

**Imperative Solutions to Sustainable Land Use under Private Land Ownership
- A Critique of Nobel Economics Laureate Theodore W. Schultz**

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Abstract

Contrary to Theodore W. Schultz's assertions that small farmers are rational, part-time farming is efficient, and economies of scale have no logical basis and have not stood the test of time and empirical findings, this paper presents that in (1) the low income countries still saddled with traditional agriculture, (2) the low income countries developing towards the high income economy, and (3) the high income countries, numerous able-bodied part-time and absent farmers earning higher off-farm income tend to inefficiently hold, i.e., under-utilize or idle, small (and often fragmented) farms without selling or leasing them to full-time (or active) farmers to achieve economies of scale which do have logical basis and have stood the test of time and empirical findings; and points out that this is a *global* problem unresolved under private land ownership in not only developing but also developed countries. Thus small farmers in so doing are not so rational to the societal and their fundamental interests. The paper also indicates that in the transitional countries in *Central-Eastern Europe and Central Asia* under private land ownership or possession many farmers voluntarily remain in collective land operation which perpetuates the low individual incentives just as under the public land ownership of the former centrally planned economy. The paper further analyses the dilemmas the *EU* has been facing in resolving food overproduction, reducing trade-distorting agricultural subsidies and tariffs, keeping small farmers in agriculture while strengthening large farmers and efficient land use. The paper thus *proposes* possible solutions on how to protect private land ownership, while transferring under-utilized land to full-time farmers; prevent the high costs of the traditional land consolidation, but still reaching its aims; keep part-time small farmers in agriculture, meanwhile bolstering full-time large farmers; avoid collective land operation, in the meantime benefiting from collective services; boosting EU enlargement but not adding burdens on the EU; retain non-cereal agriculture on ecologically sensitive land, at the same time improving the environment and precluding food overproduction; reduce trade-distorting agricultural subsidies and high tariffs, whereas making full-time farmers viable and competitive; and promote off-farm activities, for the meantime reinforcing agriculture.

I. Schultz's Assertions and the Global Reality

In *Transforming Traditional Agriculture* [1964] (reprinted in 1983 without changing views) which won the 1979 Nobel 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. If this seems like a commonplace idea, it is so because of the writings of T. W. Schultz.' (Johnson in Schultz [1964] 1983: back cover)

But here the low income countries are *shut* to the high wage stage or high income economy, as Schultz clarifies ([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 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, he puts aside the issue of 'the adaptation of the agricultural sector to growth in high income countries'.

This paper, however, displays that at least from the mid-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. (It would be more appropriate to call absent farmers as nominal farmers since an absentee from farming is not a real farmer. They are called so just in order to reflect their psychology of not abandoning the title of farmers so as to return to farming once having lost off-farm jobs.)

For example, although prewar **Japan** in **East Asia** was developed, its industrialization was based on its import of foods from, and export of industrial goods to, colonies. Its agriculture was relatively stagnant. (Oshima 1987: 39, 109). After WWII (World War II), of all farm households, its full-time households accounted for 50% in 1950, 34.8% in 1955, 33.7% 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: 100; 1981: 109, 113). 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 over one-fifth during 1950-59.

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 paper presents a reality as contrary to Schultz's assertion. From natural, economic and technological point of view, when there are few off-farm activities, the rural development is at the low income economy or low wage stage, and peasants have to rely on agriculture. As population grows, they have to reclaim uncultivated normal land, then ecologically sensitive land (hillland, wetland, saline land, sandy land, etc.) for food. As relatively easily reclaimable land diminishes, shortage of land would appear.

From institutional point of view, under the feudal system, a few landlords own large areas of land, while most peasants own little and have to be either tenants or wage laborers. Under the centrally planned economy, land is publicly owned and collectively operated. Both systems could not arouse enough farmer's individual incentives for production. Hence the land tenure reform for equitable individual ownership or individual possession under public ownership of land, which usually distributes land to families with a combination of good, bad, remote and nearby parcels, resulting in fragmented small individual farms. The individual farms could raise incentives of farmers (private landowners, or individual holders of public land) for production, increase productivity and release surplus peasants from agriculture.

However, cereals (and many other agricultural products) have a low elasticity in consumption [keeping in mind that certain special products (fruits, wine, ham, fish, etc.) may only be produced in some special localities and may have a higher elasticity]. After people become richer, they tend to consume less of them, but they could not abandon them. Therefore the full-time (or active) farmers' income would be lowered in comparison with off-farm workers, which would induce many able-bodied peasants to seek off-farm income. As the rural development enters the high income economy or high wage stage, and labor becomes more expensive than large machinery, it would be necessary for the remaining full-time farmers to acquire more land, achieve economies of scale, reduce costs, and be viable and competitive, if the part-time and absent farmers could sell or lease their under-utilized or idled land to them.

But a global problem is that in (1) the low income countries still saddled with traditional agriculture, (2) the low income countries developing towards the high income economy, and (3) the high income countries, even though land property rights have been well defined and restrictions on land sale or lease have been removed, many able-bodied part-time and absent small farmers earning higher off-farm income still inefficiently hold (i.e., under-utilize or idle) land, having no or little incentive to sell it, in order to keep security (so that they could return to farming once having lost off-farm jobs), 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, telephone, fax, computer, Internet, etc.) have made living in the rural areas convenient. They have no or little incentive to lease it either, due to low rent (the full-time farmers could not pay high rent because the revenue from cereal production would not be high), avoidance of possible misuse by tenants (who may apply much chemical fertilizer in order to gain a short-term high output), jealousy in preventing neighbors from prospering, and self-use for family consumption and as a hobby. The higher off-farm income has made the part-time and absent farmers unnecessary to either sell or lease their land. These are the major reasons why the free market mechanism itself could not effectively lead the able-bodied part-time and absent farmers to transfer their inefficiently used land to the full-time farmers. Actually, the higher the off-farm income, and the more stable the off-farm jobs the part-time and absent farmers have

obtained, the less incentive they would have in selling or leasing their land. The land under-utilization and idling by part-time and absent farmers tend to be year-around, rather than seasonal.

