The book 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 reveals that after the first land reform of distributing land to small farmers, the irrational and polyopolistic 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, 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). It has 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.

Hirschman has ignored that this obstacle has hampered the linkage effects. Evidences in Asia, Africa, Latin America, Central-Eastern Europe and Central Asia; Western Europe; North America and Oceania are presented. Revising relevant US and Western European legislations, it provides effective and appropriate Proposals to, 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, 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.

Jian-Ming Zhou PhD in economics of European University Institute in Italy, is a post-doctoral visiting research fellow of IAO. His achievements contain 35 papers accepted by conferences in Asia, Europe, Latin America and USA; 36 publications including five by FAO, nine by EU Commission, and a book Sustainable Development in Asia, America and Europe with Global Applications: A New Approach to Land Ownership, Edward Elgar Publishing 552 pages 2001; 11 seminar presentations in four European countries; a press conference for WTO in Geneva; and consultancy for DEFRA, FAO, OECD and international journal Agricultural Economics. His analyses and Proposals have received 183 responses as appreciation/attention from Nobel economics laureates, governments, farmer organizations, and international organizations of the EU, EU accession countries, Japan, Switzerland, Canada, USA; CARB, OECD, WTO, UN, CSD, FAO, IMF, UNCTAD, UNEP and World Bank during 18 February 2002 – 7 May 2008.
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Morocco, Larache. Oued Loukkos river tributary - L. Ongaro, 2002
JIAN - MING ZHOU

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 2008
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Foreword

This powerful work written with competence and passion by Dr Jian-Ming Zhou deserves the utmost attention of the policy makers who take decisions on agriculture throughout the world.

I lack the technical expertise which is needed to take a stand in the dispute Dr Jian-Ming Zhou opens against the theories of the Nobel Prize Winner Prof Theodore W. Schultz on the rational/irrational choices of small farmers and their impact. What I am deeply convinced of is the role of institutions and legal rules in affecting the efficiency of economic activities and therefore of agriculture itself. Prof Douglas North, another great economist who was awarded the Nobel Prize years ago, has demonstrated how entire economic systems took off or declined in the past as a consequence of their respective legal frameworks.

This is the reason by which I tend to take the arguments of Dr Jian-Ming Zhou very seriously, when he suggests innovative regulations upon private land ownership, namely (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. He is convinced that by adopting these new regulations we could cope with our overproduction or food shortage without using the shield of protectionism. I am sure that his suggestions will open a discussion. But it is a badly needed one.

Giuliano Amato
Deputy of the Parliament, Minister of the Interior, and Former Prime Minister of Italy; Chairman of the Action Committee for European Democracy; Professor of Law of European University Institute in Italy and New York University of the USA

12 September 2007
Chapter 1

Rationality of Small Farmers, Pursuit of Nonfarm Jobs, and Efficiency of Part-Time Farming

I. A Critique of Schultz’s Assertions

(I) Definitions of efficiency and rationality

In *Transforming Traditional Agriculture* [1964] (reprinted in 1983 without changing views) which won its writer the 1979 Nobel Memorial Economics Prize, ‘Schultz makes the very important point that farmers in low income countries are *rational* and make *effective* use of their resources. They are poor because their resources are very limited and because the knowledge is not available that would permit them to *produce the same output with fewer resources or a larger output from the same resources*’ (Johnson 1983). According to Commentator AE2 (2003), ‘In the framework of Prof Schultz, the rationality refers to the maximizing behavior subject to certain constraints, which is nothing but standard definition of the rationality in economics’. Thus, rationality and efficiency (effectiveness) are the same for Schultz.

However, the present author’s definitions of efficiency and rationality are not the same, and he treats the maximizing behavior only as the definition of efficiency in land use and regards the non-maximizing behavior as inefficient.

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1 A first-time systematical and analytical criticism of most assertions of Schultz mentioned in this Chapter has been made in the author’s book (Zhou, Jian-Ming 2001: 11, 26-9, 76, 131, 152, 218, 244, 265, 288, 344, 373, 382, 384, 429), while this book highlights and develops it. The 2001 book has cited 763 references most of which serve as evidence against his assertions on Japan (Chapter 4 with nine features of the Japanese model), other rice-based economies under private land ownership in monsoon Asia (Chapter 5: 184-88), China (Chapters 6-7 with 13 features of the Chinese model), other rice-based economies under public land ownership in monsoon Asia (Chapter 8), the USA (Chapters 9-10 with eight features of the American model), OECD and EU in general (Chapter 11: 397-8), Central-Eastern European Countries (CEEC) and Central Asia (Chapter 11: 399-430), whereas this book summarizes these lengthy texts into paragraphs and adds proofs in West Asia, Africa and Latin America. Therefore this book is a supplement to the 2001 book in terms of the criticism of Schultz’s assertions and evidence.
According to JSY (2005: 276), self-sufficiency ratio = [volume (or value) of domestic production (vdp), volume (or value) of domestic consumption (vdc)] x 100. Thus, a country could be regarded as having achieved self-sufficiency in one product if its \((vdp, vdc) \times 100 = 100\), over-self-sufficiency if its \((vdp, vdc) \times 100 > 100\), or under-self-sufficiency if its \((vdp, vdc) \times 100 < 100\). However, this is only in absolute terms. In relative terms, if a country has reached self-sufficiency or over-self-sufficiency in cereals in absolute terms, but there are still people in hunger (without obtaining the minimum daily calorie stipulated by the United Nations), then it has under-self-sufficiency in cereals in relative terms. An example could be Brazil which has been a net exporter of cereals and reached over-self-sufficiency in absolute terms, but also possessed many people in hunger and hence not achieved self-sufficiency in relative terms in cereals. The distinction between self-sufficiency in absolute and relative terms is designed by the author. Auroi (13 October 2005) regards a basic self-sufficiency below 100% as at least 60% of domestic production. China treats it as over 90% of domestic production and has maintained it in cereals at this level (Liu & Guo 10 August 2004).

Overproduction of a product of a country shall mean the surplus of that product of that country which could not be sold internally or externally without or even with agricultural protectionism. This definition is formulated by the author as not seen in the literature. In a country without protectionism, (1) if domestic production is equal to domestic consumption, it is a competitive or true self-sufficiency; (2) if domestic production is more than domestic consumption, and the surplus is salable abroad, it is over-self-sufficiency but not overproduction; however if it is unsalable abroad, it is both

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non-maximizing behavior is inefficient but may be regarded as rational as long as it caters farmers’ basic social welfare. But if the basic social welfare of the farmers has been catered, while the farmers still do not wish to transfer the rest of the land which is not effectively used to other farmers for effective use, then a non-maximizing behavior is irrational, and the resulting production abandonment is irrational. This behavior may be ‘rational’ to the egoist and superficial interests of farmers themselves, but not so to the society’s and their fundamental interests. For example, in the waiting room of an airport at night, a passenger would be regarded as irrational if he occupied more than one seat for a more comfortable sleeping, while others had no seat at all and had to sit on the ground. A staff would be considered as irrational if he, without any special reason, occupied an office without use while others had no working space. [The division and relationship between the efficiency and rationality are implicit in the author’s book (Zhou, Jian-Ming 2001: 28), but explicit here]. A deeper analysis will be made when discussing the high income stage.

(II) At the low income economy

Schultz treats the low income countries as closed from the high wage stage or high income economy, as he states ([1964] 1983: 3-4, 11, 15): 'Farming based wholly upon the kinds of factors of production that have been used by farmers for generations can be called traditional agriculture.’ ‘A major new problem has arisen in a number of high income countries in which the agricultural sector has over-self-sufficiency and overproduction, but it would not last long, as farmers would not have incentive to overproduce unsalable surplus; (3) if domestic production is less than domestic consumption, it is under-self-sufficiency, but the insufficiency gap would be matched by imports. In a country with protectionism, when domestic costs are higher than import costs, (1) if domestic production is equal to domestic consumption, it is a protectionist or untrue self-sufficiency; since if without protectionism, it would turn out to be under-self-sufficiency, as part or all of products would be imported, while the domestically unsalable products would become overproduced, hence hidden under-self-sufficiency and hidden overproduction; (2) if domestic production is more than domestic consumption, and the surplus is salable abroad, it is both over-self-sufficiency and overproduction, because if without protectionism, part or all of exports would not be realized, and would turn to be overproduced, hence hidden overproduction; when a country has partly allowed imports, there could be 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 would be accumulated into excessive inventory, while low cost products would be imported (this could be the case of South Korea, see later); (3) if domestic production is less than domestic consumption, it is under-self-sufficiency. These classifications are formulated by the author.
been most successful in adopting and using modern factors of production. It is the problem of adapting agriculture with its high rate of increase in labor productivity to a high income economy in which the demand for farm products is of slow growth. It becomes an acute problem when the labor force required for farming begins to decline at a substantial rate and many of the farm people . . . leave agriculture . . . for nonfarm jobs. ‘But countries still saddled with traditional agriculture are not up against this particular problem. ‘Thus, the ‘related economic issues’ of ‘the relatively low rate of increase in the demand for farm products as income rises’ and ‘the adaptation of the agricultural sector to growth in high income countries’ are ‘not considered’ by him.

This book, however, stresses that at least from the early 1950s on, the low income countries still saddled with traditional agriculture have been increasingly open to the high income economy, as small peasants there would migrate to those rural areas which have entered the high wage stage, cities and abroad to earn higher income as part-time and absent farmers, thus also are up against the particular problem of adapting the agricultural sector to a high income economy. For example, although prewar Japan in East Asia was developed, its industrialization from the very beginning on was based on its imports of foods from, and exports of industrial goods to, colonies (Taiwan Province of China during 1895-1945 and Korea during 1910-45), ‘as it found that capitalistic rice-growing was a low-productivity undertaking’ in its agricultural sector, which was really ‘relatively stagnant and “sick” in the decades leading up to World War II’ (Oshima 1987: 39, 109). ‘In the prewar period, very little machinery was used in monsoon Asian rice-producing economies. Tractor cultivation was attempted, but did not meet with much success in the places where it was tried. Tools and implements were generally of the simplest type. Under such traditional technologies, rice growing in the Orient was one of the most labor-intensive types of agriculture known’ (Wickizer & Bennett 1941: 50). Therefore at the end of World War II, Japanese agriculture was a traditional one. Land reform was made during 1946-50, which distributed land from large owners to peasants with no or little land, raised their incentive for production and productivity, released peasants from agriculture to off-farm activities, which in turn gradually caused agricultural labor shortage and the use of small machinery up to 1960. Of all farm households, its full-time households accounted for 53.6% in 1946 (JSY 1961: 71), 50% in 1950, 34.8% in 1955, 33.7%

5 It would be more appropriate to call absent farmers as nominal farmers since an absentee cannot farm. They are called so just in order to reflect their psychology of not abandoning the title of farmers so as to facilitate their return to farming once having lost off-farm jobs. This explanation is not contained in the author’s book (Zhou, Jian-Ming 2001).
in 1960, and 20.5% in 1965; and of total farm household population, persons engaged mainly in farming (both those engaged exclusively in farming and those engaged in farming for more days than in other jobs) took 53.2% in 1955, 42.3% in 1960, and 38.3% in 1965 (JSY 1977: 99, 103). Schultz ([1964] 1983: 18) also cites that in Northwest Europe (Austria, Belgium, Denmark, France, West Germany, Ireland, the Netherlands, Norway, Sweden, and the UK), employment in agriculture declined by over one-fifth during 1950-59.

(III) At the high income economy

How then about the low income countries which are open to the high income economy? Schultz ([1964] 1983: 124) claims that ‘in communities where nearby off-farm jobs are readily available on both a part-time basis and a full-time basis the contributions of a human agent become divisible and part-time farming becomes possible; and it can be efficient.’

But this book emphasizes a reality as contrary to Schultz’s assertion. From the natural, economic and technological point of view, when there were few off-farm activities, rural development was at the low income economy or low wage stage, and peasants had to rely on agriculture. As population grew, they had to reclaim uncultivated normal land, then marginal land for food. As relatively easily reclaimable land diminished, shortage of land would appear, and land rent would rise as many tenants competed for land.

From the institutional point of view, under the feudal system, a few landlords owned large areas of land, while most peasants owned none or little and had to be either tenants paying exorbitant rents or laborers receiving extremely low wages. Under the centrally planned economy, land was publicly owned and collectively operated. Both systems could not bring about enough individual incentives of farmers for production. Hence the first land reform – land ownership reform - to distribute land for equitable individual ownership or individual possession of publicly owned land (which may be regarded as a quasi-ownership reform although the ownership remains public), that usually allocates land to families with a combination of good, bad, remote and nearby parcels, causing fragmented small individual farms, which could raise incentives of individual farmers (private landowners or individual holders of public land) for production, increase productivity and release surplus peasants from agriculture. This land reform is still under way in Nepal, the Philippines, South Africa, Zimbabwe, Brazil, Venezuela; Cuba, North Korea, etc., but has been completed in most other countries of the world.

However, in general, the elasticity in consumption of cereals is lower than that of non-cereal agricultural goods (cash crops, meat, fish, etc.) which in turn
is lower than that of industrial and service products [keeping in mind that certain special agricultural products (vegetables, fruits, cheese, wine, ham, fish, and even a few cereals, etc.) may only be produced in some special localities and may have a relatively high elasticity]. From an evolutionary point of view, after people have wiped out hunger and become richer, on one hand, they first tend to consume more cereals; then less cereals and more non-cereal agricultural goods; but the increase of their consumption of the latter may be limited and such consumption may even relatively decline afterwards too (in order to avoid obesity). On the other, they still have to consume certain agricultural goods including cereals. Therefore the income of the full-time (or active) cereal farmers would become lower than that of non-cereal farmers, which would in turn be lower than that of off-farm workers. This would induce many able-bodied farmers to first turn to non-cereal agricultural production, and then seek off-farm employment, which would result in agricultural labor shortage, higher wage demand and use of small machinery (which did not require more land). As the economy further enters the high income stage, and labor becomes more expensive than large machinery, it would be necessary for the remaining full-time farmers to acquire more land, use large machinery, achieve economies of scale, reduce costs, and become viable or more competitive, if the part-time and absent small farmers could either sell or lease their irrationally used land to them.

But a global problem has been that under both public and private land ownership, with both traditional and modern agriculture, on both fragmented small land and consolidatorily enlarged land, in both low and high income economies, at both stages of food under-self-sufficiency and overproduction, and within both developing and developed countries, even though land property rights have been well defined and restrictions on land sale or lease removed, many able-bodied part-time and absent small farmers earning higher off-farm income have little willingness to sell land, in order to keep it as a security (so that they could return to farming once having lost off-farm jobs) and asset (to be passed to their children), and enjoy the rural environment (for a more natural, primitive, less polluted and vacational living). The modern rural facilities similar to those in cities (car, bus, train, electricity, gas, refrigerator, tap water, washing machine, television, fixed and mobile telephone, fax, computer, Internet, etc.) have made living in the rural areas convenient. They have little willingness to lease the land out either, mainly due to low rent (the full-time farmers could not pay high rent because the revenue from production of cereals and many other agricultural goods would not be high due to their low elasticity in consumption), avoidance of possible misuse by tenants (who might apply much chemical fertilizer in order to gain a short-term high output), jealousy in
preventing neighbors from prospering, self-use for family consumption and hobby, and fear that land leased out may not be withdrawn. The higher off-farm income has made the part-time and absent small farmers unnecessary to either sell or lease out land. These are the major reasons why the free market mechanism itself could not effectively lead the able-bodied part-time and absent small farmers to transfer their irrationally used land to the full-time farmers. Actually, the higher the off-farm income, and the more stable the off-farm jobs the able-bodied part-time and absent small farmers have obtained, the less incentive they would have in selling or leasing out their land. The irrational land use by able-bodied part-time and absent small farmers tend to expand from seasonal to year-around. 

Here, the author, according to his above-mentioned definitions of efficiency and rationality, raises a hypothesis (which is implicit in his 2001 book but explicit here) that, with the same conditions (age, gender, health, diligence, education, knowledge, skills, intelligence, information, etc.) between full-time and part-time farmers, in comparison with full-time farming, part-time farming cannot be efficient in terms of land use; while that for family consumption is inefficient but can be rational (mainly as an economic, social and technological buffer), that beyond family consumption need both

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6 The author’s book (Zhou, Jian-Ming 2001: 7) shall be the first in literature to systematically reveal the irrational land use by able-bodied part-time and absent small farmers as a global obstacle. The monsoon Asia part is based on his PhD thesis defended in February 1998 in European University Institute (EUI, Florence, Italy) which received a unanimous praise of an international jury of experts: ‘We recommend the award of the PhD and congratulate the candidate on a comprehensive analysis of a highly complex and significant problem and for his carefully considered suggestion for its solution.’ It was the second PhD thesis in economics receiving the jury’s congratulations in the history of EUI. They regarded it as publishable as the Department of Economics of EUI stipulated that a thesis could be defended only after all the examiners have determined it as publishable. Indeed, even before the defense, two publishers (Edward Elgar Publishing and Ashgate Publishing) had already accepted its entirety. Edward Elgar (4 December 1997) declares that this book ‘will make a significant contribution to an important but rather neglected area’. Of 167 theses defended in the Department of Economics of EUI since its foundation in 1976 until 2 February 2001, only 13 or 7.8% had been published as books, including this one. (Zhou, Jian-Ming 2001: xxi-xxii, 24). After the defense, the thesis was revised and extended to the USA, Europe and Central Asia. Before the publication, four components had been published by FAO, and four by CABI, and various parts accepted by international conferences held by FAO, USDA, WIDER, etc., in Bulgaria, Finland, France, Greece, Hungary, Italy, Morocco, the Netherlands, Norway, Russia, Slovenia, Spain, the UK and USA respectively (e.g., the part on the USA was accepted by the USDA Second National Small Farm Conference while that on CEECs-NIS by five international conferences on transition). The book has received endorsements [see (www-e-elgar.co.uk) (www.amazon.com)], and positive
inefficient and irrational.

