

**Promoting Agricultural Entrepreneurs against Food Shortage, Overproduction and Protectionism in Northern Africa and Other Regions of the World
- A Critique to Nobel Laureate Schultz and Nominee Hirschman**

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Abstract

The paper reveals that ever since the 1950s, after the first land reform of distributing land ownership (or possession under public ownership) to small farmers, the *irrational and polyopolistic land use* by able-bodied part-time and absent small farmers earning higher off-farm income but unwilling to lease the under-producing land beyond their family consumption need to full-time farmers, has been a global obstacle with both public and private land ownership, traditional and modern agriculture, fragmented small and consolidatorily enlarged land, low and high income economies, food under-self-sufficiency and overproduction, and developing and developed countries, even if land property rights have been well defined and sale/lease allowed. [*Polyopoly* is invented by the author to denote the control of a resource by many sellers in contrast to monopoly (by one seller) and oligopoly (by a few sellers)]. This is mainly due to low rents, avoidance of misuse by tenants, jealousy in preventing neighbors from prospering, and hobby use. In those countries where this land reform has not been completed, there are also large landowners who exercise it. The full-time farmers, without right to use such under-utilized or idled land, have to subsist on their tiny farms, cut forests for more land, or quit agriculture for cities or developed countries. The land of the emigrants is ineffectively used by their old parents, wives or children, or just idled, without being leased to the remaining able-bodied full-time farmers. Numerous developing nations have to import food with scarce foreign exchanges or ask for donations to cope with food shortage (such as in Northern Africa), while many industrialized nations have provided huge subsidies to maintain farmers on agriculture which may cause overproduction. This obstacle has thus harmed agriculture, rural development, income distribution, government expenditure, competition, trade, environment, etc. It has become the most fundamental microeconomic root of the three persisting global macroeconomic problems: food under-self-sufficiency, overproduction and agricultural protectionism. It has turned to be the *most fundamental root* (though not the unique one) when the rural facilities are backward (such as in numerous developing countries currently), and the *unique root* when the rural facilities are advanced (such as in many developed countries presently). The global food shortage crises since 2005 have exposed and confirmed this obstacle.

Evidences in Northern and Southern Africa; Asia; Latin America; Central-Eastern Europe and Central Asia; Western Europe; North America and Oceania are presented.

Many governments and international organizations have exercised measures to promote agricultural and rural development (early retirement, young farmers, training, infrastructure, irrigation, land consolidation, fine seeds, better quality, higher yields, localized production, small and large machinery, organic farming, anti-pollution, credits, contract farming, information, market access, off-farm activities, etc.), but overlooked that the rational and competitive land use is the basis without which other measures would not function well (if at all).

Accordingly, the paper challenges Schultz's assertions: (1) small farmers are rational; (2) low income countries saddled with traditional agriculture do not have the problem of many farmers leaving agriculture for nonfarm jobs; (3) part-time farming can be efficient; (4) economies of scale do not exist in agriculture; and (5) investment in human capital counts much more than institutional changes and is the key to agricultural growth. It indicates that Hirschman has ignored that this obstacle has hampered the linkage effects.

The paper has dug out internationally neglected laws for efficient and competitive land use in the USA and Western Europe. In the USA, covering all the states, (1) there is a time effect on turning occupied private property into ownership - adverse possession, which means that if a private person has occupied a private property (e.g., farmland) without agreement of the owner, while the owner has not sued the occupier during a limited period, then this property will belong to the occupier. (2) There is 'squatters' rights' law for turning occupied public land into private ownership, which denotes that if a person (squatter) has occupied a public land for over 25 years and paid taxes, the Secretary of the Interior may issue a patent for 160 acres of such land upon the payment of not less than 1.25 dollars per acre. These laws are still exercised. Their main significance is to encourage the efficient use of the idled private and public land resources. Their main imperfections are that (1) If the private landowner has found that his idled land is being used by another farmer without his agreement within the limitations period, he may sue to get the land back, while still idling it. (2) Even if an adverse possessor or squatter has successfully gained ownership of a private or public land, he may idle or under-utilize it later on, without leasing it to those farmers who wish to produce sufficiently on it. (3) People in general may not wish to lose private property including farmland even if they do not use it.

In Western Europe, (1) there has been a law to give right to other farmers to produce sufficiently on any under-producing land (i.e., less than 40% of the normal output): in the EU Council Regulations 1963/262, 1967/531 and 1963/261; Italy 4 August 1978 (still valid but not applied); and Switzerland from the Middle Ages that any farmer can bring his cattle to graze in the private pastures of the Alps (still valid but not applied). Its main shortcoming is that it obliges landowners to lease out all their inefficiently used land, so that part-time and absent landowners would not be able to produce for family consumption and keep farming skills; and once lost off-farm jobs, would either have no access to their land rented out, or have to withdraw it within the contractual period, affecting the lessees. (2) There has also been a law to oblige landowners to either use their land or lease it out for sufficient production: in Germany 31 March 1915 (until 1961); UK 6 August 1947; Norway 18 March 1955, 25 June 1965, and 31 May 1974 (still applied due to continuing under-self-sufficiency with the cold weather), and Denmark 17 July 1989. Its main shortcomings are that it may cause overproduction, plus the above-mentioned one. Both laws have been suspended at the overproduction stage.

Revising these legislations, the paper provides effective and appropriate Proposals (I) giving full-time farmers access to the under-producing land beyond family consumption need of part-time and absent farmers, by creating a Dual Land System, and (II) converting the environmentally sensitive farmland back to the nature obligatorily once a country has encountered constant overproduction. They would, without affecting private land ownership, simultaneously reach eight aims: (1) minimize/abolish/prevent protectionism, while (2) avoiding overproduction and (3) irrational production abandonment; (4) boost competitive full-time large farmers as entrepreneurs, whereas (5) not crowding part-time and absent small farmers out of agriculture; (6) reach/maintain basic self-sufficiency in cereals, meanwhile (7) promoting multi-functionality of other agricultural and rural sectors and (8) improving the environment. They would be useful also for public land ownership. Hence launching a second land reform – land use reform.

Especially, the full-time farmers could increase farm size, achieve economies of scale, reduce costs, become viable or more competitive, hence fully playing their entrepreneurship to produce for the national and global markets, without seeking protectionist subsidies or foreign aid.

The analyses and Proposals have been presented at 15 conferences in Asia, Europe and Latin America; nine seminars in four European countries; a press conference for WTO in Geneva; nine publications by EU Commission; and received 211 responses as appreciation/attention from Nobel economics laureates, governments, farmer organizations and international organizations of the EU, EU accession countries, Japan, Switzerland, Canada, USA; CABI, OECD, WTO; UN, CSD, FAO, IMF, UNCTAD, UNEP and World Bank during 18 February 2002 – 4 November 2008 [see the author's fifth FAO publication (<http://www.icarrd.org/en/proposals/Zhou.pdf>) pp. 7-57].

Section 1 Hypothetical Discovery

This paper reveals that ever since the 1950s, after the first land reform of distributing land ownership (or possession under public ownership) to small farmers, the *irrational and polyopolistic land use* by able-bodied part-time and absent small farmers earning higher off-farm income but unwilling to lease the under-producing land beyond their family consumption need to full-time farmers, has been a global obstacle with both public and private land ownership, traditional and modern agriculture, fragmented small and consolidatorily enlarged land, low and high income economies, food under-self-sufficiency and overproduction, and developing and developed countries, even if land property rights have been well defined and sale/lease allowed. [*Polyopoly* is invented by the author to denote the control of a resource by many sellers in contrast to monopoly (by one seller) and oligopoly (by a few sellers)]. This is mainly due to low rents, avoidance of misuse by tenants, jealousy in preventing neighbors from prospering, and hobby use. In those countries where this land reform has not been completed, there are also large landowners who exercise it. The full-time farmers, without right to use such under-utilized or idled land, have to subsist on their tiny farms, cut forests for more land, or quit agriculture for cities or developed countries. The land of the emigrants is ineffectively used by their old parents, wives or children, or just idled, without being leased to the remaining able-bodied full-time farmers. Numerous developing nations have to import food with scarce foreign exchanges or ask for donations to cope with food shortage (such as in Northern Africa), while many industrialized nations have provided huge subsidies to maintain farmers on agriculture which may cause overproduction. This obstacle has thus harmed agriculture, rural development, income distribution, government expenditure, competition, trade, environment, etc. It has become the most fundamental microeconomic root of the three persisting global macroeconomic problems: food under-self-sufficiency, overproduction and agricultural protectionism. It has turned to be the *most fundamental root* (though not the unique one) when the rural facilities are backward (such as in numerous developing countries currently), and the *unique root* when the rural facilities are advanced (such as in many developed countries presently). The global food shortage crises since 2005 have exposed and confirmed this obstacle.

Section 2 Evidences in Asia

I. The Japanese Model of Rural Development

Using a comparative approach, the author has in his 2001 book generated the *Japanese model of rural development* as a leading example which would be universally meaningful. This model began by (feature 1) a land reform for individual ownership in 1946-50 with protection of tenants from eviction, low land rent, and land-holding ceiling in order to prevent the revival of the feudal landlordism through land repurchasing. Although numerous fragmented small farms were maintained, it brought in huge incentives to peasants for production. Meanwhile national rural cooperatives were set up to provide overall services to family farms. Through (feature 2) government policies supporting rice production and rural development (chiefly rice self-sufficiency, rice price support, farm credit and subsidies, technological research and extension services); (feature 3) construction of rural infrastructure (mainly irrigation, land improvement, transportation, communication, electrification, and education); (feature 4) higher yielding and multiple cropping of rice and other cereals (which raised both land and labor productivity and released labor from cereal culture); (feature 5) diversified cropping and non-crop agriculture (which increased peasants' income, changed agricultural structures, and led to the establishment of rural enterprises for processing, transporting and marketing crop, livestock, fishery and forestry products); (feature 6) off-farm employment (which offered peasants jobs in both urban and rural enterprises, further raised peasants' income, altered rural structures, and promoted urbanization); and (feature 7) peasant migration to cities and work in town and village firms mainly by able-bodied males, full employment was realized and wages rose, which resulted in (feature 8) agricultural mechanization with small machinery. In 1960, rice self-sufficiency was attained, the first transition (agriculture to industry) completed, labor shortage appeared, and the second transition (industry to services) started. These positive features would be useful for other countries.

However, even though land consolidation [exchange of private ownership and location of spatially dispersed parcels of farms to form new holdings containing a single (or as few as possible) parcel(s), with the same (or similar) value as that of the original areas] has been progressing ever since 1949, the purchase of land by farmers was subsidized by the government from 1961 on, the land-holding ceiling relaxed in 1962, land rent control removed in 1970, and landlords allowed to retrieve land after long-term lease in 1970 and after short-term lease in 1980, (feature 9) *the irrational and polyopolistic land use by able-bodied part-time and absent small farmers* has remained as the last obstacle still unresolved to sustainable rural development. In order to be viable and gain higher incomes, farmers (mainly full-time ones) and cooperatives lobbied for government protectionism of rice production. The ruling party yielded, fearing the loss of votes. Rice import prohibition during 1961-93 caused international protests. The government subsidies to farmers through buying rice at higher, and selling it at lower, prices resulted in major budget deficits and also artificial overproduction. In order to reduce surplus the government again paid farmers to cut young crops or turn rice to forage. Under the pressure of the WTO and USA, since 1994, it has imported rice but also set up high tariff and non-tariff barriers to restrict import. Its % PSE (Producer Support Estimate) (around 55%) has been much higher than that of most other developed countries; its Producer NPC (Nominal Protection Coefficient) (beyond 2) reflects its high domestic market protection, as Table 1 shows. Rice costs and prices rose well above the prevailing international levels. Its self-sufficiency has been kept until 1996 and reduced to 99%, 95%, 95%, 95%, 95% and 96% during 1997-2002 artificially under the heavy state protectionism. Most of other agricultural products, with less or no government subsidies, have lost self-sufficiency since the 1960s, and all have fallen into this situation since 1994. The only exception is whale, whose self-sufficiency has been maintained at the expense of this scarce sea animal despite the continuous international protests. Of all farmers, those in full-time decreased from 33.7% in 1960 to 20.1% in 2003, and those in part-time 1 (mainly farming) reduced from 21.2% in 1980 to 13.1% in 2003, while those in part-time 2 (mainly other jobs) grew from 66.2% in 1980 to 66.9% in 2003. During 1965-2003, there has been a general trend of a decrease of the total agricultural labor force and those males and females aged between 15-64, and an increase of those aged 65 and over. The utilization rate of cultivated land has been dropping from 133.9% in 1960 to 100% in 1993, 99.3% in 1994, and 94.4% in 2002. (HSJ 1868-2003 Table 7-53. JSY 1977: 100; JSY 1986: 159; JSY 1992: 153; JSY 1993/94: 272; JSY 1997: 235, 276; JSY 1999: 231; JSY 2000: 268; JSY 2002: 230, 231, 237, 278; JSY 2003: 278; JSY 2005: 230, 231, 237, 274). The cultivated land abandonment ratio grew from 2% in 1975 to 3.8% in 1995 and 107% in 2005 (in so doing, the owners abandoned operation but not ownership, and consequently others still could not use their land). (For a detailed discussion, see Zhou, Jian-Ming 2001: 123-46).

In mid-April 2008, the prices of milk, soy sauce, bread, noodle, edible oil, wheat, soybean, etc., rose sharply, while the butter supply was stopped. This was the first food supply crisis in Japan since the petroleum crisis in the early 1970s. (China Daily 3 May 2008). In mid-April 2008, the government had exhausted its food budget of 230 billion yen (2.37 billion US dollars) two months in advance, and had to use the food reserve fund of 55 billion yen, a radical action it has never taken after World War II (Wang, Jian-Fen 23 April 2008).

Therefore, if the large amount of the insufficiently producing or idled land under the irrational and polyopolistic use by the able-bodied part-time and absent small farmers could be used by the full-time farmers for sufficient production, then the food supply shortage could be avoided, resolved or at least improved.

II. Other Asian Countries Following the Japanese Model

In *East Asia*, the Japanese model was just repeated by *Taiwan Province of China* in the 1970s and South Korea in the 1980s (for more information, see Zhou, Jian-Ming 2001: 7, 146, 184-5).

In *South Korea*, the government on one hand has been purchasing rice at a very high price level, which has led to overproduction by farmers (according to its Ministry of Agriculture and

Forestry, surplus rice was 150,000 tons per year and the inventory had reached 1,500,000 tons by December 2003); and on the other hand, exercising rice import prohibition, which has caused domestic rice price level five times that of China and Southeast Asia. As Table 1 presents, its % PSE (beyond 63%) and Producer NPC (beyond 2.5) are much higher than those of most other developed countries. This trade distorting behavior has violated the rules of the WTO and incurred the international pressure to reduce overproduction and open domestic market. Thus it agreed to

Table 1 Producer Support Estimate (PSE) (Percentage in Value of Production) and Producer Nominal Protection Coefficient (NPC) of 26 Countries, EU and OECD 1986-2007

Year	86-90	91	93	95	97	99	2000	01	02	03	04	05	06	07
Brazil														
% PSE				-5						5	4	6		
Producer NPC				0.92						1.01	1.01	1.04		
Bulgaria														
% PSE		-40	-4	-33		-2	1 ^p	3 ^e		9	11	6		
Producer NPC				0.74						1.07	1.12	0.97		
China														
% PSE				3			2			10	7	8		
Producer NPC				1.01						1.08	1.03	1.04		
Czech R. #														
% PSE	57	51	27	17	4	24	17	23	25	29	n.c.			
Estonia														
% PSE	75	59	-32	0	6	6	7 ^p	13 ^e						
Hungary #														
% PSE	32	13	22	14	5	23	22	19	33	28	n.c.			
Latria														
% PSE	80	70	-40	5	5	22	15 ^p	16 ^e						
Lithuania														
% PSE	77	-262	-37	0	4	16	6 ^p	11 ^e						
Poland #														
% PSE	-4	-1	12	11	14	19	15	15	19	8	n.c.			
Romania														
% PSE	45	15	16	5		20	19 ^p	24 ^e		24	28	29		
Producer NPC				1.00						1.55	1.55	1.43		
Russia														
% PSE	78	60	-24	20		4	8 ^p	10 ^e		16	19	15		
Producer NPC				1.11						1.10	1.18	1.11		
Slovakia #														
% PSE	50	39	30	12	8	25	25	16	21	25	n.c.			
Slovenia														
% PSE			28	37	37	48 ^p								
South Africa														
% PSE				12						7	8	9		
Producer NPC				1.15						1.06	1.07	1.08		
Ukraine														
% PSE				-10						-7	3	12		
Producer NPC				0.89						0.90	0.97	1.08		
Year	86-88	91	93	95	97	99	2000	01	02	03	04	05	06	07

% PSE	16					23	21	10	20	28	26	25	20	21 ^p
Producer NPC	1.17										1.30	1.32	1.20	1.17 ^p
USA #														
% PSE	22					25	22	23	18	15	16	15	11	10 ^p
Producer NPC	1.14										1.08	1.06	1.03	1.04 ^p

p - Provisional.

Member States of the OECD.

n.c. – Not calculated.

Sources: EIN 13 January 2001. OECD 2000: 25, 101-2. OECD 2001a: 71, 76-7. OECD 2001b: 181-2. OECD 2002a: 41-2. OECD 2002b: 129, 132, 135, 138, 141, 144, 147. OECD 2003: 213-4. OECD 2005: 16-7. OECD 2006: 19, 20, 45, 47, 49, 50, 53, 55, 57, 59, 61, 63, 65, 67, 69. OECD 2007a: 31, 34, 37, 41, 44, 47, 50. OECD 2007b: 38, 85, 94, 103, 104, 169, 175, 183, 191, 197, 205, 215, 224, 233. OECD 2008: 19, 20, 61, 63, 65-7, 69, 71, 73, 75, 77, 79, 81, 83, 85.

import rice up to 4% or 205,200 tons of the domestic consumption quantity during 1995-2004 while using high tariffs against further imports (Zhang, Jin-Fang 23 November 2005).

The South Korean state has realized that relying on part-time and absent farmers' free will to lease their under-utilized land to full-time farmers would not be effective. Therefore, it passed Farmland Act (on 22 December 1994, enacted on 1 January 1996). It correctly stipulated that 'The farmland shall not be owned by any person unless he uses or is going to use it for his own agricultural management' [(Article 6(1))], and otherwise it would be forced to be sold (Article 10 and 11).

However, there are two shortcomings. (1) It is not applied to the farmland bought before 1996 which accounts for the majority of the farmland. (2) Even for the farmland bought since 1996, in the version amended on 18 and 30 December 2002, Article 6(2) prescribed that 'In one of the following cases, even if farmland will or is not used for his own agricultural management, a person may own the farmland notwithstanding the provisions of paragraph (1)'. Such cases include '2-2. Where the farmland is owned in order to conduct the *weekend* or empirical farming (referring to cultivating crops or growing perennial plants as a *hobby* or *leisure* activities during the weekend, etc.)'. Therefore, any part-time and absent farmer could pretend to cultivate a bit on his land at the weekend so as to avoid punishment while full-time farmers could not use it.

On 4 December 2003 the government proclaimed a bill signed by President Moo-Hyun Roh to reduce the rice purchasing price per 40 kg by merely 2% to 59,200 won (about 50 US dollars) in order to decrease the overproduction. However, politically speaking, such measure would incur opposition by many members of the Parliament as they rely on farmers' votes, as evidenced by the fact that the rice purchasing price had never been reduced ever since 1948 when South Korea was founded. (TTNN 10 February 2003). Economically speaking, even if the rice purchasing price were reduced, and overproduction decreased or avoided, then full-time farmers' living standard would also be lowered, so that many of them would become part-time and absent farmers to earn higher off-farm income. If they could lease their insufficiently used or idled land (beyond family consumption need) to the fewer remaining full-time farmers, then the latter could achieve economies of scale, reduce costs and earn a living standard equivalent to that of the off-farm income gainers. But because there is no such measure to oblige the lease of the irrationally used land of the part-time and absent farmers to the full-time farmers, the latter would be forced to either abandon rice production (which is strategic to that country) or press the government to continue the protectionism including the high purchasing price so as to guarantee them a high living standard (which is the result and reality).

This is what has been indicated above - a coexistence of over-self-sufficiency, overproduction together with imports (revealing the uncompetitive or untrue self-sufficiency or over-self-sufficiency), as the domestically and externally unsalable surplus due to the higher costs

has been accumulated into excessive inventory, while low cost products have to be imported. This situation would be strengthened after South Korea has agreed in December 2005 to import rice up to 7.96% or 408,700 tons of the domestic consumption quantity during 2005-14 while using high tariffs against further imports (Zhang, Jin-Fang 23 November 2005).

Similarly, the price of the domestic beef has been much higher than the international one, and the ordinary consumers cannot afford and want to buy cheap but safe beef. In June 2007, South Korea and the USA established a free trade agreement, waiting for approvals by the Parliaments of both countries. Then the USA has pressed South Korea many times to open its domestic beef market unconditionally. South Korean government has initially insisted on importing the US beef with restrictions due to the US mad cow disease, but finally agreed on 18 April 2008 to open its overall market to import the US beef, which has drawn strong dissatisfaction of the domestic producers. On 8 May 2008, Prime Minister Seung-Soo Han of South Korea proclaimed that it will stop importing the US beef if the mad cow disease has happened again there; but there is no scientific proof that the US beef is unsafe; and the government will punish spreaders of rumors, and organizers of illegal gatherings which cause social disorder. Even so, some groups want to make large gatherings to protest importing the cheap US beef with the excuse that it is not safe. (Jin, Jin-Zhe 8 May 2008. ZGXWW 16 May 2008)

In fact, thousands of people demonstrated continuously against the agreement, which has led to the apology of the President Myung-Bak Lee and reshuffle of his cabinet. On 21 June 2008, South Korea announced to have just reached a supplementary agreement with the USA to import the beef of its cows under the age of 30 months only (which are less easy to get the mad cow disease), without the parts of spiral cord, brain, etc. (which are easy to contain the mad cow virus). But on that evening, about 6,000 people were still protesting. (XHW 23 June 2008)

According to Ke-Cheng Zhou (4 June 2008), the South Koreans, especially the beef farmers, know that once the cheap beef has entered, their expensive beef would lose market. This would be the fundamental reason of their seeking protectionism, even though the South Koreans in the USA consume the same beef.

However, if the under-producing land held irrationally and polyopolistically by the able-bodied part-time and absent small farmers could be used by the full-time beef farmers, then the latter could increase farm size, achieve economies of scale, reduce costs, and become viable and competitive, rather than relying on protectionism against imports.

Although *Malaysia, Thailand, Indonesia* and *the Philippines* in *Southeast Asia*; *Bangladesh, India, Pakistan*, and *Sri Lanka*; and *Bhutan* and *Nepal* in *South Asia* are generally at the earlier phases of the Japanese model under private land ownership, irrational and polyopolistic land use by part-time and absent landowners has already happened, although to different extent, as rural labor force has been induced to abandon agriculture (but not necessarily land ownership) to go to cities. In those rural areas where many peasants still rely on land for subsistence, there are also landowners who hold land without leasing it out. For example, India has made land reform so that large landowners no longer exist. The medium- and small-sized landowners are allowed to lease land out and withdraw it after the termination of the leasing contract in some states, but prohibited in the other states (Polman 13 December 2005). It has not yet eliminated mass poverty and hunger in the rural areas. In the late 1990s, the government has embarked upon an ambitious target of doubling food production and making India hunger-free in 10 years. But even so, large amount of land is idled by absent landowners who have no intention of renting it out. (Kanda 1998: 7). According to Chakrabarti (22-23 November 2001), the problem has been aggravated in many developing countries since the late 1990s as the WTO free agricultural trade agreement has made their agriculture more unprofitable and compelled more farmers to seek off-farm income while idling land (e.g., in India), in front of the heavily subsidized exports and high tariffs of the developed countries (thus India together with other developing countries have been pressing the developed nations to abolish agricultural protectionism). After many years of self-sufficiency, India imported over 3 million tons of wheat in 2006 (RMW 1 August 2006).

Cambodia, Laos and Vietnam in *Southeast Asia* have transformed the former public land ownership under the centrally planned economy into a nominal state - but *de facto* private - land ownership, i.e., the state-owned land has been possessed by households permanently and the possession could be sold, and in Cambodia the residential land became privately owned and salable. This has resulted in both newly landless and irrational and polyopolistic land use. (For more analyses, see Zhou, Jian-Ming 2001: Chapter 8). At the same time, full-time farmers who love farming, and still existent or appearing landless farmers who need land have had to cut trees and grasses to get land, hence damaging the environment.

The general situation in *Southeast Asia* is summarized in the 'Symposium Theme' of the International Symposium (8-11 January 2002) in Chiang Mai, Thailand: 'The dynamic economic and demographic development in many regions of Southeast Asia has brought about fundamental changes for rural areas and the agricultural sector. Rapid population growth, urbanization and increasing purchasing power of populations in more developed regions through industrialization induce changes in the quantity, quality and structure of food consumption. At the same time income disparities between urban centers and rural areas and among social/ethnic groups have risen. These developments tend to result in an overexploitation and degradation of natural resources, decreasing agricultural productivity and thus risks of rural livelihoods. *Migration into urban centers* and further *encroachment of agriculture into marginal areas* are on the rise creating a vicious circle of increasing poverty and destruction of natural resources.'

In *Lebanon* and *Yemen* of *West Asia*, according to Owaygen (8-11 April 2002) and Destremau (22-23 November 2001) respectively, land is privately owned, and many able-bodied male part-time and absent farmers went to earn higher income in cities or abroad, while leaving women in agriculture, hence insufficient land use. Land idling is also serious.