This behavior may be partly seen as out of their rational concern over their direct interests in security. Thus if the part-time and absent farmers could be guaranteed with a back-up basic social welfare and provided with appropriate remuneration, then some of them (especially old ones who tend to carry out much less farm or off-farm activities and wish to earn some rent) would be willing to transfer their inefficiently held 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. 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 inefficiently held by the 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, food shortage, unnecessary food import, higher domestic and international prices of agricultural goods, artificial food overproduction, land under-utilization or idleness, waste of other resources, environmental deterioration, etc. would also be incurred. Therefore at least some of the part-time and absent small farmers are *not so rational* to the society's and their own fundamental interests, even if they may be rational enough to their egoist and superficial interests. Similarly, part-time farming, if only on some of the family land to cater self-consumption, could be regarded as efficient. But if it is maintained also on the rest of the land which could have been leased to the full-time farmers for more effective use while not affecting the self-consumption of the part-time farmers, it is *not so efficient*. In fact, the inefficient land-holding by part-time and absent small farmers has made market mechanism unfunctionable. (Zhou 2001: Chapter 1)

Japan provides a typical example. The Japanese model of rural development began by a land reform for individual ownership in 1946-50 with protection of tenants from eviction, low land rent, and land-holding ceiling of 3 ha in order to prevent the revival of feudal landlordism through land repurchasing. It brought in huge incentives to peasants for production, but also maintained numerous fragmented small farms. Meanwhile national rural cooperatives were set up to provide overall services to family farms. Through *construction of rural infrastructure, higher yielding and multiple cropping of rice and other cereals, diversified cropping and non-crop agriculture, off-farm employment, and peasant migration to cities and work in town and village firms*, full employment was realized and wages rose, which led to *agricultural mechanization with small machinery*. In 1960, rice self-sufficiency was attained, the first transition (agriculture to industry) completed, labor shortages appeared, and the second transition (industry to services) started. However, even though the land-holding ceiling was relaxed in 1962, land rent control removed in 1970, and landlords were allowed to retrieve land after long-term lease in 1970 and after short-term lease in 1980, *the inefficient land-holding by part-time and absent small landowners has perpetuated the fragmented small farms* as the remaining obstacle still unresolved to sustainable rural development. In order to be viable and gain higher incomes, farmers and cooperatives lobbied for government protection of rice production. The ruling party yielded, fearing the loss of votes. Thus costs and prices of rice rose well above the prevailing international levels. The government subsidies to farmers resulted in major budget deficits. Rice import prohibition during 1961-93 caused international protests. Following a natural disaster

and loss of rice self-sufficiency in 1993, since 1994, cheap rice has had to be imported, and rice self-sufficiency restored by continuous subsidies. In fact, starting from 1960, except for rice and wheat, all the foods have been under-self-sufficient, while much land is under-utilized or idled. (Zhou 2001: Chapter 4)

In East Asia, the Japanese model was just repeated by **Taiwan Province of China** in the 1970s and **South Korea** in the 1980s (Hayami & Yamada 1991: 7). During 1978-83, **mainland China** contracted village collectively owned land to households for individual operation, which aroused peasants' incentives for production and released surplus labor to off-farm activities. Thus from the beginning of the 1980s, land under-utilization and idling by part-time and absent farmers have also appeared. (Zhou 2001: Chapter 6)

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, inefficient land-holding by part-time and absent landowners have already appeared, although to different extent, as rural labor force has been induced to abandon agriculture 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. (Zhou 2001: Chapter 5). For example, India has not yet got rid of mass poverty and hunger in the rural areas. 'The government has now 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: 2, 7). According to Chakrabarti (2001), because many developed countries still keep agricultural subsidies and tariffs well over the WTO standards, they have made agriculture in many developing countries more unprofitable and compelled more and more farmers to seek off-farm income, while idling land, e.g., in India. **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 was 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 inefficient land-holding. (Zhou 2001: Chapter 8). The general situation in Southeast Asia is summarized in the 'Call for Papers' by the International Symposium (2002) 'Sustaining Food Security and Managing Natural Resources in Southeast Asia - Challenges for the 21st Century': '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 **Yemen** of **West Asia**, according to Destremau (2001), land is privately owned, and many male part-time and absent farmers went to earn higher income in Saudi Arabia, while leaving women to cultivate in home, hence land under-utilization.

In **Latin America**, population living in the countryside dropped from 58% in 1950 to 25% in 1995 (Abramovay [1996] 1997: 56). In **Mexico of North 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.' 'If the migrants were relocating to Mexican cities, rather than the USA, 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. But migration is a multi-billion-dollar venture for Mexico. Emigrants send home an estimated \$6.3 billion each year. That money – the nation's third largest source of income, behind oil and tourism – has not only provided relatives with money for food, clothing and medicine. 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.' (Thompson 2001: 2)