This is basically because full-time farmers could have more time to learn and apply modern agricultural science and technology, take care of farming and the environment, use more land to achieve economies of scale and reduce costs, and thus ‘produce the same output with fewer resources or a larger output from the same resources’ than part-time farmers. It is important to notice that even if the knowledge that would permit them to produce the same output with fewer resources or a larger output from the same resources is available, the part-time and absent farmers may not have enough time to learn and apply it, especially the modern scientific knowledge, as Schultz himself has admitted ([1964] 1983: 203-4): ‘Farm people even more than many workers in nonfarm jobs must acquire skills and knowledge drawn from science if they are to be effective in using modern agricultural factors of production’, and ‘Much of what is learned that is vocationally relevant at the time will be wholly obsolete as agriculture in the community adopts and uses ever more modern agricultural factors.’ They may not have enough energy to take care of their idled or insufficiently used land.7

But part-time (and absent) farmers may need a part of land for family consumption products (as an economic buffer to avoid relying on buying foods in the market), for keeping farming skills (as a technological buffer) and for

reviews in ‘World Agricultural Economics and Rural Sociology Abstracts’, October 2001, Vol. 43, No. 10, Abstract 6046; ‘Rural Development Abstracts’, December 2001, Vol. 24, Abstract 2480; ‘Journal of Economic Literature’, March 2002: 301-2; ‘Agricultural Economics’, January 2003, Vol. 28, Issue 1: 71-4; and ‘Quarterly Journal of International Agriculture’, February 2003, Vol. 42, No. 1: 114-6 with judgments such as ‘this path-breaking book’, ‘His approach is very broad’, ‘The discussion of these types - along with the consequences they bring with them – provides insights that can hardly be found anywhere else’, ‘The book is full of in-depth observations and analyses’, ‘It is one of the most important contributions in our time to land-tenure literature and a must for all of those working in the field’, ‘Zhou’s contribution is ‘remarkable in any case’. The author has provided consultations to FAO and OECD, and acted as a referee for Agricultural Economics’ at their invitations and been asked by ‘Contemporary Authors’ to be listed there.

7 Evidence that the part-time and absent small farmers may not have enough time and energy to learn and apply the modern scientific knowledge and take care of their idled or insufficiently used land is in the author’s book (Zhou, Jian-Ming 2001: 138-9 for Japan; 185-8 for other rice-based economies in monsoon Asia under private land ownership; 214-6, 248 for China; 383 for the USA; 397-8 for Portugal, OECD and EU in general; 416 for CEECS-NIS; 413 for Kazakhstan; 415-7 for Armenia; 418 for Georgia and Albania; 419 for Croatia; 421-2 for Slovenia; 424 for Poland). This paper will add evidence for West Asia, Latin America and Africa.

8 The points that part-time farming cannot be efficient (in comparison with full-time
survival once lost off-farm jobs (as a social buffer). Thus, on the part of the land for family consumption need, part-time farming, though inefficient compared with full-time farming, can be rational.

However, if part-time (and absent) farmers are unwilling to transfer the under-producing land beyond their family consumption need to the full-time farmers who need it for efficient use to achieve economies of scale and reduce costs, become viable or more competitive, then part-time farming is both inefficient and irrational.8 [A detailed discussion on the irrational land use by able-bodied part-time and absent small farmers in terms of the property rights and transaction costs theories including those by Coase, North, Demsetz, Furubotn and Pejovich, Laffont, Milgrom and Roberts, and Varian is in Jian-Ming Zhou (2001: Chapter 3)].

In reality, if the part-time and absent small farmers could be guaranteed with a back-up basic social welfare and provided with appropriate remuneration, then some of them (especially old ones and single females without husband who owing to physical restrictions normally carry out relatively less farm or off-farm activities and wish to earn some and even low rent) would be willing to transfer their otherwise irrationally used land in various suitable forms to the full-time farmers for effective use, yet others (particularly able-bodied ones) would still be unwilling to do so.9 As a result, the remaining full-time small farmers, largely non-viable as the economy develops into the high wage stage, could not easily get the resources irrationally held by the able-bodied part-time and absent small farmers for effective use, although the knowledge and other conditions are available to both the full-time, and part-time and absent small farmers that would permit them to produce the same output with fewer resources or a larger output from the same resources. National food security could only be kept at the subsistence level or could not even be maintained without huge government subsidies. Budget burden, unnecessary food under-self-sufficiency and import, higher domestic and international prices of agricultural goods, artificial food overproduction, agricultural trade protectionism, low competitiveness of farmers, inequitable income distribution, persisting poverty, insufficient production or idleness of farming), but that for family consumption need is inefficient while rational and that beyond family consumption need both inefficient and irrational are implicit in the author’s book (Zhou, Jian-Ming 2001: 28), but explicitly indicated here.

9 Evidence that old, and single female, part-time and absent small farmers are much more willing to lease land out than able-bodied ones is in the author’s book (Zhou, Jian-Ming 2001: 134 for Japan; 377-8 for the USA; 416 for CEECs-NIS; 419 for Croatia; 424 for Poland).

10 The author is most grateful to Ian Fraser, Ken Hulley and Nicola Owtram for their help.
land, waste of other resources, soil degradation, environmental deterioration, etc. would also be incurred. Therefore at least some (mainly able-bodied) part-time and absent small farmers are not rational to the society’s and their own fundamental interests, even if they may be ‘rational’ enough to their egoist and superficial interests. (Appendix 1.1 presents the components of the agricultural protectionism and its measurements)

II. Caveats and a Historical and Dynamic Approach

Commentator AE1 (2003) states that ‘Chayanov (1923) already demonstrates the efficient characteristics of part-time farming, family farming and small farms for agriculture in Europe, Russia and Japan at the end of the 18th century, characteristics that Schultz refers to in his 1964 book.’ It would be necessary to clarify that Schultz does not refer to Chayanov at all, but only to ‘James F. Thompson, “Part-time Farming and Resource Productivity in Western Kentucky” (unpublished PhD dissertation, University of Chicago, 1962)’ Schultz ([1964] 1983: 124, footnote 11) as the unique evidence for his assertion that ‘in communities where nearby off-farm jobs are readily available on both a part-time basis and a full-time basis the contributions of a human agent become divisible and part-time farming becomes possible; and it can be efficient.’ Therefore, Commentator AE1 may not have read his book carefully. Moreover, Thompson finds that in the 1950s part-time farming was much less efficient than full-time farming due to intrinsic reasons, rather than ‘can be efficient’. Nevertheless, the author is grateful to this comment because it may be representative of many other readers, and thus presents some caveats below.

(I) Family farming may not be equal to small farms’ farming. The author’s 2001 book has collected evidence that most of the successful and efficient large-scale farming is based on family farming (Zhou, Jian-Ming 2001: 135, 138 for Japan; 248-77 for China; 321-7 for the USA; 416-8 for Armenia and Georgia; 419 for Croatia; 422 for Slovenia).

(II) Small farms may not be equivalent to inefficiency. (1) At the low income economy, the land tenure reform for equitable individual ownership or individual possession of publicly owned land may bring huge incentives for production to farmers even upon fragmented small farms (evidence is in the author’s book Zhou, Jian-Ming 2001: 123–7 for Japan; 191-209 for China; 333-4 for the USA; 416-8 for Armenia, Georgia and Albania). (2) At the high income economy or the transition from the low to high income economy, there are also small farms whose owners or holders are full-time farmers, love farming and till
land efficiently. Of them, those who could get more land could achieve economies of scale and become competitive [evidence is in Zhou, Jian-Ming 2001: 135, 138 for Japan; 223-94 for China; 378-80 for the USA; 416-8 for Armenia and Georgia; 419 for Croatia; 422 for Slovenia (implicitly)]; while those who could not get more land would have difficulty for even survival without huge government subsidies, or also become part-time and absent farmers (evidence is in Zhou, Jian-Ming 2001: 138-46 for Japan and Taiwan Province of China; 209-22 for China; 382-4 for the USA; 414 for Poland; 416-8 for Armenia and Georgia; 419 for Croatia; this book will add evidence for Mexico).

(III) Old and single female farmers are much more willing to lease land out than able-bodied part-time and absent small farmers, as mentioned above.

(IV) Large landowners are much more willing to either produce sufficiently on their land or lease it out. Large landowners still exist chiefly in those countries (1) where the land reform has not been completed (Brazil, the Philippines, South Africa, etc.), (2) where after the land reform, small landowners gradually sold land to others who accordingly accumulated land (the USA, Canada, etc.), and (3) where the land enclosure had driven small owners to cities to be cheap industrial workers and concentrated land to some large owners (the UK). Compared with small landowners, large ones are much more willing to either produce sufficiently on their land or lease it out principally because their gains from economies of scale would exceed the costs, or their loss due to insufficient production or idling would be too high. Suppose 100 ha of land are owned by 100 persons, each 1 ha. If one produces on or leases out this small land, he may not earn much, while still bearing the potential risks the tenant might incur to his land. Thus, if he had enough off-farm income, he would prefer to neither produce sufficiently on it nor lease it out – in so doing, he would not lose much on this small land. In contrast, if 100 ha are owned by one person, his gains from either producing sufficiently on or leasing it out would be higher than his costs owing to economies of scale (which will be further dealt with later); and his loss due to insufficient production or idling would be too high. Of course, it has also happened (e.g., in Brazil) that some large landowners are rich enough and just idle or under-utilize a part of land, if they feel the market prices are not high enough for them to produce sufficiently on it, and if the tenants could not afford to pay high rents. (Therefore this book will finally propose to give full-time farmers access to any under-producing land beyond the family consumption need of the owner no matter whether he is large or small).

With the above-mentioned caveats, the following discussion will concentrate
on the inefficient and irrational aspect of the *able-bodied part-time (and absent) small* farmers (rather than putting ‘part-time farming, family farming and small farms’ in the same category as Chayanov presents) in a *historical and dynamic approach.*

The author has pointed out at the earlier part of this book that from the natural, economic and technological point of view, when there were few off-farm activities, rural development was at the low income economy or low wage stage, and peasants had to rely on agriculture. As population grew, they had to reclaim firstly uncultivated normal land, and then marginal land for food. As relatively easily reclaimable land diminished, shortage of land would appear. Relatively easily reclaimable land largely disappeared in Asia before the 1950s (Ishikawa 1967: 61), and also in many other continents following the population explosion in the post-war period, which Schultz ([1964] 1983: 179) has also recognized - ‘But good farm land is no longer around for the taking, except in a few parts of Latin America and in some areas elsewhere which are still inaccessible from lack of roads and other transport facilities’. Until then (including the end of the 18th century), whether part-time farmers were efficient or not, they would not affect full-time farmers very much since relatively easily reclaimable land was still available. But evolutionarily speaking, afterwards, the full-time farmers could not increase farm size if part-time and absent small farmers did not sell or lease out their irrationally used land (i.e., the part beyond their family consumption need).

### III. Polyopoly of Cultivable Land

Exactly because on this earth, cultivable land can no more be created, the owners and holders of such scarce resource possess a *polyopoly*, which is a term invented by the author to denote the control of a resource by many sellers in comparison with monopoly (by one seller) and oligopoly (by a few sellers). For instance, in the expansion of a city, many owners of the surrounding land may demand very high prices for selling their land. Accordingly, polyopsony means the control of a resource by many buyers in comparison with monopsony (by one buyer) and oligopsony (by a few buyers). For example, using polyopsony, many consumers of a country may boycott the imported products of another in choosing a proper English word from several (manypoly, multipoly, numerouspoly, polyopoly) proposed by the author to describe the phenomenon, and to Ian Fraser for advising the author to determine to use polyopoly. According to him, mono and oligo are originated from Greek, so as poly; in order to avoid polyopoly, o is added in between, hence polyopoly.
country. Of course, it is not the task of this book to discuss all types of polyopoly and polyopsony and analyze which should receive what kinds of social management. But the polyopoly reflected in the refusal of leasing the under-producing land beyond family consumption need by part-time and absent small farmers at low rents to the full-time farmers, is irrational and anti-market economy, could not be resolved by the free market mechanism itself, and should thus be intervened by the society (just as anti-monopoly and anti-oligopoly) in order to reach a rational and competitive land use.
Appendix 1.1

Components and Measurements of Agricultural Protectionism

Before going further, it would be necessary to briefly describe the components and measurements of agricultural protectionism here.

I. Components of Agricultural Protectionism

(I) Domestic support

i. *Green box.* Non or minimally trade-distorting, allowed by the URAA - Uruguay Round Agreement on Agriculture of 1994 as a result of the Uruguay Round negotiations of 1986-94 which established the WTO – World Trade Organization, provided through a publicly-funded government program not involving transfers from consumers; not having the effect of providing price support to producers; including general services such as research, pest and disease control, training, extension and advices, inspection, marketing, promotion, and infrastructure; public stockholding for food security; domestic food aid; direct payments to producers (exempted from support reduction commitments); decoupled income support; government financial participation in income insurance and income safety-net programs; relief from natural disasters; producer retirement programs; resource retirement programs; investment aids; environmental programs; and regional assistance programs. (URAA 1994: Annex 2)

ii. *Amber box de minimis* (e.g., coupled income support, market price support). Most trade-distorting, but allowed by the URAA as 5% of the total value of production of a basic agricultural product during the relevant year for a developed country Member; 10% for a developing country Member; and 8.5% for China, as a part of the OTDS - Overall Domestic Trade-Distorting Supports. (URAA 1994: Article 6.4)

iii. *Amber box beyond de minimis* (AMS - Aggregate Measurement of Support). Most trade-distorting, protectionism, not allowed by the URAA, as a part of the OTDS. (URAA 1994: Article 6.1)

iv. *Blue box* (direct payments under production-limiting programs). Most trade-distorting, protectionism, not capped by the URAA, but under the Doha Development Agenda negotiations for reduction, as a part of the OTDS. (URAA 1994: Article 6.5)

(II) Export subsidies. Not allowed by the URAA, protectionism. (URAA 1994: Articles 8-12)
(III) Import restrictions beyond the permission by the URAA. Protectionism. (URAA 1994: Articles 4-5)

II. Measurements of Agricultural Protectionism

(I) ‘The Producer Support Estimate (PSE) is an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, arising from policy measures which support agriculture, regardless of their nature, objectives or impacts on farm production or income. When the PSE is expressed as a percentage of gross farm receipts (% PSE), it shows the amount of support to farmers, irrespective of the sectoral structure of a given country. For this reason, the % PSE is the most widely used indicator for comparisons of support across countries, commodities and time.’ (Diakosavvas 2002: 219). Generally speaking, it includes the Green box (non- or minimally trade-distorting, allowed by the WTO); Amber box de minimis (minimum protectionism allowed by the WTO); Amber box beyond de minimis, and export subsidies (protectionism prohibited by the WTO), Blue box (protectionism under negotiations for prohibition by the WTO), and import restrictions (a part of which is protectionism prohibited by the WTO). Some green box measures are not in the PSE but in the GSSE - General Services Support Estimate which ‘is the annual monetary transfers to agriculture but not to individual producers that provide budgetary-financed expenditures for the provision of such services as research, development, training, inspection, marketing and promotion’ (OECD 2007b: 20).

Of the composition of the PSE, it is easy to know the Amber box de minimis. But it does not indicate the percentage of the Green box and those of the Amber box beyond de minimis, Blue box, export subsidies, and import restrictions. Therefore, it has not exactly shown whether a country has exercised protectionism, and if so, how much, by the WTO criteria, although it is a useful reference for this purpose.

(II) In contrast, ‘the Producer NPC [Nominal Protection Coefficient] is defined as a ratio between the average price received by the producers (including payments based on current output) and the border price’. It thus ‘measures the level of domestic market protection’. (OECD 2007b: 37, 40, 65). Naturally, the domestic market protection is positive when it is greater than 1, and negative when it is smaller than 1. The higher it is beyond 1, the higher the domestic market protection.

Table 1 reveals that in general, the higher the % PSE, the greater the Producer NPC.
Table 1 - Producer Support Estimate (PSE) (Percentage in Value of Production) and Producer Nominal Protection Coefficient (NPC) of 26 Countries, EU and OECD 1986-2006

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Chapter 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

11 The author (Zhou, Jian-Ming 2001: 7) has cited Oshima’s view (1987: 65) that the last obstacle to sustainable rural development in monsoon Asia is (fragmented) small farms, but added that the inefficient (irrational) land use by able-bodied part-time and absent small farmers (private landowners or individual holders of public land) is the cause. Here it is developed by incorporating the polyopolistic use into the cause and regarding this cause as the last or most fundamental obstacle to sustainable rural development globally no matter whether the land is fragmented and small or not.

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 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.
Chapter 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 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 Tibajjuka, 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
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-Saharan, 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 polyopolistic 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-Ghoneemy [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 Razafind Ravonona 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 Coast, 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 Mbojd (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 it 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.
Chapter 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 Maceira 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.’ (Fryssinet 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 acres12 (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

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12 1 acre = 0.40468564224 ha, 1 ha = 2.4710538 acre.
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 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

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 Vincente 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, ‘lead scholar’ for ‘Rural Poverty Report 2001’ of the International Fund for Agricultural Development (as he informs the author), asks (27 September 2003) ‘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 mu$^{13}$ (204.87 ha) of farmland.

$^{13}$ 1 mu = 0.067 ha, 1 ha = 15 mu.
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 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.
Chapter 5

Evidences in Central-Eastern Europe and Central Asia

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 polytopolistic 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
A 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 (SYCSEE 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.
Chapter 6

Evidences in Western Europe

I. At the Under-self-sufficiency Stage

(I) There has been a legislation to give right to other farmers to produce sufficiently on any under-producing land in the EU and Italy, and a similar one in Switzerland.

