growth. Hence, they are willing to strengthen entrepreneurial education and training in order to nurture more future entrepreneurs. Many APEC economies, regardless of their various levels of economic development, consider the enhancement of entrepreneurship skills an effective approach to foster robust growth of SMMEs.

Finally, some APEC economies acknowledge the value of promoting collaboration between public research institutes, such as universities and research centers, and SMMEs. These governments have also taken actions to strengthen or formulate institutional cooperation between the two. However, these APEC economies generally have not adopted active policies regarding how to use government procurement to support SMMEs' innovation.

Although the preceding points indicate that most APEC economies have taken actions to foster a better environment for innovation growth and entrepreneurship, there still has a significant discrepancy across the APEC region and, therefore, remains room for improvement. In this regard, one piece of important evidence comes from a huge ranking gap of APEC economies in the World Bank's "2011 Ease of Doing Business Report," in which Singapore stands out as number one, in the world while the Philippines ranks 148th. These divergent performances show that APEC has not collectively achieved the progress in improving the overall business climate for SMMEs. Since SMMEs are likely to be the embodiment of entrepreneurship and major drivers for innovative growth, APEC economies should take more proactive actions to improve their business environments for promoting more and more innovative SMMEs.



Sustainable Development in Taiwan: an Application of Content Analysis

Wayne Chen (陳威仲)

Environmental protection and sustainable development (SD) has been an emerging issue in policy making in Taiwan, however, limited analysis was carried out on the development of deliberation and the narrative discourse. This essay serves as one example identifying Taiwan's sustainable development deliberation standing on whether an anthropocentric or biocentric perspective, which is a common question as well as a theoretical dichotomy in viewing mindset of environmental policy making in the West (Barnes and Barnes, 1999; 25-7, Richardson, 1997; 44-8).

The essay, by choosing two talks of Jiunn-Rong Yeh (葉俊榮), illustrates how the SD discourse could be viewed on the anthropocentrism vs. biocentrism framework, and also answers 2 questions:

1. How is SD presented as an emergent issue to the public?
2. Do these presentations provide more evidence/reason from a human-centred perspective or a pure environmental perspective?

Sample Selection

Jiunn-Rong Yeh is a professor in Law Department of National Taiwan University, and a Minister without Portfolio in the Executive Yuan¹ at

¹ The Executive Yuan in Taiwan is equivalent to the Cabinet in UK.

the time in Taiwan. As a pioneer of SD movements, Yeh represented the mainstream belief and value in policy making and localisation of international regulations. Two speeches analyzed in the essay are to disclose insight of Taiwanese awareness regarding the environmental context, and changes of such awareness before and after announcing the 'First Year of Sustainability'² in Taiwan.

The two articles of Yeh are,

1. Yeh, J. R., 2002, a Sustainable Taiwan. *Journal of Sustainable Industrial Development*, 6, pp.3-12. This is an interview conducted by Jung, M. H., an editor of *Journal of Sustainable Industrial Development*.
2. Yeh, J. R., 2004, Sustainable development in Taiwan- how long can Taiwan stand away from this trend? *Forum on Training and Development*, 39, pp.19-26, presented in the Regional Civil Service Development Institute, Taiwan in June, 2003.

Coding Schedule and Instructions

There are two themes, based on research questions, were established:

1. Urgency: Was time pressure sensed in environmental movements? How critical were environmental issues illustrated in these two talks?
2. Anthropocentrism vs. Biocentrism: What was Taiwan's perspective in considering environmental degradation? Was it from a human-centred viewpoint, e.g. economic development, industrial competitiveness, international trade, threat to human survival, or from a more nature-centred standpoint, e.g. biodiversity, irreversible ecological damage, and global

² National Council for Sustainable Development, under the Executive Yuan, announced 2003 as the 'First Year of a Sustainable Taiwan' in January, 2003.



warming?

A coding schedule was drawn as Figure 1 accordingly.