'At the turn of a new century, however', as the USA increased border control and made illegal crossings more difficult, '*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, and more Michoacanos currently live in California, Illinois and Texas than in their homeland. In village Casa Blanca, the families – usually fathers first, followed years later by their wives and children – have been swept North by the desperate torrent that carries floods of immigrants to the USA, leaving widening swaths of Central Mexico *abandoned*. In the 1990s, most of the 5,800 people once living in Casa Blanca have moved to Tulsa, Oklahoma. Fewer than 2,500 remain, and many of them have begun referring to this desert village as a ghost town.' 'Migration experts worry that having entire families and villages transplanted North of the border could pose serious economic consequences because incentives to send money home could wane.' Thus, while President Vicente Fox 'has been a vocal advocate for making the US-Mexican border more open to the free flow of Mexican workers, he has also said that he aims to carry out projects that would help lift rural areas out of poverty to encourage more Mexicans to stay home.' In the week of 11-15 June 2001, 'he inaugurated a micro-lending program aimed at supporting homespun businesses in the poorest regions of the country. But of the 2,000 people who lived in the Michoacan village of Huacao 10 years ago, only 400 remain – nearly all of them are women, children too young to trek across the border or elderly people who feel too weary.' (Thompson 2001: 2)

In **Brazil of South Latin America**, there has been a bimodal of large land estates and small farms. During 1972-96, those larger than 1,000 ha have 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 (OECD 1999-7: 21). But Abramovay [1996] (1997: 62-3) reveals 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.).'

In **Egypt of North Africa**, according to El-Ghonemy ([1996] 1997: 183-6), 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 as seven times the land tax 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. But the free market mechanism has not led to efficient land use: waste of cultivated land became so serious that the Vice Prime Minister and Minister of Agriculture, Livestock, Fisheries and Land Reclamation 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 1998).

In **Madagascar and Mauritius of East Africa**, according to Razafindravonona (2001) and Bhukuth (2001), land under-utilization 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, Nigeria, Senegal, and Togo of West Africa**, onchocerciasis (river blindness) has been considered as 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., gradually widened its covering area, and finally turned the ORZs into OFZs (Onchocerciasis-Freed Zones) in 1991. As a result of the OCP and other development programs, the OFZs and notably the valleys were repopulated in the mid-1980s. (CICRED 1999: 3, 29, 46, 111-5)

In the latter half of the 1990s, FAO organized a research in nine of these countries (without Guinea Bissau and Nigeria). The research finds that the land tenure system before the abandonment and after the recovery has always been in various forms of communal ownership, under the control of the tribes/lineages' elders. The new settlers, coming from different parts, are tenants to farm (except to cut or plant trees, which is the privilege of traditional land owners), without any ownership rights. They may be requested to quit after each crop season. (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 is progressively acquiring some *de facto* permanent rights on the piece of land where he/she settled; and local marriages' (Ciparisse 13 March 2002). Thus, 'an increasing proportion of young people were able to settle as sharecroppers and later as landowners in the pioneer settlements in the Central-

Western and South-Western parts of Ivory Coast' (CICRED 1999: 96-7) and 'An increasing number of outsiders have taken advantage of position or wealth and tried to acquire and purchase plots of land, thus increasing the trend towards an individualization of rights which directly menaces the traditional common system of access to land and resources by the group' (Ciparisse 2001).

'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, 96, 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 Onchocerciasis-Freed Zones 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 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)

One may think that under the circumstances that land is abundant (although generally of relatively poor fertility), if long-term leasing could be assured to the male adults, they would be willing to remain in agriculture (Ciparisse 2002). Of course, long-term leasing would be conducive, but not an absolute condition, for them to do so. For example, in both China and the USA, renewable annual leasing has functioned well (Zhou 2001: Chapters 7 and 10). Even in the OCP valleys, the fact that the wives and children could remain in agriculture shows that male adults were not singled out for eviction and could remain as well. Indeed, there are family units composed of several members and managed by a man (CICRED 1999: 86). Thus the more fundamental reason why many male adults have left farming is that off-farm activities are more profitable.

One could see that although in the latter half of the 1990s, the OFZs had not yet been fully settled, and land was still available for those who wish to cultivate more land and new immigrants, land under-utilization by part-time farmers has already happened. It could be expected that once the valleys have been fully settled, inefficient land-holding by part-time and absent farmers would make land unavailable to full-time farmers who wish to carry out modern agriculture, increase farm size, use large machinery, and reduce costs.

CEECs (Central and Eastern European countries - 15 in total) and **CIS** (Commonwealth of Independent States - 12 in whole), since the early 1990s, 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 land owners or possessors then had the choice to either set up individual farms, or remain in the collectively operated large farms. As a result, on one hand, in

domain 1 (individual farms), numerous able-bodied part-time and absent farmers earning higher off-farm income tend to hold fragmented small farms in inefficient use without selling or leasing them to 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 lacking experience and capital to establish their own farms, and some old peasants). Able-bodied part-time and absent individual landowners have leased out little land to the individual full-time farmers. 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.

On the other, there are still collectively operated large farms which operate either publicly owned land or rented private land (**domain 2**). Under private land ownership, those part-time and absent landowners who still wish to earn some rent are generally more willing to lease land to them than to individual full-time farmers because they possess more facilities and provide more services. Thus some landowners (mainly in CEECs) who have got physical parcels (which are typically fragmented as a combination of good, bad, nearby and distant parcels for reaching equity among landowners) rented them back to a large farm, while other landowners (chiefly in CIS) have obtained paper shares from a large farm and only upon quitting can they be given physical parcels (which are usually also fragmented for equity reasons). The large farm has distributed the publicly owned land or gathered private land to groups of employees for operation (collective operation of either public or *private* land), which, although benefiting from collective help, is a continuation of the operation system under the former centrally planned economy (collective operation of *public* land) and keeps the individual incentives low. Such collectively operated large farms (typically in the CIS) usually also give small household plots to members for individual operation (which proves efficient, showing the possibility of successful family operation upon larger land if collective help is provided). (Details, not allowed here due to length limit, are available in Zhou 2001: Chapter 11). The percentage of collective farming (as opposite to individual farming) is presented in Table 1.