III. The Chinese Model of Rural Development

As a comparison, the author has in his 2001 book also generated 13 features of the *Chinese model of rural development*. During 1978-83, mainland China contracted village collectively owned land to households in fragmented small farms for individual operation, while villages provided services and general management (feature 1 institutional changes for a small-scale farming and collective-individual mixed economy) which aroused peasants' incentives for production and released surplus labor to off-farm activities, and carried out government policies supporting rice production and rural development (feature 2), construction of rural infrastructure (feature 3), higher yields and multiple cropping of rice and other grains (feature 4), diversified cropping and non-crop agriculture (feature 5), off-farm employment (feature 6), peasant migration to cities and work in town and village firms (feature 7) and agricultural mechanization with small machinery (feature 8), which were similar to features 1-8 of the Japanese model. At the beginning of the 1980s, the irrational and polyopolistic land use by part-time and absent small farmers had also appeared. But China has then implemented effective and appropriate solutions to this obstacle as institutional changes for a large-scale farming and collective-individual mixed economy (feature 9 starting around the mid-1980s), which made it possible to realize agricultural mechanization with large machinery (feature 10), earlier development in some (chiefly Eastern and coastal) rural areas, and its promotion in the other (mainly Central and Western) areas especially from the early 1990s on (feature 11), introduction of more advanced technology and management, greater investment, and domestic and international markets to agriculture by urban-rural joint enterprises, and external and foreign single and joint ventures (feature 12), and prevention of food overproduction, promotion in quality and perfectization in variety of agricultural products, and improvement of the environment, while strengthening development of the Central and especially the Western areas (feature 13 mainly from mid-1999). (For more information, see Zhou, Jian-Ming 2001: 7, 146, 184-5, Chapters 6-7). The Chinese model will be further dealt with below.

Consequently, in November 2001, the Association of Southeast Asian Nations and China have decided to form a free trade zone in 2010 (in which the tariff on rice will be reduced by 50% in 2015) (WXC 29 November 2004). But Japan and South Korea could not join mainly because if

they opened their agricultural markets, they would not stand the competition from the other countries with lower costs. Thus the irrational and polyopolistic land use by able-bodied part-time and absent small farmers has become the root of their agricultural protectionism.

Section 3 Evidences in Africa

I. The General Situation in Africa

In Sub-Sahara Africa, agriculture is still the main component of the national economy, as 17% of the GDP, 57% of the employment, and 11% of the export revenue are from agriculture. But its rural development has faced many restricting factors, as stressed by FAO Director-General Jacques Diouf on 19 June 2008 at the 25th FAO Regional Conference for Africa in Nairobi, Kenya. (ZGXWW 20 June 2008). Some of the problems in Africa are presented below.

Population explosion. In Africa, most countries do not exercise family planning (with a few exceptions such as Egypt), and population has been increasing sharply, with high birth rate and high percentage of children in the whole population. The population growth rate is 3%, much higher than the average world rate 1.2%. On average, each woman bears 6.9 children (in Kenya 8), the highest in the world. Children under 15 years old account for half of the total population, and even two thirds in some countries (in Egypt 32%). The illiterate people have been growing, occupying half or more of the people in some countries (in Egypt 29%). According to the UN, in most countries (except for a few, Botswana, Egypt, Seychelles, Tunisia, etc.), the population growth rate is higher than the economic growth rate, hence lowering the general living standard. (Huang, Pei-Zhao 7 April 2007)

More rural people swarm into urban slums. A report of the African Development Bank of 13 May 2008 indicated that at that time there are 250 million residents in the African cities. The living conditions of 60% or so of them are very unstable. It predicts that about 12–13 million farmers would leave rural areas for cities in 2008. According to this trend, by 2020, roughly 350 million people would live in the urban slums. The explosion of the urban population has given huge pressure on the backward infrastructure, health services, food supply, etc. (Liu, Ying 15 May 2008)

On 16 April 2007, Anna Tibaijuka, Under-Secretary-General of the UN and Executive Director of the UN Human Settlements Program, anticipated that during 2005-2030, the annual growth rate of the population in cities would be twice that of the population in the world, and stressed the problem of the expansion of urban slums in the world, which has been caused by the swarming into cities by farmers, the high unemployment rate, and insufficient investment in cheap housing by the governments and commercial constructors. The urbanization rate in Sub-Sahara Africa is the highest of the world, while the expansion rate of the urban slums there is also most striking. For example, in Kenya, about 60-80% of the urban residents live in the slums. (Zhao & Wang 16 April 2007)

Remaining farmers increasingly hunt animals and cut forests for logs and farmland, which have caused the reduction of forests and animals. For example, in Ethiopia, previously, lions' coming out of forests to eat people during daytime was very rare. But due to over hunting and cutting forests, lions have found much less smaller animals to eat and areas to live. As a result, in September 2005, in a state in the south, 450 kilometers from Addis Ababa, they came out of the forests and ate 20 human beings and 70 cows, injured over 10 persons, and caused more than 1,000 people to flee. (Zhang, Chun-Yan 22 September 2005)

Large amount of cultivable land is not used for production. In Sub-Sahara, there are about 130 million ha of cultivable land suitable for production, but only 3.9 million ha are currently used for this purpose, according to a recent report of the Africa Rice Center (WARDA) with headquarters in Cotonou, Benin (Liu, Ying 13 June 2008). In Africa, there are 184 million ha of cultivable land, but only 14% is used for production, and 21 million ha of them are in accelerated degradation, as informed by FAO Director-General Diouf on 19 June 2008 (ZGXWW 20 June 2008).

In *certain African countries*, the governments do not allow land leasing, in fear that if it were allowed then the private landowners could go to cities to earn higher off-farm income while

idling land (Mikos 24 September 2004). These governments have neglected that the prohibition of land leasing cannot prevent the private landowners from becoming part-time and absent to work in cities, while still insufficiently using or idling their land. Therefore the correct way shall be to permit land leasing and give full-time farmers the right to lease in the insufficiently producing land beyond the family consumption need of the landowners, so that those landowners who would like to earn high off-farm income could do so, while their land could be used in a rational and competitive way.

Africa has become a net importer of agricultural products. As Diouf pointed out on 19 June 2008, in Africa, in the past 20 years, on average annually, output of cereals increased by 2.6%, but import of cereals grew by 3.5%. Since 1996, on average annually, export of agricultural products enlarged by 2.3%, but its share in the global export of agricultural products dropped from 8% in the 1970s to 1.3% in 2005. In the recent 30 years, the growth of import has been higher than that of export in agricultural products. Food accounts for 87% of the agricultural import. (ZGXWW 20 June 2008)

Urgent food aid has been desperately wanted by over 30 million people in 24 countries [*Burkina Faso, Burundi, Central African Republic, Chad, Congo (Brazzaville), Democratic Republic of Congo (Kinshasa), Eritrea, Ethiopia, Guinea, Ivory Coast, Kenya, Lesotho, Liberia, Malawi, Mali, Mauritania, Niger, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Uganda, and Zimbabwe*] of *Sub-Sahara*, with Southern Africa as the most food-deficient area, where 12 million people were in such desperate situation, including 4.6 million (about 40% of the total population) in Malawi and 3 million in Zimbabwe, as reported by FAO of the UN on 28 September 2005. In *East Africa*, the food supply crisis was most serious in the Darfur region and south of *Sudan*. In the south of *Somalia*, 1 million people demanded food aid. (Chen, Cai-Lin 30 September 2005)

The agricultural output in Africa would be sharply reduced to half of the level of 2007 by 2020, according to the Intergovernmental Panel on Climate Change (IPCC) of the United Nations Environmental Program (UNEP). (Liu, Ying 26 September 2007)

John Holmes, Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator of the UN, pointed out on 10 April 2008 in Dubai of the United Arab Emirates, that since the summer of 2007, global food prices have risen by 40%, which has triggered, and may cause more, riots. The World Bank President: Robert B. Zoellick reported that the food prices may soar by 80% in three years, and riots had already happened in 33 countries since then including *Burkina Faso, Cameroon, Egypt, Ivory Coast, Mauritania, Mozambique, Senegal*, etc., in Africa. (ZGXWW 10 April 2008. Jing, Jing 9 April 2008)

How to solve these problems? On 14 June 2007, the Alliance for a Green Revolution in Africa (AGRA) was launched, with Kofi A. Annan, former Secretary-General of the UN, as the Chairman (Annan 14 June 2007). It intends to handle problems in seeds, soils, water, markets, agricultural education, African farmer knowledge and participation (from the farming tools used to the ability to buy seeds, *own land*, and access credit), coordinate national, regional, and global policies (to address high taxes and tariffs that raise the prices of agricultural inputs; smart subsidies to enable poor farmers to make use of new technologies; promotion of the safe use of agricultural inputs; environmental monitoring and sustainability; and the development of rural infrastructure), and carry out monitoring and evaluation. It plans to especially help the small-scale farmers. (AGRA 4 July 2008). Many economists have suggested that from the long-term point of view, Africa should achieve economies of scale, so as to raise agricultural output and get rid of the situation of seriously relying on food imports. (Jing, Jing 9 April 2008)

But the officials of FAO, other UN agencies, and AGRA, and the many economists have not mentioned the problem of the irrational and polyopolestic land use, and how to solve it by facilitating farmers to use the idled land for production, especially by promoting leasing of the under-producing land beyond the family consumption need of the part-time and absent farmers to the full-time farmers.

II. The Situation in Some Individual African Countries

Regarding *Egypt* of *North Africa*, the rural areas are still less developed as 'the poor are absolutely dependent on public services', 'simply because they do not have the means to acquire literacy, good health, adequate nutritional standards or irrigation facilities through the private sector'. However, there has been a shift from anti-poverty and equalitarian strategies towards economic growth and trade liberalization since 1985 as prompted by the World Bank and IMF. The 1952 land reform law of protecting tenants from eviction and guaranteeing a low level of land rent was repealed by the 1993 law which permitted the land rent to be determined by the market forces from 1996-97 on. As a result, the production costs of small farmers increased, many landowners recovered land from numerous tenants who in turn became dependent on being hired as farm workers, their real wages declined, and land rent rose sharply. The share of small landowners of less than 2 ha decreased, while that of medium landowners of 10-20 ha increased. (El-Ghonemy [1996] 1997: 183-6). But the free market mechanism has not necessarily led to efficient land use: waste of cultivated land has already happened at such a low income stage, and become so serious that Vice Prime Minister and Minister of Agriculture Yousuf Amin Wali had to declare on 6 April 1998 that idling and wasting cultivated land was illegal, and each province had the power to stop such behavior by administrative means (XHNA 6 April 1998). But no effective measures have been taken since, so that land idling has become more serious (Mansouri 2005), while the country has to import 70% of food to feed its 70 million people (Yang, Jun 7 September 2005).

In *Morocco*, according to Mtilk (18-19 January 2005) and El Mouaatamid (12 June 2005), agricultural land is privately owned. An average family has three (rural areas maybe five) children. Equitable land inheritance among children (one share to sons and half a share to daughters so that after marriage a husband and wife would equally have 1.5 shares) has led to fragmentation. Rain plays an important role in agriculture. Due to no rain for years and poverty, many farmers left for towns or Europe. Then they got jobs there, and forgot farming skills, have no interest in, and could not easily return to, farming at home. Many of them have just idled land as absent farmers. Since the 1960s, the government has built many reservoirs, artificial lakes, and canals. However, even in the regions with enough water, there are part-time and absent private landowners who inefficiently use land. For example, a geographer who has received higher education and was working in the capital of Rabat, has had a privately owned land in the Eljadida City of the Doukkala Region (about 200 km from Rabat) which has had enough water supply and good soil. His parents did not work. But he neither used nor leased out the land, a typical absent farmer. On the other hand, there exist many landless people who migrate to work in different farms and would like to lease in land. But under the belief that the use of privately owned land cannot be obliged, there is no measure by the government to oblige the idled land to be used rationally and competitively.

Tunisia, according to Ahmed, Boufaroua, Kherreddine and Mansouri (2005), remains an agrarian country dominated by traditional agriculture. Following the independence from France in 1964, the government turned the French-occupied land into state ownership and distributed it to farmers with no or little land for individual ownership. Now most land is privately owned, and the rest is owned by the state. The state leases the state owned land to able-bodied farmers for up to 15 years with conditions for good cultivation and production. If they were not matched, the land would be taken back. But there is no punishment on the waste or under-utilization of the privately owned land. In fact, many able-bodied farmers have left for cities (e.g., living in Siliana city which is in the center of the country) or Europe, their old parents, wives and children use land inefficiently. Land idling has also happened. Although there is land leasing (hamous) by able-bodied part-time and absent farmers, the rent being 20% of the revenue of the tenants, it is not often, because the part-time and absent landowners have strong linkage to their land even if they do not use it sufficiently. There are able-bodied full-time farmers who want to use more land and landless farmers who wish to get land, but have no access to the idled or under-utilized private land.

In fact, in the southern bank of the Mediterranean Sea, or North Africa, population grew quickly. For example, in Egypt, population increased from 42 million in 1981 to over 76 million in

April 2007, almost doubled (Xin, Jian-Qiang 30 August 2005. Huang, Pei-Zhao 7 April 2007). Large amount of labor force has emigrated to the northern bank, or the southern EU Member States, for higher salaries and living standard. But their land is not necessarily leased to the remaining farmers. The remaining farmers have slashed large areas of forests into farmland, so that the forests accounted for only 4% of the territory in the southern bank, while it took 42% in the northern bank in 2007. (Feng, Tao 23 August 2007)

According to Yemen 'Political Journal' of 26 August 2007, in the Arabic countries (which are situate in West Asia and North Africa), in 2007, only 20% of food demanded by market are self-produced, the rest being imported. In the recent five years up to 2007, the value of food imported grew sharply to 20 billion US dollars, while that of food exported only about 5 billion US dollars annually on average. (Li, Teng 27 August 2007)

In *Madagascar*, *Malawi*, and *Mauritius* of *Southeast Africa*, according to Razafindravonona (22-23 November 2001), Thangata (8-11 April 2002) and Bhukuth (22-23 November 2001) respectively, land insufficient production and idling by part-time and absent private landowners are serious.

In the 11 countries of *Benin*, *Burkina Faso*, *Ghana*, *Guinea*, *Guinea Bissau*, *Ivory Cost*, *Mali*, *Niger*, *Senegal*, *Sierra Leone* and *Togo* of *West Africa*, onchocerciasis (river blindness) has been one of the causes for depopulation and emigration from the ORZs (Onchocerciasis Reference Zones) during the 1960s-70s, which led the valleys to be abandoned. The OCP (Onchocerciasis Control Program) launched in 1974 by the World Bank, WHO, UNDP, FAO, etc., finally turned the ORZs into OFZs (Onchocerciasis-Freed Zones) in 1991. The OFZs and notably the valleys have been repopulated increasingly from the mid-1980s on. (CICRED 1999: 3, 29, 46, 111-5)

In the latter half of the 1990s, FAO's research in nine of these countries (without Guinea Bissau and Sierra Leone) (CICRED 1999: VIII, 3) finds that the land tenure system before the abandonment and after the recovery has always been in the communal ownership, under the control of the elders of tribes/lineages. The new settlers are their tenants. (Ciparisse 25 February 2002). However, 'in some cases, elders have sold pieces of land with or without the agreement of their lineage to settlers, mainly due to the necessity/possibility of easy money gain for the elder owners; increased feeling that who directly farms could progressively acquire some *de facto* permanent rights on the piece of land where he/she settled; and local marriages' (Ciparisse 13 March 2002).

'The unit engaged in agricultural production and commercialization is the household', as 'small holders'. The new settlers have been carrying out *traditional* agriculture, as 'agriculture is not mechanized', and 'the prevailing production system is based on the principle of the extensive land occupation. The system, of course, is highly dependent on labor and incorporates few commercial inputs. Moreover, it presents the disadvantage of low yields per unit of cultivated areas since an increase in production depends more on extending the cultivated areas than on any real transition towards intensive production. This is especially the case in food producing areas.' (CICRED 1999: IX, 86, 92, 104)

'Most of the rural areas of Sub-Saharan Africa are currently undergoing the highest population growth in the history. At the same time, migrations have increased and diversified.' 'The OFZs in West Africa are a good example of this type since they are not yet densely populated. They are experiencing high immigration flows'. 'The most innovative information emerging from this research turned out to be the high degree of mobility of the young adults whose families had settled in the OCP valleys'. 'Their young populations continue to emigrate to the capitals, towns or rural areas of neighboring countries or to Europe.' 'If the ways in which the valleys are being repopulated were to continue as they are today, this would lead to an increase in the proportion of women and children in the agricultural work force with consequent decline in production capacities.' (CICRED 1999: VIII-IX, 11). The migration by male adults to other rural areas is usually for producing cash crops which are more profitable than cereals (Ciparisse 13 May 2002),

while that to cities is for off-farm activities, which are even more lucrative than cash crop production. Hence the appearance of the irrational and poliopolistic land use by able-bodied part-time and absent small farmers in low income countries still saddled with traditional agriculture and developing towards the high income economy under both public and private land ownership.

In *Mauritania* of *West Africa*, according to Mbodj (20 May 2005), rice, wheat, sorghum and millet are the main foods. Most land is owned publicly, by the state, tribes (mainly in the north), or local communities (governed by big families, chiefly in the south). The rest of the land is owned individually. Individuals may buy land from the state, tribes and local communities. Some individuals have owned large areas of land and employed farm workers. Much land in the north is deserted, equal to about two thirds of the country's territory. In the south, there is enough water and good soil, but inefficiently used. There are part-time and absent farmers and also full-time farmers. According to the regulations, land unused for five-10 years may lead to its taking over by the state. But in practice, such punishment has not been implemented. Leasing is allowed, but has not been carried out often. Thus land under-utilization is very serious. The other main problems in agriculture are the lack of financing, machinery, and help for sale in the market. As a result, none of the main foods is self-sufficient. The imported foods are twice more than the domestically produced. Sorghum and millet are mainly imported from the neighboring countries. Foreign aid has not included any measure on the efficient land use. There is no civil war. The government does not have much power over the tribes and local communities, which are powerful. Thus the tribes and local communities may oblige the efficient land use if they realized its importance.

In *Angola* of *West Africa*, the land is under the state public ownership. Local communities may apply to the state (Ministry of Agriculture) for use of a land. The state may give the land for use for initially five years, and then inspect the land use situation. If acceptable, then a use permission of 55 years would be given. The local community heads allocate land to families and arbitrate disputes. If a land is not used properly, it would be allocated to others. (Observer 12 May and 30 June 2006)

But no clear documents of land demarcation and rights have been given. There is no security in land use. Corruption could happen. For example, some years ago, a general came to enclose land and forced farmers out. Even by 2006, many politicians and powerful people held land without use, waiting for foreigners to come to invest and pay them more money (although foreign investment was rather restricted). The state has had no measure to control the idling of land. (Observer 12 May and 30 June 2006)

The civil war was stopped in 2002. Numerous persons have died in the war. More than 100,000 people became refugees in the Democratic Republic of Congo (Kinshasa), Namibia and Zambia. They gradually returned to Angola. Many of them were internally displaced people. During the civil war they escaped from rural areas and stayed in the urban and peri-urban areas. They could not go back to their original rural areas because of mines, lack of social services and rural infrastructure (water, school, health, roads, etc.) and because they did not have clear rights on their previously used land. (Observer 12 May and 30 June 2006)

Lots of able-bodied male farmers also go to work in the post-war construction sites in cities. They have left their wives, old parents and children to work on agriculture. (Observer 12 May and 30 June 2006)

The country is still in food under-self-sufficiency, and has been receiving international donations. (Observer 12 May and 30 June 2006)

In *Zimbabwe* of *Southern Africa*, the white farmer population first came to Southern Rhodesia in the 1890s. In 1918, the Judicial Committee of the Privy Council in London ruled that the land of Southern Rhodesia was owned by the Crown. After self-government was granted in 1923, the Southern Rhodesia House of Assembly created a legal framework for the allocation of land. The Land Apportionment Act of 1930 was the basis for subsequent laws and continued in effect until independence. It divided the land of the colony into three areas: (1) areas where only whites could own property; (2) areas which were held in trust for indigenous tribes on a collective basis (communal

areas), and (3) areas where only blacks could own property. One practical effect of the apportionment was that some black families were ejected from land they had held for generations. (Wikipedia 2 July 2008)

There was a marked racial imbalance in the ownership and distribution of land. Zimbabwean whites, although making up less than 1% of the population, owned more than 70% of the arable land, including most of the best land. However, in many cases this land was more fertile because it was titled, resulting in incentives for commercial farmers to create reservoirs, irrigate, and otherwise tend the soil. Communal lands, with no property rights, were characterised by slash and burn agriculture, resulting in a tragedy of the commons. (Wikipedia 2 July 2008)

The Lancaster House Agreement of 21 December 1979 set up 'willing seller, willing buyer' clause (which could not be changed for ten years). The 1985 Land Acquisition Act gave the government the first right to purchase excess land for redistribution to the landless. However, the Act had a limited impact, largely because the government did not have the money to compensate landowners. In addition, white farmers mounted a vigorous opposition to the Act. Because of the 'willing seller, willing buyer' clause, the government was powerless in the face of the farmers' resistance. As a result, between 1980 and 1990, only 71,000 families out of a target of 162,000 were resettled. (Wikipedia 2 July 2008)

The 1992 Land Acquisition Act was enacted to speed up the land reform process by removing the 'willing seller, willing buyer' clause. The Act empowered the government to buy land compulsorily for redistribution, and a fair compensation was to be paid for land acquired. Landowners could challenge in court the price set by the acquiring authority. Opposition by landowners increased throughout the period from 1992 to 1997. While some land was purchased by the fund, few families were resettled. Instead, it was reported that hundreds of abandoned and expropriated white farms ended up in the hands of cabinet ministers, senior government officials and wealthy indigenous businessmen. Most British and Americans cut their losses and money, alleging widespread corruption. To date, fewer than 70,000 of the people of Zimbabwe have been resettled, most without the necessary infrastructure to work the huge commercial farms on the 12 ha plots they have been allocated. (Wikipedia 2 July 2008)

In 1997, as part of the implementation of the 1992 Land Acquisition Act, the government published a list of 1,471 farmlands it intended to buy compulsorily for redistribution. The list came out of a nationwide land identification exercise undertaken throughout the year. Landowners were given thirty days to submit written objections. In June 1998, the government published its 'policy framework' on the Land Reform and Resettlement Program Phase II (LRRP II), which envisaged the compulsory purchase over five years of 50,000 square km from the 112,000 square km owned by commercial farmers (both black and white), public corporations, churches, non-governmental organizations and multi-national companies. Broken down, the 50,000 square km meant that every year between 1998 and 2003, the government intended to purchase 10,000 square km for redistribution. (Wikipedia 2 July 2008)

In September 1998, the government called a donors conference in Harare on the land reform of LRRP II. 48 countries and international organizations attended. The objective was to inform the donor community and involve them in the program. The donors unanimously endorsed the land program, saying it was essential for poverty reduction, political stability and economic growth. They particularly appreciated the political imperative and urgency of the land reform, and agreed that the 'inception phase' (covering the first 24 months) should start immediately. (Wikipedia 2 July 2008)

In 2000, the government organised a referendum on the new constitution, to empower the government to acquire land compulsorily without compensation. It was defeated, 55% to 45%. A few days later, the War Veterans Association organised to march on white-owned farmlands, initially with drums, song and dance. As the 'liberation' continued, the seizing began to take on a more aggressive aspect. They claimed to have 'seized' the farmlands. A total of 110,000 square km of land was seized. (Wikipedia 2 July 2008)

In 2005, the Parliament passed a constitutional amendment, signed into law on 12 September 2005, that nationalised Zimbabwe's farmland, and deprived landowners of the right to challenge in court the government's decision to expropriate their land. (Wikipedia 2 July 2008)

In 2006, the newly resettled peasants had largely failed to secure loans from commercial banks because they did not have title over the land on which they were resettled, and thus could not use it as collateral. With no security of tenure on the farms, banks have been reluctant to extend loans to the new farmers, many of whom do not have much experience in commercial farming, nor assets to provide alternative collateral for any borrowed money. (Wikipedia 2 July 2008)

In 2000, there were about 4,000 white farmers. Following the land reform, by 2003, that total had fallen to its present level of about 200, almost all of whom own only portions of their previous land. Now the last handful of 60 farms is currently being singled out. It is reported that white commercial farmers have been under huge pressure and some have had their homes, crops and equipment destroyed or taken. Several farmers are currently fighting court actions against eviction orders from the properties they have cultivated for years. (Wikipedia 2 July 2008)

Previously, land-owning farmers, mostly white, had large tracts of land and utilized economies of scale to raise capital, borrowed money when necessary, and purchased modern mechanised farm equipment to increase productivity on their land. The post-2000 land reform broke this land into smaller tracts and gave it to former black farm workers and peasants, who had little knowledge of how to run the farms efficiently or raise productivity. Further, the refusal of banks to lend them money has limited their ability to purchase equipment or otherwise raise capital. As a result, the drop in total farm output has been tremendous and produced widespread claims by aid agencies of starvation and famine. A country once so rich in agricultural produce that it was dubbed the 'bread basket' of Southern Africa, is now struggling to feed its own population. A staggering 45% of the population is considered malnourished. (Wikipedia 2 July 2008)

According to Mhashu and Mumanyi (28 June 2008), after the land reform, some landholders have produced on their small land on a full-time basis, but others (especially many city dwellers) have under-utilized or just idled their farmland.

To the lack of rural facilities (irrigation, roads, credits, fine seeds, small machinery, fertilizers, etc.), construction should be made (such as investment in material capital). To the shortage of farming knowledge, training should be provided to the farmers, especially the new ones (such as investment in human capital). As a result, the problem of land under-utilization or idling would be relieved.