At the EU level, 'A number of directives affect the ownership of farmland as a farmer'. The EC Council 'Directive 1963/262 provides for the right to pursue agricultural activities on agricultural holdings that have been abandoned or left uncultivated for at least two years. No special permit is required'. (Attention should be paid to the point that at that time cultivation meant production). 'Directive 1967/531 provides for the abolition of discriminatory restrictions on the application of the law on agricultural leases. Directive 1963/261 concerns the right to take on lease any property'. Following overproduction, these directives terminated (officially on 30 July 1999 but actually in the 1980s), and the EC Council Regulation 1094 of 1988 and Regulation 2328 of 1991 decided to pay farmers to set aside a part of arable land from arable crops, on the condition that the 'Member States have to take the necessary measures to keep the land in good agricultural condition. They can make the necessary provisions for managing the land so that the environment and natural resources are protected [Article 2(3)].' (Van der Velde & Snyder 1992: 9, 13-4)

In Italy, the 'Rules for the Utilization of the Uncultivated, Abandoned or Insufficiently Cultivated Lands' of 4 August 1978, in Article 2, determines that 'Those lands whose average ordinary production in the last three years have not reached 40% of those obtained under the same cultivation, in the same period, on the lands of the same census zone, with the same cadastral characteristics, the cultural features being taken into account, are regarded as insufficiently cultivated'. Article 4 stipulates that the Regions assign such lands 'for cultivation to the requesters who are obliged to cultivate them in a single or associated form'. The Tuscan Regional law (3 November 1979) 'Norms to Realize the Law of 4 August 1978, No. 440, for the Productive Recovery of the Uncultivated, Abandoned or Insufficiently Cultivated Lands' (Article 3) further requires that
‘The town governments, should execute census and classification of the uncultivated or abandoned lands; and besides, provide its renewed annual relative lists’. ‘The censused land lists determined by the town government should be published for 30 days in the government bulletin’. (Article 4) ‘The entities who intend to cultivate such lands should attach a declaration of commitment to cultivation and a general plan of recovering and utilizing such lands to their demand for assigning such lands’ for the Provincial Commission to approve and assign the lands. After the EU met overproduction, these laws have not been implemented, but still valid; and could be exercised again if food security once more became a problem.

In Switzerland, since the Middle Ages there has been a law that any farmer can bring his cattle to graze in the privately owned pastures of the Alps, which is still valid but not applied (Lehmann 10 October 2005).

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) There has also been a legislation to oblige landowners to either use their land or lease it out for sufficient production in Germany, the UK, Denmark and still in Norway.

In Germany, ‘Previous scarcities of foodstuffs prompted the legislation to adopt provisions to help guarantee an adequate food supply by obliging farmers to cultivate agricultural land in accordance with good husbandry. If a farmer did not satisfy this legal obligation, the law provided sanctions, such as the compulsory leasing of the land to another person willing to cultivate the land in accordance with good husbandry.’ This obligation was set up in the ‘Law of Cultivating the Land’ of 31 March 1915 and removed in 1961 owing to the appearance of surplus production. (Winkler 1992: 83. Kroeschell 1982: 69)

In the UK, the Agriculture Act of 6 August 1947 demands that the owner of agricultural land bear the responsibilities of good estate management to enable an occupier of the land ‘to maintain efficient production as respects both the kind of produce and the quality and quantity thereof’ (section 10); and that the occupier of agricultural land bear the responsibilities of good husbandry to maintain ‘a reasonable standard of efficient production, as respects both the kind of produce and the quality and quantity thereof, while keeping the unit in
a condition to enable such a standard to be maintained in the future’ (section 11). The minimum lease period is one year (section 40). It renders the Minister of Agriculture the power to supervise whether these responsibilities have been fulfilled (section 12), and if not, to impose a fine and/or imprisonment on the bearers of these responsibilities (section 14), and to purchase compulsorily the land (section 16). Following the occurrence of surplus production and EC Council Regulation 1094 of 1988 on set-aside arable land, the implementation of this Act has also been relaxed (Rodgers 1992: 149).

In Denmark, the Agricultural Holdings Act of 17 July 1989 sets down that ‘Agricultural holdings and their lands must be used for agriculture, horticulture, and forestry.’ ‘Subdivision of agricultural holdings may not be carried out without a license from the land authorities. This ensures that the holdings are not split up into small enterprises, for example in case of succession.’ ‘As a general rule, only individuals may acquire agricultural holdings in the rural zones. Persons who acquire an agricultural holding in these zones must live on the farm permanently for eight years whether they actually manage the farm or not. If the area of the holding exceeds 30 ha, they must also have a training in agriculture and they must not farm out any part of the land’. ‘The person who actually manages an agricultural holding, whether it is the owner him- or herself, a tenant, or a manager, must live permanently on the holding’. ‘Landowners who wish to use their land for a purpose other than farming must obtain a permit from the many authorities that deal with the legislation mentioned above’ (the Queen, Parliament, Ministry for the Environment, Ministry of Agriculture, local government - county and municipal councils, and courts). ‘Each authority is free to refuse a permit if it feels that the landowner’s project would be harmful to the interests the legislation tries to protect.’ ‘If the yield of the land is too feeble to make farming worthwhile, the farmer must at least not use the land for other purposes’ (of course he could lease such land out). Concerning leasing, ‘The statute only requires a written contract specifying the rent and the term of the lease. It does not regulate the rent, which is solely determined by the market price.’ As a result of such promotive measures, the problem that ‘the technical and economic development in agriculture in the last decades have made most registered holdings too small for survival’ has been overcome, the farms’ ‘number has fallen and their size has increased’, and ‘most Danish farms today consist of a holding owned by a farmer who has rented adjoining land’. Adjusting to the happening of food overproduction, it ‘does not compel a farmer to cultivate marginal farmland, and he may also profit from the set-aside scheme of the EC Regulation 1094 of 1988’. (Wulff 1992: 36, 38-9, 40, 44, 46-7). The Agricultural Holdings Act of 15 July 1999 further permits owners to idle or set aside normal land. Although landowners are not
obliged to set aside land according to the government planning, possibilities of expropriation exist within the specific Danish rules on nature conservation, nature restoration and wetland restoration (the Nature Protection Act of 3 January 1992) which are not related to the EC agricultural law. (Anker 4 March & 13 May 2002)

In Norway (which has not joined the EU), the Land Act of 18 March 1955, the Act of Tenancy of 25 June 1965, and the Concession Act of 31 May 1974 lay down that a farmland must be either self-cultivated, or leased for farming even if the rent is not so high as to satisfy the landowner (of course, the owner can choose the highest rent bidder, thus a leasing market still exists; but the rent can be fixed by the Municipal Agricultural Board if there is disagreement); unreasonably high rent is unlawful; the minimum lease term is five-year; a reasonable yield must be produced; the landowner must live in the farm even though the land is leased out (so as to keep rural population); otherwise the land will be compulsorily sold; sufficient farmland is secured for active farmers, and it is possible to keep the price of farmland lower than the market price. Although these regulations have been criticized as ‘communist’, Norwegians do not want to change them. For Norway, ‘with a hard climate and marginal conditions for agriculture, development could lead to an increased movement of people from the districts to the centers and the end of agrarian activities in many districts’. ‘The legislation securing arable land for agricultural purposes has, as a whole, been successful. Use of arable land for densely built-up areas, roads, and other purposes has decreased. The aim of being self-sufficient in food has been achieved for husbandry products, most vegetables, feed grains, and half the grain used for human consumption’. (Austena 1992: 140-3, 146-7). The legislation is still applied as basic self-sufficiency in cereals has not been achieved.

Its main shortcomings of this legislation are that it may cause overproduction, plus the above-mention one, i.e., 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
strength 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

14 The author is unaware anyone else who has revealed this fundamental dilemma in the literature.
subsides), 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 polyopolistic 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 polyopolistic 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 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 \textit{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 Estonia (Estonian Ministry of Agriculture 2007: 33, 121), ‘Figure 1 shows how agricultural output, net value added and factor income changed during 2000-2006. The changes were relatively modest until 2003, although in 2004 the economic results were greatly influenced by increased support and higher selling prices, e.g. the buying-in price of milk rose 33.2%, giving agricultural producers significant additional income. Development slowed down [actually declined] in 2005.’ Table 2 lists the reductions in the growing area, production and yield of 2006 over 2005.

In Germany, ‘As a result of decoupling direct payments forecasts suggested that production in the beef sector (male bovine, suckler cows) would decrease. In the sectors of tobacco and dried fodder a declining production is also reported.’ (Müller 26 September 2007)

Italy has encountered a general trend of reductions in agricultural production during 2005-07, see Table 3 (reduced numbers are in \textit{bold and italic}).
In 2005, the Tuscan and Umbria Regions of Italy have immediately suffered a large production decrease (Tuscan Region 2007: 64) as many farmers just planted sunflowers and let them die in the fields so as to be entitled to the decoupled subsidy (Baranes 2006).

In the UK, there was a small reduction, in most cases, in both crop area and livestock numbers in 2005 and 2006. In 2006, the area of all crops grown fell by 2.2% to 4.3 million ha; the area for cereals fell by 2% while other arable crops (excluding potatoes) fell by 3.2%; the dairy herd rose slightly by 0.1% while the beef breeding herd fell by 1.7%; the size of the sheep flock fell by 2%; the number of breeding pigs and gilts in pig fell by 0.3% (DEFRA 2006).

Table 2 - Changes in Agricultural Production during 2005-2006 in Estonia (in Percentage)

<table>
<thead>
<tr>
<th>CROP</th>
<th>GROWING AREA</th>
<th>PRODUCTION</th>
<th>YIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter cereals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rye</td>
<td>-1.4</td>
<td>-12.3</td>
<td>-10.7</td>
</tr>
<tr>
<td>Wheat</td>
<td>17.9</td>
<td>-9.4</td>
<td>-23.1</td>
</tr>
<tr>
<td>Barley</td>
<td>0.0</td>
<td>9.1</td>
<td>-0.1</td>
</tr>
<tr>
<td>Triticale</td>
<td>-59.7</td>
<td>-64.7</td>
<td>-12.0</td>
</tr>
<tr>
<td>Summer cereals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>0.8</td>
<td>22.0</td>
<td>22.6</td>
</tr>
<tr>
<td>Barley</td>
<td>-4.2</td>
<td>-19.4</td>
<td>-15.8</td>
</tr>
<tr>
<td>Oats</td>
<td>-5.3</td>
<td>-26.4</td>
<td>-22.0</td>
</tr>
<tr>
<td>Mixed grain</td>
<td>2.2</td>
<td>0.0</td>
<td>-8.6</td>
</tr>
<tr>
<td>Buckwheat</td>
<td>-85.7</td>
<td>-80.3</td>
<td>-10.2</td>
</tr>
<tr>
<td>Total</td>
<td>-2.9</td>
<td>20.3</td>
<td>14.7</td>
</tr>
</tbody>
</table>


Table 3 - Changes in Agricultural Production in Italy during 2004-2007

<table>
<thead>
<tr>
<th>CROPS</th>
<th>YEAR</th>
<th>TOTAL AREA (ha)</th>
<th>AREA IN PRODUCTION (ha)</th>
<th>YIELD (per ha)</th>
<th>TOTAL PRODUCTION (100 kg)</th>
<th>HARVESTED PRODUCTION (100 kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbaceous crops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereals</td>
<td>2004</td>
<td>4,276,507</td>
<td></td>
<td>55.2</td>
<td>235,872,726</td>
<td>232,832,074</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>3,995,820</td>
<td></td>
<td>54.3</td>
<td>216,887,935</td>
<td>214,550,329</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>3,605,330</td>
<td></td>
<td>53.5</td>
<td>203,712,456</td>
<td>201,883,057</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>3,688,923</td>
<td></td>
<td>51.3</td>
<td>189,243,871</td>
<td>187,562,606</td>
</tr>
<tr>
<td>Dry legume</td>
<td>2004</td>
<td>70,440</td>
<td></td>
<td>19.7</td>
<td>1,397,378</td>
<td>1,163,877</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>75,438</td>
<td></td>
<td>20.2</td>
<td>1,523,877</td>
<td>1,478,401</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>75,347</td>
<td></td>
<td>20.3</td>
<td>1,487,923</td>
<td>1,456,952</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>76,799</td>
<td></td>
<td>20.4</td>
<td>1,565,701</td>
<td>1,534,125</td>
</tr>
<tr>
<td>Tuber plants</td>
<td>2004</td>
<td>73,837</td>
<td></td>
<td>255.2</td>
<td>18,845,021</td>
<td>18,440,042</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>71,343</td>
<td></td>
<td>255.9</td>
<td>18,254,048</td>
<td>17,759,370</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>73,943</td>
<td></td>
<td>250.3</td>
<td>18,207,177</td>
<td>18,002,112</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>69,809</td>
<td></td>
<td>262.2</td>
<td>18,304,664</td>
<td>17,896,286</td>
</tr>
</tbody>
</table>
Table 3 - continued

<table>
<thead>
<tr>
<th>Vegetables in open field</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>473,473</td>
<td>468,292</td>
<td>450,773</td>
<td>436,212</td>
<td>573,389</td>
</tr>
<tr>
<td></td>
<td>297,8</td>
<td>293,3</td>
<td>281,0</td>
<td>282,4</td>
<td>297,6</td>
</tr>
<tr>
<td></td>
<td>141,014,769</td>
<td>137,352,810</td>
<td>126,673,400</td>
<td>123,340,988</td>
<td>170,646,352</td>
</tr>
<tr>
<td></td>
<td>131,197,416</td>
<td>122,369,950</td>
<td>120,007,125</td>
<td>93,946,092</td>
<td>151,219,207</td>
</tr>
<tr>
<td>Industrial crops</td>
<td>498,073</td>
<td>436,212</td>
<td>416,212</td>
<td>265,051</td>
<td>266,714</td>
</tr>
<tr>
<td>Fruit production</td>
<td>470,170</td>
<td>466,735</td>
<td>466,585</td>
<td>444,859</td>
<td>170,649,374</td>
</tr>
<tr>
<td>Fresh fruits</td>
<td>444,714</td>
<td>441,675</td>
<td>439,589</td>
<td>422,699</td>
<td>168,071</td>
</tr>
<tr>
<td>Citrus</td>
<td>171,666</td>
<td>172,489</td>
<td>170,439</td>
<td>170,665</td>
<td>210,1</td>
</tr>
<tr>
<td>Wine</td>
<td>786,663</td>
<td>792,782</td>
<td>786,123</td>
<td>786,123</td>
<td>786,123</td>
</tr>
<tr>
<td>Olive</td>
<td>1,166,022</td>
<td>1,166,022</td>
<td>1,166,022</td>
<td>1,167,862</td>
<td>1,168,424</td>
</tr>
<tr>
<td>Vegetables in greenhouse</td>
<td>3,424,301</td>
<td>3,493,808</td>
<td>3,960,587</td>
<td>1,134,996</td>
<td>1,130,797</td>
</tr>
<tr>
<td>TOTAL AREA (ha)</td>
<td>4.6</td>
<td>4.6</td>
<td>5.3</td>
<td>41.2</td>
<td>28.0</td>
</tr>
<tr>
<td>AREA IN PRODUCTION (ha)</td>
<td>15,614,608</td>
<td>15,859,084</td>
<td>15,616,690</td>
<td>46,773,590</td>
<td>31,687,818</td>
</tr>
<tr>
<td>TOTAL PRODUCTION (100,000 kg)</td>
<td>15,651,923</td>
<td>13,307,346</td>
<td>14,905,831</td>
<td>46,773,590</td>
<td>31,687,818</td>
</tr>
<tr>
<td>NUTRITIONAL VALUE (1,000)</td>
<td>9,934,197</td>
<td>10,003,647</td>
<td>9,783,870</td>
<td>9,533,576</td>
<td>9,533,576</td>
</tr>
</tbody>
</table>

In the EU-25, in 2004, according to Table 4, 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 5 demonstrates, of the indices in the volume, price and values (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.

Table 4 - Price Indices of Agricultural Products: Output (annual, base 2000=100) in the EU-25 during 2004-2007 (percentage change on previous year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nominal</td>
<td></td>
<td>Nominal</td>
<td></td>
<td>Nominal</td>
<td></td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td>Cereals (including seeds)</td>
<td>0.8</td>
<td>-1.6</td>
<td>-13.2</td>
<td>-15.1</td>
<td>14.3</td>
<td>11.9</td>
<td>51.2</td>
<td>47.7</td>
</tr>
<tr>
<td>Industrial crops</td>
<td>0.3</td>
<td>-2.1</td>
<td>-6.3</td>
<td>-8.6</td>
<td>1.7</td>
<td>3.7</td>
<td>8.4</td>
<td>5.7</td>
</tr>
<tr>
<td>Forage plants</td>
<td>7.8</td>
<td>3.3</td>
<td>-15.4</td>
<td>-17.7</td>
<td>-2.3</td>
<td>-4.7</td>
<td>15.0</td>
<td>12.5</td>
</tr>
<tr>
<td>Vegetables and horticultural products</td>
<td>-8.7</td>
<td>-10.8</td>
<td>6.1</td>
<td>3.8</td>
<td>8.3</td>
<td>1.1</td>
<td>5.8</td>
<td>-0.4</td>
</tr>
<tr>
<td>Potatoes (including seeds)</td>
<td>-1.6</td>
<td>-6.0</td>
<td>-8.9</td>
<td>-9.9</td>
<td>58.9</td>
<td>50.7</td>
<td>-3.1</td>
<td>-7.3</td>
</tr>
<tr>
<td>Fruits</td>
<td>-5.3</td>
<td>-2.6</td>
<td>-4.8</td>
<td>-2.2</td>
<td>4.7</td>
<td>-0.8</td>
<td>9.2</td>
<td>6.5</td>
</tr>
<tr>
<td>Wine</td>
<td>-0.3</td>
<td>3.1</td>
<td>10.2</td>
<td>12.1</td>
<td>0.5</td>
<td>2.6</td>
<td>6.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Olive oil</td>
<td>9.0</td>
<td>6.1</td>
<td>17.0</td>
<td>13.7</td>
<td>11.5</td>
<td>8.9</td>
<td>-1.8</td>
<td>-10.9</td>
</tr>
<tr>
<td>Other crop products</td>
<td>2.1</td>
<td>-3.9</td>
<td>0.8</td>
<td>-1.1</td>
<td>2.9</td>
<td>1.0</td>
<td>15.6</td>
<td>13.7</td>
</tr>
<tr>
<td>Crop output</td>
<td>0.6</td>
<td>-1.6</td>
<td>-7.2</td>
<td>-8.4</td>
<td>10.5</td>
<td>8.2</td>
<td>18.0</td>
<td>15.5</td>
</tr>
<tr>
<td>Animals</td>
<td>-5.7</td>
<td>1.4</td>
<td>2.1</td>
<td>-2.1</td>
<td>3.0</td>
<td>-2.3</td>
<td>-1.3</td>
<td>-2.5</td>
</tr>
<tr>
<td>Animal products</td>
<td>-2.6</td>
<td>-4.1</td>
<td>-1.1</td>
<td>-1.3</td>
<td>-3.3</td>
<td>-2.2</td>
<td>13.3</td>
<td>10.8</td>
</tr>
<tr>
<td>Animal output</td>
<td>2.4</td>
<td>0.2</td>
<td>0.7</td>
<td>-1.4</td>
<td>2.7</td>
<td>0.5</td>
<td>3.9</td>
<td>1.6</td>
</tr>
</tbody>
</table>