The CEEC candidates of the EU have given trade-distorting agricultural subsidies at a higher level (around 20%) than the WTO standards (10% of the total value of production for a developing country and 5% for a developed one). Once admitted to the EU, they would have to be provided with an even higher level which the EU currently bears (about 50%, see Table 2) and wants to reduce but has encountered the resistance of its own farmers out of their vested interests. If the EU provided less subsidies to them than to the current member states, they would regard it as discrimination and would not agree. Thus the EU still cannot afford to admit any CEEC candidates after so many years of negotiations, and EU enlargement is impeded.

In the **United States**, 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 inefficient land-holding 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 at least a part of land to other farmers to increase farm size, or they themselves could lease in land to become large farmers, forming part ownership. Indeed some 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 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. This phenomenon also exists in **Canada** and the **EU** to some extent. (Zhou 2001: Chapters 9-11)

CEECs (* EU candidates)		CIS	
1. Slovakia *	84 (1999)	1. Turkmenistan	92 (1995)
2. Czech R. *	77 (1996)	2. Russia	91 (1997)
3. Bulgaria *	48 (95/96)	3. Kazakhstan	88 (1997)
4. Hungary *	40.4 (2000)	4. Uzbekistan	86 (1995)
5. Estonia *	37 (1997)	5. Moldova	85 (1995)
6. Lithuania *	33 (1996)	6. Ukraine	85 (1995)
7. Romania *	33 (1997)	7. Belarus	84 (1998)
8. Croatia	26 (1998)	8. Azerbaijan	77 (01.1996)
9. Poland *	18 (1996)	9. Kyrgyzstan	76 (1995)
10. Bosnia & Herzegovina	6 (1997)	10. Georgia	<10 (1996)
11. Latvia *	5 (1997)	11. Armenia	0 (1997)
12. Slovenia *	4 (1997)	12. Tajikistan	n. a.
13. Albania	0 (96/97)		
14. Macedonia	Similar to 8, 10, 12		
15. Yugoslavia	Similar to 8, 10, 12		

Sources: Hungary: CSO-HU 2001. Slovakia: MOA-SK 2000. Others: Zhou 2001: Chapter 11.

	1995	1996	1997	1998	1999
EU-15	41	35	38	45	49 ^p
Czech R.	12	13	9	21	25 ^p
Estonia	0	7	5	19 ^p	15 ^e
Hungary	14	9	7	13	20 ^p
Latvia	5	3	4	17 ^p	18 ^e
Lithuania	1	5	7	20 ^p	21 ^e
Poland	18	23	22	23	25 ^p
Romania	10	12	3	25 ^p	20 ^e

Slovakia	18	11	13	26 ^p	25 ^e
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* PSE is equivalent to the trade-distorting agricultural subsidies.

p - Provisional.

e - Estimate.

Source: OECD 2000: 25, 101-2.

The above examples have shown that land under-utilization and idling by part-time and absent farmers are indeed a global problem under both private and public land ownership and with both traditional and modern agriculture. Schultz might be excused for being unaware of it in 1964 when he published his book. But how could he be pardoned for reprinting it without changing views in 1983, when this problem had become serious at least in Japan, Taiwan Province of China, South Korea, and mainland China and widely reported?

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' 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: 11, 15), increase of farm size of the remaining full-time farmers would already be logically possible, and could be realized if the inefficient land-holding by the 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'. 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 WWII and China during the initial reform period (1978 - mid-1980s). 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, USA, Canada, Australia, New Zealand, EU, and some CEECs and CIS countries (Zhou 2001: Chapter 4, 7, 9-11). Therefore, unfortunately, it would be Schultz's faith that has not 'stood the test of time' and 'empirical findings' in the high income economy.

Thus the author's book (Zhou 2001) may be the *first* in literature to challenge Schultz's assertions by indicating with abundant evidences that land under-utilization and idling by part-time and absent farmers are a global trend and worldwide problem under both private and public land ownership and with both traditional and modern agriculture, systematically analyzing it, and suggesting to establish proper land tenure systems in variable mixed economies to overcome the failure of the free market

mechanism and effect the transfer of the land inefficiently held by part-time and absent farmers to full-time ones.

But the author's view does not as yet seem like a commonplace idea. For example, the usual belief is: '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).' (Lerman April 1999: 20). In the International Symposium 'Sustaining Food Security and Managing Natural Resources in Southeast Asia: Challenges for the 21st Century', 8-11 January 2002 in Thailand, a noted Southeast Asian economist stated to the author that whatever peasants do, they are correct and have good reasons. Apparently he was deeply influenced by Schultz. Thus the publisher Edward Elgar (1997) judges the author's book (Zhou 2001) as 'will make a significant contribution to an important but rather *neglected* area'.

II. Seeking Possible Solutions under Private Land Ownership

It is well known that **China** has succeeded in agricultural reform immediately in 1978 when it was started and continuously since then, in sharp contrast to the decade-long stagnant agricultural transition in CEECs and CIS. In China, private land ownership is not allowed. Land remains under either the state ownership (for urban land) or village collective ownership (for rural land). The village collectively owned land was contracted for 30 years (renewable) to households (initially fragmented and small for equity reasons) as the basic level of operation (some village reserve land could be for short-term lease), hence arousing peasants' individual incentives for production, while the village provides general management and services. The contracted land cannot be sold by the holders, thus avoiding newly landless such as in Cambodia, Laos, Vietnam, CEECs and CIS. But it can be sub-let, creating a land use market. The effective ways to overcome the inefficient holding of fragmented small farms by part-time and absent farmers have also been found. If, within the contract period, a household has become part-time or absent, the village, with the two-thirds majority agreement of villagers, and the approval of the county government, could keep a smaller land for self-consumption for the part-time and absent farmers, while transferring the rest of the land to the full-time farmers to form compact units and achieve economies of scale (of course, the part-time and absent farmers in question can appeal to the courts for a final settlement). Owing to the efficient land use, China has given trade-distorting subsidies to its agriculture by only 2% of the total value of production, much less than 10% as a developing country could enjoy. (Zhou 2001: Chapter 6-7)

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

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 (Zhou 2001: Chapter 4).