However, either under the present poor rural facilities and farming knowledge, or after they have been improved, if some full-time farmers would like, and be able, to use more land for sufficient production, while the part-time and absent small farmers are unwilling to lease their under-producing land beyond family consumption need to them, then the latter's behavior would constitute irrational land abandonment. The state should take measures to make such land leased to the full-time farmers (such as institutional change for a second land reform – land use reform, following the first one – land ownership reform). Otherwise, the first land reform would not lead to the expected positive results, and the investment in material and human capital would not function well, if at all.

Section 4 Evidences in Latin America

I. The General Situation in Latin America

In Latin America, population living in the countryside dropped from 58% in 1950 to 25% in 1995 (Abramovay [1996] 1997: 56). However, 'Beyond the City: the Rural Contribution to Development', prepared by a team of researchers led by Guillermo Perry as the World Bank's major annual research study on Latin America and the Caribbean found 'that the rural population in the region is actually 42% of the total, almost double the official figure of 24%, when measured according to the OECD criteria for defining rurality which include both population density and distance to major cities' (Viveros & Morrison 14 February 2005). 'Almost 64% of the rural population in Latin America and the Caribbean live below the poverty line and, over the last two

decades, the number of poor people in rural areas has increased in both absolute and relative terms.' 'Agriculture and rural economic activities are major sources of employment in Latin America and the Caribbean - more than 30% of the labor force working in agriculture - and are of critical importance in terms of eradicating poverty.' (IFAD 19 January 2007)

In general, land reform has been made only to a low extent, large landowners still dominate while most peasants have no or little land (Liu & Su 1 April 2002). There are even large landowners who idle land without leasing it to small or landless farmers for survival (Hunt 26 September 2003) because they are too rich and do not care about the low rent the poor tenants could afford to pay. Numerous small and landless peasants have thus been forced to migrate to cities, where many of them could find no regular jobs or no jobs at all, but just live in slums, with rising crimes (Liu & Su 1 April 2002). But even in places where the land reform has been made, of the new small landowners, while some have survived on the land, others sold land ownership or use rights and re-became landless, and further others just idled land and migrated to cities (Carisio & Helmold Macieira 27 October 2004). Hence the irrational and polyopolistic land use has become a fundamental microeconomic root of the persisting poverty, inequality and injustice.

II. The Situation in Some Individual Latin American Countries

In *Brazil of Southern Latin America*, there has been a bimodal of large land estates and small farms. According to OECD (28-30 April 1999-7: 21), during 1972-96, those larger than 1,000 ha had reduced from 48.3% to 45.1%, while those smaller than 100 ha increased from 16.4% to 20.4%, owing to the ongoing land reform. But the Pastoral Land Commission indicated that in 2007, 3.5% of Brazil's landholders still owned nearly 60% of the best farmland, while the poorest 40% of farmers had a mere 1%. Although Minister of Agrarian Development Guilherme Cassel claimed 'that never before have so many people been settled on land of their own in such a short time in Brazil', as 371,000 rural families have received a total of 32 million ha of land in the last four years, he did not deny that many of the families were settled in the Amazon jungle region, and said that policy should be included in the aims of social movements when they 'discuss a rational and environmentally sustainable occupation of land.' (Frayssinet 13 June 2007)

But Abramovay [1996] (1997: 62-3) reports that 'An FAO team noted that the most recent rural exodus, at least in the regions where family farming has a significant weight, mainly affects young people. This poses very serious succession problems although I have found *no university research on this problem in Brazil*. However, this is a subject which provokes increasing concern in the social movement, as it questions the ability of family farming to reproduce itself. This theme deserves much more attention from the researchers and international organizations dealing with rural development.' Moreover, in the regions where family farming dominates, 'self-employed professionals who live in towns often buy land from farmers in difficulty or from aged farmers.' The State authorities of Santa Catarina were thus worried by not only 'the prospect of a rural exodus involving young people' but also 'the destructive effect on rural communities of the systematic buying of lands by people who were not going to live on them (doctors, lawyers, etc.)' (more appropriately, not going to carry out agricultural production on them). According to Ricardo Dornelles, officer in charge of the reproducible fuels of the Brazilian Ministry of Mines and Energy, there are 224,900,000,000 acres¹ (91,013,800,940 ha) of idled farmland (Xue, Liang 7 April 2008).

Although Brazil has been a net food exporter with over-self-sufficiency in absolute terms, hunger persists so that it has under-self-sufficiency in relative terms. The large landowners prefer to produce more for export when the external prices are high. When the external prices are lowed, they prefer not to produce more and let the domestic poor afford. In so doing, they could earn polyopolistic profits, without caring about the internal poor. (Carisio & Helmold Macieira 27 October 2004). But why do not they lease the idled land to the poor? The main reason is that people in starvation are just too poor to pay high rents.

Without the right to use the idled land, numerous farmers (including small and landless ones) have to occupy forests into farmland. Minister for the Environment Silva admitted on 24 January

¹ 1 acre = 0.40468564224 ha, 1 ha = 2.4710538 acre.

2008 that more and more farmers have illegally slashed large areas of Amazon rain forests into farmland for soybean and other foods. Just during August-December 2007, 3,000 square kilometers of the Amazon rain forests were cut, including 1,800 square kilometers in Mato Grosso, the third largest state of the country, located in the western part. (ZGXWW 25 January 2008)

In 2004, the biofuels program was started. Brazil is the second largest biofuel producing country (after the USA). It mainly uses sugarcane as material (Shiwang 25 May 2008). But rather than utilizes the idled farmland, more Amazon forests have been hacked! (Xue, Liang 7 April 2008)

Therefore, the irrational and polyopolistic land use by the part-time and absent large and small farmers, without willingness to lease their under-producing or idled land to the full-time farmers at low rents, has also led to the destruction of the environment.

Although President Luiz Inacio Lula da Silva since 1 January 2003 has launched a Hunger Zero Campaign, as long as there are large and small landowners who neither produce sufficiently on their land nor lease it out, while full-time, small or landless peasants who need land for survival and competitiveness could not get it, hunger would not be easily wiped out, nor poverty, inequality and injustice.

In *Argentina*, farmers (large, medium and small) desire to produce more for export when the external prices increased. When the external prices decreased, they tend to supply less so as to keep domestic prices high (in order to earn polyopolistic profits) even though the internal poor cannot afford. Thus on 11 March 2008, the government raised export tax rate for soybean from 35% to 44.1%; and made it floating – higher (lower) when the international prices are higher (lower), in order to orient the farmers to supply more and reduce prices internally when the external prices are higher. But the farmers had responded by a national strike during 13-28 March 2008, which was restarted the same day after failing to reach agreement with the government. As a result, both the external and internal prices have been raised, and food shortage strengthened! By 25 March 2008, 40% of the butchery shops stopped business, and 90% of the supermarkets discontinued supply of meat, milk, etc. (Wang, Jian-Fen 27 March 2008. Secret China 27 March 2008. LHZB 31 March 2008. Song & Feng 18 June 2008)

Therefore, it would be naïve to imagine that the numerous farmers would supply more, reduce prices for the poor internally, and abandon their polyopolistic profits! They would rather idle a part of their land while enjoying high domestic prices, without leasing it at low rents to the full-time farmers who want to produce sufficiently for their own survival and for the other poor consumers.

In *Mexico of Northern Latin America*, in the 20th century, ‘rural areas across the heartland have been sustained by’, ‘or thrived on, the earnings of men and women who *temporarily* migrated to the USA for work. Farmers in many parts of Central Mexico made temporary forays up north and used the money they earned to maintain their families back home.’ ‘Migrants also pooled their money and filled in for strapped or corrupt local governments by supporting public works projects that ranged from paving streets and installing portable water systems to refurbishing churches and furnishing classrooms with computers.’ ‘The abandonment of villages . . . would seem little more than an inevitable progression because declining federal agricultural subsidies have made it hard for the farming industry to support large numbers of small growers.’ (Thompson, Ginger 18 June 2001: 2)

‘At the turn of a new century, however’, as the USA increased border control, ‘*permanent* emigration has squeezed parts of Mexico’s rural core to the verge of extinction. Officials in Michoacan State reported that the number of migrants leaving for the USA had increased to some 50,000 people each year. About half of them move permanently to the USA’. ‘In village Casa Blanca, the families – usually fathers first, followed years later by their wives and children – have been swept north by the desperate torrent that carries floods of immigrants to the USA, leaving widening swaths of Central Mexico *abandoned*. In the 1990s, most of the 5,800 people once living in Casa Blanca have moved to Tulsa, Oklahoma. Fewer than 2,500 remain, and many of them have begun referring to this desert village as a ghost town.’ ‘Migration experts worry that having entire

families and villages transplanted north of the border could pose serious economic consequences because incentives to send money home could wane.' Thus, while President Vicente Fox 'has been a vocal advocate for making the US-Mexican border more open to the free flow of Mexican workers, he has also said that he aims to carry out projects that would help lift rural areas out of poverty to encourage more Mexicans to stay home.' In the week of 11-15 June 2001, 'he inaugurated a micro-lending program aimed at supporting homespun businesses in the poorest regions of the country. But of the 2,000 people who lived in the Michoacan village of Huacao 10 years ago, only 400 remain – nearly all of them are women, children too young to trek across the border or elderly people who feel too weary.' (Thompson, Ginger 18 June 2001: 2)

According to NAFTA (North American Free Trade Agreement), from 1 January 2003 on, Mexico should open the agricultural markets to the USA. During the week of 16-22 December 2002, the Lower House of the Mexican Parliament passed a resolution to ask the Upper House to abolish the NAFTA articles for such opening. In the afternoon of 26 December, the national 'Permanent Agricultural Delegates Congress' issued an ultimatum to President Fox, demanding him to sign the 'National Rural Agreement' by 30 December, otherwise they would launch a campaign on 31 December to block the roads and harbors of the whole country to hamper the imports of the cheaper US agricultural goods. In the evening of the same day, he had to yield to them by agreeing to establish a dialogue mechanism with farmers' organizations, assist farmers who suffer from the shocks of the cheaper imports to raise competitiveness and open markets, and sign the 'National Rural Agreement' which imitated the EU approach of providing *subsidies*, sanitary assistance, vocational training, legal consultation to farmers, thus temporarily resolving the crisis of resisting NAFTA. (TTNN 28 December 2002)

Therefore, in Mexico, on one side, so much land is idled by the part-time and absent small farmers; while on the other, many farmers could not get land or increase farm size, achieve economies of scale, reduce costs and become viable or more competitive in front of the cheaper US imports, and have had to press the government to provide more subsidies. As a result, Mexico has been increasing its protectionism, as during 2004-06, its % Produce Support Estimate (PSE) has grown from 11% to 17%, while its Producer NPC (Nominal Protection Coefficient) from 1.04 to 1.17 (see Table 1).

In mid-2003, the Mexican Ministry of the Environment and Natural Recourses released a report that the ecological environment in 70% of the country's land and sea territory has been being destroyed, including 32 states and federal districts as the 'highest dangerous zones', and the economic losses of the country due to the deterioration of the ecological situation has amounted to 67 billion US dollars each year. (Song, Xin-De 17 June 2003)

The most prominent problem is forest devastation. According to official data, one century ago, the primeval and afforested forests covered 99% of the land territory, and forests even existed in some dry areas of the country. But during 1993-2000, over 7,890,000 ha of forests have sorrowfully disappeared. The forest area of the whole country in 2003 was about 142,000,000 ha, while the largest area of the destroyed forests annually reached 1,500,000 ha. By this speed, according to the Ministry of the Environment and Natural Recourses and other relevant agencies, in maximally 60 years, the entire primeval forests would vanish, and in 127 years, all the forests and biological diversities would be gone. (Song, Xin-De 17 June 2003)

The main causes of the forest destruction include (1) frequent forest fires due to lasting high temperatures; (2) rampant narcotic drug production (marijuana, opium poppy, etc.) which demanded for cutting trees for land; and (3) serious *inefficient land use* which forced those farmers who needed more land but could not get it from those who held it irrationally and polyopolistically, to slash forests to increase farm size, or create grazing land (Song, Xin-De 17 June 2003). Thus, the irrational and polyopolistic land use by able-bodied part-time and absent small farmers has also led to the environmental deterioration.

In order to prevent the ecological environment from further worsening, the Mexican Parliament has promulgated a law on sustainable forest development and other pertinent laws, so as

to control the land reclamation through destroying forests. The government has set up the National Forest Commission to implement the relevant laws and strengthen the consciousness of the public on the forest and environmental protection. (Song, Xin-De 17 June 2003)

However, no measure has been taken to overcome the irrational and polyopolistic land use by able-bodied part-time and absent small farmers. On one hand, as long as the full-time farmers need more land so as to become competitive or merely viable but could not get it from those who hold it in irrational and polyopolistic use, the danger that they might be forced to slash forests to increase farm size or create grazing land would exist. On the other hand, even if full-time farmers could be effectively prevented from cutting forests, how they could become competitive or merely viable now that they could not get land from those who hold it in irrational and polyopolistic use, remains an unresolved problem.

Lipton (27 September 2003), 'lead scholar' for 'Rural Poverty Report 2001' of the International Fund for Agricultural Development (as he informs the author), asks 'Why does the voluntary choice of Mexicans to better their chances by emigrating give cause for concern?' Hopefully the above explanations have answered this question. He also argues that 'Perhaps the land they are abandoning is bad or exhausted. Anyway, in a large-farm system its yield would be even less'. To this argument, the author would like to point out that the Mexican farmers have produced on such land for hundreds of year, how could it become 'bad or exhausted' suddenly around 2000? Moreover, even though such land became 'bad or exhausted', it does not mean that it is useless, and there could be farmers who are willing to use and improve it. The author's 2001 book has cited two examples in China: 'Bai Village of Baicun Township of Dingxiang County of Shanxi Province had 3,073 mu² (204.87 ha) of farmland. It reserved 112 mu (7.47 ha) of *saline-alkali* land for leasing to produce sorghum in the mid-1980s. The contract was for one year and renewable. The rent was 8,000 yuan in total, 71.43 yuan per mu (0.067 ha) in 1987, but raised in 1988 to 11,000 yuan, 98.21 yuan per mu, by tendering among six farmers representing 20 households' (Zhou, Jian-Ming 2001: 230). 'In the mid-1980s, in the areas formerly *flooded* by the Yongding River and areas with more *sandy soil* and fruit trees of Langfang Prefecture of Hebei Province, the village collectives could not provide effective services while single household operation was too weak, 1,135 joint households farms emerged, on average contracting 55 mu (3.67 ha) per farm. In 1986, nine households of Si-De Ren et al. contracted 160 mu (10.67 ha) of land. All the nine principal laborers were experts, three for fruit trees, two for melons and vegetables, and four for grain. They gathered funds of 11,000 yuan, dug a motor-pumped well, built six farm houses, planted 4,000 fruit trees, produced grain and oil crops on 100 mu (6.67 ha), melons and vegetables on 60 mu (4 ha), and could earn 18,000 yuan, 2,000 yuan per laborer' (Zhou, Jian-Ming 2001: 250). Therefore, as long as other farmers wish to lease in the abandoned 'bad or exhausted land', they should be given access. If 'its yield would be even less' and the tenants could not survive or get profits on it, they would naturally quit. Now that 'small farmers are rational', they should be allowed to learn from their own experiences through 'try and error' to find their optimal farm size. It would be unnecessary and irrational to prohibit them from doing so.

Of course, Mexico was once a net exporter of agricultural goods and there are large and profitable farmers. But this could not automatically get rid of poverty from the many full-time small farmers and landless farmers who needed land for becoming viable or more competitive. Moreover, by 2006 Mexico had become a net importer of food facing the heavily subsidized US and Canadian exports (Lin & Leng 21 August 2006). Therefore it would be necessary to give full-time farmers (both large and small) access to the land irrationally and polyopolistically held by the part-time and absent farmers (both large and small). In so doing, poverty, inequality and injustice could be reduced, competitiveness gained, and the environment improved.

In *Peru of Southern Latin America*, according to Ganoza Roncal 4 May 2003), because the mountainous areas are poorer than the plain regions, numerous young farmers have abandoned agriculture in the mountains to replace the young farmers in the plain areas who had migrated to the

² 1 mu = 0.067 ha, 1 ha = 15 mu.

cities, USA or Europe to earn higher incomes. It is worried that the next step of the newly arrived young farmers would be to leave the plain regions for the cities, USA and Europe too (just as already happened in Mexico and Brazil). But there is no measure to give full-time farmers access to their idled or under-producing land, which would only cause food supply shortage.

The Latin American Economic System (SELA) held an urgent meeting for food security on 30 May 2008 in Caracas of Venezuela, pointing out that 30 years ago, Haiti held basic self-sufficiency in rice and some other crops. But in order to meet the conditions of credits of the international financial institutions, it gradually reduced import tax rates, so that the heavily subsidized US rice poured in, leading to the bankruptcy of large amount of Haitian farmers. Now Haiti is the third largest importing country of the US rice. Similar situation has also happened in Mexico, Columbia, etc. (Zhao, Hui 31 May 2008)

Accordingly, in these countries, large amount of land became idled, while poverty and hunger persist. Thus, those who wish to produce food should be given the right to access to at least a part of such land.

Section 5 Evidences in Central-Eastern Europe and Central Asia Errore. Il segnalibro non è definito.

Since the early 1990s, CEECs (Central and Eastern European countries - 16 in total) and NIS (Newly Independent States of the former Soviet Union or CIS - Commonwealth of Independent States - 12 in whole) have implemented land privatization or farm restructuring mainly by (1) restitution of land to former private owners, and (2) distribution of individual land (and asset) shares for private ownership or private possession in public ownership to farm members. Individual landowners or possessors then had the choice to either set up individual farms, or remain in the collectively operated large farms. In Poland and former Yugoslavia, about 80% of agricultural land has always remained at private land ownership after World War II.

As a result, on one hand, in *domain 1* (individual or private farms), numerous able-bodied part-time and absent farmers earning higher off-farm income tend to hold fragmented small farms in irrational and polyopollistic use without selling or leasing them to the full-time farmers (most land rented out is from the governments, some city dwellers who were restituted land but only till a small part for subsistence due to the lack of experience and capital to establish their own farms, and some old and single female peasants). Land market has not been activated by the free market mechanism. The remaining full-time farmers could not easily increase farm size or receive necessary community services. These were findings by the World Bank in Croatia, Armenia, and Georgia in 1996, Poland in 2000, and in CEECs-NIS in general in 1997; by OECD in Albania and Kazakhstan in 1998, and Slovenia in 2000; and by IAMO in CEECs-NIS in general in 1999, etc.

On the other hand, many large farm members voluntarily remain in collective land operation (*domain 2*). Some landowners have got physical parcels (which are typically fragmented as a combination of good, bad, nearby and distant parcels for equity among landowners) and rented them back to large farms (mainly because they possess more facilities and provide more services). Some others (in NIS) have obtained paper shares from a large farm and only upon quitting can they be given physical parcels (which may usually be fragmented). In either case, the large farm has distributed the gathered private land to groups of employees for operation, which, although benefiting from collective services, is a continuation of the operation system under the centrally planned economy and keeps the individual incentives low. Such collectively operated large farms (typically in the NIS) usually also assign small household plots to members for individual operation (which proves efficient, demonstrating the possibility of successful family operation upon larger land). This is a Dual Land System. (For a detailed presentation on both domains 1 and 2, see Zhou, Jian-Ming 2001: 399-430). In fact, the percentage in agricultural land by collectively operated large farms, due to their low individual incentives and ineffective management, has been declining across CEECs-NIS (SYCSEEC 2002: 93-4), and domain 2 is in transition towards domain 1 as some landowners have been persuaded to withdraw land from the collectively operated large farms for individual farming (Lerman 3 February 2003). However, some large-scale farms in CEECs and NIS

adjusted their internal organization, involving adaptation to market requirements with labor shedding without throwing overboard the experience of large-scale farming, and achieved the most competitive farming (Petrick & Meingarten 4-6 November 2004: 17).

In general, the imperative task would be to foster domain 1 by overcoming the irrational and polyopolistic land use of able-bodied part-time and absent small farmers and, upon this basis, strengthening community's promotion of full-time individual farmers and sustainable rural development.

Land idling happened too. For example, *Russia* has privatized land ownership since 1991. But, in the meeting of the State Council on 22 April 2002, President Putin told the Governors of the 89 Republics that in the past 10 years, about 18 million ha of cultivated land, equal to the territory of France, had been idled (XHNA 23 April 2002). Thus Russia passed a law in 2002 to allow land sale and lease to individual nationals, and land lease (up to 49 years) but not sale to foreigners, hoping such created land market could lead to efficient land use (Lee Myers 22 June 2002a. Lee Myers 22 June 2002b). But the situation has not been improved and that law remains on paper (Petrikov 4 – 6 November 2004. RMW-HQSB 9 November 2005). On the other hand, during 1999-2001, the % PSE was 4%, 8% and 10% respectively, but increased to 16%, 19% and 15% during 2003-05 respectively, with Producer NPC as 1.10, 1.18, and 1.11 respectively, showing the growing protectionism (see Table 1).

Now that some large-scale farms in CEECs and NIS have succeeded in becoming competitive through adaptation to market requirements with labor shedding as cited above, why could not they be popularized? One of the fundamental reasons is that they depend on the free will of the landowners to lease land out, by many able-bodied part-time and absent landowners just decline to do so.

As Table 1 displays, by 2002, the % PSE of most CEE accession countries of the EU had been at a high level (around 20%). After joining the EU in May 2004, they started to receive more protectionism than before and encountered overproduction immediately in the same year. The EU bears an even higher level (about 35%). The Producer NPC of the EU-15 and EU-25 during 2004-06 was greater than 1.2. In fact, how to overcome the irrational and polyopolistic land use by able-bodied part-time and absent small farmers has become the key in the CAP (Common Agricultural Policy) reform for both the EU-15 and new accession countries. However, this key has been largely neglected. For example, the EU agricultural support to its CEE accession countries has focused on early retirement, young farmers, training, infrastructure, land consolidation, credits, fine seeds, better quality, higher yields, machinery, organic farming, environment protection, processing and marketing of products, rural tourism, etc. (SAPARD 2000). But no effective measure has been taken on the fundamental issue - to overcome the irrational and polyopolistic land use by able-bodied part-time and absent small farmers (actually such measure has not been included in the aid programs to the developing countries by the developed nations and developing countries themselves, international organizations, NGOs, etc., across the world). According to the EU, it is the old farmers who inefficiently use land (but actually they are more willing to lease land out), while the able-bodied farmers use land efficiently. It is thus not a surprise that while old farmers have been paid for early retirement and transferring land to young farmers, much land is irrationally and polyopolistically used by many able-bodied part-time and absent small farmers in the accession countries.

Section 6 Evidences in Western Europe

I. At the Under-self-sufficiency Stage

In Western Europe, (1) there has been a law to give right to other farmers to produce sufficiently on any under-producing land (i.e., less than 40% of the normal output): in the EU Council Regulations 1963/262, 1967/531 and 1963/261; Italy 4 August 1978 (still valid but not applied); and Switzerland from the Middle Ages that any farmer can bring his cattle to graze in the private pastures of the Alps (still valid but not applied). Its main shortcoming is that it obliges landowners to lease out all their inefficiently used land, so that part-time and absent landowners would not be able to produce for family consumption and keep farming skills; and once lost off-

farm jobs, would either have no access to their land rented out, or have to withdraw it within the contractual period, affecting the lessees. (2) There has also been a law to oblige landowners to either use their land or lease it out for sufficient production: in Germany 31 March 1915 (until 1961); UK 6 August 1947; Norway 18 March 1955, 25 June 1965, and 31 May 1974 (still applied due to continuing under-self-sufficiency with the cold weather), and Denmark 17 July 1989. Its main shortcomings are that it may cause overproduction, plus the above-mentioned one. Both laws have been suspended at the overproduction stage (for details, see Zhou, Jian-Ming 2008: 61-4). The main shortcoming of this legislation is that it obliges landowners to lease out all their inefficiently used land, so that part-time and absent landowners would not be able to produce for family consumption and keep farming skills; and once lost off-farm jobs, would either have no access to their land rented out, or have to withdraw it within the contractual period, affecting the lessees.

II. At the Overproduction Stage

The above-mentioned legislations ceased functioning at the overproduction stage because the *EU* has faced a fundamental dilemma and some derived dilemmas still without being solved. The fundamental dilemma is: still obliging farmers to either use land or lease it out for sufficient production would strengthen overproduction; but if not, much land would be irrationally and polyopolistically used by able-bodied part-time and absent (including large but particularly small) farmers, while full-time farmers could not easily achieve economies of scale, reduce costs, become viable and more competitive in front of the USA, Canada and Australia with much larger farm size and much lower general production costs and many developing countries with much lower labor costs. Without a solution, farmers (mainly full-time ones) pressed the governments for a high standard living equivalent to that of the part-time and absent farmers against the difficulties caused by the lower prices following the overproduction. The governments had to yield fearing losing not only their votes but also food basic self-sufficiency if full-time farmers were also forced to become part-time and absent. Thus the EU implemented protectionism of a coupling between subsidies and production; price supports to keep agricultural goods at prices over the international levels; export aids for farmers to dump products at prices lower than costs to developing countries, and high tariffs against cheaper imports. As the coupling is the most important of them, the following analysis will focus on it.