In 2005, the starting year of the wider (although still partial) decoupling, as shown by Table 4, 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 5, of the indices in the volume, price and values (preceding year = 100) for the 13 categories, 10 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 4, 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 5, of the indices in the volume, price and values (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 4, 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. The indices in the volume, price and values (preceding year = 100) for the 13 categories have not yet been published by the Eurostat. But 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

Table 5 - Changes in the Indices of Volume, Price and Values of Agricultural Production in the EU-25 during 2004-2006 (preceding year = 100)

<table>
<thead>
<tr>
<th>Products</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>01000 Cereals (including seeds)</td>
<td>116.771</td>
<td>85.811</td>
<td>95.085</td>
</tr>
<tr>
<td>02000 Industrial crops</td>
<td>110.748</td>
<td>95.392</td>
<td>88.998</td>
</tr>
<tr>
<td>03000 Forage plants</td>
<td>118.417</td>
<td>94.726</td>
<td>95.486</td>
</tr>
<tr>
<td>04000 Vegetables and horticultural products</td>
<td>100.744</td>
<td>102.657</td>
<td>98.161</td>
</tr>
<tr>
<td>05000 Potatoes (including seeds)</td>
<td>111.598</td>
<td>93.444</td>
<td>92.327</td>
</tr>
<tr>
<td>06000 Fruits</td>
<td>107.311</td>
<td>99.327</td>
<td>103.799</td>
</tr>
<tr>
<td>07000 Wine</td>
<td>123.546</td>
<td>93.339</td>
<td>98.286</td>
</tr>
<tr>
<td>08000 Olive oil</td>
<td>142.416</td>
<td>108.967</td>
<td>87.062</td>
</tr>
<tr>
<td>09000 Other crop products</td>
<td>110.344</td>
<td>106.712</td>
<td>104.756</td>
</tr>
<tr>
<td>10000 Crop output</td>
<td>112.020</td>
<td>94.747</td>
<td>96.584</td>
</tr>
<tr>
<td>11000 Animals</td>
<td>98.988</td>
<td>100.283</td>
<td>98.952</td>
</tr>
<tr>
<td>12000 Animal products</td>
<td>99.715</td>
<td>99.277</td>
<td>99.022</td>
</tr>
<tr>
<td>13000 Animal output</td>
<td>99.277</td>
<td>99.883</td>
<td>99.079</td>
</tr>
</tbody>
</table>

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 \((\text{quasi-})\) 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.’
'In March 2007, the UK (together with Portugal) secured agreement to’
‘continue to levy an additional national rate of modulation, over and above the
compulsory EU rate. Voluntary modulation has been permitted by European
rules since 1999, up to a rate of 20%’ (EU Regulation No. 378/2007 published
on 1 June 2007); ‘Under the new voluntary modulation agreement, only the UK
and Portugal are permitted to apply voluntary modulation.’ (DEFRA 27
September 2007)

‘The overall rate of modulation’ is that ‘the EU compulsory modulation will
be 5% from 2007 onwards. This rate applies across all the old EU member states.
The rate of additional “voluntary” modulation for Single Payment Scheme
(SPS) 2006 payments was set under the old voluntary modulation regulation at
6%. The rate will be 12% for SPS 2007, 13% for SPS 2008 and then 14% for SPS

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.

Table 6 - EU, National and Overall Modulation Rates during 2007-2012 in the
EU-15 (in percentage)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>EU rate</th>
<th>ADDITIONAL NATIONAL RATE (IN PORTUGAL AND UK)</th>
<th>OVERALL RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>5</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>2008</td>
<td>5</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>2009-12</td>
<td>5</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>2013</td>
<td>13</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

(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 4 and 5, 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 polyopolistic 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 Beaumond (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.
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.
Chapter 7

Evidences in North America and Oceania

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 polyopolistic 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 polyopolistically 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).
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)
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 an 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. (Chakrabortty 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. (Chakrabortty 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. (Chakrabortty 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 area of cultivable land in the world, as it reaches 197,450,000 ha accounting for 13.15% of that 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.
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 polyoplastic 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.

Schultz, as his many citations reveal, is well informed of the historical and contemporary agricultural situations of Japan ([1964] 1983: 4, 13, 21, 105, 124, 162, 181, 187, 190-1) and China ([1964] 1983: 21, 48-9, 61, 106). It is a surprise that when publishing the book in 1964 he does not notice that this problem had emerged in Japan since the 1950s, and reprinted it in 1983 without changing views when it had become serious at least in Japan, Taiwan Province of China, South Korea, and emerged in mainland China, and been widely reported. It is an even bigger surprise that he has read Thompson’s 1962 dissertation which has provided the first-hand investigation results that part-time farming was much less efficient than full-time farming due to intrinsic reasons in Western Kentucky of his home country the USA in the 1950s, but he concludes just to the contrary that ‘it can be efficient’.
Chapter 8

Existences of Economies of Scale in Agriculture

Schultz ([1964] 1983: 9-10) also claims that the tenet `that the costs of agricultural products fall as the size of the production unit in agriculture increases’ (which is his definition of the economies of scale in agriculture) has `no logical basis’. But even he himself ([1964] 1983: 122-3) has admitted that ‘Where human effort (labor) is cheap relative to the price of other agricultural factors, a one-man (or family) farm may be efficient with a small garden-type tractor; on the other hand, where human effort is relatively dear, a one-man farm may be efficient with a combination of two or even three tractors that differ in size and type.’ However, ‘It requires very special conditions for a fleet of big tractors to be efficient, conditions which in fact rarely exist.’ Apparently, large farm size is such a condition. But the rare existence of such conditions does not mean that this tenet has `no logical basis’. Actually, in `a high income economy in which the demand for farm products is of slow growth’, and `the labor force required for farming begins to decline at a substantial rate and many of the farm people . . . leave agriculture . . . for nonfarm jobs’ (Schultz [1964] 1983: 15), increase of farm size of the remaining full-time farmers would already be logically possible, and could be realized if the irrational and polyopolistic land use by the able-bodied part-time and absent small farmers could be overcome.

Schultz ([1964] 1983: 9-10, 17-8) further declares that this tenet has not `stood the test of time’ and `empirical findings’. His empirical findings are that large-scale farming did not play a role in the excellent growth of agricultural production during 1952-59 in Western Europe, which was an `old, crowded workshop with a population density much greater than Asia’s, and with a poor endowment of farm land generally’. However, the fragmented small farms were efficient in a low wage economy when there was little off-farm employment and labor was cheaper than large machinery, such as in some Western European countries and Japan during the recovery period after World War II and China during the initial reform period (1978 - mid-1980s) (concrete evidence is in Zhou, Jian-Ming 2001: 7; 123-7 for Japan; 191-209 for China). But in a high wage economy when large amount of labor has been absorbed by off-farm activities, and large machinery has thus become cheaper than labor, that tenet would function, as evidenced by Japan, China, some CEECs and NIS, EU,
Australia, New Zealand, Canada and, in particular, Schultz’s home country USA (detailed factual analysis is in Zhou, Jian-Ming 2001: 128-31 for Japan; 248-77 for China; 344-52, 378-80 for the USA). Therefore, unfortunately, it shall be Schultz’s assertion that has not ‘stood the test of time’ and ‘empirical findings’ in the high income economy.
Chapter 9
Role of Human Capital in Agricultural Growth\textsuperscript{15}

It is significant for Schultz to raise the concept of human capital ([1964] 1983: 136, 176, 186), ‘Capital goods are always treated as produced means of production. But in general the concept of capital goods is restricted to material factors, thus excluding the \textit{skills and other capabilities of man} that are augmented by investment in \textit{human capital}, and to emphasize the importance of investments in human capital which ‘are of several forms; schooling, on-the-job training, and investments in health rank high’, ‘schooling is the largest and most easily comprehended of the components of human capital’.

But, although Schultz admits ([1964] 1983: 22) that ‘It would be a mistake to infer . . . that the efficient \textit{allocation} of land in farming and investments in \textit{structures} that became a part of the land do not count’, he stresses ([1964] 1983: 22-3) that ‘It would be correct to infer, however, . . . that improvements in the quality of the material factors employed in farming and in the capacities of farm people count \textit{much more} than land.’ He further explains ([1964] 1983: 176), ‘The central argument of this study has set the stage for human capital as a major source of economic growth from agriculture. It runs as follows: The economic basis of the slow growth of a penny economy is \textit{not} to be found generally in observable inefficiencies in the way the traditional agricultural factors of production are \textit{allocated}. ‘The key to growth is in acquiring and using effectively some modern factors of production’, ‘these modern factors are often concealed by economists under an expository contrivance called “technological change”’. Therefore, he believes that investment in material capital and human capital in farming (within technological changes) counts \textit{much more} than allocative efficiency of land (within institutional changes), and investment in human capital is the key to agricultural growth. According to his definition of efficiency as cited at the beginning of this book, the ‘efficient allocation of land in farming’ should naturally mean the allocation of land in farming to those who can ‘\textit{produce the same output with fewer resources or a larger output from the same resources}’ from those who cannot.

The author does not deny the importance of investment in human capital and, broadly speaking, technological changes. But it would be inappropriate to

\textsuperscript{15} In (Zhou, Jian-Ming 2001: 16-9, 70-1) the author has stated the correct opinions, but without mentioning the wrong views of Schultz criticized in this Chapter.
raise it to be higher than that of the allocative efficiency of land and, generally speaking, institutional changes. The author holds that institutional changes (in particular allocative efficiency of land) are more fundamental and count much more than technological changes (especially investment in human capital). If the institutional barriers could not be removed dynamically, then technological changes (including investment in human capital) could not function well if at all; thus it is the institutional changes which are the keystone to agricultural growth. The following stages may be perceived.

I. ‘Growth Not Dependent on Additional Schooling’

‘They include growth from the opening up of new farm land’ in ‘The settlement by Europeans and their descendants of the Americas and Australia and New Zealand’ which ‘called for much brute human force and for some capital goods to farm the new land’; ‘from water for irrigation provided mainly by public bodies’ ‘to use by illiterate farmers’ in India; ‘and from the mechanization of field crops made possible by skilled mechanics imported from other sectors or recruited from agriculture and trained specially to operate and repair machinery’ in the Soviet Union. ‘They also include some growth from the adoption and effective use of new agricultural factors that are profitable when only a few adjustments are required of farmers’, referring ‘to hybrid corn as an example’ ‘in Punjab, India’; and ‘when new markets for farm products make it profitable to expand production’, e.g., ‘as a consequence of the cotton price supports by the United States which, during the early post-World War II period, gave cotton-exporting countries a larger part of the world market (and a stable price for cotton.’ (Schultz [1964] 1983: 178-80, 187-8). Apparently, availability of farm land is a pre-requisite even for growth not dependent on additional schooling, as farmers could not achieve growth upon no land. Therefore, institutional barriers should have been resolved to the extent that farmers at least have some land to till, be it large areas in the Americas, Australia, New Zealand, and the Soviet Union, or fragmented small farms in India. Here, although Schultz ([1964] 1983: 178-9) notes that for ‘The settlement by Europeans and their descendants of the Americas and Australia and New Zealand’ which ‘called for much brute human force and for some capital goods to farm the new land’, ‘The principal explanatory variable was the rapid increase in the supply of farm land’, he has neglected that it was after the land reform following the American Revolution through the War for Independence from Britain (1775-83) which abolished the feudalistic quit-rents (paid to absentee landlords in England in exchange for the use right of their land by farmers in the Atlantic coastal areas), prohibition of settlement west of the Alleghenies to
II. ‘Growth Dependent on Additional Schooling’

‘In general, where technically superior factors of production are a principal source of agricultural growth, schooling counts. This proposition also implies that this source of growth is no longer restricted to the adoption of only a simple new factor, but requires the successful adoption of a complex of such agricultural factors, and, furthermore, the adoption process is a long, continuing one’ (Schultz [1964] 1983: 189). At this stage, Schultz ([1964] 1983: 196-7) is correct at realizing ‘Political handicaps. There are two major political factors that account for much of the observable under-investment in farm people and one such factor that causes serious disinvestment in these forms of human capital. They are as follows: 1. where large landowners are powerful politically, it is to be expected that they will have a strong vested interest in maintaining the status quo; 2. where poor countries are committed to investment in industry as the basic approach in achieving economic growth, agricultural skills and knowledge are neglected; 3. where ideology requires the elimination of private property in land and in other (material) means of production, farm people become strictly farm workers and their entrepreneurial skills are lost.’

However, here Schultz is also wrong as he holds a static view as if once the three political handicaps or institutional barriers have been removed, then investment in material and human capital (within technological changes) will count much more than allocative efficiency of land (within institutional changes), and investment in human capital will become the key to agricultural growth. He ignores that the removal of institutional barriers should be dynamic, and in particular, there has appeared a fourth political handicap or institutional barrier: irrational and polyopolistic land use by able-bodied part-time and absent (including large but particularly small) farmers as the low income economy develops towards the high income economy, which will require a second round institutional reform, otherwise the investment in material and human capital would not function well if at all.

Concerning political handicap 1, Japan constitutes a typical example. Schultz ([1964] 1983: 181, 186-7) claims, ‘There is next the issue of investment in farm people associated with little or no favorable effects on agricultural production. It is hard to discern any clear-cut historical cases that support this kind of
relationship.’ ‘But there are apparently none in which better schooling of farm people who continue at farming is associated with a stagnant agriculture.’ ‘There are all manner of historical clues indicating that there has been a strong positive relation between the level of skills and knowledge of farm people and their productivity at farming.’ ‘When does schooling matter in farming? Increases in yield per acre over time from the adoption, first by producers in one country and then in other countries, of new yield-increasing inputs strongly imply that a widespread adoption of such inputs’, and ‘in the case of growing rice, or of corn, differences in schooling may be a major explanatory factor.’ ‘The differences in rice yields correspond closely with the differences in the schooling of rice growers. In countries where the level of this schooling is high, rice yields are also high. The new combination of inputs that accounts for the large increases in rice yields in particular countries, notably in Japan, have not been adopted by rice growers in those countries where the farm people who grow rice are predominantly illiterate.’ Schultz is dealing with agricultural growth. But he is not aware that the high rice yields of farmers with schooling would not naturally be turned into high output of rice of the whole country to reach at least basic self-sufficiency, nor automatically be associated with low costs of rice production. As mentioned above, in Japan, after the land reform in 1946-50 to remove political handicap 1, rural education has been strengthened and farmers have indeed developed high-yielding technology. But since 1960, because much land has been irrationally and polyopolistically held by able-bodied part-time and absent small farmers (who have also been well educated either in agricultural or other sciences), full-time farmers could not easily increase farm size to reduce costs, rice self-sufficiency could not be maintained without extremely distorted government protectionism which then led to artificial overproduction, and, loss of self-sufficiency after the Japanese domestic market was forced by the GATT (WTO) and USA to be opened (although at a low extent) in 1994, and since then its rice basic self-sufficiency has still be maintained with heavy state protectionism. The Japanese model has been repeated by Taiwan Province of China and South Korea. In fact, farmers in Japan and Taiwan Province have transferred and applied their advanced technologies in mainland China (TTNN 16 December 2002) because China has found effective and appropriate ways to transfer the land irrationally and polyopolistically held by the able-bodied part-time and absent small farmers to the full-time farmers including external and foreign ones. Interesting enough, advanced large agricultural machinery made in Japan could not find much use itself, but be imported into China as it is able to achieve economies of scale. (For more information see Zhou, Jian-Ming 2001: 258-9, 263, 283)

Regarding political handicap 2, in the recent decades, poor countries have
been increasingly attaching importance to agricultural skills and knowledge, rather than committing themselves to investment in industry as the basic approach in achieving economic growth. Even so, their efforts could not lead to expected results due to the obstacle of the irrational and polyopolistic land use by able-bodied part-time and absent small farmers. Mexico is a case in point. Schultz ([1964] 1983: 193) mentions that ‘No doubt Mexican nationals working in the United States gain much from the on-the-job training they acquire. Meanwhile, many higher skills can presently be had by Mexicans more cheaply at home than abroad by attending one of Mexico’s technological institutes’. Sarcastically and unfortunately, on the large areas of land whose production (but not necessarily ownership) has been abandoned by the able-bodied part-time and absent small farmers emigrating temporarily or permanently to the USA as above-cited, the higher skills of themselves or other farmers (who cannot have access to such land) learned at home and abroad could not be used.

As for political handicap 3, China and CEECs-NIS are illustrating. As above-presented, both have reformed the former centrally planned economy into a market economy: China contracted the village owned land to households for operation during 1978-83, while CEECs-NIS made land privatization or farm-restructuring in the early 1990s. Afterwards, however, irrational and polyopolistic land use by able-bodied part-time and absent small farmers has appeared in both, which has hampered the full-time farmers with entrepreneurial skills from increasing farm size, achieving economies of scale, reducing costs, and becoming viable or more competitive.

Therefore, when Schultz ([1964] 1983: 195) stresses ‘an optimum allocation of resources available for investment not only among capital goods but importantly also between such goods and the capabilities of people’ (i.e., between material capital and human capital), he neglects that there is a need for an optimum allocation of land between part-time/absent (including larger but particularly small) farmers and full-time farmers and this fundamentally counts much more than the optimum allocation of investment between material capital and human capital.

As the author (Zhou, Jian-Ming 2001: 16-9) presents, agricultural production is a function of many variables including institutions, technologies, policies, prices, production structures, labor, capital, education, health, weather, etc. These variables, however, play different roles.

According to Oshima (1987: 47, 53), in previous studies of development theories and strategies, the growth of per capita product was explained as owing to either proximate sources or ultimate causes. There was a tendency to group various inputs into the category of sources (labor, capital, education, structural changes, etc.); and to group the explanations of changes in the productivity of
inputs into the category of causes, the major ones being changes in institutions and technologies. Oshima himself (1987: 5-6) studies the underlying long-term ultimate causes that sustain economic growth by assuming that growth is largely the outcome of the interplay of institutional and technological changes, as emphasized by Kuznets (1966), and finds that it is the *institutional component* that is the most important in the interaction of institutions and technologies underlying the growth of developing countries. Examples of the institutional changes are land tenure reforms from the feudal landlord ownership to individual land ownership (such as in Japan during 1946-50), and from the centrally planned economy to family-based operation (such as in China during 1978-83).