The EU early retirement scheme proposed for CEECs may encourage old landowners to rent out land (who are more willing to do so anyway), but may not function much for the able-bodied part-time and absent ones.

Traditional land consolidation [exchange of the 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] currently being carried out in some CEECs, CIS and other developing countries incurs enormous individual bargains, and costs tremendous time (even decades), financial and human resources. But after the parcels have been joined, it would not give part-time and absent small landowners much incentive to rent out land, since cereals (and many other products) from the joined land may not necessarily enjoy much higher sales than those from the dispersed parcels, and the joined land would not raise rent a lot in comparison with the much higher off-farm income, as the experiences of Japan and Taiwan Province of China have demonstrated. Moreover, population growth and inheritance would easily re-fragment the joined family farm, as the Indian practice has presented. (Zhou 2001: Appendix 3.1)

Since the 1970s, some Japanese villages, as a result of measures collectively taken on the village level to preserve a region's agricultural activity, organized agricultural production cooperatives to let full-time farmers operate the under-utilized or idled land of part-time and absent landowners upon the latter's commission. Some production cooperatives were joined by farm households of a whole village, eliminated boundaries among parcels, and thus enlarged farm size and achieved economies of scale. But due to various personal and organizational reasons/problems, some members quit the cooperatives by withdrawing land physically. As a result, setting up of land use cooperatives and their subsequent breaking down have repeatedly occurred. Then, the part-time and absent small landowners could still idle their land, while full-time farms could not increase size. (Zhou 2001: Chapters 4)

In order to achieve economies of scale, transfer of the inefficiently held land of the part-time and absent farmers to the full-time farmers is essential. But why could not private land ownership smoothly succeed in doing so while public land ownership (such as in China) could? The author discovers that the fundamental reason is that the private landowners have the right to withdraw their land from land use cooperatives which arrange their under-utilized or idled land to be cultivated by full-time farmers, while the individual users of publicly owned land do not have this power. The author thus proposes a village corporation with financially salable but physically *unwithdrawable* private land shares to allow full-time family farms to lease in a part of the under-utilized or idled land of part-time and absent landowners (as land for market), while leaving the other part for them (as land for self-consumption), such as a Dual-Land System. The private landowners, if quitting, could only sell land shares in financial terms, so that although the landowners have changed, their land would always remain physically in the corporation for efficient use. This is one of the applications of the *principles* of the new model for sustainable rural development raised by the author (Zhou 2001: Chapters 3-5). This proposal was first published by FAO (Zhou 1997) as a third way beyond the centrally planned economy and free market system to solve the inefficient land-holding by part-time and absent small farmers under private land ownership. It might be possible to apply it in those CEECs and CIS countries where many farmers remain in collective land operation. However, for its implementation, a law would have to be passed to forbid physical

withdrawability of land when private landowners quit land use cooperatives. Considering the adoption of such a law may meet psychological barriers, the author hereby recommends alternative solutions (also as one of the applications of the principles of the new model for sustainable rural development, and a third way beyond the centrally planned economy and free market system), to realize the same purposes under private land ownership while bypassing this possibly sensitive political issue.

In **domain 1** individual farms (which exist all over the world).

(I) To adopt a law to oblige private landowners to either cultivate their land or lease a part of it to full-time farmers, with a minimum lease term of one- (preferably five-) year. Hence a Dual-Land System: *the land for self-consumption* is still held by the part-time and absent landowners so that their rural habitation could be reserved, family need for vegetables (and if they wish even cereals) catered, farming skills kept, and small farms not crowded out of agriculture; while *the land for market* is that leased to the full-time farmers, so that they could increase farm size and obtain incentives for longer term investment. At the tenant side, full-time farmers have the right to lease in a part of the under-utilized or idled land of the part-time and absent landowners. Having rented in contiguous parcels of different owners, they have the right to remove their boundaries and join parcels together so as to eliminate fragmentation (of course, the original boundaries should be recorded in the cadastre and a map and be shown by field signs). When the lease is over, the landowner has the right to withdraw his (her) original parcels within their original boundaries, but he (she) must then cultivate them, or lease them again to the full-time farmers. The rationale for establishing this law is that land is not only a private property, but also a scarce natural resource. An owner has the right and freedom to till it, but should have no right and freedom to under-utilize or idle it. By implementing such a law, private land ownership will not be affected, but land use will be facilitated and land waste avoided. If the landowner does not cultivate the land but is obliged to lease it, then at least he could earn a rent, even if it is not so high as satisfying him. The aim of the traditional land consolidation could be reached, 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.

(II) To establish a family-village dual level operation of land: while the families are the basic level, the village should provide general management, infrastructure, irrigation, facilities, large machinery, financing, forward and backward services. This will improve village services to family farms which are weak in numerous developing and transitional countries.

Some explanations are desirable.

1. The above-mentioned law does not intend to replace land reform of distributing land for individual ownership out of equity reasons, which is still necessary where a few landlords own large areas of land while many peasants own no or little land (especially in some countries in Africa, Latin America, and South and Southeast Asia). Nevertheless, it would not be harmful but beneficial to adopt it before the land reform, as well as during and after it.