(I) The coupling could not solve that fundamental dilemma but has led to derived dilemmas.

i. Concerning overproduction. Under the coupling, if farmers have produced surplus, the EU has to buy it, which has encouraged overproduction and concealed the irrational and polyopolistic land use by able-bodied part-time and absent small farmers in the large farm sector mainly in the plain areas where land is generally consolidated, because the protectionism could guarantee the income of the tenants to be able to pay high rents to the landowners to lease land out (here the large farm obviously means a farm under operation, not necessarily under ownership, as the operator may lease in small parcels to form a large farm). Thus on one hand, the EU intends to avoid surplus, and has put quotas on some products (e.g., milk, sugar); and set aside a part of arable land from production of cereals (and other arable crops, i.e., food-used oilseeds and protein plants), including highly productive land (producing over 92 tons/20 ha in cereals, representing on average 72% of the arable crops area), at a rate set each year by the EU (in the 2000/01-2006/07 marketing years 10%) under a (*quasi-*)compulsory program (Council Regulation 1251 of 1999: Article 6. European Commission January 2002: 1), (*quasi* means farmers were not obliged to set aside land, but induced to do so if they wished to receive the set-aside subsidies), and less productive land on a voluntary basis (European Commission January 2002: 3). On the other hand, overproduction has not been avoided since the coupling as the engine is still yielding it. *Derived dilemma 1.*

ii. Regarding competitiveness. Under the coupling, farmers' competitiveness through lowering costs seems not so important, because if they could not sell products, the EU would buy them. Thus on one side, the EU has the incentive to make the land use more efficient via economies of scale to reduce the enduring high costs, and has exercised an early retirement scheme in both the EU and CEE accession countries through SAPARD (2000) to pay old farmers to transfer land to

young farmers (lease, sale, or entitlement change without sale). In the plane areas of the EU-15, this obstacle has been concealed by the protectionism which could guarantee the high income of the tenants to be able to pay high rents to the landowners to lease land out. This has been the main cause to the phenomena 'We have an ongoing structural change and farms tend to get larger and more efficient in the EU. Farm labor reduces by 2% to 3% each year', 'We simply do not have the problems of land absenteeism and abandonment in the EU to a scale which is comparable to that in many and differently organized developing countries' (Demarty 9 October 2007), and across the EU about 20-75% of land was leased (Ahner 27 September 2004).

But it would in turn contribute to overproduction. Thus on the other side, irrational and polyopolestic land use by able-bodied part-time and absent small farmers seriously exists in the small farm sector of the southern states (Greece, Italy, Portugal, Spain) and accession countries where land is more fragmented because the rents of the fragmented small parcels are usually lower than those of the consolidated land. Of course, it also appears in the other countries like Finland, Germany, Ireland, Sweden, etc. One example for the southern hilly areas of the EU was provided in the 'Plan of Rural Development of the Tuscan Region 2000-2006' of Italy: 'By an analysis of the agricultural sector in more details, of all Regions that are taken into consideration, Tuscany is characterized by a weight on average regarding the work unit, but with an *extremely low productivity*. This is due to the existence of a relatively *wide range* of farmers who carry out their activities in *part-time* or *leisure time*, with motivations that go beyond those incomes and with a productive capacity *much lower* than that of professional farms, thus influencing negatively the Regional average' (Tuscan Region 17 May 1999: 12). *Derived dilemma 2.*

iii. In respect of the budget. The coupling has led to overproduction and unanticipatable budget as the overproduction may exceed the expectation in the planned budget, and cost the taxpayers and consumers huge amount of money. The EU, on one hand, wishes to reduce the heavy budget deficits, but on the other, has introduced in the set-aside to reduce overproduction, and the early retirement schemes to raise land use efficiency, which however, have added financial burdens, meanwhile have resolved neither overproduction nor irrational and polyopolestic land use. *Derived dilemma 3.*

iv. In the field of the international cooperation, the EU aims to help developing countries and has set up many programs with economic and technological assistance. But the high trade-distorting coupling, price supports, export aids and import restrictions have unfairly harmed the interests of the Third World. Thus, the EU has been continuously criticized in this aspect. *Derived dilemma 4.*

(II) The decoupling could not bypass that fundamental dilemma. Realizing some of the shortcomings of the coupling, the EU has conducted an incremental partial decoupling between subsidies and production during 1992-99, and released the 'Mid-Term Review of CAP of Agenda 2000' (MTR) (European Commission 10 July 2002) as a watershed document in the CAP reform. Its major importance was that the EU has finally proposed to completely decouple the link between direct subsidies and production, so that farmers would fully compete in the market, rather than gearing production to subsidies. It would be implemented by the accession countries, thus reducing the financial burdens of the enlargement. It stipulated 'the maximum sum paid to a farm will be EUR 300,000' annually (European Commission 10 July 2002: 23) so as to abate the previous situation that most subsidies went to the fewer large farms. It would also improve market opportunities for the developing countries, and constitute a good example for the other developed economies (in particular the USA, Canada, Japan, South Korea, Taiwan Province of China, Switzerland) to follow.

The MTR was significant also in that the decoupled direct subsidies to each farm would be conditional upon cross-compliance with the environmental, food safety, and animal welfare standards. This would bring about chiefly positive results in these aspects.

i. But the decoupling could not bypass the above-mentioned fundamental and derived dilemmas.

At the demand side, the decoupling has increased the need for more efficient land use. As mentioned above, under the coupling, competitiveness of farmers seems not so important, because if farmers could not sell products, the EU would buy them. After the decoupling, however, the EU would cease doing so. Therefore farmers would have to fully compete in the market for selling their products. Higher quality and localized special trade marks could promote their sales. But with the same or similar quality, in the sea of numerous localized special trade marks (each of which would claim that it is the best), and for many cereals which could not be easily specialized locally, lower costs would be more competitive. This would in turn necessitate the increase of farm size so as to achieve economies of scale and reduce costs by the full-time farmers.

At the supply side, some MTR measures may strengthen the irrational and polyopolistic land use. First, after the decoupling, farmers would have to sell their products in the market because the EU would no more purchase their surplus, and market prices would be lowered due to more competition. This would lead to a positive result that farmers would no longer have the incentive to produce more than what they could sell, but also a negative consequence, i.e., ‘in some cases abandonment of land’, as MTR (European Commission 10 July 2002: 19) anticipated, rather than leasing it to the full-time farmers who would require it for achieving economies of scale. Second, after the decoupling, a direct subsidy would be given to each ha which has been granted a payment in 2000-02 under one of the support schemes (e.g., in the UK 200-250 pounds per year), even if it does not produce any product, as long as the farmer has fulfilled the cross-compliance with the environmental standards (it would not be difficult to plant trees and grasses to prevent soil erosion), while the cross-compliance with the food safety and animal welfare standards would be irrelevant if the farm neither produces any crop nor raises any animal. This would give the incentive to some and even many farmers to just enjoy a direct subsidy without production, and spend all or most of their time on earning off-farm income, without leasing the land to the full-time farmers, so as to avoid the decoupled subsidy from going to the tenant (according to the MTR, the decoupled direct payments should be given to the operator who could be either landowner or tenant). In order to let farmers decide whether to produce or not, the farm ministers of the EU Member States proposed in the MTR that the decoupled payments be given to farmers even if they produce zero (Lohe 5 October 2004).

This decision was based on the belief that with the decoupling, ‘Farmers will’ ‘respond to market signals’, and ‘those farmers who leave the sector’ will use the ‘possibility to transfer the land to those who want to expand its [their] business’, as reflected in the replies to the author by the EU Commissioner on Trade Peter Mandelson (2 December 2005): ‘Thank you for your email of 23 October 2005 which contains interesting ideas on agriculture. You are certainly aware that the Common Agricultural Policy has been reformed in depth in 2003: once this reform will be [is] fully implemented, the bulk of direct payments to farmers will be fully decoupled (no obligation to produce anymore). Farmers will have therefore no more incentive to produce due to the subsidies they received, but will instead **respond** to market signals. In order to get their payments, farmers will have to fulfill environmental criteria, as well as animal and plants health standards and animal welfare conditions. The rural development policy will be boosted. With this reform, the European Union has been in a position to make **ambitious** proposals in the DDA [Doha Development Agenda] negotiations, so as to significantly improve market access and reduce trade distorting subsidies. The EU has indeed proposed on 28 October 2005 to cut by 70% its trade distorting subsidies and to cut by 47% its average tariff rates. This comes on top of the proposal made last year to fully eliminate our export subsidies’, and by the Director-General for Agriculture and Rural Development of the EU Commission Jean-Luc Demarty (9 October 2007): ‘Land markets in Europe facilitate the intensive and extensive use of agricultural land via pricing over the medium to long term. Commodity markets have a short term impact: The currently high prices of agricultural commodities trigger a more intensive use of agricultural land and much of the less intensively used land is now converted into intensive use again. The inverse happens in times of low agricultural prices. Hence, the market economy offers self-regulation which we should use to the better.’ ‘The

land markets offer those farmers who leave the sector a possibility to transfer the land to those who want to expand its [their] business. This decentralized way of shifting ownership and use has been working *very well*.

But such belief has not taken into account the key obstacle pointed out in the author's various publications ever since April 1996, and in his direct communications to the EU policy-makers ever since February 2002, as repeated in his reply to Mandelson on 6 December 2005: 'Even if subjectively full-time farmers [will instead respond to market signals], objectively they would not succeed in so doing, since the Able-bodied Part-time and Absent Farmers Would Refuse to Lease their Insufficiently Producing Land to Them to achieve economies of scale because they could not afford to pay high rents once the present EU guarantee of their high income has been abolished.'

Thus there should be an effective and appropriate solution to achieve the 'efficient allocation of land in farming' (Schultz [1964] 1983: 22) to those who can 'produce the same output with fewer resources or a larger output from the same resources' (Johnson 1983) from those who cannot. But unfortunately the MTR did not provide any solution.

'Therefore, the decoupling could not bypass the above-revealed fundamental dilemma. Rather, it would only expose it which has been largely covered by the protectionism of coupling. In fact, although the MTR anticipates the risk of land abandonment after the decoupling, it has provided no solution to deal with it. Thus if this fundamental dilemma could not be overcome, then the decoupling might fail, as the full-time farmers would again exert pressure on the political parties to resume coupling so as to guarantee them a high standard living.' This was the author's prediction in his Cambridge Conference paper (Zhou, Jian-Ming 2003: 26-7) submitted on 13 June 2003.

Unfortunately, supportive evidence appeared so quickly: on 26 June 2003, after about one year's debates on MTR, what the EU farm ministers adopted (European Commission 26 June 2003) was a retreat from MTR's '*completely* decoupling the link between direct payments and production' to a *bulk decoupling and limited coupling*: 'the vast majority of subsidies will be paid independently from the volume of production', while 'Member States may choose to *maintain a limited link between subsidy and production* under well defined conditions and within clear limits', just in order 'to avoid abandonment of production'. Although called 'a *fundamental* reform of the CAP', it was downgraded to be merely a continuation in the same category of the incremental partial decoupling during 1992-99. This has clearly demonstrated that after the complete decoupling, some farmers would irrationally abandon production, rather than leasing their irrationally and polyopolistically used land to the full-time farmers who would need it to achieve economies of scale, reduce costs, and become viable or more competitive.

Following the wider (although still partial) decoupling decision in 2003, since its implementation in 2005, for energy crops, protein crops, nuts, etc., the EU has set up mandatory coupled subsidies to all the Member States. For the other products, only two in the EU-15 (Ireland, Luxemburg); and 11 in the EU-12 (without Slovenia), have adopted a full decoupling from the EU funding by February 2007, and some EU-12 countries have given coupled subsidies with their own funding. For example, Estonia has given totally 707.8 million Estonian krooni as Complementary National Direct Payment in 2007, one third being coupled (Talvik 28 September 2007).

ii. Although the decoupling is only partial, reductions in agricultural production have happened immediately in various countries.

In the EU-25, in 2004, according to Table 2, there was an *increase* (percentage on previous year) of the price indices of agricultural products output: in nominal value, *seven* of the 13 categories of products, and in deflated value, *four* of the 13. Correspondingly, as Table 3 demonstrates, of the indices in the volume (preceding year = 100) for the 13 categories, only *three were lower* than in 2003, while those in 10 were higher than in 2003, showing a general increase of agricultural output. In 2005, the starting year of the wider (although still partial) decoupling, as shown by Table 2, there was an *increase* (percentage on previous year) of the price indices of agricultural products output:

in nominal value, *five* of the 13 categories, and in deflated value, *two* of the 13. However, as displayed by Table 3, of the indices in the volume (preceding year = 100) for the 13 categories, *10*

Table 2 Price Indices of Agricultural Products Output (annual, base 2000=100) in the EU-25 during 2004-2007 (percentage change on previous year)

Products	2004		2005		2006		2007	
	Nominal value	Deflated	Nominal value	Deflated	Nominal value	Deflated	Nominal value	Deflated
01000 Cereals (including seeds)	0.8	-1.4	-13.2	-15.1	14.3	11.9	51.2	47.7
02000 Industrial crops	0.3	-2.1	-6.5	-8.6	-1.7	-3.7	8.4	5.7
03000 Forage plants	7.8	5.3	-15.8	-17.7	-2.5	-4.7	15.0	12.5
04000 Vegetables and horticultural products	-8.7	-10.6	6.1	3.8	3.3	1.1	1.8	-0.4
05000 Potatoes (including seeds)	-4.0	-6.0	-8.0	-9.9	53.9	50.7	-0.1	-2.3
06000 Fruits	-5.3	-7.6	-4.6	-7.2	1.7	-0.8	9.2	6.5
07000 Wine	-0.8	-3.1	-10.2	-12.1	-0.8	-2.8	6.6	4.6
08000 Olive oil	9.0	6.1	17.0	13.7	11.5	8.3	-17.0	-18.9
09000 Other crop products	-2.1	-3.9	0.8	-1.1	2.9	1.0	15.6	13.7
10000 Crop output	0.6	-1.6	-7.3	-9.4	10.5	8.2	18.0	15.5
11000 Animals	5.7	3.4	2.1	-0.1	4.6	2.3	-2.2	-4.3
12000 Animal products	-2.0	-4.0	-1.3	-3.3	-0.1	-2.2	13.3	10.8
13000 Animal output	2.4	0.2	0.7	-1.4	2.7	0.5	3.9	1.6

Source: Eurostat 22 May 2008.

Table 3 Volume Indices of Agricultural Production in the EU-25 during 2004-2007 (preceding year = 100)

	Products	2004	2005	2006	2007
01000	Cereals (including seeds)	116.7771 ^e	85.8114^e	95.0855^e	99.7265^e
02000	Industrial crops	110.7405 ^e	95.3927^e	88.9980	101.3525 ^e
03000	Forage plants	118.4117 ^e	94.7261^e	95.4808^e	108.0536 ^e
04000	Vegetables and horticultural products	100.7447 ^e	102.6572 ^e	98.1613^e	100.3144 ^e
05000	Potatoes (including seeds)	111.5982 ^e	92.7823^e	91.8628^e	114.0034 ^e
06000	Fruits	107.3119 ^e	99.3271^e	103.7991 ^e	95.2570^e
07000	Wine	123.5462	93.3301	98.2866^e	96.5989^e
08000	Olive oil	142.0365	82.0909^e	88.1631^e	103.2011 ^e
09000	Other crop products	110.8344 ^e	105.6712 ^e	104.7566 ^e	99.3885^e
10000	Crop output	112.0250 ^e	94.7476^e	96.5847^e	100.9396 ^e
11000	Animals	98.9983^e	100.2587 ^e	98.9529^e	102.0796 ^e
12000	Animal products	99.7145^e	99.2706^e	99.0223^e	99.8507^e
13000	Animal output	99.2770^e	99.8836^e	98.9794^e	101.2327 ^e

Notes:

e - Estimated value.

Value 01 Value at basic price.

P_adj vol Volume.

Geo eu25 European Union (25 countries).

Base year n_1 n-1 = 100.

Source: Eurostat 29 October 2008.

were lower than in 2004, and only three were higher than in 2004, starting a general trend of higher prices but lower production.

In 2006, as revealed by Table 2, there was a *wider increase* (percentage on previous year) of the price indices of agricultural products output: in nominal value, *nine* of the 13 categories, and in deflated value, *eight* of the 13. But, as introduced by Table 3, of the indices in the volume (preceding year = 100) for the 13 categories, *11 were lower* than in 2005, and only two were higher than in 2005, strengthening the general trend of higher prices but lower production.

In 2007, as displayed by Table 2, there was an *even wider increase* (percentage on previous year) of the price indices of agricultural products output: in nominal value, *ten* of the 13 categories, and in deflated value, *nine* of the 13. But, as introduced by Table 3, of the indices in the volume (preceding year = 100) for the 13 categories, *five were lower*, continuing the general trend of higher prices but lower production. Moreover, the EU turned from a net exporter of agricultural products in 2006 to net importer in 2007 (European Commission June 2008).

That is to say, farmers have *not* responded 'to market signals', just opposite to the expectation of Mandelson (2 December 2005). And 'The currently high prices of agricultural commodities' did *not* 'trigger a more intensive use of agricultural land and much of the less intensively used land is now' *not* 'converted into intensive use again.' Rather, farmers have used land *less* and produced *less* while the prices have been *higher*. Therefore, 'those farmers who leave the sector' have *not* used the 'possibility to transfer the land to those who want to expand its [their] business', and 'This decentralized way of shifting ownership and use has' *not* 'been working very well', just contrary to the belief of Demarty (9 October 2007).

This has given evidence to the author's view in his reply to Mandelson on 6 December 2005: 'Even if subjectively full-time farmers [will instead respond to market signals], objectively they would not succeed in so doing, since the Able-bodied Part-time and Absent Farmers Would Refuse to Lease their Insufficiently Producing Land to Them to achieve economies of scale because they could not afford to pay high rents once the present EU guarantee of their high income has been abolished.'

iii. Concerning reducing overproduction, the MTR proposed to continue the (*quasi*-) compulsory set-aside on highly productive land (i.e., farmers should set aside such land if they wanted to get the decoupled direct subsidies), while lowly productive land could receive the decoupled direct subsidies no matter whether it was set-aside or not (i.e., not compulsorily). This was adopted by the EU Presidency Compromise (30 June 2003: 6, 12, 27) (in agreement with the Commission). Although the new set-aside was called environmental set-aside, it was still aimed at reducing overproduction. Here the EU has again neglected that its overproduction has not been caused by the availability for farming of too much highly productive land, but by protectionism (without which farmers would have no incentive to overproduce even if much highly productive land is available) which is in turn caused by the irrational and polyopolistic land use of the able-bodied part-time and absent (mainly small) farmers. The EU farm ministers' decision of 26 June 2003 and EU Presidency Compromise of 30 June 2003 have been legalized into Council Regulation (EC) No 1782/2003 (29 September 2003).

iv. However, continuing protectionism is not a solution acceptable to the developing countries, other developed countries, international organizations, and the EU itself. Thus in 2000, the EU had adopted the Lisbon Strategy which permits, encourages and strengthens competition. Seeing the unsatisfactory result of its implementation, at the beginning of 2005, the EU has revised it and requested the Member States to set up national programs of execution.

In June 2005, the UK jumped out to press the EU to substantially reduce its agricultural budget. The EU then agreed on 17 December 2005 to advance the review of it from 2013-14 to 2007-08. (Tian, Fan 24 June 2005. Zhang, Nian-Sheng 17 December 2005)

On 18 December 2005, the WTO passed 'Ministerial Declaration' signed by all the member countries which announced that the developed countries will abolish export aids for cotton by 2006 and all forms of export aids for the other agricultural goods by 2013; developed and some developing countries will import farm products from the leased developed countries without tariff and quota from 2008; reached consensus on largely reducing domestic farm supports; adopted the

Swiss Formula and made specific direction for non-agricultural market access; agreed to establish concrete steps (modalities) for substantially reducing domestic farm supports and for non-agricultural market access by 30 April 2006 and to submit comprehensive draft schedules based on these modalities by 31 July 2006. (Liu & Gong 19 December 2005. XHW 19 December 2005. WTO 22 December 2005)

On 23 July 2006 in Geneva, the EU agreed to make average cuts of 54% to their farm import duties. The USA wanted the EU to cut some 66%, and declined to cede to demands for bigger cuts to its own farm subsidies, unless it could get much more access to the industrial and services market. Brazil thus complained that the developing countries were disappointed since their richer counterparts were not making the kind of sacrifices needed to get the negotiations moving and were instead leaning on poor countries to open their markets for industrial and services goods, while the Indian Minister of Industry and Commerce Kamal Nath stated that the USA must be held responsible for the failure of the WTO Doha negotiations started four years ago and their consequent suspension on 24 July 2006. (Waddington & Schomberg 30 June 2006. Zhang & Ya 25 July 2006. Liu, Guo-Yuan 24 July 2006)

On 30 April 2007, the Chairman of the Agriculture Committee of the WTO Crawford Falconer noted 'that the EU has signaled already that it could be prepared to go to a 75% cut which, if applied, would take its OTDS [overall domestic trade distorting supports] figure down to around 27.5 billion euros' and demanded 'at a minimum with an EU cut above 70% and that a cut up in the vicinity of 75-80%' (Falconer 30 April 2007: 6). 'A 75% cut in the overall level of the trade distorting support from the current WTO bound levels (i.e., WTO limits) would be broadly equivalent to a cut in the region of just under 50% in relatively recent expenditure (e.g., 2003 / 04 levels)' of the EU (DEFRA 9 November 2007).

However, on 12 September 2007, the EU announced that, as agreed among the European Council, Parliament and Commission, 'By 2013, the share of traditional CAP spending (excluding rural development) will' be '32%', from 34-36% in 2007 (European Commission 12 September 2007). A reduction of only 2-4% over a six-year of 2007-13 would not seem so substantial, considering only 5% of the total population is in agriculture (CPE 30 June 2005).

In July 2007, 'Falconer published a series of proposals for WTO members which suggested that the US reduce its agricultural subsidies to between 12.8-16.2 billion dollars (9.2-11.6 billion euros). Washington had previously refused to cut its farm support to below 23 billion dollars.' But on 19 September 2007, it accepted this proposal, 'provided everybody else would work within the same parameters.' (Yahoo News 19 September 2007). Canada has followed the suit in 2007.

Therefore, now the ball is mainly at the EU (and other developed countries such as Japan, South Korea). If the EU could not reduce its agricultural budget substantially, then the WTO Doha negotiations would be blocked, and the whole world would blame the EU as responsible.

v. Once protectionism has been further reduced, refusal of leasing land out at low rents and irrational production abandonment would be graver and the EU would lose agriculture substantially. (i) The EU Commissioner on Agriculture and Rural Development Fischer Boel (14 May 2007) has planned 'Nearly 90 per cent of direct payments will be decoupled by 2010'. The Health Check report (European Commission 20 May 2008a) further proposed 'to remove the remaining coupled payments and shift them to the Single Payment Scheme, with the exception of suckler cow, goat and sheep premia, where Member States may maintain current levels of coupled support'.

But, ‘On the occasion of the integration of the cotton sector into the single payment scheme, it was deemed necessary that part of the support should continue to be linked to the cultivation of cotton through a crop specific payment per eligible hectare to *avoid the risk of production disruption* to the regions of cotton production’ (European Commission 20 May 2008b: 20). **Consequently, on 23 June 2008, the EU Council of Agricultural Ministers adopted the reformed EU cotton support scheme which maintains 65% as decoupled, and 35% as coupled aid in the form of area payments. (European Commission 23 June 2008)**

Therefore, the *unique root* for the EU to maintain a partial coupling is still because it has not overcome the production abandonment caused by the irrational and polyopolistic land use of its part-time and absent farmers who refuse to lease even the land beyond their family consumption need to the full-time farmers at low rents once the coupling has been completely lifted, the same as for its retreat from a complete decoupling proposed on 10 July 2002 to keeping a partial coupling on 26 June 2003.

(ii) The EU has also started modulation, i.e., ‘transfer of subsidy funds from Pillar 1 of the CAP (guarantee expenditure and single farm payments) to Pillar 2 (rural development and agri-environmental schemes). Since 2005, modulation has been applied on a compulsory basis in all EU-15 Member States. This transfer of funds will amount to nearly 9 billion euros across the EU-15 in the period up to 2013’. ‘A 4% rate of compulsory EU modulation was applied to subsidy payments in 2006 and a 5% rate will apply from 2007 onwards. All farmers will have the first 5,000 euros of their payments effectively exempted from compulsory modulation; the appropriate sum will be repaid to farmers as an additional amount of aid’. (DEFRA 27 September 2007). The European Commission (20 November 2007) proposed ‘increasing the rate of “modulation”, i.e., the reduction of direct payments to all farms receiving more than 5,000 euros per year and the transfer of the money into the rural development budget. This would be increased gradually from 5 percent now to 13 per cent in 2013.’

The Health Check report (European Commission 20 May 2008a) furthermore indicated that ‘Currently, all farmers receiving more than €5,000 in direct aid have their payments reduced by 5 percent and the money is transferred into the Rural Development budget. The Commission proposes to increase this rate to 13 percent by 2012. Additional cuts would be made for bigger farms (an extra 3 percent for farms receiving more than €100,000 a year, 6 percent for those receiving more than €200,000 and 9 percent for those receiving more than €300,000). The funding obtained this way could be used by Member States to reinforce programs in the fields of climate change, renewable energy, water management and biodiversity.’

(iii) The Health Check report (European Commission 20 May 2008a) also proposed ‘Moving away from historical payments: Farmers in some Member States receive aid based on what they received in a reference period. In others, payments are on a regional, per hectare basis. As time moves on, the historical model becomes harder to justify, so the Commission is proposing to allow Member States to move to a flatter rate system.’ This move would reduce decoupled subsidies.

(iv) The Health Check report (European Commission 20 May 2008a) moreover suggested ‘Payment limitations: Member States should apply a minimum payment per farm of €250, or for a minimum size of 1 hectare or both.’ This would curtail direct subsidies from going to the smallest ‘farms’, as Fischer Boel stated ‘If you keep one goat in your backyard you are not a real farmer’. ([Castle](#) 20 November 2007)

The modulation, abolition of the decoupled payments on the historical basis, and exclusion of the smallest farms from the decoupled payments, would reduce the amount of the decoupled subsidies, as according to Choplin (6 October 2004), the EU’s current budget on the decoupled payments is higher than that on the coupled ones.