The author (Zhou, Jian-Ming 2001: 70-1) has presented technological efficiency - a production plan is (technologically) efficient if there is no way to produce more output with the same inputs or to produce the same output with less inputs, as Varian argues (1992: 4).

*Static or short-run technological efficiency* could be attained *without* changing technologies but with higher incentives and/or better division and coordination of labor through institutional changes. It could also be reached by adopting already invented more advanced technologies which were not used before peasants gained incentives and/or achieved better division and coordination of labor. For example, the land reform and setting-up of cooperatives in Japan during 1946-50 gave huge incentives and better division and coordination of labor to peasants, and the land tenure reform in China during 1978-83 also highly motivated farmers. They increased production quickly with the already used technologies, and then adopted the existing more advanced technologies unused before. (For details, see Zhou, Jian-Ming 2001: 70-1; for Japan 123-7; for China 17-8, 205-9)

*Dynamic or long-run technological efficiency* needed for achieving sustainable growth depends heavily on the technological progress embodied in the construction of rural infrastructure (including education as the main form of investment in human capital); higher yields and multiple cropping of rice and other cereals; diversified cropping and non-crop agriculture; off-farm employment; peasant migration to cities and work in town and village firms; agricultural mechanization with small machinery (features 3-8 in the Japanese and Chinese models) which would take longer time (e.g., finding a higher yielding variety of rice, building a big dam, transforming a desert, or educating peasants may cost several years). (See Zhou, Jian-Ming 2001: 71; for Japan 125-7; for China 18, 291-2, Chapters 6-7)

But once production has reached the frontier permitted by the established institutions, even though increases of production or reduction of costs are still
technologically possible (through agricultural mechanization with large machinery), they tend to be hampered by vested interests, just as the irrational and polyopolistic land use by able-bodied part-time and absent small farmers in feature 9 of the Japanese model has suggested. At this stage, in an evolutionary approach, a second round of institutional changes is needed to allow sustainable rural development. Just because this obstacle has once been overcome as in feature 9 of the Chinese model around the mid-1980s, further technological progresses embodied in agricultural mechanization with large machinery; regional transfer of development; introduction of more advanced technology and management, larger investment, and domestic and international markets to agriculture by urban-rural joint enterprises, and external and foreign single and joint ventures; prevention of overproduction and improvement of the environment (features 10-13 in the Chinese model) could be realized. Therefore, Barker, Herdt and Rose (1985: 157) conclude that of so many variables for rural development, the institutional changes are the keystone. (See Zhou, Jian-Ming 2001: 18-9; for Japan 131-46; for China 209-94)

III. Coexistence of Growth Not Dependent and That Dependent on Additional Schooling

Schultz asserts ([1964] 1983: 183), ‘it is true that programs to improve the skills and knowledge and health of workers were generally not a pre-requisite to the advances made during this phase of the Industrial Revolution. Why, then, should schooling be essential today? The answer lies in the fact that poor countries now entering upon industrialization are not employing the simple, primitive machinery and equipment of a century or two ago. Nor could they do so even if they wished to, because such things have become collectors’ items for museums.’ Here, Schultz has ignored the existence or persistence of the dual economy, i.e., modern industry mainly in cities and traditional agriculture in rural areas (see Zhou, Jian-Ming 2001: for monsoon Asia 35, 54, 185-7, 297, 302-4; for China 17-8). Thus, ‘The simple, primitive machinery and equipment of a century or two ago’ have been employed not only still in 1964 (such as in China), but even now (such as in Africa as above-mentioned, and parts of Asia, Latin America, etc.), and not yet completely become collectors’ items for museums. Of course, it does not mean schooling is not important today. But availability of farmland irrationally and polyopolistically used by the able-bodied part-time and absent small farmers to full-time farmers has increasingly become more essential.

Schultz ends his book by claiming ([1964] 1983: 205), ‘in sum and substance, the man who is bound by traditional agriculture cannot produce much food
no matter how rich the land. Thrift and work are not enough to overcome the niggardliness of this type of agriculture. To produce an abundance of farm products requires that the farmer has access to and has the skill and knowledge to use what science knows about soils, plants, animals, and machines. He is not aware that access to land is more fundamental, as the rational and competitive land use is the basis of sustainable agricultural and rural development, without which, other agriculture-promoting measures (early retirement, young farmers, training, infrastructure, land consolidation, credits, fine seeds, better quality, higher yields, localized special production, small and large machinery, organic farming, environmental protection, information, market access, etc.) would not function well (if at all), and the development of off-farm activities would even weaken the agricultural sector (although it should and could strengthen it).
Chapter 10

Imbedded Influence of the Five Assertions of Schultz

But the author’s views against the above-mentioned five assertions of Schultz do not as yet seem like a commonplace idea. This is mainly because ‘Schultz’s arguments have had a substantial impact on some of the economists who are actively involved with structural aspects of public policies and with project evaluation’ (Bowman 1983); ‘The notion that “farmers’ behavior is rational” has been recognized and accepted by Western economists in general since the publication of Schultz’s Transforming Traditional Agriculture’ (Lin, Justin Yi-Fu 1988: 63); ‘It has had a significant effect upon economic research and thinking about agriculture in low income countries, and it has had an effect upon what governments and international agencies have done with respects to agricultural policies’; ‘If this seems like a commonplace idea, it is so because of the writings of T. W. Schultz.’ (Johnson 1983). The above-mentioned assertions of Schultz have become so imbedded a commonplace idea, that many economists do not even appeal to or mention him, while his influence could be clearly seen.

For instance, although Lerman and his World Bank colleagues had found just to the contrary in Croatia, Armenia and Georgia in 1996 (as above-cited), he (1999: 20) still has the belief that free market forces could effect the transfer of land irrationally and polyopolistically used by the able-bodied part-time and absent small farmers to the full-time farmers, as if they were rational and competitive enough to automatically and voluntarily make such transfers in the land markets:

Once land has been allocated to individuals through the various processes of restitution and distribution, the new owners may immediately sense a need for adjustment of their holdings. Some landowners have no inclination to farm their land: they are too old, too frail, have better jobs outside agriculture, or do not have sufficient knowledge to become successful farmers. The optimal course of action for these landowners may be to get rid of their land. Other individuals, who know how to farm efficiently, may wish to increase their holdings in order to achieve higher earnings and greater welfare. The optimal course of action for these individuals is to acquire more land. The land market provides a meeting place where both groups of agents may enter into appropriate transactions for adjustment of land-holdings through transfer of ownership rights (buying and selling of land) or use rights (leasing of land). The economic role of land markets as a stage for farm size
optimization explains the considerable interest in this issue in transitional economies, where the new farm sizes are decided abruptly and quite arbitrarily through administrative and political processes.

Although without mentioning Schultz, Lerman and these transitional economies have evidently been deeply influenced by his allegations. Another example is that in the above-mentioned International Symposium (8-11 January 2002) in Chiang Mai, Thailand, a senior Indonesian economist Dillon states to the author that whatever peasants do, they are correct and have good reasons. He further specifies (26 August 2002): ‘In the sixties, Schultz’s research in India proved “small but efficient”. Since then there have very many studies showing that farmers are generally very close to “allocative efficiency” although they might be quite distant to “technical efficiency”. Apparently, he and the authors of the ‘very many studies’ have also been imbedded with Schultz’s assertions, so that they do not notice the allocative inefficiency of the able-bodied part-time and absent small farmers with their irrational and polyopolistic land use while full-time farmers could not have access to their land.

These assertions by Schultz have been deeply imbedded in the policymakers, as reflected in the above-cited comments by the EU Commissioner on Trade Mandelson (2 December 2005): ‘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’, by the EU Commissioner on Agriculture and Rural Development Fischer Boel (10 June 2008): ‘it’s still true that decoupled direct payments are a powerful tool. They leave farmers free to respond to whatever the market tells them’, and by the Director-General for Agriculture and Rural Development of the EU Commission 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

16 Fortunately, in commenting the earlier version of this book presented in the UNESCO Seminar ‘Poverty and Sustainable Development’ in Bordeaux, France 22-23 November 2001, Lerman has actually recognized that his above-cited view is not compatible with the world-wide evidences and turned to be positive to the author’s Proposals to solve the problems, for which the author is most grateful.
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.’

Similarly, in the view of Commentators EA1 & EA2 (30 May 2005), 
‘Certainly there are inefficient land uses across the world, but not only one 
cause’. As explained in the author’s 2001 book and 2003 Cambridge Conference 
paper and developed in this book, after the land reform of distributing land 
from large owners for equitable small individual ownership (or possession 
under public ownership), when off-farm activities were rare, farmers would 
tend to efficiently use land, even though many rural facilities were still backward. 
The best examples were the immediate agricultural growth in Japan after the 
land reform of 1946-50 and in China after the economic reform of 1978-83. Of 
course, the rural facilities should be developed, otherwise they would also cause 
inefficient land use. But following the development of off-farm activities, many 
able-bodied part-time and absent small farmers earning high off-farm income 
would have no willingness to lease even the land beyond their family 
consumption need to the remaining fewer full-time farmers. This problem has 
been increasingly serious in Japan ever since 1960 while the rural facilities have 
been well established. Similarly, one may not say that the rural facilities are 
backward at least in the present EU-15. But if the coupling and other 
protectionist policies were all abolished, then the irrational production 
abandonment caused by the refusal to lease land to the full-time farmers by the 
part-time and absent landowners at low rents would happen, just as already 
happened under the wider but still partial decoupling implemented since 2005, 
as revealed by Tables 4 and 5. Therefore, 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 many developing countries 
currently) and the unique cause when the rural facilities are advanced (such as 
in many developed countries presently).

In a democratic society, if a view were found as inappropriate, it would be 
rebuted. For instance, Amartya Sen (1998 Nobel economics laureate) writes 
Test’ (in his 1964 book). Schultz (March 1967: 154-65) then defends himself in 
‘Significance of India’s 1918-19 Losses of Agricultural Labor - A Reply’. Sen 
Another example is that Schultz in his 1964 book attacks the ‘zero marginal 
product’ hypothesis of Arthur Lewis (May 1954), but the Nobel Economics 
Prize Committee democratically and fairly made these two academic ‘foes’ share
the 1979 Prize albeit neither school has convinced the other (even now).

But the author is unaware anyone who had ever criticized the above-mentioned five assertions of Schultz in literature before Jian-Ming Zhou made in his 2001 book. Apparently, this was not because other authors were lenient to him, but because they were not found as inappropriate. Now that they have already been unsuitable in 1964, more so in 1979, further so in 1983, and still so presently, a systematical and analytical refutation of them would be necessary, and researches of effective and appropriate solutions to the obstacle neglected and misjudged by him imperative.
Chapter 11

Failures of Backward and Consumption Linkage Effects on Agriculture Ignored by Hirschman

The irrational and polyopolistic land use by able-bodied part-time and absent (including large but particularly small) farmers has also caused the failures of the backward linkage effects of the agro- and other industries and the consumption linkage effects on agriculture, which has been paid little attention by Hirschman and others.

Hirschman (1954, 1958, 1977, 1987) has developed the linkages theory. A linkage (or linkage effect) is a characteristic, more or less compelling sequence of investment decisions occurring in the course of industrialization and, more generally, of economic development. More specifically, the linkage effects of a given product line are investment-generating forces that are set in motion, through input-output relations, when productive facilities that supply inputs to that line or utilize its outputs are inadequate or nonexistent. Backward linkage leads to new investment in input-supplying facilities and forward linkage to investment in output-using facilities, both are physical or production linkage. Consumption linkage is the stimulus towards domestic production of consumer goods that will be undertaken as newly earned incomes are spent on such goods (which are often initially imported). Fiscal linkage includes direct fiscal linkage whereby the state extracts (and subsequently spends) revenue through taxes on exports, and indirect fiscal linkage whereby it raises (and then disposes of) receipts via tariffs on imports. Inside linkage describes situations in which the same economic operators who are already engaged in the ongoing activity are impelled to undertake the new activity (either yielding a new product at the same place or producing the same product in a new place); while outside linkage depicts circumstances under which the new activity is taken up by foreigners or the state. Backward, forward and consumption linkages can be either inside or outside linkages, whereas fiscal linkage is outside linkage. Hirschman claims that the linkages capture much of the development story: development is essentially the record of how one thing leads to another, and the linkages are that record. They focus on certain characteristics inherent in the productive

The author’s comments on Hirschman’s linkages theory are not in Jian-Ming Zhou (2001).
activities already in process at a certain time. These ongoing activities, because of their characteristics, push or invite some operators to take up new activities. Whenever that is the case, a linkage exists between the ongoing and the new activity. (Hirschman 1977: 72-3, 80-1; 1987: 206-9). This Chapter is mainly concerned with the relevant problems in the backward linkage effects of the agro- and other industries and consumption linkage effects on agriculture.

Hirschman’s linkages theory has been very influential and widely accepted. For instance, FAO stresses that ‘Industries based on agricultural raw materials played a major part in the early stages of the industrialization of developed countries, and they are no less important in the industrialization now under way in developing countries. Such industries are estimated to account for nearly half of the total manufacturing value added and almost two thirds of the employment in the manufacturing sector in the developing countries, and their share in the developed countries, although smaller, is still substantial. The development of such industries also has many beneficial feedback effects on agricultural production itself as there exist ‘the strategic links and interdependencies between agriculture and agro-industries.’ (Santa Cruz 1998: iii). Of these feedback effects, ‘The most direct one is, of course, the stimulus it provides for increased agricultural production through market expansion. Often, in fact, the establishment of processing facilities is itself an essential first step towards stimulating both consumer demand for the processed product and an adequate supply of the raw material. The provision of transport, power and other infra-structural facilities required for agro-industries also benefits agricultural production. The development of these and other industries provides a more favorable atmosphere for technical progress and the acceptance of new ideas in farming itself.’ (FAO 1997). ‘An effect that is sometimes overlooked is the substantial increase in employment in the production of the raw material that may result from setting up an industry using it. Even if the industrial process is itself capital intensive, considerable employment may be generated in providing the raw material base.’ (Marsden & Garzia 1998: 13)

However, as presented above, Japan has provided an inconsistent case. Now that the agro- and other industries have been well developed in that country (features 5-7), why could not their backward linkage effects on agriculture be realized (regarding the decline in agricultural production and employment of able-bodied labor force in agriculture)? Contrary to the domestic-products-oriented consumption linkage effects which should lead to import substitute as defined by Hirschman, there appear reverse or import-oriented consumption linkage effects which have substituted domestic products with imports (of agricultural goods in this case). (The reverse or import-oriented consumption linkage effects is a concept formulated by this author). Likewise, the EU
proposed a complete decoupling between subsidies and production (the major component of the agricultural protectionism) on 10 July 2002, but retreated to allow to keep the coupling on 26 June 2003, just in order ‘to avoid abandonment of production’. The EU’s high import tariffs have also been continuously criticized by the developing countries and international organizations. It is well known that the agro- and other industries are well developed in the EU, why could not their backward linkage effects on agriculture and domestic-products-oriented consumption linkage effects be realized so that the abandonment of agricultural production and increase of unnecessary imports would not happen once the agricultural protectionist policies have been lifted? Moreover, since the implementation of the wider (although still partial) decoupling in 2005 in the EU, people still have to consume food. The food prices have been even rising, which sent clear signals to the producers. But why have not the farmers responded to the market signals and produced more, rather, have they produced less (as demonstrated by Tables 4 and 5)? In Brazil and Argentine, when the external prices are high, farmers are willing to produce more to earn export profits. When the external prices are low, but the internal poor are still in hunger which are signals to farmers, why do not they produce more to reduce the prices so that the poor can afford, but rather idle a part of land?

Therefore, the following questions arise: can the backward linkage effects of the development of the agro- and other industries on agriculture be realized always? Can the more favorable atmosphere for technical progress and the acceptance of new ideas in farming itself provided by the industrial development be turned to reality all the time? If not, mainly at which stage of rural development? What are the major reasons? How to resolve them?

In fact, although admitting (1987: 209) that ‘Some or all of the linkage can fail to materialize and an inquiry into these failures permits a preliminary sorting out of major conceivable reasons for negative developments’, Hirschman has not endeavored to go beyond the preliminary study to systematically research the failures in either one or more linkages, deeply analyze the major reasons, and make great efforts to seek solutions. Rather, he mainly takes delight in talking about the normal functioning of the linkages. But this would be not only futile in front of the failures, but even harmful, as it may lead to the ignorance of them and the illusion as if once (e.g.) the agro-industries have been established, then their backward linkage effects on agriculture would automatically be realized. An analogy could be that, when humankind did not know the circulation of blood in the human body, its discovery was significant. Afterwards, further researching the normal blood circulation is still necessary, but more importance should be attached to elucidating and curing the mal-circulation, since these tasks cannot be fulfilled by merely talking about the
normal circulation. It would be inappropriate and even detrimental if medical scientists remained at mainly speaking on the normal circulation, while paying little attention to so many diseases of mal-circulation. Just think if doctors cheerfully talked about the normal blood circulation in front of so many blood cancer patients who are going to die currently still without solutions! Similarly, despite Hirschman (1998: 80, 83, 101) has been an economic adviser to Colombia since 1952 and then other parts of Latin America, developed the linkages theory basically out of his studies there, happily felt Colombia `was moving forward’ and believed ‘there is no doubt that Latin America has made considerable progress in the 30 years since World War II’, how to explain why the ‘moving forward’ in that country did not lead to more wonderful advancement and the ‘considerable progress’ in that continent did not expand to more successful development through the linkages but fell into decline in the 1980s, and how to solve the persisting mal-functioning of the linkages there? In fact, it is systematic studies, discovery of main reasons, and solutions of the failures of the linkage effects which are desperately longed for by the vast people in deteriorating poverty, inequality and injustice there and elsewhere.

Correspondingly, the above-cited FAO report (1997) has primarily repeated the normal backward linkage effects of the agro- and other industries on agriculture raised by Hirschman, as if these effects could be taken as granted. By the same illusion, the afore-mentioned FAO document (Marsden & Garzia 1998) has only indicated problems in the development of the agro-industries, and emphasized its backward linkage effects on agriculture, while essentially ignored the failures in the realization of them. It is interesting that the recommended methodology ‘was field-tested during an FAO project in Thailand’ (Santa Cruz 1998: iii), but the above-mentioned ‘Symposium Theme’ of the International Symposium (8-11 January 2002) in Thailand has reported a worsening agricultural situation exactly in Thailand and Southeast Asia. It is thus imperative to systematically study the failures in the realization of the backward linkage effects of the agro- and other industries and the consumption linkage effects on agriculture, their main reasons, and the effective and appropriate solutions.