Figure 1. Coding Schedule

Article Number	Sentence Number	Emphasis on Urgency	Adopted Perspective

Emphasis on Urgency

1. Very less urgent: any sentence notes that there is no time pressure should be coded as 1.
2. Less urgent: any sentence regards environmental problem a task that human have sufficient time to deal with.
3. Neutral: any sentence suggests involving environmental degradation in developmental agenda today or time can be not adequate in the future.
4. Urgent: we have to accelerate our pace to protect nature, and yield a much higher priority than other agendas.
5. Very Urgent: environmental crisis is inevitable, we can only try to reduce its impact, and get ready to suffer.
9. Missing value.

Adopted Perspective

1. Very anthropocentric: any sentence regards nature from an human-centred value driven perspective, i.e. economic development, national competitiveness, social wealth, cultivated lands, and without considering to reduce the exploitation on nature.
2. Anthropocentric: any sentence acknowledges human a higher priority in seek a compromise between meeting human's needs and environmental protection.

- 3. Neutral: any sentence considers human and non-human beings and nature should share equal right, and human practices and their external impact should be evaluated on this premise.
- 4. Biocentric: any sentence suggests considering nature and other beings first in human institution.
- 5. Very Biocentric: any sentence suggests human should avoid intervening nature. Human should not exploit the environment for any reason.
- 9. Missing value.

Coding Result

Figure 2. The frequency distribution and position of both articles in the 'Emphasis on Urgency'

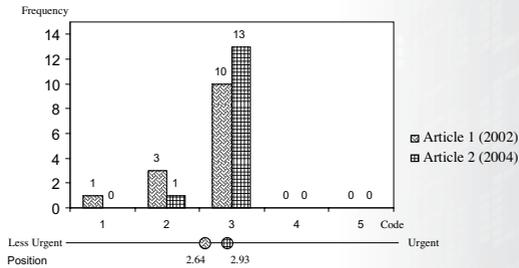


Figure 3. The frequency distribution and position of both articles in the 'Adopted Perspective'

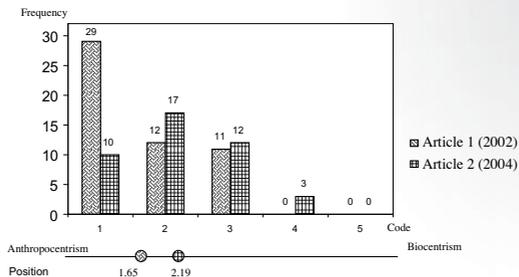




Figure 2 and Figure 3 illustrate the output of content analysis of the two articles. Two primary findings were conducted.

- 1.Environment was not introduced as an emergent issue in Taiwan, or at least time pressure was not an essence in attracting public attention. The position of the 'Emphasis on Urgency' in 2004 was more neutral than it was in 2002, but the frequency and position (average) exhibited a limp belief in impelling environmental protection.
- 2.Environmental degradation in Taiwan had not aroused a common awareness towards nature, but towards the improvement and advantage of domestic economic development, industrial competitiveness, and diplomatic relationship such environmental improvement might bring in. In the 2002 article, Dr. Yeh illustrated a strong profit-driven thinking of social wealth and flourishing, from an anthropocentric perspective. A Significant number (29) of sentence coded as 1 are mostly concrete examples and advantages illustrated to support an ecocentric viewpoint. There is a notable progress between 2002 and 2004. In the 2004 article, Yeh recognised the environmental degradation not only by human values, but also nature itself. Extinguishing animals, biodiversity and continence suggested in the 2004 article marked an emergence of a more biocentric perspective.

Conclusion

This essay illustrates an example of the content analysis by assessing two talks given by Yeh. The result shows more emphasis on time pressure and a more biocentric perspective is adopted regarding in the 2004 article than the talk one year before. Deliberation of environmental issues from a bio-centric standpoint was more widely conceived and environmental degradation was considered a more urgent issue in local society. However, environmental

discussion was more focused on increasing public understanding but calling linking to global actions which can be a more urgent issue to Taiwan.

Reference

1. Barnes, P. & Barnes, I. (1999) Environmental Policy in the European Union, Edward Elgar, Cheltenham.
2. Richardson, D. (1997) the Politics of Sustainable Development. IN Baker, S., Kousis, M., Richardson, D. & Young, S. (Eds.) The Politics of Sustainable Development- Theory, Policy and Practice within the European Union. London, Routledge.