(v) The Health Check report (European Commission 20 May 2008a) recommended a reform towards abolition of protectionism in the ‘Intervention mechanisms: Market supply measures should not slow farmers’ ability to respond to market signals. The Commission proposes to abolish

intervention for durum wheat, rice and pig meat. For feed grains, intervention will be set at zero. For bread wheat, butter and skimmed milk powder, tendering will be introduced.'

(vi) There is still overproduction: 'applications to use the *sugar* restructuring fund have not been at the level that we need, and we must do something about it', 'we must bring production quota down to the right level. We do this either by boosting applications to the restructuring fund, or simply by cutting quotas.' (Fischer Boel 14 September 2007)

But if these proposals of the Health Check report could be fully approved by the EU, or the remaining coupling, price supports, export aids, and import restrictions of the protectionism to guarantee the present income of the tenants could all be abolished, and the high decoupled payments could be decreased, then the refusal of leasing the under-producing land out beyond their family consumption need by the able-bodied part-time and absent farmers at low rents and the consequent irrational production abandonment would become more serious.

(vii) In fact, there is already potential or real food and biofuel shortage.

1. 'The price of *milk* would not normally be an editor's first choice for a headline topic, but this summer, it really made waves in some countries.' 'We must give particular thought to what happens when the milk quota system finally comes to an end.' 'The strait-jacket effect of the quota system has received particular attention in recent weeks, as drought in producer countries and thirst in big consumer countries have sent prices rocketing.' (Fischer Boel 14 September 2007)

The Health Check report (European Commission 20 May 2008a) thus proposed that 'Milk quotas will be phased out by April 2015. To ensure a 'soft landing', the Commission proposes five annual quota increases of one percent between 2009/10 and 2013/14.'

However, although Fischer Boel (14 September 2007) has been aware that 'Still others blamed the retail giants', 'I also note complaints from some farmers that higher retail revenues are not being passed on to them', 'Producers must be able to stand together if they want to bargain effectively with the retail giants', the Health Check report did not propose how to abolish the monopoly and oligopoly of the giants in the inputs (backward) and outputs (forward) linkages around agriculture, including those in the dairy sector.

As a result, on 27 May 2008, nearly 1,000 Dutch milk cow farmers demonstrated against the low purchasing price of milk in front of the biggest Dutch dairy producer Friesland Food Group. The organizer - the Dutch Dairy Board which represents about one third of the Dutch milk cow farmers, pointed out that since the end of 2007, while the prices of forages, fuels, and chemical fertilizers have been increasing, the milk purchasing price by the main dairy producers has been reduced from 0.5 euros to 0.34 euros per liter, lower than the production costs. It demanded to raise the price to 0.43 euros per liter to match the costs. But the Group refused to discuss with the farmers on the price. Thus the Board appealed to the farmers to destroy milk and stop supply to the dairy producers. Milk cow farmers in France, Germany, Italy, Luxemburg, and Spain have also launched similar protests to demand dairy producers to raise milk purchasing prices. However, the Dutch Organization for Agriculture and Horticulture criticized destroying milk as a wrong signal because currently the global food prices are so high and numerous people do not even have enough to eat. (Liu, Li 29 May 2008).

Therefore, as long as the monopoly and oligopoly of the giants in the inputs (backward) and outputs (forward) linkages around agriculture are not abolished, the milk farmers would continue to suffer from the low purchasing prices even though their milk production quotas have been lifted (more output might make the prices even lower), and consumers would still endure the high retail prices, while these giants could keep enjoying the huge monopolistic and oligopolistic profits. It is thus imperative to abolish them, by, e.g., separating them into more independent companies.

2. 'European Union agriculture ministers today approved the Commission's proposal to set at 0% the obligatory *set-aside* rate for autumn 2007 and spring 2008 sowings. The change comes in response to the increasingly tight situation on the *cereals* market. It should increase next year's cereals harvest by at least 10 million tons. In the EU-27, a lower than expected harvest in 2006 (265.5 million tons) led to tightening supplies at the end of marketing year 2006/2007 and to

historically high prices. Intervention stocks have shrunk from 14 million tons at the beginning of 2006/2007 to around 1 million tons now.' 'Setting the rate at zero does not oblige farmers to cultivate all their land. They can continue with voluntary set-aside and apply environmental schemes.' (European Commission 26 September 2007)

The Health Check report (European Commission 20 May 2008a) in addition proposed 'Abolition of set-aside: The Commission proposes abolishing the requirement for arable farmers to leave 10 percent of their land fallow. This will allow them to maximize their production potential.'

This measure may not solve the irrational and polyopolistic land use by the able-bodied part-time and absent farmers in their refusal to lease their land beyond family consumption need to the full-time farmers, because 'Setting the rate at zero does not oblige farmers to cultivate all their land' for production.

3. 'Many members of the general public worry that *biofuel* feedstock competes with food crops for land, and that this could have implications for food production.' 'If we want biofuels to make up 10 per cent of our transport fuel usage by 2020, our studies estimate that this would use about 15 per cent of our arable land by then – some 17.5 million hectares.' (Fischer Boel 14 September 2007)

In fact, producing biofuels is aimed to bypass the monopoly and oligopoly of the petroleum exporting countries, which have been regarded as one of the most important causes of the rise of the oil prices and food production costs world-wide. Therefore, the production of biofuels itself in principle should not be perceived as wrong. What are not correct are firstly to turn food crops into biofuels when global human food consumption need has not been matched, as human beings should convert non-edible stuff into biofuels [but it may need about 10 years to develop such technology into commercially applicable one (Shiwang 25 May 2008)],), and only in case the global demand for food by human consumption has been satisfied, could food crops be turned into biofuels; and secondly, to use the sufficiently food producing farmland for biofuels, as Brazil, the USA, EU and all the other countries should have used the idled or under-utilized land for biofuels. For example, as above-mentioned, in Brazil, there are 224,900,000,000 acres (91,013,800,940 ha) of idled farmland in 2008. But instead of using them, the biofuels program started in 2004 slashed Amazon forests! In the EU, now that following the decoupling in 2005, so many farmers have produced less food, at least they could use the production-abandoned land for biofuels from non-edible stuff, or even from food crops in case the global demand for food by human consumption has been satisfied. The EU should really endeavor to investigate and publish the annual data of its normal and environmentally sensitive rural land, cultivable land, and farmland; and its sufficiently- and under-producing land.

(viii) However, the Health Check report did not provide any solution to avoid the irrational production abandonment following the adoption of its protectionism-reducing proposals. Thus, its proposals might either be partially rejected, or if fully adopted, would lead to the loss of food basic self-sufficiency of the EU, both of which would cause to keep protectionism. Actually, worried about the production abandonment, resistance to such proposals has already been underway.

1. Concerning the increase of decoupling and decrease of coupling, the CPE-COAG (European Farmers Coordination - Coordinator of Organizations of Farmers and Ranchers) (20 May 2008) immediately lodged a protest on the same day after the release of the Health Check report: 'decoupling is an important factor for *abandoning the production* and we expect from the Commission an assessment backed up by figures of its implementation regarding the production structures, for example in the case of dairy production. We ask to the Council to *re-couple* the direct payments.'

The general public has realized the intrinsic problem of the decoupled subsidy, i.e., now that a farmer can enjoy it without production (but only planting tress and grasses to avoid soil erosion), nor leasing his land out (otherwise it will go to the tenant), then he would rather keep the land out of production, while earning higher off-farm income, as double income.

However, even after the Eurostat has revealed the general trend of higher prices but lower production in the EU since the implementation of the wider decoupling in 2005 as shown in Tables 2 and 3, the EU Commissioner on Agriculture and Rural Development Mariann Fischer Boel (10 June 2008) persistently believes that ‘it's still true that decoupled direct payments are a powerful tool. They leave farmers *free to respond* to whatever the market tells them’. That is why the Health Check report did not provide any effective and appropriate solution to the irrational production abandonment mainly caused by the refusal to lease the under-producing land beyond family consumption need of the able-bodied part-time and absent small farmers earning higher off-farm income to the full-time farmers at low rents, as pointed out in my various publications ever since April 1996, and in my direct communications to the EU policy-makers ever since February 2002, as if it did not exist.

2. Regarding the reduction of the direct payments to the large farmers, the Danish Member of the European Parliament (Chairman of the Independence/Democracy Group) Jens-Peter Bonde (13 October 2007) informed the author that he had tabled an amendment for the budget to cut all spending above 40,000 euros per legal unit receiving money from CAP funds as a beginning, but last time got only around 100 votes out of the totally 785 Members of the European Parliament.

3. As for the exclusion of the smallest farms from the decoupled payments, the CPE-COAG (European Farmers Coordination - Coordinator of Organizations of Farmers and Ranchers) (20 May 2008) protested that ‘It is scandalous to propose to delete the smallest payments’. ‘The smallest farmers, especially in Romania, Poland, Italy would be excluded by the increase of the floor to 1 ha.’ ‘We propose the institution of a minimum fixed sum of direct payment for the very small farms.’

4. Against the production of biofuels, **the press release from AEFJN (Africa Europe Faith and Justice Network), Biofuelwatch, Carbon Trade Watch, COAG (Coordinator of Organizations of Farmers and Ranchers), Corporate Europe Observatory, CPE (European Farmers Coordination), Ecologistas en Acción (Spain), EcoNexus, FIAN, GRR, the Soya Alliance and the Transnational Institute (28 May 2008) presented that ‘A key report from the European Parliament has called for the EU's 10% biofuel target to be scrapped, amidst growing evidence over the impact on wildlife, people and the world's food supplies. The report by the European Parliament's Rapporteur for the new laws on biofuels, Claude Turmes MEP, concludes that there is “overwhelming evidence to drop the mandatory 10 per cent target for fuels from renewables”.**

‘Campaigners from a range of Europe-wide organizations welcomed the proposals to scrap the target and urged the industry and environment committees to drop the target.

‘Sofia Monsalve Suárez from FIAN said: “European demand” “for fuel is already helping push up food prices and creating a serious food crisis in some parts of the world. Land use for agrofuels is forcing small farmers and indigenous peoples off their lands, causing poverty and hunger. Agrofuels will not solve the hunger problem in the world. They will make it worse.”

‘Anders Wijkman MEP (Sweden PPE), who is reporting to the Environment Committee on the same legislation, has also called for the target to be reduced, but campaigners say his proposal of eight per cent - designed to “create a market” - cannot be justified.

‘Nina Holland from Corporate Europe Observatory said: “An eight per cent target will cause almost as much damage as a ten per cent target. Pushing up food prices is causing hunger and that fact is inescapable. The EU's targets should be dropped.”

‘They are also concerned by some of the other recommendations made in the draft Turmes report, including the recommendation that large amounts of biomass are used for electricity generation and heating.

‘Campaigners say they want to see a tougher definition of “renewables”, excluding agrofuels from large scale plantations which rely on large quantities of oil-based inputs, and which have damaging social impacts.

‘René Louail, from CPE Board: “Agrofuel plant construction in Europe should be stopped. The money should be instead spent on switching production in Europe to vegetable proteins so that we no longer depend on imports.”

‘EU representatives are currently in Bonn for discussions on the Convention on Biological Diversity where discussions are focused on how the agrofuel boom will impact on biodiversity. Civil society organizations present in Bonn are calling on the Parties to ban agrofuels from industrial monocultures.’

Therefore, it is time for the EU to realize that the irrational and polyopollistic land use by able-bodied part-time and absent farmers earning higher off-farm income but unwilling to lease the under-producing land beyond their family consumption need to full-time farmers is the most fundamental microeconomic root of the three persisting macroeconomic problems: under-self-sufficiency, overproduction and agricultural protectionism, and endeavor to overcome it. Otherwise, the anti-protectionism proposals of the Health Check report might repeat the unpleasant fate of the retreat to a partial decoupling decision on 26 June 2003 from the complete decoupling proposal by the EU Commission on 10 July 2002.

III. These Western European Legislations Could Not Both Promote Large Farmers and Retain Small Farmers in Agriculture

During the incremental partial decoupling since 1992, the EU had gradually replaced price subsidies by direct income subsidies, reduced intervention schemes, and successively decreased administrative prices towards the international levels, aiming to achieve a ‘farming without subsidies’ and let the market decide prices in the long-run. As a result, ‘not all EU agricultural production is sheltered by high tariffs and the EU prices may be close to international levels for a significant share of EU production, depending on market price fluctuations’ in the view of Beaumont (6 March 2002) (although the view of many developing countries may not completely be the same). Such market-oriented measures have been relatively favorable to the large farmers, because they have lower costs due to economies of scale and are stronger in the market competition; but unfavorable to the already weak small farmers, and have led to more exiting by them from agriculture, and consequently encountered protests from farmers out of their gained interests. Thus the EU wishes to both strengthen large farmers and retain small farmers in agriculture, because on one hand, urban unemployment has already been so high and homeless people so many, and on the other, rural development should be promoted to avoid the increase of ‘ghost towns’ with nearly empty population. (Zhou, Jian-Ming 2001: 398). But how to combine these two seemingly contradictory aims? In fact, both promoting large farmers and retaining small farmers in agriculture is also an unresolved dilemma persisting in both of the developed and developing countries. Apparently, the above-mentioned Western European legislations could not provide a solution.

IV. The Unsuitability of the Legislations Even at the Under-self-sufficiency Stage

Now that the above-cited two Western European legislations have been successful for overcoming food under-self-sufficiency, why could not they be popularized to many other countries still at that stage? One of the reasons is that they oblige landowners to lease out *all* their inefficiently used land or give right to other farmers to use *all* of it (which might be imperative in the war era, but not so in the peace epoch), so that part-time and absent landowners would be unable to produce for their family consumption and keep farming skills; and once lost off-farm jobs, would have no access to their land rented out, or have to withdraw it within the contractual period (as many developing countries cannot afford to provide them with a basic social welfare), hence affecting the lessees.

Section 7 Evidences in North America and Oceania Errore. Il segnalibro non è definito.

I. In the USA

(I) Small farmers have been being crowded out of agriculture by large farmers and their number has been declining ever since 1935. But the development in recent decades of off-farm employment pursued as subordinate to the loss-making independent small farming has resulted in irrational and polyopollistic land use by able-bodied part-time and absent small farmers. This has

indeed slowed the process of small farmers' exiting farming, but not halted it. In order not to be squeezed out of agriculture, the part-time and absent small farmers could raise their income by leasing out their irrationally and polyopologically used land for other farmers to achieve economies of scale, or they themselves could lease in such land to become full-time large farmers, forming part ownership. Indeed some full-time small farmers, including African Americans who are the weakest of this group, have succeeded in becoming competitive large farmers by renting in a part of land. But in general only old and single female small farmers are willing to lease land out. Even the US Department of Agriculture which has been trying to help small farmers to acquire land and increase farm size, has stuck to the way for them to purchase land, and neglected to promote leasing. On the other hand, protectionism and consequent overproduction have also persisted in the USA. (For details, see Zhou, Jian-Ming 2001: 313-32, 370-84). Such phenomena exist in Canada too (Zhou, Jian-Ming 2001: 397-8).

(II) The 1996 Farm Act of the USA has correctly started non(or much less)-trade-distorting decoupled subsidies production flexibility contract (PFC) which was replaced in the 2002 Farm Act by direct payments (which are tied to the ownership of land on the fixed historical acreage and yields, not based on current production or prices, with fixed payments; paid to the real operator - owner or tenant; operators can choose to produce zero but must prevent soil degradation; participation is voluntary). But the trade-distorting measures are kept, such as (1) coupled subsidies counter-cyclical payments (CCPs), loan deficiency payments (LDPs), marketing loan gains (MLGs), marketing loans and marketing assistance loan program, etc. (which are linked to market prices), (2) export aids (to be phased out by 2013), (3) import restrictions, and 4. price supports which continue to affect other and especially developing countries. (ERS-USDA 24 February 2006). The USDA's proposals on 31 January 2007 for the 2007 Farm Act kept coupled payments (USDA 1 February 2007).

The 2008 Farm Bill 'extends the strong safety net for farmers, maintains programs authorized in the 2002 Farm Bill with minor changes, preserves the non-recourse marketing loan program, a fundamental piece of the farm safety net, and continues the price-based counter-cyclical program, which provides assistance when prices decline'. (US House Agriculture Committee 9 May 2008)

The 2008 Farm Bill was vetoed by President George W. Bush (21 May 2008) with the following main reasons.

'It continues subsidies for the wealthy and increases farm bill spending by more than \$20 billion, while using budget gimmicks to hide much of the increase. It is inconsistent with our objectives in international trade negotiations, which include securing greater market access for American farmers and ranchers. It would needlessly expand the size and scope of government. Americans sent us to Washington to achieve results and be good stewards of their hard-earned taxpayer dollars. This bill violates that fundamental commitment.

'At a time when net farm income is projected to increase by more than \$28 billion in 1 year, the American taxpayer should not be forced to subsidize that group of farmers who have adjusted gross incomes of up to \$1.5 million. When commodity prices are at record highs, it is irresponsible to increase government subsidy rates for 15 crops, subsidize additional crops, and provide payments that further distort markets. Instead of better targeting farm programs, this bill eliminates the existing payment limit on marketing loan subsidies.

'Now is also not the time to create a new uncapped revenue guarantee that could cost billions of dollars more than advertised. This is on top of a farm bill that is anticipated to cost more than \$600 billion over 10 years. In addition, this bill would force many businesses to prepay their taxes in order to finance the additional spending.

'The bill also contains a wide range of other objectionable provisions, including one that restricts our ability to redirect food aid dollars for emergency use at a time of great need globally. The bill does not include the requested authority to buy food in the developing world to save lives. Additionally, provisions in the bill raise serious constitutional concerns.'

However, the US House Agriculture Committee (22 May 2008) announced that ‘Congress Overrides Presidential Farm Bill Veto, 14 of 15 Farm Bill Titles Enacted into Law’ (with the exception of the Bill’s trade title to be added later on).

(III) Higher prices of biofuels have induced US farmers to sell corn (maize) for biofuels.

In the USA, there were only 59 ethanol factories in 2001. But after the 11 September 2001 attacks, as the country would like to reduce its rely on the petroleum under the monopoly and oligopoly of the exporting countries, the number increased to 119 in 2007, and 86 are being built. (Shiwang 25 May 2008)

Accordingly, the price of corn grew to \$5.5 per bushel in 2008, over two times that in 2006, in Iowa, one of the largest states in corn production and export. More and more farmers sell corn for ethanol, rather than for export. The 28 ethanol processing factories there consume one fourth of the corn output of the state, which would reduce its export by at least one half in the coming years. (Shiwang 25 May 2008)

In the USA, in 2007, the corn planting area was estimated as 9,360 acres (3787.86 ha), the largest since 1944, and the corn output grew to 12.5 billion bushels. But its price also increased to \$3.5-3.6 per bushel. Why did not the higher output of corn reduce its price? This was mainly because more corn has been used for ethanol. When the petroleum price is at \$50 per barrel, the cost of producing ethanol from corn can be matched. As the current petroleum price is over \$100, the profit rate of producing ethanol from corn is so huge as over 50%. Moreover, the ethanol firms have enjoyed both tax reduction and subsidies by the US government. (Shiwang 25 May 2008)

The USA is the largest biofuel producing country of the world. Its annual output of ethanol was 4.2 billion gallons in 2005, 8 billion gallons in 2007, replacing 2% of its annual amount of petroleum usage. In 2030, 30% of the US gasoline in use would be replaced by biofuels, and the amount of the biofuels would reach 60 billion gallons. This amount would satisfy the current annual growth rate of the petroleum usage of 1-2%, so that the country would only need to keep the petroleum import quantity at the present time, and its petroleum safety could be guaranteed. (Shiwang 25 May 2008)

Currently, the export of corn by the USA holds 75% of the global export amount. But in 2008, as one fourth of the corn would be used for ethanol, its corn export would be decreased by 48%. Within the coming five years, one third of the corn would be used for ethanol. This has been regarded as one of the main causes of the global price rise of corn. (Shiwang 25 May 2008)

As the price of corn grew faster, more and more farmers have converted land from soybean to corn. In the recent years, the area of soybean production has shrunk by 15.6%. This has led to the global price rise of soybean too. As soybean is the main forage, its price rise has brought up the prices of meat, egg, and milk. (Shiwang 25 May 2008)

(IV) Higher prices of food and biofuels have also induced farmers to use the idled land, the environmentally sensitive land, and seek land abroad.

As crop prices remain high, farmers and other landowners are working to expand their output and take advantage of big profits for wheat, corn and soybean. The boom is creating pressure to begin farming on land enrolled in US environmental programs intended to rebuild native prairie and wildlife habitats. The USA is the world's top wheat exporter. (Wagner 14 May 2008)

In North Dakota, some landowners are now farming land that has been left idle or enrolled in conservation programs launched in 1985. (Wagner 14 May 2008)

A few years ago, it was more profitable to leave that land idle when wheat prices were \$3 or \$4 per bushel. Now the prices are at \$8, \$9, \$10, it is more economical to use that land to grow a crop. In North Dakota and other states, the challenge is to find good farmland that is not already being used for agriculture or for other ends. The push to expand US farmland began in 2007 and is picking up steam. In 2007, the increase in the crop prices was 20-30%, but only 1% in land. (Wagner 14 May 2008)

One of the biggest possible sources of new farmland is the 14 million ha held in a environmental program known as the Conservation Reserve Program. The federal program is to pay

out nearly \$2 billion in 2008 to landowners in exchange for planting grass, shrub or trees to benefit the local environment. Advocates say the effort combats soil erosion, improves air and water quality, and provides habitats for native birds and other wildlife. In 2007, some members of the 10-year contracts of the program came up for renewal, but scores of farmers in the grain-producing states decided to leave the program and begin farming wheat, corn or other crops. North Dakota lost more than 165,000 ha in conservation, more than any other state in the country. Thus the positive impacts that were all funded by taxpayers over the past 20 years are disappearing, are being washed away in a rush for new sources of energy via biofuels. (Wagner 14 May 2008)

According to Bruce Babcock, Director of the Center for Agricultural and Rural Development at Iowa State University, one alternative to pulling more land out of conservation is to look outside the country for potential farmland elsewhere, especially Brazil, Russia and parts of sub-Saharan Africa. He says Brazil alone has the potential to develop up to 100 million ha in new cropland. (Wagner 14 May 2008)

A secret report of the World Bank, written by its senior economist Don Mitchell, completed in April 2008, but leaked to *The Guardian* in July 2008, estimates that the basket of food prices examined in the study rose by 140% between 2002 and February 2008. Higher energy and fertilizer prices accounted for an increase of only 15%. Rapid income growth in developing countries has not led to large increases in global grain consumption and was not a major responsible factor. Even successive droughts in Australia have had a marginal impact. Biofuels have been responsible for 75%. Biofuels derived from sugarcane, which Brazil specializes in, have not had such a dramatic impact. Instead, the EU and US drive for biofuels has had by far the biggest impact on food supply and prices. The figure emphatically contradicts the US government's claims that plant-derived fuels contribute less than 3% to food-price rises. (Chakraborty 4 July 2008)

‘Without the increase in biofuels, global wheat and maize stocks would not have declined appreciably and price increases due to other factors would have been moderate’, says the report. (Chakraborty 4 July 2008)

The report argues that production of biofuels has distorted food markets, as it has diverted grain away from food for fuel, with over a third of US corn now used to produce ethanol and about half of vegetable oils in the EU going towards the production of biodiesel; and has also sparked financial speculation in grains, driving prices up higher. (Chakraborty 4 July 2008)

The author perceives that in order to solve this problem, progress in the rural facilities should be speeded up, i.e., the present technology of using non-edible stuff for biofuels should be developed into commercially applicable as soon as possible.

The institutional changes should also be made. The USA has the largest per country area of cultivable land in the world, as it reaches 197,450,000 ha, accounting for 13.15% of the total of the world. Its per capita cultivable land is 0.7 ha, 2.9 times that of the world. (Shiwang 25 May 2008). The author holds that if it could abolish its huge protectionist subsidies as the rest of the world has been demanding in the WTO Doha negotiations, and as its government has accepted on 19 September 2007, many farmers would have no incentive to produce so much as they have done so far. Thus their idled or under-producing normal land could be used by the true full-time farmers with less or no subsidies for sufficient production of food, and biofuels from non-edible stuff, or even from food crops in case the global demand for food by human consumption has been satisfied, without using the environmentally sensitive land or seeking land abroad. This would be applicable to the EU, Brazil, and all the other countries which want to produce biofuels.

Once the present technology of using non-edible stuff for biofuels has been developed into commercially applicable, i.e., the rural facilities have been advanced also in this aspect, but the USA, EU, Brazil, etc., still turned food crops into biofuels when the global human food consumption need has not been matched, then the irrational and polyopolistic land use would clearly be the unique cause of the food shortage at least in the USA and EU as their rural facilities are much more advanced than in Brazil.

However, even at the current stage, i.e., before the present technology of using non-edible stuff for biofuels has been developed into commercially applicable, the irrational and polyopolistic land use could also be regarded as the unique cause of the food shortage at least in the USA and EU, as they could abolish protectionist farm subsidies right now, so that many farmers would have no incentive to overproduce. Thus their idled or under-producing normal land could be used by the true full-time farmers with less or no subsidies for sufficient production of food, and biofuels from food crops in case the global demand for food by human consumption has been satisfied. The irrational and polyopolistic land use could be regarded as the most fundamental (although not the unique) cause of the food shortage in Brazil as it could use the large areas of idled farmland for biofuels.