As analyzed in the author’s book (Zhou, Jian-Ming 2001) and earlier parts of this book, it is the irrational and polyopolistic land use by able-bodied part-time and absent farmers (typically small but not excluding large landowners such as in Latin America where land reform has not been completed) which has restricted the functioning of the market mechanism, and restrained the full-time farmers from achieving economies of scale or just becoming viable. Thus, fundamentally it is this obstacle which has hampered the realization of the backward linkage effects on agriculture of the agro- and other industries, and
caused the reverse consumption linkage effects, as the demand for agricultural products these linkages have induced could not be matched domestically (if without government trade-distorting protectionism) and imports have to be resorted to. Although this obstacle appeared first in Japan in 1960, it has increasingly become global under both public and private land ownership, with both traditional and modern agriculture, upon both fragmented small and consolidatorily enlarged land, in both low and high income economies, at both stages of food under-self-sufficiency and overproduction, and within both developing and developed countries.18

Hirschman not only has not paid attention to the polyopoly of the able-bodied part-time and absent (including large but particularly small) farmers in land use within agriculture (which would be the unique finding by the author as a global obstacle that has hampered the normal functioning of the linkages), but also has not attached importance to the monopoly and oligopoly of the food giants in the inputs (backward) and outputs (forward) linkages around agriculture that have harmed farmers of their own countries and other, especially developing, nations (which many have reported).

18 The secretary of Hirschman had emailed an answer to the author on 4 September 2002 ‘While Professor Hirschman indicated you have listed the primary texts which address his linkages theory, he suggested you may also wish to examine his latest book’, ‘(He referenced the third section -- pages 45-110 -- of this book in particular) Hirschman, Albert O. Crossing Boundaries: Selected Writings (New York: Zone Books, 1998)’. After reading these primary texts and that latest book, the author emailed his Cambridge Conference paper (Zhou, Jian-Ming 17-19 September 2003) including the main contents of this Chapter to Hirschman for his comments on 12 March 2004 but has never received a reply.
Chapter 12

Could the Ricardian Model of Free Market Mechanism Overcome the Obstacle?

Unlike the USA, Canada, Australia and New Zealand, other nations (as large as Brazil, China, India, and the EU, and as small as Japan, South Korea, and many other countries across Asia, Africa, Latin America, and Europe) do worry about losing food basic self-sufficiency, especially in cereals.

I. Could the Ricardian Model Function When War and Frontier Still Exist?

Keeping food basic self-sufficiency, especially in cereals, is not merely an economic issue, as political, social and cultural factors enter. Economically speaking, one may suggest those countries with food shortage caused by the irrational and polyopolistic land use of able-bodied part-time and absent small farmers to import from others, until this has led to a global food shortage to raise the prices of agricultural products and induce the part-time and absent farmers to make efficient land use to produce more. However, before this pure and idealistic Ricardian model of free market mechanism could function, those countries in food shortage would have to lose food basic self-sufficiency especially in cereals and chiefly rely on imports. But politically speaking, if a country relied on imports for its cereals, then it might be threatened in diplomatic conflicts and have its throat cut during wartime. Thus, basic self-sufficiency in cereals (such as rice for Asia and wheat for Europe) is a strategic issue. That is why Japan could tolerate under-self-sufficiency and rely on imports for all the other agricultural goods but not rice (as well as whale of course), which has consequently been heavily subsidized ever since 1960 for reaching artificial self-sufficiency (and even overproduction) and whose import since 1994 was mainly due to the international pressure. Not to mention those poor African, Latin American and Asian countries and CEECs still at the food under-self-sufficiency stage which could neither afford to import with their scarce foreign exchanges nor rely on international donations to feed their populations. Socially and culturally speaking, one may easily propose the EU to only keep the landscape for tourism and import everything else, e.g., cheaper agricultural and industrial goods from Australia, the USA and many developing
countries. But the EU would not agree as abandoning agriculture especially cereal production which has been carried out for hundreds of years would be socially and culturally unacceptable.

The UK before losing world-wide colonies had not sought basic self-sufficiency in cereals in Britain and Northern Ireland. This has often been cited as an example to advocate that basic self-sufficiency in cereals is not necessary for a country. (Beaumond 29 September 2004. Brooks 29 October 2004). But such advocators have forgotten that when it had world-wide colonies, the colonies and the occupying country constituted a large sovereign nation, so that it could rely on them for basic self-sufficiency in cereals. This is just an example that basic self-sufficiency in cereals is necessary for a country. Similarly, the EU as a super nation intends to keep basic self-sufficiency in cereals at the EU level, but not for each Member State, so that some Member States may overproduce to feed the others. In fact, some Member States (e.g., Italy, Portugal) have already had under-self-sufficiency in cereals.

One may think that basic self-sufficiency in cereals is not necessary for any country since today’s world is completely different from before as there is no perspective of war; it might be necessary for developing countries because they do not have enough foreign exchanges to import foods but not so for developed nations. Such a view has not taken into account that sanctions, embargos, invasions, wars and threats have not disappeared, so that today’s world is not yet completely different from before. Thus, many countries have been forced to maintain food sovereignty and advocate for a basic or ever complete self-sufficiency for more products than cereals in the WTO negotiations (Brooks 29 October 2004). The free trade zone to be established in 2010 between the Association of Southeast Asian Nations and China as decided in November 2001 will reduce the tariff on rice in 2015 only by 50%, rather than 100%, reflecting the strategic desire of the member states to keep a certain degree of self-sufficiency in rice, is an example. The author visited the WTO on 13-14 September 2004 and asked which country is willing to lose basic self-sufficiency in cereals, but no country could be indicated.

II. Could the Ricardian Model Function When There Is No War and Frontier?

Even if in a peaceful world without perspective of war and threat, and without frontiers and tariffs among nations, could the Ricardian model of free market mechanism function automatically, so that the global food shortage would raise the prices of agricultural products and induce the part-time and absent farmers to make efficient land use to produce more?
As is well known, before the land reform, a few landlords owned large areas of land, while most peasants owned none or little and had to be either tenants paying exorbitant rents or laborers receiving extremely low wages. Although the prices of the agricultural products were much higher than what the poor people could afford, the Ricardian model of free market mechanism could not induce the landlords to produce more and reduce prices so that poor people could afford, other than remaining in hunger or going to die. This was essentially because they were oligopolists or even monopolists (in some regions) in land ownership, and wished to keep prices and profits high rather than responding to the social interests including the need of the poor. The above-mentioned Brazilian case where large landowners refuse to reduce prices of the already overproduced foods so as to let people in hunger to afford, and decline to lease land out at low rents in order to make poor full-time or landless farmers rent in their land, is an existing example. Hence the land reform which has been obliged by the state to distribute the land of the large owners to peasants with no or little land.

But after the land reform, many able-bodied part-time and absent small farmers have not used land efficiently even at the under-self-sufficiency stage. Why did not the high prices at food shortage period induce them to at least lease the land beyond their family consumption need to the remaining full-time and still existent or appearing landless farmers? This is mainly because they are polyopolists in land ownership, and only respond to high rents rather than the social interests containing the need of the full-time and landless farmers who cannot afford to pay them. That is why at the under-self-sufficiency stage, laws of obliging them to lease under-producing land to full-time farmers have been implemented in Germany, the UK, Denmark, the EU, Italy and still in Norway although there was no internal war within each of these countries.

As Tables 4 and 5 show, in the EU-25 since 2005, there has been a general trend of higher prices but lower production. Farmers have not responded ‘to market signals’, just opposite to the expectation of the EU Commissioner on Trade Mandelson (2 December 2005) and the EU Commissioner on Agriculture and Rural Development Fischer Boel (10 June 2008). ‘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. This reveals that ‘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 the EU Commission Agriculture Director-General Demarty (9 October 2007).
Therefore, high prices caused by food shortage even without war or tariff among nations could not make the Ricardian model of free market mechanism function automatically, and in order to realize rational and competitive land use, effective and appropriate state obligation would still and always be necessary.

III. The Pre-condition for the Ricardian Model to Function Is without Monopoly, Oligopoly and Polyopoly

Why do not the insufficient producers respond to the higher prices via producing more either by themselves or by leasing their land to the sufficient producers? The Ricardian model of free market mechanism preaches that product (food) shortage would raise prices and induce producers (farmers) to produce more and reduce prices. But the pre-condition for it to function is that there is no monopoly or oligopoly. If there is monopoly or oligopoly, then the monopolists and oligopolists would prefer not to produce more to reduce prices, so as to earn monopolistic and oligopolistic profits.

Seeing the literature has treated many sellers as only making free market competition, without exercising a kind of monopoly, the author has invented the term polyopoly to describe the control of a resource by many sellers, and the term polyopsony to denote the control of a resource by many buyers. Accordingly, the irrational and polyopolistic land use by numerous able-bodied part-time and absent (including large, but particularly small) farmers earning higher off-farm income but unwilling to lease their under-producing land beyond family consumption need to full-time farmers at low rents would amount to monopoly, because on this earth, farmland cannot be created anymore (rather than mobile phones which can be bought cheaply almost everywhere). The polyopsonists would prefer not to produce more to reduce prices so as to earn polyopolistic profits - the same character as that of the monopolists and oligopolists.

In general, their refusal to lease land out is due to low rents (as the full-time farmers are unable to pay high rents if without protectionism such as the coupled subsidies), worry about misuse by tenants, jealousy in preventing neighbors from prospering, and hobby use. In the EU, the decoupled subsidy permits the recipient to produce zero as long as he keeps land on a good environmental condition without erosion (which could be easily fulfilled by planting trees and grasses). If he leases land out, this subsidy will go to the tenant. Now that ‘safe in the knowledge that their Single Farm Payment will turn up in their bank account anyway’, as the EU Commissioner on Agriculture and Rural Development Fischer Boel admits (4 February 2008), the best choice
would be for them to earn higher off-farm income, enjoy this subsidy, produce none or insufficiently with higher prices, without leasing land to the sufficient producers.

In other countries, there is similar phenomenon. For instance, as above-mentioned, in Brazil, there are 224,900,000,000 acres (91,013,800,940 ha) of idled farmland. But hunger still persists with many poor. Why do not the landowners supply more domestically and reduce prices so that the poor could afford? This is chiefly because they prefer to produce more for export when the external prices are higher, without caring about the internal poor so as to earn polyopolistic profits. The poor farmers, without right to use such idled land, have had to convert large areas of Amazon forests into farmland for soybean, etc. In 2004, the biofuel program was started. But rather than using the idled farmland, more Amazon forests have been cut!

Also as above-presented, in Argentine, numerous large, medium and small farmers 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. In March 2008, the government has raised export tax rate on soybean in order to orient them to supply more domestically and reduce the internal prices when the external prices are higher. But they have been making strikes, which have led to higher prices both internally and externally.

Thus, similar to the EU, in these countries, domestically, ‘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’, and ‘those farmers who leave the sector’ have not used the ‘possibility to transfer the land to those who want to expand its [their] business’. The fundamental cause is that they enjoy polyopoly in land use, similar to monopoly and oligopoly!
Chapter 13

China’s Successful Experiences Based on Public Land Ownership until 2000

As above-cited, the author’s book (Zhou, Jian-Ming 2001) presents that China has found effective and appropriate solutions to this microeconomic root, and accordingly maintained basic self-sufficiency in cereals, prevented overproduction, improved the environment, without resorting to protectionism.

As the first stage, during 1978-83, China carried out a land tenure reform from the centrally planned economy to market economy by keeping public land ownership of villages, while contracting the land to households as the basic operation level whereas the villages provided general management and services, hence successfully reached basic food self-sufficiency in 1984. Although the contracted land could be sub-let, irrational and polyopolistic land use by able-bodied part-time and absent small farmers also happened at the beginning of the 1980s and became serious afterwards.

Thus in an evolutionary approach, as the second stage, around the mid-1980s, a second round of institutional changes has been conducted. Under the guidance of the government, the villages, upon the majority agreement of the villagers, obligatorily kept a smaller land for family consumption for the part-time and absent small farmers, while allocating the rest of their land competitively to the full-time farmers (Dual Land System). The government also encouraged (but not forced) part-time and absent small farmers to be fully engaged in off-farm activities or become permanent residents of small and medium cities and towns, and voluntarily transfer all their land to the fewer remaining full-time farmers to achieve economies of scale (Single Land System). Thus China maintained basic self-sufficiency in cereals rather than losing it as Japan did in 1960 (followed by Taiwan Province of China in the 1970s and South Korea in the 1980s).

As the third stage, during 1995-99, it encountered temporary food overproduction. The government has then obliged farmers on the environmentally sensitive farmland to convert it back to the nature (forestry, grassland, lake land and wetland) forever, and paid them 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. It has meanwhile kept the rational and competitive use of the normal land to produce surplus food, which is allocated to the farmers of the environmentally sensitive farmland converted to the nature. Therefore, nationwide, the food supply and demand have been balanced and chronic overproduction prevented, whilst the environment improved.

By overcoming the irrational and polyopolistic land use of able-bodied part-time and absent small farmers as the fundamental microeconomic obstacle, China has given subsidies to agriculture by only 2% of the total value of production in 2000 (see Table 1), much less than 10% for a developing country and 8.5% for China (Song & Yao 31 January 2005). At all the three stages, there has been a close macro-micro linkage in gradual, evolutionary and dynamic experimenting, policy-making, popularizing, and stability-maintaining. (For details see Zhou, Jian-Ming 2001: Chapters 6-7).

But there is still much room to improve. Since 2001 China has moved towards the direction of protectionism by providing more farm subsidies, as Table 1 demonstrates. How to avoid it while keeping agriculture competitive will be dealt with later in this book.

Public land ownership, however, may not be acceptable to many other economies. Then how to solve this microeconomic root under private land ownership?

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19 The author attended the above-mentioned International Symposium (8-11 January 2002) in Chiang Mai, Thailand, where participants also expressed that though the Chinese reform experiences are successful, it would be difficult to transplant them into other countries, because China holds public land ownership, while most other countries have private one.
I. Other Unsuitable Solutions under Private Land Ownership

(I) Those solutions which had functioned from the Middle Ages to the 1950s in Western Europe (land enclosure, primogeniture, massive emigration, land sale due to the then backward conditions of rural areas) would not work now (see Zhou, Jian-Ming 2001: 146-50).

(II) Traditional land consolidation currently being carried out in some CEECs, NIS and other developing countries incurs enormous individual bargains, and costs tremendous time (even decades), financial and human resources. Although the joined parcels would convenience cultivation and smoothen leasing, due to the low elasticity in consumption of cereals and many other agricultural products, the raise of tenants’ income might not necessarily be so high as to induce the part-time and absent small landowners to lease land out, as the experiences of Japan and Taiwan Province of China have demonstrated. As analyzed above, those EU countries which had already carried out successful land consolidation long time ago (such as Denmark) have also been facing irrational production abandonment following the implementation of the wider decoupling to reduce protectionism ever since 2005. Moreover, population growth and inheritance could easily re-fragment the joined family farm, as the Indian practice has shown. (For a comparative international survey of land consolidation under private farmland ownership and its shortcomings, see Zhou, Jian-Ming 2001: Appendix 3.1). Thus it is helpful but not a fundamental solution.

(III) How about imposing a land waste tax which seems more market oriented? In fact, such a tax has been repeatedly proposed, e.g., as early as in (1956: 563) by Schiller (and may even be earlier by others), and as recently as in (8-11 January 2002) by Onchan for Thailand where the irrational and polyopolistic land use by able-bodied part-time and absent small farmers has become very serious. The Romanian Law on Land Resources of 20 February 1991 stipulates ‘Article 53. All owners of agricultural land must assure its
cultivation and its soil protection’; ‘Article 54. Land owners who do not fulfill the obligations stipulated in Article 53, will be summoned in writing to comply, by the commune, city, or municipality. Those who do not obey the summons and who through their own fault, do not fulfill their obligations within the time established by the town hall, will be given an annual fine of 5,000 to 100,000 lei per ha, depending on the land’s category of use. The fine is ordered by reasoned decision of the town hall, and the money becomes an income to the local budget’; ‘Article 55. . . . They lose right to the use of the land after a period of two years’. Such a fine is also a land waste tax. Attention should be paid that in 1991 cultivation was still generally regarded as equal to production.

However, a land waste tax is unable to function effectively. 1. If the tax were low, some farmers would be willing to pay, while still idling the land. For example, in China, the village collectively owned land was contracted to households which should produce a quota of cereals and/or other products to be sold to the state and could then dispose of the extra output in the market. But there were landholders who paid cash (equivalent to a land waste tax) to fulfill the quota while still idling the land, so as to spare all their time onto earning higher off-farm income (Zhou, Jian-Ming 2001: 215).

2. If the tax were high, some farmers could claim that they could not afford. It would not be so easy to punish them by imprisonment. In fact, such a law may not be passed as the parliamentary members dare not offend the part-time and absent landowners (such as in Japan).

3. Many farmers are absent, earning higher income in other rural areas, cities or abroad. It would almost be impossible for the police to wait at their home unknowing when they would return, or search and arrest them elsewhere either directly or indirectly via the International Criminal Police Organization or other countries’ police. There is also the question whether other countries’ police would cooperate. For instance, many Albanian, Tunisian and Moroccan landowners are illegally working in Italy while idling land at home. But tax evasion in Italy itself is widespread and the police often close one eye. While the police are having troubles in finding and arresting the tax evading absent farmers, the land is still being idled.

4. The tax is normally paid to the governments, although a part might be channeled to local communities to improve services to full-time farmers. But if the full-time farmers could not get the fundamental service they need, i.e., access to the irrationally and polyopolistically used land of the able-bodied part-time and absent farmers, other services would be insignificant. Thus they may not have the incentive to report an under-producing or idled land to the tax officers. The tax officers may not have the incentive to charge the tax because it does not enter their own pocket. Rather they might have the incentive to take bribes and
allow tax evasion. But if a proportion of tax could be given to tax officers as bonus, they might charge it arbitrarily and exorbitantly. As a result of such difficulties, in Romania, although land leasing is widespread, idling of normal land still exists according to Balint (4-6 November 2004).