2. After the land reform, if there are few off-farm activities and peasants 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 in order to prevent the revival of feudal landlordism through land repurchasing would be necessary, as Japan did in the 1950s. But once off-farm activities have developed and absorbed many part-time and absent

farmers, such restrictions should be removed so as 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 have not yet abolished such restrictions, e.g., Thailand (Onchan 2002), should do so too.

3. This law does not exclude the implementation of the traditional land consolidation.

4. 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 as recently as in (2002) by Onchan for Thailand where land under-utilization and idling by part-time and absent landowners have become very serious. The Hungarian Land Act (1994) promulgated after land privatization prescribes that an agricultural land must be either self-cultivated or leased for farming (section 36 and chapter III), otherwise a financial penalty will be imposed on the landowner (section 42). Such a penalty is actually a land waste tax.

However, a land waste tax is unable to function effectively. (1) If the tax were low, some landowners 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 to be sold to the state and could then dispose of the extra output in the market. But there were landholders who paid cash to fulfil the quota while still idling the land, so as to spare all their time on earning higher off-farm income. (2) If the tax were high, some landowners could claim that they could not afford. It would be difficult to punish them by sending them to prison. (3) Many landowners are absent, earning higher off-farm income in cities or abroad. It would almost be impossible for the police to wait in 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 landowners are working in Italy while idling land in 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 landowners, the land is still being idled. (4) The tax is normally paid to the governments, although they might channel a part to villages 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 under-utilized and idled land, other services would be insignificant. Thus they might not have incentive to report an under-utilized or idled land to the tax officers. The tax officers may not have incentive to charge the tax because it does not enter their own pocket. Rather they might have 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 so many difficulties, some Hungarians in city who have been restituted agricultural land, have never cultivated or leased it, but never been fined either.

In contrast, by the law of obliging the lease of under-utilized and idled land to the full-time farmers, as long as the village has seen a land as having not been properly cultivated on agriculture for maximumly one year (or a few years, to be determined in each country), and the landowner still does not agree, or has not shown up at all, to cultivate or lease it for the next year, the village could oblige its lease to the full-time farmers. Full-time farmers would have the incentive to report any under-utilized or idled land to the village because it would be they who would have access to it. Therefore, this law would be much more effective than the land waste tax.

Of course, implementing this law does not exclude charging such a tax.

5. A law to confiscate idled private land has been adopted in a presidential decree issued in November 1997 in Tajikistan (EIU 1998: 27); and is being debated in the Romanian Parliament in the spring of 2002, but has met difficulty in getting it passed mainly because it is regarded as too harsh to private landowners (Atanasiu 2002). In contrast, a law to oblige private landowners to either cultivate it or lease a part of it for farming would be much more lenient while still reaching the aim of avoiding land waste.

6. Determination of a land as under-utilized may technically be according to its yield as lower than a reasonable level in the previous year(s) under normal conditions of each locality. For example, the Italian 'Rules for the Utilization of the Uncultivated, Abandoned or Insufficiently Cultivated Lands' of 4 August 1978 stipulates (Art. 2) 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' (Gazzetta 1978). However, in order to prevent any officials from arbitrarily determining a land as under-utilized or idled even according to the officially announced technical criteria, it would be beneficial to require such a judgement to first get the consent of two-thirds majority of the remaining villagers with voting rights, and then the approval of the local governments of at least two levels above the village. Those landowners who disagree with such a judgement may appeal to the governments and courts. (Zhou 2001: Chapters 5 & 7). Of course, the specific criteria and procedures in decision-making and dispute-settling will have to be determined in each country according to its specific conditions.

7. As for how to organize the lease while catering the interests of the landowners, tenants and society, and in particular avoiding the misuse of land by the tenants, if the landowner him(her)self leases the land to a tenant, he 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 land quality (Zhou 2001: Chapter 10). If the landowner is absent and the village has to rent out a part of his land, then the village should call for tender and rent the land to the person who is the most experienced and skillful, and bids for achieving the highest output or rent, highest investment in improving the infrastructure (e.g., irrigation) and quality of the land, using more organic manure and less chemical fertilizer, protecting the environment, etc. If, after winning the contract, the lessee did not implement it, then the village will have the right to stop it and transfer the contract to another competent full-time tenant. (Zhou 2001: Chapters 5 & 7)

In so doing, not only the market is not repealed, it will be promoted. (1) If the landowner himself cultivates the land, he can certainly compete in the market. (2) If a part of his land is obliged to be leased to a full-time farming tenant, this tenant can be selected via competition of tender, thus there is a leasing market. (3) After winning the contract, this tenant can compete in the market. (4) If after winning the contract, the lessee failed to fulfil it, then the village will have the right to stop the contract and transfer it to another full-time tenant, so as to guarantee that the land is *really* operated competitively according to the market principles. Therefore it is a third way between the former centrally planned economy and the present free market mechanism, and a combination of the appropriate state/community intervention and market mechanism.

8. If, in certain earlier stages of rural development, land supply exceeds the demand, and an owner could not find a tenant for his unused land, then he would not be punished by this law. However, in the higher stages of rural development, when part-time and absent landowners tend to hold land in inefficient use, this law would function.