(V) Internationally neglected laws for efficient and competitive land use in the USA. It is claimed that the USA is the most liberal and democratic country of the world. But the author has dug out the following laws. Covering all the states, (1) there is a time effect on turning occupied private property into ownership - adverse possession, which means that if a private person has occupied a private property (e.g., farmland) without agreement of the owner, while the owner has not sued the occupier during a limited period, then this property will belong to the occupier. For example, in Texas, if the owner of a farmland has not sued the farming occupier within 10 years, he will lose his right to claim it and the occupier will own it legally (Civil Practice & Remedies Code). (2) There is 'squatters' rights' law for turning occupied public land into private ownership, which denotes that if a person (squatter) has occupied a public land for over 25 years and paid taxes, the Secretary of the Interior may issue a patent for 160 acres (64.75 ha) of such land upon the payment of not less than 1.25 dollars per acre (0.40 ha) (US Code Collection).

These laws are still exercised. Their main significance is to encourage the efficient use of the idled private and public land resources. Their main imperfections are that (1) If the private landowner has found that his idled land is being used by another farmer without his agreement within the limitations period, he may sue to get the land back, while still idling it. (2) Even if an adverse possessor or squatter has successfully gained ownership of a private or public land, he may idle or under-utilize it later on, without leasing it to those farmers who wish to produce sufficiently on it. (3) People in general may not wish to lose private property including farmland even if they do not use it.

(VI) Monopoly and oligopoly of the giants in the inputs (backward) and outputs (forward) linkages around agriculture exist.

Li Zhou of the School of Agricultural Economics and Rural Development of the Renmin University of China states that in the USA, the firms in the inputs (backward) and outputs (forward) linkages around agriculture usually belong to one big company, or have associate relationship (e.g., the Monsanto Company and the Cargill Company have partnership). Farmers are in the milled and clamped by them. Farm credits; supply of seeds, chemical fertilizers, pesticides, machinery, and animal forages; livestock husbandry, slaughter and processing; cereal purchase and processing; agricultural product sales, many famous trademarks of industry-processed foods, etc., are concentrated into and controlled by these food giants. (Zeng, Xiang-Rong 17 June 2008)

If a corn farmer wants to buy seeds, then within 100 square miles around him, he can only find the Cargill Company which only sells products of the Monsanto Company. If he did not use its seeds, then he could not find a nearby market to sell his corn. If he needs seed credits, he has to go to a bank of the Cargill Company, with the conditions to buy the seeds of the Monsanto Company and chemical fertilizers of the Cargill Company. At the harvest, if he did not accept the purchasing price of the Cargill Company, then he could only feed it to his pigs. But if he wished to sell his pigs at high price, he could only find the Cargill Company to buy them at its low price. (Zeng, Xiang-Rong 17 June 2008)

If he did not farm anymore, but go to live in city, then he could not escape from the control of the food giants even there. The locally produced coarse oat is no longer available. The unique corn flakes are industry-processed ones made of the flour of the Cargill Company, and the other

foods are also associated with it, since all the farmers who did not accept the production methods designated by it at this locality have been bankrupt. The prices of the corn flakes in the shops are so high, because the big companies can always create short supply in the market. (Zeng, Xiang-Rong 17 June 2008)

Farmers' share of the consumer food dollar has been decreasing. Consumer food dollar is an indication of the income shares by different activities in one dollar spent on food by consumers. In 1910, 40% of a consumer food dollar went to farmers, 15% to the inputs (backward) linkage, and 45% to the outputs (forward) linkage. (Zeng, Xiang-Rong 17 June 2008). In 1997, 21 cents to farmers, while 79 cents to the marketing-related activities, including packaging, advertising, transportation, and the labor used by assemblers, manufacturers, wholesalers, retailers, and eating places (WFRP 1999). But in 2007, only 5% went to farmers (Zeng, Xiang-Rong 17 June 2008).

Moreover, in the current global food supply shortage crises, most profits from the skyrocketing rise of food prices have been taken by the giants in the inputs (backward) and outputs (forward) linkages around agriculture, rather than by farmers, as condemned by the World Development Movement. According to the UK media, during December 2006 – February 2007, the net revenue of the Monsanto Company was 0.543 billion dollars. But during December 2007 – February 2008, it jumped to 1.12 billion dollars, 2.06 times of the former. In the same comparable periods, the net revenue of the Cargill Company leaped from 0.553 billion dollars to 1.03 billion dollars, 1.85 times of the precedent, while that of the US chemical fertilizer giant Mosaic Company from 0.0434 billion dollars to 0.5208 billion dollars, 12 times of the previous one. (Wang, Lei 12 May 2008)

Correspondingly, most farm subsidies by the US government have been taken by the food giants in the inputs (backward) and outputs (forward) linkages which control agriculture. For example, during 1995 – 2002, farm subsidies amounted to 114 billion dollars, on average 14.25 billion dollars per year. But 80% of them went to these food giants. (Zeng, Xiang-Rong 17 June 2008)

Therefore, according to Li Zhou, the US government has been subsidizing these transnational food giants, together with some other developed countries, to distort the global systems of agricultural production and services (Zeng, Xiang-Rong 17 June 2008).

Similarly, about 1,000 small farmers of the Via Campesina (International Peasant Movement), men and women from 25 different countries and 12 Indonesian provinces gathered in Jakarta to claim the right to farm their land, the right to eat and to feed their families and communities, in a five-day International Conference on Peasant Rights aiming at attracting world attention to the fate of small producers. They declared that 'The current food and environment crisis are the outcome of extensive farming, **food chain control by transnational companies** and food market liberalization. This is destroying the environment, replacing family farms by large agricultural estates. Food is now in the hands of investors and speculators. Such policies have left millions of farmers without a proper income and the world population in a global food crisis.' (Via Campesina 21 June 2008)

The author hereby appeals to abolish the monopoly and oligopoly of the food giants in the inputs (backward) and outputs (forward) linkages around agriculture (although this is not his research field). One approach would be to separate them into more independent companies.

The farm structure of Canada is quite similar to that of the USA.

II. In Oceania

There are also irrational and polyopolistic land use and irrational production abandonment by part-time and absent small farmers in Australia (Cornhill 21 April 2004. Pyne 19 October 2004) and New Zealand (Payton 29 October 2004).

The governments of Australia, New Zealand, Canada and the USA want to help full-time small farmers to get more land, but they may not have the worry of losing food basic self-sufficiency (except for temporary loss due to natural disasters) because the earlier immigrants had formed the largest farms which could easily feed their small populations and compete with other

countries. That is why protectionism is generally not implemented in New Zealand and Australia (see Table 1); its root in the USA is political because farmers want more income and politicians need more votes (Francis 21 October 2004); Canada is similar to the USA. The later part of the book will propose solutions for the USA.

The above evidences have shown that the irrational and polyopolistic land use by able-bodied part-time and absent small farmers has indeed been a global problem under both public and private land ownership, with both traditional and modern agriculture, on both fragmented small and consolidatorily enlarged land (land consolidation has been made in many Western European countries, Japan, Taiwan Province of China, etc.), in both low and high income economies, at both stages of food under-self-sufficiency and overproduction, and within both developing and developed countries. Hence a global *second land reform – land use reform* – for rational and competitive land use, the environment improvement, and poverty reduction is necessary.

Section 8 Challenges to the Assertions of Schultz and Negligence of Hirschman

Accordingly, this paper challenges Schultz's assertions: (1) small farmers are rational; (2) low income countries saddled with traditional agriculture do not have the problem of many farmers leaving agriculture for nonfarm jobs; (3) part-time farming can be efficient; (4) economies of scale do not exist in agriculture; and (5) investment in human capital counts much more than institutional changes and is the key to agricultural growth (for details, see Zhou, Jian-Ming 2008: 11-23, 97-110). It indicates that Hirschman has ignored that this obstacle has hampered the linkage effects (for details, see Zhou, Jian-Ming 2008: 111-5)

Section 9 Effective and Appropriate Proposals

Proposal (I) Give full-time farmers access to the under-producing land beyond family consumption need of the part-time and absent farmers, by creating a Dual Land System (where the farm is larger than for family consumption). A landowner may keep a part of his land as *land for family consumption* (as an economic buffer without relying on buying foods in the market, also for practicing farming skills as a technological buffer and returning to agriculture once lost off-farm jobs as a social buffer) even if he does not produce sufficiently on it (the criterion for sufficient production may be determined and adjusted according to each country's conditions, and differ from 40% of the normal output as set up in the Italian law of 4 August 1978, e.g., it could be 70%). The rest of the land is *land for market*. If nobody would like to lease it in, the landowner may keep it even without sufficient production, so that overproduction could be prevented. But if other farmers, without being forced by any one, merely out of their own economic considerations, would like to lease it in so as to achieve economies of scale, reduce costs and become viable or more competitive, the owner could not refuse even at low rents, so that the irrational production abandonment could also be avoided. The minimum lease term should be determined according to the local conditions and the nature of the crops. Having rented in contiguous parcels of different owners, the tenant would have the right to remove the boundaries and join parcels together so as to eliminate fragmentation (which is also a difficult and unsolved task under private land ownership), with the original boundaries recorded in the cadastre and a map and shown by field signs. Once the leasing contract is over, the owner has the right to withdraw the land. But if he does not produce sufficiently on it for maximally one year, while other farmers wish to lease it in for so doing, he could not decline. If afforded, the state may provide a minimum living standard welfare to every rural (and urban) resident who would have to compete in the market to earn more; and a decoupled direct subsidy to the real land operator (owner or tenant). The state should set up a ceiling of chemical fertilizer, pesticide and herbicide per ha and inspect its application so as to protect the interests of the landowners and promote green products.

Proposal (II) Convert the environmentally sensitive farmland back to the nature obligatorily forever once a country has encountered constant overproduction. The EU (and some other developed countries) regards the highly productive land as the cause for overproduction and has set aside a part of it from cereal production on a *quasi-compulsory* basis, while setting aside the lowly productive land only on a voluntary basis. But the author finds that the true cause is

protectionism without which farmers would have no incentive to overproduce even if much highly productive land is available for farming. Thus the EU should phase out protectionism, and make the non-environmentally sensitive cultivable land (no matter whether highly or lowly productive) available for full-time farmers to achieve economies of scale, while converting the environmentally sensitive farmland (both highly and lowly productive) permanently back to the nature (forests, lake land, grass land and wet land) beyond set-aside which is only temporary. Its landowners should not produce cereals, but could still pursue production of fruits, vegetables, livestock, fishery, afforestation, processing of agricultural products, transportation, rural tourism and other off-farm activities. Hence full-time large farmers could be further strengthened, overproduction of cereals reduced, multi-functionality of other agricultural and rural sectors promoted, and the environment improved. Especially, the full-time farmers could increase farm size, achieve economies of scale, reduce costs, become viable or more competitive, hence fully playing their entrepreneurship to produce for the national and global markets, without seeking protectionist subsidies or foreign aid.

They would, without affecting private land ownership, simultaneously reach eight aims: (1) minimize/abolish/prevent protectionism, while (2) avoiding overproduction and (3) irrational production abandonment; (4) boost competitive full-time large farmers as entrepreneurs, whereas (5) not crowding part-time and absent small farmers out of agriculture; (6) reach/maintain basic self-sufficiency in cereals, meanwhile (7) promoting multi-functionality of other agricultural and rural sectors and (8) improving the environment. They would be useful also for public land ownership. Hence launching a second land reform – land use reform. (For detailed explanations of these Proposals, see Zhou, Jian-Ming 2008: 133-44)

Section 10 Potential Global Relevance

The implementation of the author's Proposals would promote fraternity and fair competition among nations of the world.

I. These Proposals would be crucial for the EU (and most other economies under private land ownership such as Japan, South Korea, Taiwan Province of China, Switzerland) to avoid protectionism without losing agriculture. For decades, developing countries have had two main types of problems - their own and agricultural protectionism from the developed nations. The author's Proposals are relevant to them. But even if they have resolved this microeconomic root, the protectionism of the developed nations would still make their agriculture less or un-profitable, hence continuing the inequality between the developed and developing countries. Moreover, protectionism in agriculture of the developed nations and that in industry and services of the developing countries are interrelated - if the developed nations could not abolish their protectionism in agriculture then the developing countries would not do their part in industry and services in the WTO negotiations. But in order to abolish agricultural protectionism, the developed nations would have to prevent irrational production abandonment, otherwise protectionism would never be ended. The author's Proposals could just resolve this microeconomic root also in the developed nations, so that the abolition of their agricultural protectionism would be possible, hence also the industrial and service protectionism of the developing countries.

(I) In particular, due to no official solution to avoid the irrational production abandonment, the EU-27 has no plan on when to adopt a full decoupling, and has announced to cut the budget on agriculture by only 2-4% during 2007-13, rather than 50% as itself proposed in 2005 and requested by the WTO, as mentioned above. It is thus imperative for the EU to present these Proposals to the whole EU for a democratic discussion and eventual adoption.

(II) The EU has requested the CEE countries to postpone free movement of their cheap laborers into the Western EU areas up to seven years after the accession, worrying that they may easily take jobs away from the Western EU workers. Most of the CEE countries have agreed on a reciprocal basis vis-a-vis the Western EU Member States (Enlargement 14 June 2002), hence dividing the enlarged EU. The Western EU farmers have been actually allowed to lease in land in CEE freely, but not vice versa at the same extent. The author, however, has discovered that in the agricultural sector, the reality and trend in the world as well as in the EU is that able-bodied farmers

are more interested in earning higher off-farm income, so that allowing the full-time farmers from CEE to lease in the irrationally and polyopolistically used land of the able-bodied part-time and absent farmers of the Western EU would not crowd them out of agriculture. In fact, there has already been an agricultural labor shortage in some parts of the Western EU, e.g., the Italian agricultural trade unions have demanded the Labor Ministry and Parliament to adopt a law to permit hiring workers for its agriculture from outside the EU-15 with possible priority to the accession countries (Bani 8-11 April 2002). The competition among the Western and CEE full-time farmers in the leasing markets in both the Western and CEE EU areas would be mutually constructive. Therefore, at least in this sector, there should be no harm for the Western EU to allow free labor movement from CEE immediately (or through a much shorter transition period) after or even before the accession, hence increasing fraternity and fair competition between the Western and CEE parts of the EU. The author has raised this proposal in (Zhou, Jian-Ming 5-7 June 2002: 20) and later publications, and emailed it to the policy-makers in the Commission and Member States of the EU.

The Italian government lifted all employment restrictions to the immigrants from the new EU Member States in 2007 (Bo, Yuan 23 November 2007). France partially opened its job markets in May 2006 to eight Eastern European countries, i.e., the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia which joined the EU on 1 May 2004. It announced on 28 May 2008 to fully open its job markets on 1 July 2008 to them (Bulgaria and Romania which joined the EU in 2007 are in the waiting list). (Yao, Li 30 May 2008)

Of the EU-15, Austria, Belgium, Denmark, and Germany still have not fully opened their job markets to the Eastern European countries (Yao, Li 30 May 2008). The author hereby appeals to them to adopt his proposal.

II. These Proposals would be useful to the USA which has been mainly blamed for the failure on 24 July 2006 to reach an agreement in the WTO Doha negotiations due to its shortage in willingness to significantly reduce farm subsidies.

Scenario 1. Currently the USA may not have the worry of losing food basic self-sufficiency (at least in cereals), and it wishes to help the poor countries, as President George W. Bush (14 March 2002) recognizes that 'persistent poverty and oppression can lead to hopelessness and despair. And when governments fail to meet the most basic needs of their people, these failed states can become havens for terror'. Hence it will be in the interests of both the developing countries and its own safety against terrorism, *to exercise a complete decoupling, while phasing out other protectionist measures, with an earliest deadline.* In so doing, production abandonment would happen, but it may not lead to the loss of national food basic self-sufficiency (at least in cereals). The basic income of all farmers would not be affected, as those who receive the decoupled subsidy but choose to neither produce by themselves nor lease the land out could keep it, and earn off-farm income, plus the unemployment social welfare; while those small and large farmers who prefer to produce could do so, and large farmers could enjoy economies of scale and low costs, to keep national food basic self-sufficiency (at least in cereals). But even under the scenario that the national food basic self-sufficiency (at least in cereals) would not be lost as a result of the production abandonment following the abolition of protectionism, the USA may still choose to adopt the author's *Proposal (I) Give full-time farmers access to the under-producing land beyond family consumption need of part-time and absent farmers, by creating a Dual Land System*, so that the full-time farmers could increase farm size, achieve economies of scale, reduce costs, become viable or more competitive to produce for the global markets (of course, the protectionist subsidies should be abolished).

Scenario 2. Following phasing out protectionism, many farmers might abandon production to the extent of threatening food basic self-sufficiency (at least in cereals), especially as the US population has reached 0.3 billion on 17 October 2006 and is still growing, demanding more food and crops for fuel. Under such circumstances, it would be necessary to adopt the author's *Proposal (I)*. Thus sufficiently producing small farms could keep land use, full-time small farmers have more

chances to become large, and large farmers be strengthened, while a basic living standard guaranteed for poor farmers.

Under either scenario, there would be no need to worry that the USA would lose food basic self-sufficiency (at least in cereals), or farmers would lose a basic living standard. Therefore protectionism could be phased out, and harmonization in the domestic and international societies reached.

For improving the environment, the USA has a conservation reserve program (CRP), which gives farmers annual rental payments to voluntarily retire environmentally sensitive cropland and plant permanent vegetation for 10-15 years (FSA-USDA 19 October 2006). The author regards it as positive, but not enough, hence his above-mentioned *Proposal (II) Convert the environmentally sensitive farmland back to the nature obligatorily forever once a country has encountered constant overproduction* under either scenario (plus joining the Kyoto Protocol as many have demanded). Its landowners should not produce cereals, but could be given a basic income support until they could earn a living through production of fruits, vegetables, livestock, fishery, planned cutting of woods with reforestation, agro-industry for processing agricultural products, transportation, rural tourism, and other off-farm activities. The non-environmentally sensitive cultivable land should be available for full-time small and large farmers to increase farm size and achieve economies of scale. Hence overproduction of cereals could be reduced, multi-functionality of other agricultural and rural sectors promoted, and the environment improved.

The situation of Canada is similar to that of the USA, hence the relevance of the Proposals.

After sending these Proposals to the US and Canadian policy-makers during December 2006 – April 2007, the author has received 39 responses reflecting their appreciation or attention during 18 December 2006 - 3 December 2007. Michael W. Yost of 13 February 2007 wrote ‘Thank you for your email of January 9, 2007, to Secretary Johanns regarding the Doha Round negotiations of the World Trade Organization. As the Administrator of the Foreign Agricultural Service (FAS), I have been asked to respond on behalf of the Secretary. We appreciate your input. As you know we are in the midst of negotiations and we are trying to reach an agreement on agriculture that will benefit the entire world by eliminating export subsidies and significantly reducing tariffs and trade-distorting domestic subsidies.’ Consequently, on 19 September 2007, the USA has agreed to accept the proposal by the Chairman of the Agriculture Committee of the WTO Falconer to reduce its agricultural subsidies to between 12.8-16.2 billion dollars (9.2-11.6 billion euros), which it had refused previously, as mentioned above. Canada has followed the suit in 2007.

III. These Proposals would be essential for China (and other countries) under public land ownership to avoid protectionism while creating a competitive agriculture.

(I) The state has been worried about many farmers’ leaving agriculture and losing food basic self-sufficiency. Since the early 2000s, the state first replaced various fees on farmers by agricultural taxes, then waved the taxes in many provinces, increased other financial and material supports (Chen & Qi 14 January 2005), and gave subsidies to farmers (ZGXWW 10 February 2005), so as to avoid many farmers’ leaving agriculture and attract part-time and absent small farmers back to farming. The state has decided to abolish agricultural taxes in the whole country and strengthen inputs to the rural areas in 2006 (ZGXWW 19 December 2005). In 2006, the state direct subsidies to farmers are 26.7 billion yuan, 102% more than in 2005, including two parts. 1. Direct subsidies for food production, 14.2 billion yuan, including an additional 1 billion yuan as direct payments in the 13 main food producing provinces (autonomous regions) as over 50% of their food risk foundation. 2. Direct subsidies for the inflation of the industrial materials for agricultural use (due to the price rises of the imported petroleum and domestic products), 12.5 billion yuan (XHW 11 April 2006. ZGXWW 19 December 2005). In 2007, the direct subsidies for food production has increased by over 6%, as 15.1 billion yuan. The direct subsidies for the inflation of the industrial materials for agricultural use have grown by nearly 130%, as 27.6 billion yuan. The total sum has augmented by almost 60%, as 42.7 billion yuan. The increased direct subsidies in 2007 were directly coupled with the output, commercial quantity (i.e., output not for

self-consumption but for sale), and quality of food. That is say, those who have produced more output, more commercial quantity and higher quality of food will get more direct subsidies. (An, Bei 21 May 2007). They brought about positive results as China has kept food basic self-sufficiency. But there are also decoupled subsidies which are given to farmers according to the area of their contracted land, even though they produce nothing, which has actually encouraged land idling (Guang, Zhou-Wan 6 July 2008).

(II) However, as many part-time and absent small farmers returned to farming, the labor shortage in the industrial and service sectors has been strengthened (Guo, Li 24 April 2005), which has resulted in rising wages and forced many Taiwanese and foreign firms to move from the Pearl River Delta to Yangtze River Delta, further to Northern (Hua Bei) and Northeasternmost (Dong Bei) parts of China, and then to Southeastern Asian countries due to their lower labor costs (TTNN 10 January 2006).

(III) Some part-time and absent small farmers did not want to return to farming. They boiled the free seeds from the government and sowed them, then showed the non-growing result to the officials so as to convince them that they could not farm. (Rui, Er 12 May 2005)

(IV) Moreover, increasing direct subsidies is not a fundamental solution to promote agriculture. During the reform period, after the growth of farmers' income, the prices of the industrial materials for agricultural use would also rise, offsetting farmers' income growth. Furthermore, China has raised its % PSE from 2% in 2000 to 10% in 2003 (the Amber box de minimis by the WTO for China being 8.5%), 7% in 2004 and 8% in 2005; and its Producer NPC from 1.01 in 1995-97, to 1.08 in 2003, 1.03 in 2004, and 1.04 in 2005 (see Table 1). Nevertheless, 'For the first time since the late 1970s, China's agro-food balance changed from a net export to net import position in 2004' (OECD 2007a: 11). In November 2006, food prices began to rise. The market purchasing prices of rice, wheat and corn on 14 August 2007 were higher than one year ago by 7.6%, 6.2% and 14.6% respectively, on average 8.4%. In April 2007, the prices of edible oil started to grow. Rapeseed, soybean, and peanut oil were more expensive on 14 August 2007 than one year ago by 44.4%, 42.6% and 35.2% respectively. Since May 2007, the price of pork increased sharply twice. On 14 August 2007, in 36 large and medium cities, it was 79.4% higher than one year ago. Accordingly, the products made of them also became more expensive. (Wang, Yang 20 August 2007). Coal, electricity, gas, water, housing, medical, education, etc., all became more costly (Dong, Fang 19 August 2007). In July 2007, the CPI (Consumer Price Index) soared by 5.6%, the highest in 10 years ever since February 1997 (OMP 14 August 2007). China has declared itself as a responsible country and not to follow the developed nations to apply protectionism. Once the subsidies have reached the WTO threshold, but many farmers still did not want to farm, then further raising subsidies would become protectionism.

(V) It was estimated that in 2006, there were still 14 million surplus laborers; and in 2006 the state wanted to achieve employment for 45 million laborers from the urban areas and the same amount from the rural areas (Zheng, Ming-Ming 15 April 2006). But the education levels and skills of the surplus farmers could not yet match the higher industrial and service requirements. Thus, in the author's view, the fundamental solution would be to encourage (though not forcing) those small farmers who prefer to earn off-farm income to do so (which could relieve the industrial and service labor shortage), and to invest in training them to be adapted to the higher industrial and service requirements, rather than attracting them back to farming, while transferring a part or even all of their inefficiently used land to the fewer full-time farmers who love farming, so that the latter could increase farm size, achieve economies of scale, reduce costs, become viable and more competitive. Evolutionarily, more and more peasants would move to the industry and services with higher off-farm income, while the fewer remaining full-time farmers would also gain from economies of scale and strengthen agriculture.

In order to do so, a pre-condition is to solve corruption, which has become increasingly serious in all fields including land use during the reform era since 1978.

Relating to the author's Proposal (I), in many areas where off-farm activities could not yet absorb enough peasants, quite a few local officials, without the majority agreement of villagers, forcibly reduced the *land for family consumption* and enlarged the *land for market* so as to obtain more fees from contracting farmers of the latter. Those peasants who could neither win the *land for market* nor find off-farm jobs had to subsist on the tiny *land for family consumption*. Some local officials also allocated more and better land to relatives or friends with favorable conditions; took farmland back before the expiration of the contract; sold or rented farmland to industry and service developers with lower than normal compensation to villagers without their prior agreement or even knowledge. In fact, there have appeared many farmers who have lost land but could not find off-farm jobs (Yu, Lan 27 May 2006). According to the Ministry of Labor and Social Security, there were over 40 million land-lost farmers in 2006. There may appear over 2 million newly land-lost farmers every year in the long run. (Liu, Xin-Wei 5 December 2006). Those who could not find off-farm jobs would have to live with the minimum living standard welfare from the government. There have been local governments, industrial and service developers who took farmland but then idled it without making construction. According to Xian-Ping Lang, the food inflation since November 2006 was mainly because many local governmental officials took money from agriculture for operations in stock exchange and land estate (Dong, Fang 19 August 2007). There have also been giants in the inputs (backward) and outputs (forward) linkages around agriculture. They forced farmers to sell them vegetables and pork at lower prices, and sold these products to consumers at higher prices, or hoarded them to sell until prices became much higher, which the corrupt local governments did not want to control. (An, Qing-Ren 22 September 2007). Thus in 1999 the then Premier Rong-Ji Zhu called not to implement the Dual Land System anymore. (Yang, Xiao-Kai 21 December 2002)

Premier Jia-Bao Wen (14 March 2006) stated that the household contracted land valid for 30 years is actually permanent, so as to prevent the illegal occupation of farmland due to corruption. However, this rigid approach, on one hand, has not effectively controlled corruption, since the local corrupt officials could still find ways to violate the land use contract without being punished. On the other hand, it has hampered the transfer of the irrationally and polyopolistically used land by the part-time and absent small farmers to the full-time farmers for more rational and competitive use, which has made it difficult for the full-time farmers to survive, that in turn has forced the state to provide more direct subsidies near or as agricultural protectionism.