(IV) A law to confiscate idled private land has been adopted in a presidential decree issued in November 1997 in Tajikistan (EIU 1st Quarter 1998: 27); and has been debated in the Romanian Parliament in the spring of 2002, but has met difficulty in getting it passed mainly because it was regarded as too harsh to private landowners (Atanasiu 12 March 2002).

(V) If GMO (Genetically Modified Organism) cereals were produced, could a nation achieve food basic self-sufficiency while tolerating the irrational production abandonment by part-time and absent farmers? 1. Most consumers of the world would not accept GMO foods. 2. Even if so, economies of scale would still exist so that full-time large farmers would prevail by lower costs in producing GMO cereals, while those nations suffering from the irrational production abandonment by the part-time and absent farmers would lose basic self-sufficiency in cereals in the competition due to their higher costs.

(VI) If a Land Bank (such the South Korean government was trying to establish in 2004) could effect the transfer of the irrationally and polyopolistically used land of the part-time and absent farmers to the full-time farmers? A Land Bank only provides information concerning where and which land is idled or under-producing, but cannot effect its transfer to the efficient and rational users. In fact, in many villages, there is no information asymmetry or shortage, as the full-time farmers can see the idled or under-producing land of their part-time and absent farming neighbors, but cannot have access to it due to the refusal of the owners to lease it out at low rents.

II. The Author’s Principles of the New Model

Thus the author tries to find a new model which would work at both food under-self-sufficiency and overproduction stages for both developing and developed countries with private land ownership, and raises ‘the principles of the new model’ (without the element of physically unwithdrawable but financially salable private land shares) at (Zhou, Jian-Ming 2001: 165-6):

The principles of the new model are: implementing variable mixed economies; combining market economy with appropriate interventions by the central and local
governments and rural communities and participation by farmers; keeping private ownership of farmland and housing land; holding public land ownership for major infrastructure; strengthening large while preserving small farmers rather than crowding them out; dividing small farmers’ farmland into production land for market and self-sufficiency land (under the Dual Land System) or family plots (under the Single Land System) for household’s own use; joining the production land for market for the use of [progressively] each household on a per capita basis, labor force, grain-producing labor force, and finally competitively expert farmers to gain economies of scale and more efficient use of land, capital, labor, technology, and management resources and paying dividends to small landowners; retaining the self-sufficiency land or family plots by small farmers; promoting off-farm employment for small farmers to speed the transition from agriculture to industry and further to services; progressing from the Dual Land System to Single Land System following the transfer of small farmers to off-farm activities; sustaining agricultural and rural development by generating income and food security within rural areas rather than relying on the government welfare subsidies and food import; allocating surplus food produced on the normal cultivated land to the owners of the erodible cultivated land in order for them to convert it back to forestry, grassland, lake land and wetland, so as to both prevent food overproduction and improve the environment.

Accordingly, the author has suggested several possible applications of them. One application is Proposal 5.1: village-wide corporate ownership of physically *unwithdrawable* but financially salable private land shares (Zhou, Jian-Ming 2001: 154-65), which was published by FAO first (Zhou, Jian-Ming 1 October 1997). It is then found that this would meet psychological barriers as landowners prefer that their private land could be withdrawn from the use by others.

Another application is raised when dealing with the EU (Zhou, Jian-Ming 2001: 398 second paragraph), which does not require such unwithdrawability.

In particular, some EU member countries (e.g., Italy) once adopted laws to oblige part-time and absent farmers to lease their inefficiently held land to full-time farmers for more efficient use. But such laws ceased to function [functioning] in order to comply with the EU’s common agricultural policy of reducing food overproduction. (Omodei Zorini 2001). Hence the EU faces a dilemma: if such land were more efficiently used, food overproduction would be strengthened; if not, the EU farmers would not be able to increase farm size in order to be more competitive in the international markets especially in front of the much larger US farms with much lower costs. Here, the author wishes to point out that it is the ecologically weak land which should be converted back to forestry, grassland, lake land and wetland, so as to both decrease food overproduction and protect the environment, while the inefficiently held normal land should still be turned over to full-time farmers for
more efficient use, so that they could increase farm size and lower costs, as indicated in the principles of the new model in Chapter 5.

It is this one, although only occupying less than half a page in that book, that this book develops into a set of major policy Proposals.
Chapter 15

Possibly Effective and Appropriate Proposals for Private Land Ownership

I. The Author’s Proposals

The author thus provides, in an evolutionary approach, Proposals for both developed and developing countries at both under-self-sufficiency and overproduction stages, without changing private land ownership, to achieve eight aims at the same time: (1) minimize/abolish/prevent protectionism, while (2) avoiding overproduction and (3) irrational production abandonment; (4) boost full-time large farmers, whereas (5) not crowding part-time and absent small farmers out of agriculture; (6) reach/maintain basic national self-sufficiency in cereals, meanwhile (7) promoting multi-functionality of other agricultural and rural sectors and (8) improving the environment.

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.

These Proposals have been published in the author’s book (Zhou, Jian-Ming 2001: 165-6 ‘the principles of the new model’, 398 second paragraph), and elaborated in his papers accepted by 15 conferences, in nine seminars and an international press conference in Asia, Europe, Latin America during 22 November 2001 – 25 June 2006 (see Zhou, Jian-Ming 2005-06: Appendix I, II, III and IV), and in his nine articles published by the EU Commission during 6 November 2007 – 14 June 2008 (see Bibliography at the end of this book), hence launching a global second land reform - land use reform.
II. Some necessary explanations

1. These Proposals do not intend to replace the first land reform of distributing land for individual ownership due to equity reasons, which is still necessary where a few persons own large areas of land while many peasants own none or little (especially in some countries in Africa, Latin America, and Southeast Asia). Nevertheless, there would be no harm but benefits in adopting them before the land reform, as well as during and after it.

2. After the first land reform, if there are few off-farm activities and farmers still have to rely on land for survival, the protection of tenants from eviction, control of land rent at the low level, and land-holding ceiling to prevent the revival of the feudal landlordism through land repurchasing would be necessary, as Japan implemented following the land reform of 1946-50 (this point is particularly relevant to those African, Latin American, and South and Southeast Asian countries which have just carried out land reform).

The Via Campesina reported (21 June 2008) that ‘Peasants represent almost half of the world population and are the backbone of the food system. However, their rights are systematically violated. Small farmers are expelled from their land to make room for large plantations, infrastructures and industrial, residential or commercial projects. For example in Indonesia, on the 29th of January 2008, 35 security guards of the National Plantation PTPN IV Adolina backed by 70 police officers from Deli Serdan District destroyed 30 hectares of land planted with corn and cassava belonging to small farmers. Seven farmers were arrested trying to defend their crops (they are now released). The company has cleared the land in order to grow palm oil. The UN Special Rapporteur on the Right to Housing calculates that an average of 71.6% of rural households in Africa, Latin America and Western and Eastern Asia (excluding China) are landless or near landless. In addition, women farmers suffer from double marginalization: as farmers and as women. As farmers they do most of the agricultural work but as women their access to land, resources, incomes and decision-making is restricted.’ It is apparently inappropriate to force small farmers who still rely on farming for their basic livelihood to leave their land to large farmers.

But once off-farm activities have developed and absorbed many part-time and absent farmers, such restrictions should be evolutionarily removed to facilitate the land transfer to the full-time farmers, as Japan did during 1962-80. Those countries which have reached the similar stage but not yet abolished such restrictions, e.g., Thailand (Onchan 8-11 January 2002), are advised to do so now.
3. Implementing these Proposals could reach the aim of the traditional land consolidation, but without the difficulties of exchanging ownership and locations of fragmented small parcels, and regardless of the inheritance which may further fragment the ownership and location of the family farms. Of course, they do not exclude the implementation of the traditional land consolidation.

4. As presented above, a land waste tax may suffer from the difficulties of determining the tax levels, escaping of the landowners, low incentive of other farmers to report the land waste to the tax officers, the ineffectiveness and corruption of the tax officers. These Proposals would be more effective, because as long as a land for market has been insufficiently used for maximally one year, while other farmers wish to lease it in, the owner could not refuse and the local land authorities could exercise the lease even if the landowner is absent. Full-time farmers would have the incentive to report the wasted land to the land authorities since it would be they who would have access to it.

5. These Proposals are much more lenient than land confiscation or obliged land sale while still reaching the same aim of avoiding land waste.

6. These Proposals may overcome the above-mentioned fundamental dilemma between overproduction and irrational production abandonment, and the derived dilemmas. In particular, they allow a certain degree of production abandonment as long as other farmers do not wish to lease in the under-producing land beyond the family consumption need of the owners, so that overproduction could be avoided. But if other farmers wish to do so, then the landowners could not decline, so that the full-time farmers could achieve economies of scale, reduce costs and become viable or more competitive in both domestic and international markets. Accordingly, it would prevent under-self-sufficiency in cereals because once it has appeared, domestic food prices would rise, and full-time farmers would have the incentive and realize the possibility to lease in the under-producing land beyond family consumption need of the part-time and absent farmers so as to produce more. It would also permit the full-time farmers to reduce costs and become more competitive in the international markets.

7. Under the proposed Dual Land System, the land for family consumption is still held by the part-time and absent landowners so that their family need for vegetables and cereals could be catered, farming skills kept, and small farmers not crowded out of agriculture, small farms with narrow ridges and trees for birds retained, hence an appropriate solution; while the land for market is leased competitively to the full-time farmers, so that they could achieve economies of scale, reduce costs, be viable and more competitive and obtain incentives for longer term investment. If the landowner is absent, the local land authorities
could implement the leasing of the land for market, hence an effective solution. Therefore, this legislation would be suitable for both traditional and modern agriculture, fragmented small and consolidatorily enlarged land, low and high income economies, food under-self-sufficiency and overproduction stages, and developing and developed countries under private land ownership.

8. Of course, the part-time and absent farmers should be allowed to lease out even their land for family consumption on a voluntary basis. But they should make sure that they would not withdraw such land before the leasing contract is over (if the tenant has not violated the contract), so as not to affect the interests of the tenant. In so doing, the Dual Land System will become Single Land System.

9. Would these Proposals make land lease more complicated as the local land authorities would have to distinguish farmers into full-time, part-time 1 (mainly on farming), part-time 2 (mainly on off-farm jobs) and absent, or large and small scale? Such distinction is for theoretical and statistical reasons (such as in the Japan Statistical Yearbooks). In the real operation, as long as the land beyond family consumption need of an owner has been insufficiently used for one year, and the owner has no intention to sufficiently produce on it the next year, while other farmers would like to lease it in for so doing, then there would be no need to know whether the owner is a full-time, part-time 1, part-time 2, absent, large or small farmer, for the local land authorities to authorize the lease of this land.

10. In so doing, the market is not repealed, but would be promoted. (1) If the landowner himself uses the land, he could compete in the market. (2) If his insufficiently used land for market is requested by several farmers, he could select one offering the highest rent, hence a leasing market. (3) After winning the contract, this tenant could compete in the market. (4) If the lessee failed to fulfill the contract, the landowner (or in his absence the local land authorities) would have the right to stop the contract and transfer it to another tenant, so as to guarantee the land to be really operated competitively.

11. Once full-time farmers have leased in the land, they could decide to produce which products (not only cereals but also others) and how much, out of their own economic considerations according to market demand-supply conditions and the natural conditions of the land.

12. If the highest rent a requester could offer is still lower than the amount the owner demands, should the state compensate for the gap in order to avoid obliging the owner to lease the land out? Practically speaking, (1) if so, the owner may demand increasingly high and exorbitant amount of rent, so that the state could not afford. Suppose a landowner charged 500 euros as the annual rent of his land, and there were four requesters who could only afford to pay 100, 200, 300 and 400 euros respectively. The landowner could pick the 400-euro payer...
(other conditions equal) as the tenant. But if the state paid the gap of 100 euros to the landowner, he would ask for 600 euros next year, 700 euros further next year, . . . and an increasingly unlimited amount in the future, which no state could afford. (2) If the state had to set up a ceiling on the compensation it pays (e.g., 100 euros, so that the landowner could not receive more compensation if he charged over 500 euros), this would also be an obligation. Thus a certain degree of obligation could not be avoided. (3) Even if the state could afford to pay a compensation for the gap, this would be another form of protectionism not allowed by the WTO. Thus the state should not compensate for the gap. Theoretically speaking, this gap is actually a polyopolistic profit (just like a monopolistic and oligopolistic profit), and should thus not be allowed. This approach reflects a mixed economy combining market economy (the owner could choose the highest rent bidder – 400-euro payer) and state intervention (the owner could not refuse to lease land out at a rent lower than his demand - the state would not compensate for the gap of 100 euros). Thus this is not a command economy which excludes market economy, but a third way between them.

13. One may worry that if the landowner could pick up the highest rent payer, then poor people could never win the leasing contract, then how they could survive. (1) After the first land reform, each rural family should have been distributed an equitable amount of land for at least subsistence. Thus even if a poor farmer could not win a contract to lease in more land, because he could not afford to pay the highest rent compared with the offers of the other candidate tenants, at least he has got a minimum amount of land for survival. If he would like to use more land, he would have to compete in the leasing market. (2) In reality, poor farmers may also succeed in renting in more land. As mentioned above, in the USA, some small farmers, including African Americans who were the weakest of farmers and owned little land, have succeeded in becoming competitive large farmers by renting in land from old and single female landowners (Zhou, Jian-Ming 2001: 370-84).

14. One may also ask how to guarantee a minimum living standard (enough for food, cloths, housing, local transportation) for all farmers. (1) In most developing countries, the government cannot yet afford to guarantee it by payments. But after the land reform, each farming family should have been attributed a minimum amount of land at least for subsistence. When there are few off-farm activities and farmers still have to rely on land for survival, the protection of tenants from eviction, control of land rent at the low level, and land-holding ceiling to prevent the revival of the feudal landlordism through land repurchasing would be necessary. (2) In many developed countries, the government may afford to guarantee it by payments. But such payments should
be limited to a reasonable amount. For example, to a jobless and homeless landowner in Florence, the government may need to pay 700 euros monthly (of course, such payments should be adjusted according to the minimum living costs of the locality). If his family members were also jobless, they could share housing, and then the housing payments to all the members may be adjusted. If he earns 200 euros, the government may only pay 500 euros. If he earns 700 euro, the government should not pay. If he refused a job offered by the government which he could do, the government may also decide to pay him less or zero. If he wants to earn more, he would have to compete in the market, either by leasing in more land or engaging in off-farm activities. (3) In some fast developing countries, the government may start to do so and popularize it gradually. For example, as mainland China has been developing towards richness, a minimum living standard guarantee system has gradually been established, whereby the urban and rural residents are paid the difference between their incomes and the local minimum living standard. It was started in Shanghai in 1993, and has been spreading towards all the other urban and rural areas. (Zhou, Jian-Ming 2001: 247-8. Chao, Ge 21 March 2005). The state has decided to give all the rural residents a minimum living standard guarantee in 2007 (VOA 6 March 2007). Naturally, if a farming family receiving a minimum living standard welfare does not produce sufficiently on its land beyond family consumption need, while other farmers wish to do so, it should not be allowed to refuse to rent it out.

15. One may suggest to divide the decoupled direct subsidy of the EU between the landlord and tenant, rather than giving all of it to the tenant, so that landowner may have incentive to lease land out. But in so doing, the part given to the tenant may not be enough to cover his costs in cross-compliance with the environmental, food safety, and animal welfare standards. Thus, the landowner may be provided with some other incentives to lease the land out. One possibility would be a reduction or exemption of the agricultural tax and land rent tax.

In total, there would be two kinds of basic social welfare. (1) A minimum living standard welfare to every rural (and urban) resident. (2) A decoupled direct subsidy to the real land operator (either the owner or tenant); if nobody would like to lease in the land, the owner may keep it even without sufficient production; but its sum should not be beyond the WTO standard. For example, if the minimum living standard welfare were 700 euros, and the decoupled direct subsidy 100 euros, then, once the owner has leased his land out, the decoupled direct payment would go to the tenant, so that he would keep 700 euro as the minimum living standard welfare (minus his land rent revenue).

16. One may think that these Proposals may violate one of the private
property rights - right to use and not to use one’s property; and put landowners at an inferior position in negotiations with tenants. But since cultivable land on this earth can no more be created, if some landowners neither use their land nor allow other farmers to use a part of it (unless paying high rents), this would amount to polyopoly, similar to monopoly and oligopoly which are not permitted by modern capitalism. A part of such high rents is profits from polyopoly of land just as profits from monopoly and oligopoly. For example, large firms like Microsoft, Nokia, Simens cannot do whatever as they wish just because they are private firms, but must follow national and international laws, especially the anti-monopoly and anti-oligopoly laws. It seems that such laws have put them at an inferior position in negotiations with consumers. But actually they have just put them at a fair position so that they can only earn normal competitive profits but not monopolistic and oligopolistic ones. The rationale under these Proposals is the same as that under the above-cited Western European and US laws: land is not only a private property, but also a scarce natural resource, and should be used in a rational and competitive way for the social, economic and environmental interests which are also in accordance with the fundamental interests of the able-bodied part-time and absent farmers.

17. One may also hold that democracy should not oblige landowners to lease land out. But in many developed countries, their democracy has forced domestic taxpayers and consumers to pay more for agricultural products, and compelled developing countries to suffer from their protectionism, just to protect the irrational and polyopolistic interests of their really or potentially part-time and absent landowners. Moreover, democracy of the developed countries has set up so many regulations on the use of private properties, such as the speed and noise of private cars, pollution of private factories, and pollution of private landowners on their own and neighbors’ land. At the under-self-sufficiency stage, the above-mentioned Western European countries all used democracy to oblige an efficient land use, so as the afore-mentioned two US laws even at the current overproduction stage. Therefore, the same democracy should establish regulations for a rational and competitive land use at all stages.

18. Would the landowners in general accept this kind of obligation? At the under-self-sufficiency stage, they have accepted as mentioned-above, because they could understand that otherwise the whole nation would suffer from hunger. At the overproduction stage, they would also accept if sufficient dialogue could be made so that they could understand that otherwise the whole nation would either resort to protectionism or lose basic self-sufficiency in cereals (as the EU faces) or suffer from both (as Japan and South Korea have encountered). Actually these Proposals are promotive to the Lisbon Strategy the EU has set up
in 2000 and re-launched at the beginning of 2005 for more competition.