9. Once relatively stable food overproduction has appeared which could not be absorbed by exports, the marginal (ecologically sensitive or weak) cultivated land should be converted back to forestry, grassland, lake land and wetland. Such landowners should be given income subsidies, which are allowed by WTO as non-trade-distorting, until they could be self-reliant upon non-cereal-agriculture and off-farm activities (animal husbandry, fishery, fruit production, planned cutting of wood with reforestation, tourism, etc.). Of course, even in the generally marginal land areas, there could be some land which is not ecologically sensitive, upon which, cereal production could still be carried out. On the normal land, the full-time farmers should promote the quality and perfectize the varieties of agricultural goods, and produce those products with good marketing prospects. They should still produce surplus food to be allocated to such landowners so that a balance between the supply of and demand for food could be reached, chronic food overproduction prevented nation-wide, and the environment improved. Considering that the bulk of overproduction is from the normal land, setting aside some normal land from production may be done. But if full-time farmers wish to increase farm size for achieving economies of scale and reducing costs, the set-aside land should be available for them to do so. The normal land inefficiently held by part-time and absent farmers (except land for self-consumption) should still be available, mainly via leasing (both voluntary and obliged), to the full-time farmers. If they produced more than what they could sell, the prices and profits would be lowered. Thus they would have incentive not to do so. (Zhou 2001: Chapter 7)

In **domain 2** collective land operation (which typically exists in CEECs and CIS).

(I) To transform the current collectively operated large farm into a large corporate farm (with either publicly owned land or gathered private land) and lease compact units to full-time families as the basic operation level, since successful farming could only be based on family operation with higher individual incentives, no matter with large farm size such as in the USA and EU or small farm size such as in China and Japan.

(II) To form a family – large mother farm dual level operation of land: while family farms should be the basic level, it would be unnecessary to divide large machinery of the large mother farm to households, as the mother farm should provide general management, infrastructure, irrigation, facilities, large machinery, financing, forward and backward services. Once the proposed law of obliging the lease of unused land (except land for self-consumption) to full-time farmers has been adopted, it could be applied here as well.

(III) To realize - in **both domains 1 and 2** - a gradual transformation of the (trade-distorting) direct subsidies on the prices of agricultural products and incomes of farmers, especially the full-time farmers to raise their income to be equivalent to or higher than that of off-farm workers, into (non-trade-distorting) indirect subsidies on the improvement of services, infrastructure, technology and purchase of machinery, in order to promote the full-time farmers' competitive strength to earn a higher income through their own better performance.

(IV) To promote - in **both domains 1 and 2** - off-farm activities and further rural development in order to absorb surplus peasants, raise rural employment and income, and transfer more land to the remaining full-time farmers to achieve economies of scale.

In so doing, while off-farm activities and rural industrialization could be promoted, agriculture would not be neglected but reinforced. Part-time and absent small landowners would not be crowded out of agriculture, but the full-time farmers could be strengthened, economies of scale achieved, costs reduced, and trade-distorting agricultural subsidies decreased. The sustainable agricultural and rural development as defined by FAO (SDD-FAO 1995: 1) - 'Food security, to be obtained by ensuring an appropriate and sustainable balance between self-sufficiency and self-reliance; employment and income generation in rural areas, particularly to eradicate poverty; and natural resource conservation and environmental protection', could be realized. In particular, EU enlargement towards CEECs would be boosted.

Overcoming dilemmas of the EU. During the World Economic Forum of 31 January - 4 February 2002 in New York, the EU was again criticized as maintaining huge trade-distorting subsidies and high tariffs on agriculture and not realizing its commitments of reducing them to the WTO standards. Indeed, in the recent decades, the EU has met food overproduction. On one hand, in order to reduce output, it has established quotas on some production (e.g., milk); and set-aside arable land scheme (with subsidies for farmers to join voluntarily) which include both marginal and normal land (Beaumont 1 March 2002. Van Eyllen 2002). On the other, it has also given subsidies to maintain agricultural products at prices higher than the international levels, and kept high tariffs to restrict the imports of cheaper agricultural goods, so as to avoid farmers' difficult living due to the lower prices caused by surplus production. But this protectionism has just encouraged overproduction. *Dilemma 1.*

The EU has realized that this mechanism has also made high costs endure. Hence on one side, it has exercised an early retirement scheme to encourage old farmers to transfer land to the able-bodied ones. This could allow the latter to increase farm size, achieve economies of scale, and reduce costs. But it might in turn contribute to overproduction. Therefore, on the other, land under-utilization and idling by able-bodied part-time and absent landowners earning higher off-farm income exist in many countries (France, Germany, Ireland, Italy, Portugal, etc.). In general, if the land inefficiently held by the part-time and absent farmers were transferred to the full-time farmers, food overproduction would be strengthened; if not, the EU farms would not be able to increase size to be more competitive in the international markets in front of the USA, Canada and Australia with much larger farm size and much lower general production costs, and some developing countries with much lower labor costs. *Dilemma 2.*

To be fair, in the latter half of the 1990s, the EU has started to gradually replace price subsidies by direct income subsidies, reduce intervention schemes, and successively decrease administrative prices towards the international levels, aiming to achieve a 'farming without subsidies' and let the market decide prices in the long-run (Guidelines 2000). 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' (Beaumont 6 March 2002). Such market-oriented measures would relatively be 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 may lead to more

exiting by them from agriculture, and have 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. (OECD 1998: 15-87). But how to combine these two seemingly contradictory aims? *Dilemma 3*.