In fact, in 2008, the phenomenon of idling farmland has become more serious all over the country (Guang, Zhou-Wan 6 July 2008). According to the Ministry of Land and Resources, during 1996-2004, the area of farmland reduced by over 100 million mu (6700,000 ha), on average over 10 million mu (6,700,000 ha) annually. It decreased by on average about 4 million mu (268,000 ha) annually during 2005-06. In the same period, the per capita cultivable land was below 1.5 mu (0.1 ha), only 40% of the average world level. In 2010, it may decline to about 1.4 mu (0.0938 ha). The per capita cultivable land of farm household diminished from 2.8 mu (0.1876 ha) in the Ninth Five-Year Plan period (1996-2000) to 1.96 mu - 2 mu (0.13132 ha – 0.134 ha) in the Tenth Five-Year Plan period 2001-05). (Chinese Ministry of Agriculture 26 October 2007)

In relation to the author's Proposal (II), during 1949-99, the investment by the state to forestry was totally 24.3 billion yuan, on average 0.5 billion yuan annually. In order to strengthen the improvement of the environment, it jumped to 33.9 billion yuan in 2002, 42.9 billion yuan in 2003, 51.029 billion yuan in 2004, and 55.376 billion yuan in 2005. But due to the lack of an effective control mechanism, corruption has become serious also in the forestry management. In 2001, the then Director-General of the State Forestry Administration Sheng-Xian Zhou listed a series of corrupt cases of the local officials. For example, false report of afforestation area by the Forestry Bureau of Heilongjiang Province and a county under it. Many cases of seriously destroying natural forests in the Xinjiang Uygur Autonomous Region. Embezzling and phishing funds in the projects of converting the environmentally sensitive farmland back to the nature in Sichuan Province, Shanxi Province, etc. (ZGQNZK 1 November 2006)

Since then, however, corruption has widened and deteriorated in the amount of involved money, areas, and personnel. For instance, concerning the amount of involved money, Wulateqian Banner (County) of the Inner Mongolia Autonomous Region was a poor county. But Bao-Wei Yuan, its then Director of the Forestry Bureau embezzled nearly 1 million yuan of the special funds for planting trees and grasses in just over one year. Regarding the involved areas, as converting the environmentally sensitive farmland back to the nature and other environmental improvement projects progressed across the whole country, corrupt cases increased in many places. As for the involved personnel, in the forestry field of Zhangping City of Fujian Province, job-related crimes such as graft and bribery happened in each of the passed years, and totally 41 cases including 43 persons were investigated and prosecuted, accounting for 30% of the accepted cases of the Procuratorate of the City. In the recent years, the cases of malfeasance, graft and bribery investigated and prosecuted by the Procuratorate of Lushi County of Henan Province reached 15, including 14 forestry officials being sentenced by the courts. (ZGQNZK 1 November 2006)

Cheating to get the funds for converting the environmentally sensitive farmland back to forestry, and similar funds, and grafting them into personal pockets; taking bribes to issue contracts for planting forests, and to provide licenses for cutting trees, are the main forms of corruption. They have increasingly and seriously harmed the project of converting the environmentally sensitive farmland back to the nature and other environmental improvement projects. (ZGQNZK 1 November 2006)

Therefore, to effectively control corruption is the top priority in China for the success of the economic reform under market economy in all fields.

IV. These Proposals have given an ideal direction in solving the fundamental global problems under private land ownership (also relevant to the countries under public land ownership such as China for avoiding protectionism). If all countries of the world could adopt these Proposals and allow not only nationals but also foreigners to lease in the irrationally and polyopolistically used land of their part-time and absent farmers, then resources would be more efficiently used, poverty and inequality reduced, the environment improved, sustainable rural development achieved, fair competition boosted, and fraternity among nations advanced. There has already been a successful example: China has allowed external and foreign farmers to lease in its land for agriculture, and farmers from its external regions (Hong Kong and Taiwan Province) and foreign countries (Australia, Brazil, Canada, Germany, Israel, Japan, Singapore, Thailand, the USA, etc.) have indeed done so there (see Zhou, Jian-Ming 2001: 258-9), while Chinese farmers have rented land in other countries, e.g., Hungary and Russia, for agriculture.

The author's analyses and Proposals have received 211 responses as appreciation or attention from the governments, farmer organizations, international organizations, and Nobel economics laureates of the EU, EU accession countries, Japan, Switzerland, Canada, USA; CABI, OECD, WTO; UN, CSD, FAO, IMF, UNCTAD, UNEP and World Bank during 18 February 2002 – 4 November 2008 (for the earlier 100 see Zhou, Jian-Ming 2005-06: Appendix IV-V), such as 'Unique way for a breakthrough in WTO Doha negotiations, Paramount, Core, Crucial issues; Great concern to all, Fully shares your concerns; Good analysis, Highly deserving, Great interest, Extremely interesting, Intriguing, Very valuable contribution, Very serious, Completely relevant, Thoughtful, Worthwhile, Well-written, Indeed important, Helpful, Useful, Constructive, Impressive, Admirable; Innovative, Non-conventional, Transcend the usual schemes, Novel, Inspirational; No alternatives; Appreciation, Compliments; Mandate to welcome, Warmly thank, Commend you; Make your topic to the international development agenda; Has taken full account of your theory, Encourage you to continue, We will continue to examine your ideas further, Bear them in mind when framing future policy proposals; You are a very valuable researcher; You may well be a **NOBEL PRIZE** winner'.

In face-to-face talks in 2004-05 in Brussels, Halle and Geneva, the Deputy Director-General for Agriculture and Rural Development of the EU Commission, Deputy Director of the Cabinet of the EU Commissioner for Agriculture and Rural Development, many representatives of the EU

Member States and farmer organizations to the EU and WTO widely understood and agreed with the author's analysis and Proposals, and confirmed that to resolve the irrational production abandonment while phasing out protectionism, the EU could not resume the protectionism, but would intervene with these Proposals, as no alternative has been seen. Only afterwards, did the EU agree to advance the review of significantly reducing farm subsidies from 2013-14 to 2007-08 on 17 December 2005, end export aids by 2013 on 18 December 2005, and cut farm import tariffs by 54% on 23 July 2006 as requested by the developing countries, which it dared not promise for decades in fear of the irrational production abandonment.

Having not heard any alternative to his remedy to the irrational and polyopolistic land use by the able-bodied part-time and absent farmers mentioned in this book in the various international occasions, the author is extremely happy that Commentators EA1 & EA2 (30 May 2005) so confidently conclude that 'Certainly there are inefficient land uses across the world, but not only one cause, and *certainly not only one simple remedy*'. The author has provided his explanation to 'Certainly there are inefficient land uses across the world, but not only one cause' in the above text - after the development of off-farm activities, the irrational and polyopolistic land use by the able-bodied part-time and absent (including large but particularly small) farmers has become the *most fundamental cause* (although not the unique cause) of the inefficient land use when the rural facilities are backward (such as in numerous developing countries currently) and the *unique cause* when the rural facilities are advanced (such as in many developed countries presently). Because unfortunately they have not presented any other remedy, the author is eager to know it.

Therefore the valuable comments of all distinguished readers, no matter whether specialized in land tenure or not, are gratefully solicited, especially on: (1) Whether there is another work which has provided global evidence that the irrational and polyopolistic land use by the able-bodied part-time and absent (including large but particularly small) farmers has become the most fundamental microeconomic root of the three persisting global macroeconomic problems - food under-self sufficiency, overproduction, and agricultural protectionism. (2) Any reason why these Proposals could not be adoptable by any country. (3) Any suggestions for improvement. (4) Any alternative to these Proposals. (5) How the EU, Japan, South Korea, Switzerland, Taiwan Province of China, etc., could, without adopting these Proposals, break the swing between protectionism (and subsequent overproduction) and irrational production abandonment (and consequent loss of basic self-sufficiency at least in cereals). (6) How Canada and the USA could, without adopting these Proposals, effectively help full-time small farmers to increase access to land, achieve rational and competitive land use, and abolish protectionism. (7) How numerous developing countries (including those on public land ownership such as China) could, without adopting these Proposals, reach/maintain basic self-sufficiency or food sovereignty (at least in cereals) and reduce poverty without seeking protectionism. (8) In your or other country or region, whether there are able-bodied part-time and absent farmers who are not willing to lease their under-producing land beyond family consumption need to the full-time farmers.

Bibliography

1. Abramovay, Ricardo [9-13 April 1996]: 'Agriculture, the Rural Environment and the Development Gap', in Food and Agriculture Organization of the United Nations (ed.) (1997) Rome, *Rural Development: International Workshop*.
2. AEFJN (Africa Europe Faith and Justice Network), Biofuel Watch, Carbon Trade Watch, COAG, Corporate Europe Observatory, CPE (European Farmers Coordination), Ecologistas en Acción (Spain), Econexus, FIAN, GRR, the Soya Alliance and the Transnational Institute (28 May 2008): 'Agrofuels 10%: Farmers and Citizens Ask for Scrapping the 10% Target', Press Release (<http://pr.euractiv.com/?q=node/3156>).
3. AGRA - Alliance for a Green Revolution in Africa (downloaded 4 July 2008): 'AGRA at Work', (<http://www.agra-alliance.org/section/work>).

4. Ahmed, Hedyoui; Boufaroua, Mohamed; Kherreddine, Cheikh and Mansouri, Frida (28 February – 17 March 2005): Introduction of the Land Use Situation in Tunisia, Ministry of Agriculture and Water Resources of Tunisia.
5. Ahner, Dirk (27 September 2004): Introduction of the Land Use Situation in the European Union, Deputy Director-General for Agriculture and Rural Development, European Commission, Brussels.
6. An, Bei (21 May 2007): 'The Overall Financial Direct Subsidies of the State on Industrial Materials for Agricultural Use of this Year increased by 130% over the Last Year', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20070521/n250144986.shtml>).
7. An, Qing-Ren (22 September 2007): 'Three Black Hands Which Caused Prices to Soar', (<http://www.wywxwyx.com/Article/Class4/200709/24518.html>).
8. Annan, Kofi A. (14 June 2007): 'Remarks by Mr Kofi A. Annan', *Launch of the Alliance for a Green Revolution in Africa (AGRA) at the World Economic Forum Session 'Investing in Growth: A Green Revolution in Africa'*, Cape Town, South Africa, (<http://www.agra-alliance.org/about/pr061407-speech.html>).
9. Bani, Marco Alessandro (8-11 April 2002): Introduction of the Land Use Situation in Italy, *Fifth IFSA European Symposium on Farming and Rural Systems 'Research and Extension, Local Identities and Globalization'*, the International Farming Systems Association - European Group, in Faculty of Agriculture, University of Florence, Italy.
10. Beaumont, Hans-Christian (6 March 2002): Email, Directorate-General for Agriculture and Rural Development, European Commission, Brussels.
11. Bhukuth, Augendra (22-23 November 2001): Introduction of the Land Use Situation in Mauritius, *Seminar 'Poverty and Sustainable Development'*, Organized by the UNESCO Chair, in University of Montesquieu-Bordeaux IV, France.
12. Bo, Yuan (23 November 2007): 'Chinese in Italy Mistakenly Believed the Rumor of Employment Amnesty, Several Thousands Swarmed on the Chinese Consulate to Change Passports', *ZGXWW (Zhong Guo Xin Wen Wang - www.chinanews.com.cn)*, in (<http://news.sohu.com/20071123/n253438974.shtml>).
13. Bonde, Jens-Peter (13 October 2007): Email, European Parliament.
14. Bush, George W. Bush (14 March 2002): 'President Proposes \$5 Billion Plan to Help Developing Nations - Remarks by the President on Global Development, Inter-American Development Bank, Washington, D.C.', (<http://www.whitehouse.gov/news/releases/2002/03/20020314-7.html>).
15. Bush, George W. Bush (21 May 2008): 'Farm Bill Veto Message', the White House, (<http://www.whitehouse.gov/news/releases/2008/05/20080521-4.html>).
16. Carisio, Maria and Helmold Macieira, Luciano (27 October 2004): Introduction of the Land Use Situation in Brazil, Agriculture Section, Permanent Mission of Brazil to the European Union, Brussels.
17. [Castle](#), Stephen (20 November 2007): 'Proposed Cuts in EU Farm Subsidies Raise British and German Ire', *International Herald Tribune*, (<http://www.iht.com/articles/2007/11/20/business/farm.php>).
18. Chakrabarti, Milindo (22-23 November 2001): Introduction of the Land Use Situation in India, *Seminar 'Poverty and Sustainable Development'*, Organized by the UNESCO Chair, in University of Montesquieu-Bordeaux IV, France.
19. Chakraborty, Aditya (4 July 2008): 'Secret Report: Biofuel Caused Food Crisis. Internal World Bank Study Delivers Blow to Plant Energy Drive', *The Guardian*, (<http://www.guardian.co.uk/environment/2008/jul/03/biofuels.renewableenergy>).
20. Chen, Cai-Lin (30 September 2005): 'Food and Agriculture Organization of the UN Proclaimed that 24 African Countries Need Urgent Food Aid', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20050930/n227105158.shtml>).

21. Chen, Er-Hou and Qi, Zhong-Xi (14 January 2005): 'The Central State Raised Financial Supports to Agriculture by a Large Margin and 18 Provinces Waived Agricultural Tax', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20050114/n223951229.shtml>).
22. China Daily (<http://www.chinadaily.com.cn>) (3 May 2008): 'The First Food Crisis in 40 Years Has Appeared in Japan, with the Supply of Some Foods Stopped', in (<http://news.wenxuecity.com/messages/200805/news-gb2312-588244.html>).
23. Chinese Ministry of Agriculture (26 October 2007): 'The General Situation of Chinese Agriculture', (http://www.agri.gov.cn/nygk/t20071026_911031.htm).
24. Choplin, Gerard (6 October 2004): Introduction of the Land Use Situation in the European Union, CPE - Coordination Paysanne Européenne (European Farmers Coordination), Brussels.
25. CICRED - Committee for International Cooperation in National Research in Demography (1999): *Population Dynamics in Rural Areas Freed from Onchocerciasis in Western Africa*, Paris.
26. Ciparisse, Gerard (25 February, 13 March, 13 May 2002): Emails, Land Tenure Service, Food and Agriculture Organization of the United Nations, Rome.
27. Civil Practice & Remedies Code: Chapter 16 Limitations, Sections 16.021-16.027, (<http://tlo2.tlc.state.tx.us/statutes/cp.toc.htm>).
28. Commentators EA1 & EA2 (Anonymous) (30 May 2005): Comments on an Earlier Version of the Relevant Parts of this Book.
29. Cornhill, Rob (21 April 2004): Email, Natural Resource Management, Department of Agriculture, Fisheries and Forestry, Australian Government.
30. Council Regulation (EC) No 1782/2003 (29 September 2003): (http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&numdoc=303R1782&model=guichett&lg=en).
31. CPE - Coordination Paysanne Européenne [European Farmers Coordination] (30 June 2005): Press Release, Brussels, (http://www.cpefarmers.org/w3/article.php3?id_article=65).
32. CPE-COAG - Coordination Paysanne Européenne [European Farmers Coordination] – Coordinadora de Organizaciones de Agricultores y Ganaderos [Coordinator of Organizations of Farmers and Ranchers] (20 May 2008): 'CAP 2003 "Health Check": CPE-COAG Position Regarding the European Commission's Proposals', Press Release, Brussels, (http://www.cpefarmers.org/w3/article.php3?id_article=172).
33. DEFRA - Department for Environment, Food and Rural Affairs of the UK (27 September 2007): 'Further Information: Modulation Question & Answers', (<http://www.defra.gov.uk/farm/singlepay/furtherinfo/modulation.htm>).
34. DEFRA - Department for Environment, Food and Rural Affairs of the UK (9 November 2007): Citation in [16 November 2007] 'Cut EU budget on agriculture by 50%, not merely 4% ! ! !', (http://ec.europa.eu/budget/reform/library/contributions/ci/20071116_CI_13.pdf).
35. Demarty, Jean-Luc (9 October 2007): Letter, Director-General for Agriculture and Rural Development, European Commission, Brussels.
36. Destremau, Blandine (22-23 November 2001): Introduction of the Land Use Situation in Yemen, *Seminar 'Poverty and Sustainable Development'*, Organized by the UNESCO Chair, in University of Montesquieu-Bordeaux IV, France.
37. Dong, Fang (19 August 2007): 'Prices in China Rose Sharply, and People, Officials and Scholars All Worried', *Voice of America*, (<http://www.voanews.com/chinese/w2007-08-19-voa30.cfm>).
38. EIN - European Internet Network (13 January 2001): 'China Stands Firm on Agricultural Demands at WTO Talks', (<http://insidechina.com/news.php3?id=254291>).
39. El-Ghonemy, M. Riad [9-13 April 1996]: 'Recent Changes in Agrarian Reform and Rural Development Strategies in the Near East', in Food and Agriculture Organization of the United Nations (ed.) (1997) Rome, *Rural Development: International Workshop*.
40. El Mouaatamid, Brahim (12 June 2005): Introduction of the Land Use Situation in Morocco, Centre d'Etudes et de Recherches Démographiques (CERED), Haut Commissariat du Plan (HCP), Rabat, Morocco.

41. Enlargement (14 June 2002): 'Chapter 2 - Freedom of Movement for Persons', *Progress in the Negotiations, Enlargement Website*, European Commission, Brussels (<http://europa.eu.int/comm/enlargement/negotiations/chapters/chap2/index.htm>).
42. ERS-USDA - Economic Research Service - US Department of Agriculture (24 February 2006): 'Farm and Commodity Policy: Government Payments and the Farm Sector', (<http://www.ers.usda.gov/Briefing/FarmPolicy/gov-pay.htm>).
43. EU Presidency Compromise (30 June 2003): (http://europa.eu.int/comm/agriculture/mtr/index_en.htm), (<http://register.consilium.eu.int/pdf/en/03/st10/st10961en03.pdf>).
44. European Commission (January 2002): 'Evaluation of the Impacts of the Community Measures on Land Set Aside', (http://europa.eu.int/comm/agriculture/eval/index_en.htm), (http://europa.eu.int/comm/agriculture/eval/reports/gel/index_fr.htm), Synthèse (http://europa.eu.int/comm/agriculture/eval/reports/gel/sum_en.pdf).
45. European Commission (10 July 2002): 'Mid-Term Review of Common Agricultural Policy of Agenda 2000' – MTR, (http://eur-lex.europa.eu/LexUriServ/site/en/com/2002/com2002_0394en01.pdf).
46. European Commission (June 2008): 'MAP – Brief. Monitoring Agri-trade Policy. EU Agricultural Trade in 2007 – An Update. A Net Importer Again', (<http://ec.europa.eu/agriculture/publi/map/brief8.pdf>).
47. European Commission (26 June 2003): 'EU Fundamentally Reforms its Farm Policy to Accomplish Sustainable Farming in Europe' (http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/03/898|0|RAPID&lg=EN&display=)), (<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/03/898&format=HTML&aged=0&language=EN&guiLanguage=en>).
48. European Commission (26 September 2007): 'Cereals: Council Approves Zero Set-aside Rate for Autumn 2007 and Spring 2008 Sowings', (<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/1402&format=HTML&aged=0&language=EN&guiLanguage=en>).
49. European Commission (20 November 2007): '"Health Check" of the Common Agricultural Policy - Fit for New Opportunities', (http://ec.europa.eu/agriculture/healthcheck/index_en.htm).
50. European Commission (20 May 2008a): 'Food and Farming: Health Check Will Modernize the CAP and Free Farmers to Respond to Growing Demand', (<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/762&format=HTML&aged=0&language=EN&guiLanguage=en>).
51. European Commission (20 May 2008b): 'Proposal for a Council Regulation Establishing Common Rules for Direct Support Schemes for Farmers under the Common Agricultural Policy and Establishing Certain Support Schemes for Farmers', (http://ec.europa.eu/agriculture/healthcheck/prop_en.pdf).
52. European Commission (23 June 2008): 'CAP Reform: Commission Welcomes Adoption of Reformed Cotton Support Scheme', (<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/993&format=HTML&aged=0&language=EN&guiLanguage=en>).
53. Eurostat - Statistical Office of the European Communities (last update 22 May 2008 Thursday 09:56:50 MEST): 'Price Indices of Agricultural Products, Output: Base 2000=100 (Annual)', date of extraction 28 May 2008 Wednesday 04:38:30, (http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/agric/agri/apri/apri_pi/apri_pi00&language=en&product=EU_MAIN_TREE&root=EU_MAIN_TREE&scrollto=531).
54. Eurostat - Statistical Office of the European Communities (last update 29 October 2008 Wednesday 08:43:18 MET): 'Economic Accounts for Agriculture - Indices: Volume, Price, Values', date of extraction 2 November 2008 Sunday 03:36:01, (<http://epp.eurostat.ec.europa.eu/portal/page?>

_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/agric/agri/aact/aact_eaa&language=en&product=EU_MAIN_TREE&root=EU_MAIN_TREE&scrollto=319).

55. Falconer, Crawford (30 April 2007): 'Communication from the Chairman of the Committee on Agriculture, Special Session', World Trade Organization, (http://www.agradepolicy.org/output/resource/agchairtxt_30apr07_e.pdf)

56. Feng, Tao (23 August 2007): 'Countries in the Northern Bank of the Mediterranean Sea Are Rich and Clean, But in the Southern Bank Seriously Poor and Polluted', XHW (Xin Hua Wang - www.xinhuanet.com), in (<http://news.sohu.com/20070823/n251747327.shtml>).

57. Fischer Boel, Mariann (14 May 2007): 'Nothing to Hide: the CAP at the Service of the EU', EU Commissioner on Agriculture and Rural Development, (<http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/07/306&format=HTML&aged=0&language=EN&guiLanguage=en>).

58. Fischer Boel, Mariann (14 September 2007): 'The Future of the CAP and Rural Development', EU Commissioner on Agriculture and Rural Development, (<http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/07/533&format=HTML&aged=0&language=EN&guiLanguage=en>).

59. Fischer Boel, Mariann (10 June 2008): 'A Health Check for Sustainable Competitiveness', EU Commissioner on Agriculture and Rural Development, (<http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/08/322&format=HTML&aged=0&language=EN&guiLanguage=en>).

60. Francis, Norval E., Jr. (21 October 2004): Introduction of the Land Use Situation in the USA, Agriculture Section, Permanent Mission of the United States to the European Union, Brussels.

61. Frayssinet, Fabiana (13 June 2007): 'Agriculture - Brazil: David, Goliath and Land Reform', (<http://ipsnews.net/news.asp?idnews=38161>).

62. FSA-USDA - Farm Service Agency - US Department of Agriculture (19 October 2006): 'Conservation Programs', (<http://www.fsa.usda.gov/FSA/webapp?area=home&subject=copr&topic=landing>).

63. Guang, Zhou-Wan (6 July 2008): 'The Phenomenon of Idling and Wasting Farmland Is Serious All over the Country', *Jiangxi Lun Tan (Jiangxi Province Forum)* - <http://bbs.jxcn.cn/index.asp>, (<http://bbs.jxcn.cn/TopicOther.asp?t=5&BoardID=21&id=220621>).

64. Guo, Li (24 April 2005): 'As Low Cost Expansion and Growth in Extensive Model Increase, Western China Has Encountered Labor Shortage', Liao Wang Xin Wen Zhou Kan [Liao Wang News Weekly] (<http://www.sinoeb.cn>), in (<http://news.sohu.com/20050424/n225317719.shtml>).

65. HSJ - Historical Statistics of Japan (1868-2003): Table 7-53 Self-Sufficiency Ratio of Food (F.Y.1960--2002), (<http://www.stat.go.jp/data/chouki/zuhyou/07-53.xls>), Statistics Bureau & Statistical Research and Training Institute, Ministry of Internal Affairs and Communication, Japan.

66. Huang, Pei-Zhao (7 April 2007): 'Growth in African Population Strikes Alarming Bell', *People's Daily* (www.people.com.cn), in (<http://news.sohu.com/20070407/n249265019.shtml>).

67. IFAD - International Fund for Agricultural Development (updated 19 January 2007): 'IFAD Strategy for Rural Poverty Reduction - Latin America and the Caribbean', (<http://www.ifad.org/operations/regional/2002/pl/pl.htm>).

68. International Symposium (8-11 January 2002): 'Sustaining Food Security and Managing Natural Resources in Southeast Asia: Challenges for the 21st Century', Organized by University of Hohenheim, Germany; Chiang Mai University and Kasetsart University, Thailand; International Center for Research in Agroforestry, and International Board for Soil Research and Management, Chiang Mai, Thailand (www.uni-hohenheim.de/symposium2002).

69. Jin, Jin-Zhe (8 May 2008): 'International Length and Breadth: The US Beef Disturbance Examines the Governing Ability of South Korean President Myung-Bak Lee', *China Radio International* (<http://gb.cri.cn>), in (<http://news.sohu.com/20080509/n256759214.shtml>).