19. By these Proposals, would full-time large farms get oligopoly and suffocate competition in the land leasing market? This would not happen as there are optimal farm sizes in each location which would deter farm size from becoming too large and concentrated in few farmers. It would not be economically possible for one farmer to use all the cultivable land of the EU to produce.

20. Under these Proposals, private land ownership will not be affected, but irrational and polyopolistic land use could be avoided. As for how to implement and organize the leasing while catering the interests of the landowner, tenant and society, and in particular avoiding misuse of land by the tenant, the landowner could choose the highest rent bidder, and they could share the inputs and outputs, so that not only the landowner but also the tenant would have the incentives to achieve the highest profits, prevent losses, and avoid deterioration of the land quality. This has been practiced in the USA (see Zhou, Jian-Ming 2001: 374-7). If the landowner is absent and the land authorities have to rent out his land for market, then they should call for tender and rent the land to the person who is the most experienced and skillful, and bids for achieving the highest rent, and investment in improving the infrastructure and quality of the land, using more organic fertilizer and less chemical one, improving the environment, etc. If the lessee did not implement the contract, then the land authorities will have the right to stop and transfer it to another competent tenant via tender. The above-cited 1979 law of the Tuscan Region of Italy also shows a good example of implementation. Relevant laws should also be established. For example, according to Giannoni 22 July 2005), in the EU, under the coupling, there have been large companies which paid high rents to landowners, but did not apply fertilizer. In so doing, land fertility may be lost in four-five years. Some of the landowners knew of this problem, but still leased land to them out of the fear that the agriculture of the EU has no future, and in order to earn easy and quick money. Thus the EU should stipulate both maximal level of chemical fertilizer (to prevent pollution) and minimal level of organic fertilizer (to protect fertility) to be applied, make field examinations and impose penalties on those who have violated them. Just as implementing other regulations, the costs of examinations should be born by the taxpayers and penalty payers.

21. There are countries where the clarification of land property rights still has not been completed, such as Albania where a land may be claimed by several families of a clan (Vittuari 27 April 2005). Needless to say, such clarification should be completed and land ownership certificates issued. However, even before this uneasy and time-consuming task has been finished, the local land
authorities could authorize the lease of the under-producing land beyond family consumption need of the claiming families to the full-time farmers (which would at least be better than land waste), and distribute the rent to the claiming families in a roughly equal way as a temporary solution. Of course, it would require field trials to find a suitable solution.

22. Would self-sufficiency in cereals stop international trade? There are several kinds of rice, wheat and other cereals. No country could produce all of them economically, so that international swaps would exist even if a country has achieved self-sufficiency in cereals in terms of quantity. Moreover, the author advocates only a basic self-sufficiency in cereals, so that international trade would be kept in cereals, and also continued in non-cereal products.

23. Following these Proposals, the world prices would tend to be stable as the possibilities of both under-self-sufficiency and overproduction would be largely reduced.

The currently high prices of agricultural commodities have triggered many countries to restrict food export. In 2007, Kazakhstan, Argentina, etc., curbed wheat export in order to meet the domestic demands (Tan, Shu-Sen 22 March 2008). In Russia, during July 2007 - 29 January 2008, the high international prices induced its food export to increase from 783 tons in the precedent year to 1,250 tons, including 1,100 tons of wheat. On 29 January 2008, Russia raised wheat export tax rate from 10% to 40%, at least 105 euros per ton, until 30 April 2008, but would be prolonged to early July 2008, which was aimed to actually prohibit wheat export. (Zhao, Jia-Lin 6 March 2008). China, Egypt, India, Vietnam (which account for one third of the rice exports of the world), and Cambodia started to constrain rice export in early 2008, and Indonesia announced on 2 April 2008 to follow the suit (Xiu, Fu 8 April 2008. Yi, Zhi 3 April 2008). India prohibited export of wheat, rice, edible oil, etc., at the beginning of 2008. Although there was a corn harvest in 2007, its price rose by nearly 40% in 2008, from 700 rupees (about 17 US dollars) per kg in January to 970 rupees (about 24 US dollars) per kg in early July. In order to control the domestic price rise of cereals, livestock, and other agricultural products, the government forbade export of corn during 4 July - 15 October 2008. (Li, Bao-Dong 5 July 2008)

The author could understand the need for restricting food export during the current global food supply shortage crises, but would not regard it as a fundamental solution to the increasing prices and decreasing production. Externally, such measure would raise the world prices, and harm the importing countries. For example, due to the recent soaring food prices, riots have erupted in 33 countries such as Cameroon, Egypt, Haiti, Ivory Coast, Mauritania, Mozambique, Senegal, and protests have happened in Bolivia, Indonesia,
Uzbekistan, Yemen, the Philippines, etc. (ZGXWW 10 April 2008). Internally, the landowners would not be interested in producing more to reduce the prices and let the poor afford, so that they could still enjoy polyopolistic profits. In order to induce them to do so, the government would have to keep or raise protectionism (such as the EU), rather than abolishing it.

In contrast, the author’s 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’, would be the unique suitable and fundamental solution (as no alternative has ever been raised ever since the publication of the author’s Proposals in his book in 2001). When the external prices are high, the landowners are willing to produce more for export, which would reduce the world prices. After that, if they were unwilling to produce more to lessen the internal prices further and let the poor afford, a part of their land would naturally be under-utilized or idled, then full-time farmers could have access. Only by obliging ‘those farmers who leave the sector’ to use the ‘possibility to transfer the land to those who want to expand its [their] business’, would ‘The currently high prices of agricultural commodities’ indeed ‘trigger a more intensive use of agricultural land and much of the less intensively used land’ really be ‘converted into intensive use again’, as Demarty desires (9 October 2007). Only by removing polyopoly in land use as the fundamental obstacle in this way, would the Ricardian model of free market mechanism function, so that food shortage would raise prices and induce farmers to produce more and reduce prices. Both externally and internally.

24. Regarding the author’s Proposal (II) ‘Convert the environmentally sensitive farmland back to the nature obligatorily forever once a country has encountered constant overproduction’, once the environmentally sensitive farmland (both highly and lowly productive) has been permanently converted back to the nature (forests, lake land, grass land and wet land), 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. The government could pay them a transitional subsidy until they could earn a normal living upon non-cereal production activities, which is environmentally oriented, rather than trade-distorting.

25. Though these Proposals are principles which should be adapted to local conditions, it would be universally appropriate to give full-time farmers access to the under-producing land beyond family consumption need of the part-time and absent farmers, and convert the environmentally sensitive farmland back to the nature obligatorily forever once a country has encountered constant overproduction.
26. Here the author uses a dynamic and evolutionary approach from minimizing to abolishing protectionism.

(1) If a country has not rationally and competitively used all its cultivable land while implementing protectionism to achieve basic self-sufficiency in cereals, its protectionism could not be regarded as having been minimized (such as Japan and South Korea with much idled or under-producing land). In Switzerland and the plain areas of the EU-15, under the coupling, leasing was widespread. Would it mean that all the cultivable land has been rationally and competitively used so that its protectionism could be justified as already minimized to keep basic self-sufficiency in cereals? The answer is no, because it is the protectionism at the expenses of the taxpayers and consumers and developing countries which has enabled the tenants to pay high rents to induce the landowners to lease land out.

(2) Once a country (such as the EU, Japan, South Korea, Switzerland) has rationally and competitively used all its cultivable land, it would be able to avoid overproduction and under-self-sufficiency of cereals (with normal natural conditions) without the coupling, price supports, export aids, and high decoupled payments, hence abolishing the bulk of protectionism. However, if its costs were still higher than in other countries, it would need to implement import restrictions (within the scope permitted by the WTO) so as to keep a basic (or certain degree of) self-sufficiency of cereals. In so doing, it could be regarded as having minimized protectionism. Likewise, if a country has rationally and competitively used all its cultivable land but suffers from unfavorable natural conditions (such as the cold weather in Norway), it would be understandable for it to implement import restrictions as a minimum degree of agricultural protectionism in order to achieve basic (or as much as possible although below basic) self-sufficiency in cereals. (For example, the free trade zone to be established in 2010 between the Association of Southeast Asian Nations and China as decided in November 2001 will reduce the tariff on rice in 2015 only by 50%, rather than 100%, reflecting the strategic desire of the member states to keep a certain degree of self-sufficiency in rice). With certain import restrictions in cereals, the full-time large farmers could still gain advantage within their own countries. Such countries could also allow cheaper laborers of foreign countries to enter to lease in their land or become farm employees so as to reduce labor costs further.

(3) Once a country with higher costs has joined a super-nation like the EU, it would be unnecessary for each Member State to reach basic self-sufficiency in cereals, as some Member States could overproduce to feed the others and there would be no threat of losing basic supply of cereals [this view has been shared by the EU Commission policy-makers Ahner (4-6 November 2004) and
Borchardt (7 October 2004), but some farmer organizations (e.g., in Sweden) (Eriksson 23 September 2004) and Member States (e.g., Hungary) (Somogyi 26 October 2004) still wish to attain basic self-sufficiency in cereals at the Member State level, so that the remaining protectionist policy of import restrictions could be lifted within the super-nation.

(4) As the EU has been expanding, so as the free trade zones and friendly partnerships among countries in the other continents, more and more nations in such zones and partnerships could get rid of wars and threats among the member states, and have no need to achieve basic self-sufficiency in cereals in each member state, so that their free trade could be promoted and import restrictions in cereals diminished and finally ended. Following this trend, the free trade zone between the Association of Southeast Asian Nations and China would further reduce rice tariff after 2015 and finally to zero. Likewise, the EU would not invade China again as many of its Member States did before 1949 and China would not invade the EU just as it has never done. The EU and China could avoid threatening each other and establish friendly partnership of free trade to import the agricultural products from the cheaper partner, so that the EU could finish the last protectionist policy of import restrictions versus China. There would be two possible results.

A. The prices of China’s cereals were raised by the imports of the EU but (plus transportation costs) still lower than the EU level so that the EU could import all cereals from China. This would be less realistic as even those countries with largest farms would not be able to feed the whole world (if without protectionist policies to give unfair incentives to farmers to overproduce and make dumping to other countries), not to mention China dominated with small farms, so that other countries would still have room to produce for the internal and external markets. For example, by 2004, the normal annual global trading volume of cereals was 220 million – 230 million tons, which could meet only 45% of the domestic demand of China (Liu & Guo 10 August 2004). Therefore, it would be unlikely that one country could feed the whole world.

B. The imports by the EU from China raised the prices of China’s products (plus transportation costs) to or over the EU level so that the EU farmers could produce a part for its own demand although less than the level of basic self-sufficiency. This would be more realistic.

Under either result, each partner may still produce its own localized special products which, even if the costs were higher, could still be bought domestically and externally. For example, although China is still a developing country, a part of its population has become rich and consumed the more expensive fragrant rice of Thailand.

(5) Only after the whole world has entered a permanent era without
sanctions, embargos, invasions, wars and threats, and without tariffs, would basic self-sufficiency in cereals for any nation be unnecessary as each country could import from the others, so that the last protectionist policy of import restrictions could be abolished among all countries of the world. (Of course, if before the arrival of this stage, some countries do not care about losing basic self-sufficiency in cereals and would like to rely on imports without any import restriction, they should be allowed to do so). But even at that stage, the pure and idealistic Ricardian model of free market mechanism would still not function (as argued above, food shortages and high prices would not necessarily induce those farmers with polyopoly on land use to produce more to cater the need of the poor consumers, rather, they would prefer to enjoy the high prices and profits), so that these Proposals would be necessary permanently - as long as polyopoly of land use still exists on this planet without the possibility of creating more cultivatable land incessantly.
Chapter 16

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 183 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 – 7 May 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.
<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Description</th>
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<tbody>
<tr>
<td>AEFJN</td>
<td>Africa Europe Faith and Justice Network</td>
</tr>
<tr>
<td>AGRA</td>
<td>Alliance for a Green Revolution in Africa</td>
</tr>
<tr>
<td>AMS</td>
<td>Aggregate Measurement of Support</td>
</tr>
<tr>
<td>CABI</td>
<td>Commonwealth Agricultural Bureau International</td>
</tr>
<tr>
<td>CAP</td>
<td>Common Agricultural Policy</td>
</tr>
<tr>
<td>CCPs</td>
<td>Counter-Cyclical Payments (United States of America)</td>
</tr>
<tr>
<td>CEE</td>
<td>Central and Eastern Europe</td>
</tr>
<tr>
<td>CEECs</td>
<td>Central and Eastern European countries</td>
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<tr>
<td>CIS</td>
<td>Commonwealth of Independent States</td>
</tr>
<tr>
<td>COAG</td>
<td>Coordinator of Organizations of Farmers and Ranchers</td>
</tr>
<tr>
<td>CPE</td>
<td>European Farmers Coordination</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer Price Index</td>
</tr>
<tr>
<td>CRP</td>
<td>Conservation Reserve Program (United States of America)</td>
</tr>
<tr>
<td>CSD</td>
<td>Commission on Sustainable Development of the United Nations</td>
</tr>
<tr>
<td>DDA</td>
<td>Doha Development Agenda</td>
</tr>
<tr>
<td>EC</td>
<td>European Community</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>EUI</td>
<td>European University Institute (Florence, Italy)</td>
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<tr>
<td>EUR</td>
<td>Euro</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>FAS</td>
<td>Foreign Agricultural Service of the United States Department of Agriculture</td>
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<tr>
<td>(USDA)</td>
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<tr>
<td>FIAN</td>
<td>FoodFirst Information and Action Network</td>
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<tr>
<td>GATT</td>
<td>General Agreement on Tariffs and Trade</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GMO</td>
<td>Genetically Modified Organism</td>
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<tr>
<td>GRR</td>
<td>Grupo de Reflexión Rural</td>
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<tr>
<td>GSSE</td>
<td>General Services Support Estimate</td>
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<tr>
<td>Ha</td>
<td>Hectare</td>
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<tr>
<td>IAO</td>
<td>Istituto Agronomico per l’Oltremare (Institute of Agronomy for the Overseas)</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund of the United Nations</td>
</tr>
<tr>
<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change of the United Nations Environmental Program (UNEP)</td>
</tr>
<tr>
<td>JSY</td>
<td>Japan Statistical Yearbook</td>
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<tr>
<td>LDPs</td>
<td>Loan Deficiency Payments (United States of America)</td>
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</tbody>
</table>
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>LRRP II</td>
<td>Land Reform and Resettlement Program Phase II (Zimbabwe)</td>
</tr>
<tr>
<td>MEP</td>
<td>Member of the European Parliament</td>
</tr>
<tr>
<td>MLGs</td>
<td>Marketing Loan Gains (United States of America)</td>
</tr>
<tr>
<td>MTR</td>
<td>Mid-Term Review of CAP (Common Agricultural Policy) of Agenda 2000 of the European Commission</td>
</tr>
<tr>
<td>NAFTA</td>
<td>North American Free Trade Agreement</td>
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<tr>
<td>NGOs</td>
<td>Non-Governmental Organizations</td>
</tr>
<tr>
<td>NIS</td>
<td>Newly Independent States of the former Soviet Union</td>
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<tr>
<td>OCP</td>
<td>Onchocerciasis Control Program</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
</tr>
<tr>
<td>OFZs</td>
<td>Onchocerciasis-Freed Zones</td>
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<tr>
<td>ORZs</td>
<td>Onchocerciasis Reference Zones</td>
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<tr>
<td>OTDS</td>
<td>Overall Domestic Trade-Distorting Supports</td>
</tr>
<tr>
<td>PFC</td>
<td>Production Flexibility Contract (United States of America)</td>
</tr>
<tr>
<td>PhD</td>
<td>Doctor of Philosophy</td>
</tr>
<tr>
<td>PPE</td>
<td>European People’s Party</td>
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<tr>
<td>NPC</td>
<td>Nominal Protection Coefficient</td>
</tr>
<tr>
<td>PSE</td>
<td>Producer Support Estimate</td>
</tr>
<tr>
<td>PTPN</td>
<td>National Plantation (Indonesia)</td>
</tr>
<tr>
<td>SAPARD</td>
<td>Special Accession Program for Agriculture and Rural Development of the European Union (EU)</td>
</tr>
<tr>
<td>SELA</td>
<td>Latin American Economic System</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>UNEP</td>
<td>United Nations Environment Program</td>
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<tr>
<td>URAA</td>
<td>Uruguay Round Agreement on Agriculture</td>
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<tr>
<td>US</td>
<td>United States</td>
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<tr>
<td>USA</td>
<td>United States of America</td>
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<tr>
<td>USDA</td>
<td>United States Department of Agriculture</td>
</tr>
<tr>
<td>WARDA</td>
<td>Africa Rice Center</td>
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<tr>
<td>WHO</td>
<td>World Health Organization of the United Nations</td>
</tr>
<tr>
<td>WIDER</td>
<td>World Institute for Development Economics Research of the United Nations University</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
</tbody>
</table>
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The book 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 reveals that after the first land reform of distributing land to small farmers, the irrational and polyopolistic 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, 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)]. It has 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.

Hirschman has ignored that this obstacle has hampered the linkage effects. Evidences in Asia; Africa; Latin America; Central-Eastern Europe and Central Asia; Western Europe; North America and Oceania are presented.

Revising relevant US and Western European legislations, it provides effective and appropriate Proposals to, 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, 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.

Jian-Ming Zhou PhD in economics of European University Institute in Italy, is a post-doctoral visiting research fellow of IAO. His achievements contain 35 papers accepted by conferences in Asia, Europe, Latin America and USA; 36 publications including five by FAO, nine by EU Commission, and a book Sustainable Development in Asia, America and Europe with Global Applications: A New Approach to Land Ownership, Edward Elgar Publishing 552 pages 2001; 11 seminar presentations in four European countries; a press conference for WTO in Geneva; and consultancy for DEFRA, FAO, OECD and international journal Agricultural Economics. His analyses and Proposals have received 183 responses as appreciation/attention from Nobel economics laureates, governments, farmer organizations, and international organizations of the EU, EU accession countries, Japan, Switzerland, Canada, USA, CAR, OECD, WTO; UN, CSD, FAO, IMF, UNCTAD, UNEP and World Bank during 18 February 2002 – 7 May 2008.