70. Jing, Jing (9 April 2008): 'Overall Report: Rise of Food Prices in International Market Tests Africa', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20080409/n256186668.shtml>).
71. JSY: *Japan Statistical Yearbook 1961, 1977, 1986, 1992, 1993/94, 1997, 1999, 2000, 2002, 2003, 2005*, Statistical Bureau of Japan, Tokyo: Japan Statistical Association.
72. Johnson, D. Gale (1983): Endorsement Quote, in Schultz, Theodore W. [1964] *Transforming Traditional Agriculture*, Reprinted in (1983), Chicago: University of Chicago Press.
73. Kanda, Mohan (28-30 October 1998): 'India: Impacts of the Asian Crisis on Agricultural Trade and the Agricultural Financial Situation, Policy Reform and Labor Adjustment, and Agricultural Land Reform and Farmland Markets', *Emerging Market Economy Forum, Forum on Agricultural Policies in Non-Member Countries*, Organization for Economic Cooperation and Development, Paris.
74. Lee Myers, Steven (22 June 2002a): 'Over Objections, Duma Passes Bill to Privatize Farmland', *The New York Times*, in *International Herald Tribune*.
75. Lee Myers, Steven (22 June 2002b): 'Kremlin Land Bill Includes Ban on Foreign Ownership', *The New York Times*, in *International Herald Tribune*.
76. Lerman, Zvi (3 February 2003): Email, Department of Agricultural Economics and Management, Hebrew University, Israel.
77. LHZB – Lian He Zao Bao (www.zaobao.com) (31 March 2008): 'Negotiation with the Government Broken, Argentinean Farmers Start the Second Wave of Strike', in (<http://news.sohu.com/20080331/n256017988.shtml>).
78. Li, Teng (27 August 2007): 'Arabic Countries Rely on Import for Most of Their Food, on Average Annually 20 Billion US Dollars', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20070827/n251803240.shtml>).
79. Lin, Ru-Xuan and Leng, Tong (21 August 2006): 'As Population under Poverty in Latin America Exceeds 0.2 Billion, Neo-Liberal Economic Policies Are under Reflection', *Liao Wang Xin Wen Zhou Kan [Liao Wang News Weekly]* (<http://www.sinoeb.cn>), in (<http://news.sohu.com/20060821/n244910090.shtml>).
80. Lipton, Michael (27 September 2003): Comments on Jian-Ming Zhou's Cambridge Conference Paper (17-19 September 2003), Poverty Research Unit, Sussex University, UK.
81. Liu, Guo-Yuan (24 July 2006): 'Six Key WTO Members Decide to Suspend the Doha Round Trade Negotiations', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20060724/n244425080.shtml>).
82. Liu, Li (29 May 2008): 'Dutch Milk Cow Farmers Threaten to Destroy Milk to Protest Too Low Prices of Milk', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20080529/n257159025.shtml>).
83. Liu, Xin-Wei (5 December 2006): 'Strengthen Macro Adjustment and Control of Land, Promote Construction of Harmonized Society', Information Center of the Ministry of Land and Resources of China, (http://www.mlr.gov.cn/pub/gtzyb/tuditiaokong/zjgd/t20061205_78368.htm).
84. Liu, Ying (26 September 2007): 'Report Reveals that Agricultural Output in Africa Might Be Reduced by Half in 2020', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20070926/n252375173.shtml>).
85. Liu, Ying (15 May 2008): 'African Urban Population Swells Radically, the Life of 60% of the Urban Population Is Unstable', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20080515/n256865073.shtml>).
86. Liu, Ying (13 June 2008): 'The International Institute of Tropical Agriculture Claims to Be Able to Raise African Rice Output by Three Times', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20080613/n257485342.shtml>).
87. Liu, Tao and Gong, Wen (19 December 2005): 'The Sixth WTO Ministerial Meeting Passed "Declaration of Ministers"', *RMW (Ren Min Wang - www.people.com.cn)*, in (<http://news.sohu.com/20051219/n241016164.shtml>).

88. Liu, Hong and Su, Zhen-Xing (1 April 2002): 'Farmers Entering Cities without Finding Jobs, Causing Many Problems in Slums, Latin American Cities Becoming Unpractically Large', *Zhong Guo Qing Nian Bao (China Youth Daily - www.cyol.net)*, in (<http://news.sohu.com/32/22/news148342232.shtml>).
89. Lohe, Wolfgang (5 October 2004): Introduction of the Land Use Situation in the European Union, Agriculture Section, Permanent Mission of Germany to the European Union, Brussels.
90. Mandelson, Peter (2 December 2005): Email, EU Commissioner on Trade.
91. Mansouri, Frida (28 February. – 17 March 2005): Introduction of the Land Use Situation in Egypt (according to a Field Study), Ministry of Agriculture and Water Resources of Tunisia.
92. Mbodj, Cheikh (20 May 2005): Introduction of the Land Use Situation in Mauritania, Department of Meteorology Applied on Agriculture and Food Security, Ministry of Agriculture, Mauritania.
93. Mhashu, Sandra and Mumanyim, Emelda (28 June 2008): Introduction of the Land Use Situation in Zimbabwe, Department of Agricultural Education, Ministry of Agriculture, Zimbabwe.
94. Mikos, Philip (24 September 2004): Introduction of the Land Use Situation in the Developing Countries, EU Task Force on Land Tenure, European Commission, Brussels.
95. Mtilk, Hicham (18-19 January 2005): Introduction of the Land Use Situation in Morocco, High Commissariat of Waters, Forest and Fight against Desertification, Rabat, Morocco.
96. Observer (Anonymous) (12 May and 30 June 2006): Introduction of the Land Use Situation in Angola.
97. OECD - Organization for Economic Cooperation and Development (28-30 April 1999-7): 'Macroeconomic Overview and Recent Development in Agricultural Policies, Markets and Trade in Brazil', *Emerging Market Economy Forum, Forum on Agricultural Policies in Non-Member Countries*, CCNM/EMEF/CA(99)7, Paris.
98. OECD - Organization for Economic Cooperation and Development (2000): *Agricultural Policies in Emerging and Transition Economies 2000*, Paris.
99. OECD - Organization for Economic Cooperation and Development (2001a): *Agricultural Policies in Emerging and Transition Economies 2001*, Paris.
100. OECD - Organization for Economic Cooperation and Development (2001b): *Agricultural Policies in OECD Countries – Monitoring and Evaluation 2001*, Paris.
101. OECD - Organization for Economic Cooperation and Development (2002a): *Agricultural Policies in OECD Countries – Monitoring and Evaluation 2002*, Paris.
102. OECD - Organization for Economic Cooperation and Development (2002b): *Agricultural Policies in Transition Economies: Trends in Policies and Support*, Paris.
103. OECD - Organization for Economic Cooperation and Development (2003): *Agricultural Policies in OECD Countries - Monitoring and Evaluation 2003*, Paris.
104. OECD - Organization for Economic Cooperation and Development (2005): *Agricultural Policies in OECD Countries - Monitoring and Evaluation 2005 – Highlights*, Paris.
105. OECD - Organization for Economic Cooperation and Development (2006): *Agricultural Policies in OECD Countries 2006 – at a Glance*, Paris.
106. OECD - Organization for Economic Cooperation and Development (2007a): *Agricultural Policies in Non-OECD Countries: Monitoring and Evaluation 2007 - Highlights*, Paris.
107. OECD - Organization for Economic Cooperation and Development (2007b): *Agricultural Policies in OECD Countries: Monitoring and Evaluation 2007*, Paris.
108. OECD - Organization for Economic Cooperation and Development (2008): *Agricultural Policies in OECD Countries: Monitoring and Evaluation 2008 – At a Glance*, Paris.
109. OMP – Oriental Morning Post [Dong Fang Zao Bao - www.dfdaily.com] (14 August 2007): 'China Has Never So Truly Approached Inflation within 10 Years' (<http://news.wenxuecity.com/messages/200708/news-gb2312-443815.html>).
110. Owaygen, Marwan, J. (8-11 April 2002): Introduction of the Land Use Situation in Lebanon, *Fifth IFSA European Symposium on Farming and Rural Systems `Research and Extension, Local*

- Identities and Globalization*, Organized by the International Farming Systems Association - European Group, in Faculty of Agriculture, University of Florence, Italy.
111. Payton, Stephen (29 October 2004): Introduction of the Land Use Situation in New Zealand, Agriculture Section, Permanent Mission of New Zealand to the European Union, Brussels.
112. Petrick, Martin and Meingarten, Peter (4-6 November 2004): 'The Role of Agriculture in Central and Eastern European Rural Development: An Overview', in *Proceedings of the IAMO (Institute of Agricultural Development in Central and Eastern Europe) Forum 2004 'The Role of Agriculture in Central and Eastern European Rural Development: Engine of Change or Social Buffer?'*, Halle (Saale), Germany (<http://www.iamo.de/forum2004/>).
113. Petrikov, Alexander Vassil'evich (4 – 6 November 2004): Introduction of the Land Use Situation in Russia, IAMO (Institute of Agricultural Development in Central and Eastern Europe) Forum 2004 'The Role of Agriculture in Central and Eastern European Rural Development: Engine of Change or Social Buffer?', Halle (Saale), Germany (<http://www.iamo.de/forum2004/>).
114. Polman, Wim (13 December 2005): 'Need to Rethink Food and Agricultural Production-Centered Approach to Land Reform Based on Indian Experience', Contribution to the *E-Conference of the ICARRD - [International Conference on Agrarian Reform and Rural Development](#)*, Organized by Food and Agriculture Organization of the United Nations.
115. Pyne, Dominic (19 October 2004): Introduction of the Land Use Situation in Australia, Agriculture Section, Permanent Mission of Australia to the European Union, Brussels.
116. RMW - Ren Min Wang (www.people.com.cn) (1 August 2006): 'The Lessons Brought about by India's Food Crisis', in (<http://news.sohu.com/20060801/n244559623.shtml>).
117. RMW-HQSB - Ren Min Wang (www.people.com.cn) – Huan Qiu Shi Bao (www.snweb.cn) (9 November 2005): 'Present Situation of the Russian Rural Areas: Thousands of Villages Were Abandoned But the Restructuring of Farms Has Shown Reviving Signs', in (<http://news.sohu.com/20051109/n227437346.shtml>).
118. Rui, Er (12 May 2005): 'Economic Outlook: There Is No Harm to Stop Admitting Undergraduates for Teachers Universities', *Guo Ji Xian Qu Dao Bao (International Herald Leader - www.xinhuanet.com/herald)*, in (<http://news.sina.com.cn/c/2005-05-12/16526624409.shtml>).
119. SAPARD (2000): 'Special Accession Program for Agriculture and Rural Development' of the Candidate Countries of the European Union, European Commission, <<http://europa.eu.int/comm/enlargement/pas/sapard.htm>>.
120. Secret China (27 March 2008): 'Big Strike in Argentine, International Prices of Cereals Rise Sharply', (<http://www.secretchina.com/news/237962.html>).
121. Schultz, Theodore W. [1964]: *Transforming Traditional Agriculture*, Reprinted in (1983), Chicago: University of Chicago Press.
122. Shiwang (25 May 2008): 'Chinese Media: It Is the Business Doctrine of the Americans Which Is the Criminal Chief of the Global Food Shortage!', Feng Huang Wang (www.ifeng.com), in (<http://news.wenxuecity.com/messages/200805/news-gb2312-611039.html>).
123. Song, Xin-De (17 June 2003): 'An Overall Report: The Ecological Situation in Mexico Is Worrisome', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/84/50/news210185084.shtml>).
124. Song, Jie-Yun and Feng, Jun-Yang (18 June 2008): 'Argentinean Agricultural Crisis Becomes More and More Serious, Tens of Thousands of People Demonstrated Again', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20080618/n257580097.shtml>).
125. SYCSEEC (2002): 'Statistical Yearbook on Candidate and South-East European Countries 2002', Eurostat, Luxembourg: Office for Official Publications of the European Communities.
126. Talvik, Mai (28 September 2007): Email, Ministry of Agriculture, Estonia.
127. Thangata, Paul (8-11 April 2002): Introduction of the Land Use Situation in Malawi, *Fifth IFSA European Symposium on Farming and Rural Systems 'Research and Extension, Local Identities and Globalization'*, Organized by the International Farming Systems Association - European Group, in Faculty of Agriculture, University of Florence, Italy.

128. Thompson, Ginger (18 June 2001): 'Rural Mexican Towns on Border of Extinction – Northern Migration Is Bleeding the Heartland', *International Herald Tribune*.
129. Tian, Fan (24 June 2005): 'UK Prime Minister Blair Appeals to the EU to Grasp Opportunities and Accelerate Reform Pace', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20050624/n226063056.shtml>).
130. TTNN – Taiwan Today News Network (28 December 2002): 'Mexico Temporarily Resolves the Harbor Blocking Crisis by Agreeing with Farmers' Demands', (<http://ttnn.com/cna/021228/i08.html>).
131. TTNN – Taiwan Today News Network (10 February 2003): 'With High Purchasing Prices and Import Restrictions, Rice Price of South Korea Is Five Times That of China', (<http://ttnn.com/cna/news.cfm/030210/66>).
132. TTNN – Taiwan Today News Network (10 January 2006): 'All Kinds of Costs Have Been Continuously Raised, Multinational Corporations in Mainland China Turn to Southeast Asia', (<http://ttnn.com/cna/news.cfm/060110/100>).
133. Tuscan Region of Italy (17 May 1999): 'Piano di Sviluppo Rurale della Regione Toscana 2000-2006' [Plan of Rural Development of the Tuscan Region 2000-2006], (http://www.provincia.grosseto.it/images/pages/4452/Piano_sviluppo_rurale_0.pdf).
134. US Code Collection: Title 43 Public Lands, Chapter 25A Lands Held under Color of Title, § 1068 Lands Held in Adverse Possession; Issuance of Patent; Reservation of Minerals; Conflicting Claims, (<http://www.hg.org/redir.asp?url=http://www.law.cornell.edu/uscode/>).
135. US House Agriculture Committee (9 May 2008): '2008 Farm Bill Commodity Title: Investing in a Strong Safety Net That Ensures a Stable Food Supply', (http://agriculture.house.gov/inside/Legislation/110/FB/Conf/Title_I_fs.pdf).
136. USDA - US Department of Agriculture (1 February 2007): 'Johanns Unveils 2007 Farm Bill Proposals', (http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1UH?contentidonly=true&contentid=2007/01/0020.xml).
137. Via Campesina (21 June 2008): 'The Hidden Face of the Global Food Crisis: Massive Farmers Rights Violations', Press Release, (http://www.viacampesina.org/main_en/index.php?option=com_content&task=view&id=567&Itemid=1).
138. Viveros, Alejandra and Morrison, Lee (14 February 2005): 'Beyond the City: the Rural Contribution to Development', (<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/0,,contentMDK:20382901~pagePK:146736~piPK:146830~theSitePK:258554,00.html>).
139. Waddington, Richard and Schomberg, William (30 June 2006): 'WTO Round on the Ropes as Ministers Launch Talks', Reuters, (http://news.yahoo.com/s/nm/20060630/pl_nm/trade_talks_dc).
140. Wagner, Brian (14 May 2008): 'High Crop Prices Squeezing US Farmland Conservation Program', *Voice of America*, (<http://www.voanews.com/english/2008-05-14-voa45.cfm>).
141. Wang, Jian-Fen (23 April 2008): 'The World Food Crisis Becomes More Serious, the Rice Supply Is Restricted in the USA, while It Is Difficult to Buy Butter in Japan', *China Daily* (<http://www.chinadaily.com.cn>), in (<http://news.sohu.com/20080423/n256462303.shtml>).
142. Wang, Lei (12 May 2008): 'Skyrocketing Rise of Food Prices Endangers the Whole World, Profits of Transnational Agricultural Giants Soar by Times', *ZGXWW (Zhong Guo Xin Wen Wang - www.chinanews.com.cn)*, in (<http://news.sohu.com/20080512/n256789182.shtml>).
143. Wang, Yang (20 August 2007): 'The National Development and Reform Commission: The Present Price Rise Is Not Precursor of an Overall Inflation', *Xin Min Wang (www.xmnext.com)*, in (<http://news.sohu.com/20070820/n251676107.shtml>).
144. Wen, Jia-Bao (14 March 2006): 'Jia-Bao Wen: We Should Give Permanent Guarantee to Land Operation Right of Farmers', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20060314/n242282403.shtml>).
145. WFRP - Wisconsin Foodshed Research Project (1999): 'Your Consumer Food Dollar: How Does It Carve up?', (<http://www.cias.wisc.edu/foodshed/pubsntools/meal2.htm>).

146. WTO – World Trade Organization (22 December 2005): ‘Ministerial Declaration Adopted on 18 December 2005’, (http://www.wto.org/english/thewto_e/minist_e/min05_e/final_text_e.htm).
147. Wikipedia (2 July 2008): ‘Land Reform in Zimbabwe’, (http://en.wikipedia.org/wiki/Land_reform_in_Zimbabwe).
148. WXC – Wenxuecity (29 November 2004): ‘10 Member States of the Association of Southeast Asian Nations Declare to Formally Recognize the Complete Market Economy Status of China’, (<http://news.wenxuecity.com/BBSView.php?SubID=news&MsgID=20657>).
149. XHNA - Xin Hua News Agency [Xin Hua She] (6 April 1998): ‘The Egyptian Government Regards Idling and Wasting Cultivable Land as Illegal’, in (8 April 1998) *People's Daily (overseas edition)* (www.people.com.cn).
150. XHNA - Xin Hua News Agency [Xin Hua She] (23 April 2002): ‘Promoting Privatization Process, Russian President Putin Urges the Parliament to Permit Land Buy and Sale’, *Yang Zi Wan Bao* (www.yangtse.com), in (<http://news.sohu.com/90/86/news200578690.shtml>).
151. XHW - Xin Hua Wang (www.xinhuanet.com) (19 December 2005): ‘Foreign Media Comments on the WTO Hong Kong Meeting: China Has Become Spokesperson of Poor Countries’, in (<http://news.sohu.com/20051219/n241017608.shtml>).
152. XHW - Xin Hua Wang (www.xinhuanet.com) (11 April 2006): ‘China Increased Direct Subsidies to Food-Producing Farmers by 12.5 Billion Yuan in 2006 as over 100% in 2005’, in (<http://news.sohu.com/20060411/n242752956.shtml>).
153. XHW - Xin Hua Wang (www.xinhuanet.com) (23 June 2008): ‘South Korea and the USA Reached Supplementary Agreement on Beef Import’, in (<http://news.sohu.com/20080623/n257666480.shtml>).
154. Xin, Jian-Qiang (30 August 2005): ‘Egyptian President Mubarak Faces Hard Choices after Holding Power for 24 Years, and Wants to Do So for Another Six-Year’, *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20050830/n226823656.shtml>).
155. Xue, Liang (7 April 2008): ‘The Development of Biofuels in Brazil Has Drawn Concern and Attention Regarding the Social and Environmental Protection’, *People's Daily* (www.people.com.cn), in (<http://news.sohu.com/20080407/n256138649.shtml>).
156. Yahoo News (19 September 2007): ‘US Accepts WTO Agriculture Proposals in Trade Talks: WTO Official’, (http://news.yahoo.com/s/afp/20070919/pl_afp/wtousagriculturetrade).
157. Yang, Jun (7 September 2005): ‘Mubarak Wants to Be President the Fourth Time with Brilliant Diplomacy but Difficult Domestic Economy’, *Dong Fang Wang* (www.eastday.com) – *Wen Hui Bao* (<http://wenhui.news365.com.cn>), in (<http://news.sohu.com/20050907/n226887156.shtml>).
158. Yang, Xiao-Kai (21 December 2002): ‘China’s Economic Reforms (1978-2002)’, (<http://www.jjxj.com.cn/>), (<http://www.guancha.org/info/artshow.asp?ID=17422>),
159. Yao, Li (30 May 2008): ‘France Will Fully Open Its Job Markets to Eight Eastern European Countries’, *Guang Ming Ri Bao* (www.gmw.cn), in (<http://news.sohu.com/20080530/n257176804.shtml>).
160. Yu, Lan (27 May 2006) : ‘Chinese and Foreign Scholars Diagnose Hidden Social Diseases: “Three Withouts” Affect Social Stability’, *ZGXWW - Zhong Guo Xin Wen Wang* (www.chinanews.com.cn), in (<http://news.sohu.com/20060527/n243435361.shtml>).
161. Zeng, Xiang-Rong (17 June 2008): ‘“Food Empires” Devour All, Food Politics Is Stronger than Petroleum Trade’, *Da Yang Wang – Guangzhou Daily* (www.dayoo.com), in (<http://news.sohu.com/20080617/n257539326.shtml>).
162. ZGQNZK - Zhong Guo Qing Nian Zhou Kan [China Youth Weekly] (1 November 2006): ‘Spending Money Rashly, Profiting as Priority: How Can Forest Projects Become “Money Trees”’, in (http://www.ceceo.cn/Detail.asp?II_ID=16722&CLS=143006).
163. ZGXWW - Zhong Guo Xin Wen Wang (www.chinanews.com.cn) (10 February 2005): ‘Our Country Gave 11,600 Million Yuan as Direct Subsidies to Cereal Farming in 2004 and 600 Million Farmers Enjoyed it’, in (<http://news.sohu.com/20050210/n224283430.shtml>).

164. ZGXWW - Zhong Guo Xin Wen Wang (www.chinanews.com.cn) (19 December 2005): 'China Will Abolish All Agricultural Taxes and Strengthen Inputs to the Rural Areas in 2006', in (<http://news.sohu.com/20051219/n241029566.shtml>).
165. ZGXWW - Zhong Guo Xin Wen Wang (www.chinanews.com.cn) (25 January 2008). 'Brazilian Government Admits that the Speed of Cutting Tropical Rain Forests in Its Territory Is the Highest in the History', in (<http://news.sohu.com/20080125/n254876675.shtml>).
166. ZGXWW - Zhong Guo Xin Wen Wang (www.chinanews.com.cn) (10 April 2008): 'Under-Secretary-General of the UN: The Continuing Rise of Food Prices May Trigger Widespread Riots', in (<http://news.sohu.com/20080410/n256208789.shtml>).
167. ZGXWW - Zhong Guo Xin Wen Wang (www.chinanews.com.cn) (16 May 2008): 'US Secretary of Commerce Urges South Korea to Open Market to Import US Beef as Soon as Possible', in (<http://news.sohu.com/20080516/n256901663.shtml>).
168. ZGXWW - Zhong Guo Xin Wen Wang (www.chinanews.com.cn) (20 June 2008): 'Food and Agriculture Organization Indicates that African Rural Development Still Faces Many Restricting Factors', in (<http://news.sohu.com/20080620/n257621210.shtml>).
169. Zhang, Chun-Yan (22 September 2005): 'In Ethiopia 20 Human Beings and 70 Cows Became Delicious Meals of Hungry Lions, 1,000 people Fled Home Town', *China Daily* (<http://www.chinadaily.com.cn>), in (<http://news.sohu.com/20050922/n227027942.shtml>).
170. Zhang, Jin-Fang (23 November 2005): 'South Korean Congress Representatives Fought into a Mess, All Caused by Rice', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.wenxuecity.com/BBSView.php?SubID=news&MsgID=121763>).
171. Zhang, Nian-Sheng (17 December 2005): 'The EU Summit Closed after Bargaining, Macedonia Becomes EU Candidate', *RMW (Ren Min Wang - www.people.com.cn)*, in (<http://news.sohu.com/20051217/n241010369.shtml>).
172. Zhang, Tian and Ya, Long (25 July 2006): 'WTO Multilateral Trade Negotiations Failed and India Stated that the USA Must Be Held Responsible', *ZGXWW (Zhong Guo Xin Wen Wang - www.chinanews.com.cn)*, in (<http://news.sohu.com/20060725/n244444337.shtml>).
173. Zhao, Hui (31 May 2008): 'Economic Observation: The Latin American Economic System Works along Two Lines to Solve the Worry on Food', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20080531/n257200485.shtml>).
174. Zhao, Zhuo-Yun and Wang, Ying (16 April 2007): 'The UN Appeals to All Countries and Regions to Actively Respond to and Treat the Urban Poverty Problem', *XHW (Xin Hua Wang - www.xinhuanet.com)*, in (<http://news.sohu.com/20070416/n249479913.shtml>).
175. Zheng, Ming-Ming (15 April 2006): 'China Has 14 Million Surplus Laborers and the State National Development and Reform Commission Wants to Adjust Employment Policy', *Nan Fang Ri Bao (www.nanfangdaily.com.cn)*, in (<http://news.sohu.com/20060415/n242820771.shtml>).
176. Zhou, Jian-Ming (2001): *Sustainable Development in Asia, America and Europe with Global Applications: A New Approach to Land Ownership*, Cheltenham, UK: Edward Elgar Publishing.
177. Zhou, Jian-Ming (5-7 June 2002): 'Realizing Efficient Use and Conservation of Land under Private Ownership - A Rebutment to Nobel Economics Laureate Theodore W. Schultz', *Fifth Conference on Global Economic Analysis 'Sustainable Development and the General Equilibrium Approach'*, Organized by the Center for Sustainable Development at the National Tsing Hua University of Taiwan Province of China and the Center for Global Trade Analysis at Purdue University of the USA, in Taipei, Taiwan Province of China, (<https://www.gtap.agecon.purdue.edu/resources/download/1229.pdf>).
178. Zhou, Jian-Ming (17-19 September 2003): 'An Obstacle Neglected by Theodore W. Schultz and Albert O. Hirschman - Overcoming Inefficient Land Use in Asia, Africa, Europe, and South and North Americas', *Economics for the Future Conference*, Organized by 'Cambridge Journal of Economics' and Faculty of Economics and Politics, University of Cambridge, UK, (<http://www.econ.cam.ac.uk/cjeconf/delegates/zhou.pdf>).

179. Zhou, Jian-Ming (2008): *Realizing Rational and Competitive Land Use in Asia, Africa, South and North America, and Europe - A Critique to the Theories of Nobel Laureate Schultz and Nominee Hirschman*, Florence, Italy: Institute of Agronomy for the Overseas (IAO), Ministry of Foreign Affairs of Italy.

180. Zhou, Ke-Cheng (4 June 2008): 'The Beef Story in South Korea', (<http://zhoukecheng.blog.sohu.com/89278298.html>).