Moreover, once the EU has finally reduced the agricultural subsidies and tariffs to the WTO standards, overproduction could be resolved because protectionism would not exist. But it would also face the strong competition from the USA, Canada, and Australia with larger farm size and generally lower production costs, and developing countries with lower labor costs, and would have to increase imports of their cheaper products. Of course, the competitiveness of some EU products could be maintained and raised by special local production (e.g., some fruits, wine, ham, fish, and even a few cereals). But for most cereals and other products whose production is more difficult to specialize and localize against cheaper imports, would it need to keep self-sufficiency (or achieve as high percentage as possible of it)? This is an issue more political than economical. This is because if a country relied on imports for its staple food, then it might be threatened in diplomatic conflicts and have its throat cut during wartime. Thus, Japan could tolerate under-self-sufficiency and rely on imports for all the other agricultural goods but not for rice (and, of course, whale), whose self-sufficiency has been artificially kept with heavy government subsidies ever since 1960. Therefore, the Treaty Establishing the European Community (25 March 1957; amended on 2 October 1997 and enforced on 1 May 1999), Agriculture, Article 33 (ex Article 39) declares that 'the objectives of the common agricultural policy' include: 'to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilization of the factors of production, in particular labor'; 'to stabilize markets'; and 'to assure the availability of supplies'. Although self-sufficiency is not explicitly expressed by these objectives, one may find it a *de facto* objective, as it has been pursued by several member states (cited below) through a law similar to the above-proposed one. 'Farmers organization use regularly this terminology to press for supplementary support as an derived objective from market stabilization or development of agricultural productivity' (Van Eylen 2002).

Now that self-sufficiency of cereal production is desirable, then could the EU keep it once protectionism has been lifted? On one hand, there is the pessimistic view that it could not, owing to the strong competition from the USA, Canada, and Australia with larger farm size and generally lower production costs, and developing countries with lower labor costs. The EU could only keep competitiveness in some special non-cereal products which enjoy local advantages in production, and landscape for the environment and rural tourism. (Romano 2002). On the other, there is the optimistic view that it could, because 'in the hypothetical case of a real free trade situation in agriculture, imports of agricultural products to the EU would probably increase but EU farmers and agro-food industry would still play a major role when considering EU favorable natural conditions for agricultural production, skills, traditions in food, market structures and proximity of consumers' (Beaumont 6 March 2002).

The author's view is between these two extremes and conditional. In order for the EU to keep self-sufficiency in cereal production, it would be necessary for the full-time farmers to increase farm size, achieve economies of scale and reduce costs,

so as to gain competitiveness in the international markets. But it may be lost if much land is inefficiently held by part-time and absent farmers, just as would be in Japan (and many other countries with the similar problem) if protectionism were lifted.

Actually, in order to achieve self-sufficiency, a law to oblige farmers to either cultivate land or lease it for farming similar to the above-proposed one had already been adopted by the EU and some Western European countries although with varied forms. But after food overproduction has been encountered, it ceased to function.

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.' '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.' After the appearance of 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 set aside arable land, although 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 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.' '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. 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.' In this case, he can lease out the land. '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 place.' 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). 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) which are not related to the EC agricultural law. (Anker 2002)

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 set up in the 'Law of Cultivating the Land' of 31

March 1915 was removed in 1961 owing to surplus production. (Winkler 1992: 83. Kroeschbell 1982: 69)

In Italy, the 'Rules for the Utilization of the Uncultivated, Abandoned or Insufficiently Cultivated Lands' of 4 August 1978 requires (Art. 4) that the regions assign such lands 'for cultivation to the requesters who are obliged to cultivate them in a single or associated form' (Gazzetta 1978: 5759). After the EU had met overproduction, this law has not been implemented, but still valid; and could be exercised again if food security once more became a problem.

In the post-war 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 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 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 (so as to keep rural population); otherwise the land will be forced to be 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 cited legislation is still implemented because food self-sufficiency has not been fully reached.

Of course, in all the above cited Western European countries and EU, farmers could appeal to the courts if they felt to be mistreated.

Therefore, according to these Western European countries and the EU, once food overproduction has appeared, the law of obliging farmers to either cultivate land or lease it for farming would have to cease to function. In the author's view, however, (1) it should still be implemented in an appropriate form in order to keep self-sufficiency and resolve overproduction in cereal production meanwhile protectionism could be lifted; (2) only a part of the under-utilized or idled family land of the part-

time and absent farmers should be legally available to the full-time farmers, rather than all of it as prescribed in the legislation of the above-mentioned Western European countries and EU.

Hence the author's proposal for the EU (whose earlier version was raised in Zhou 2001: 398): (1) For the full-time farmers to increase farm size, achieve economies of scale and reduce costs, they should be given the legal right to lease in a part of the under-utilized or idled land of part-time and absent farmers (as *land for market*) with a minimum term of one- (preferably five-) year, while leaving the other part to the part-time and absent farmers (as *land for self-consumption*), such as a Dual-Land System. (That is to say, a farmer is not obliged to either cultivate his land or lease it for farming *actively*. But if another farmer wants to lease in a part of his under-utilized or idled land for farming, he is obliged to agree *passively*.) In so doing, large farmers could be strengthened in their international competitiveness, national food self-sufficiency could be kept, but small farmers would not be crowded out of agriculture, as their rural habitation could be reserved, family need for vegetables (and if they wish even cereals) catered, farming skills kept, and they could still pursue off-farm activities in both rural and urban areas. (2) The EU agricultural subsidies and tariffs should be reduced to the WTO standards, so that the full-time farmers would have the incentive of not producing more than what they could sell in order to avoid prices and profits from being lowered, hence overproduction could be prevented. (3) Apparently, because of the low elasticity of cereals in consumption, full-time farmers may not be able to pay a rent so high as to satisfy the landowners. Nevertheless, landowners should be obliged to lease out a part of their under-utilized or idled land to the full-time farmers if the latter wish to lease it in. Such landowners should not be given more subsidies, but could be awarded other benefits, e.g., tax favors as incentives for leasing a part of land out. (4) Of course, ecologically sensitive land should be excluded from production according to the EU regulations.

Finally the author would like to appeal and stress to all countries especially the developed ones, to reduce agricultural subsidies and tariffs to the WTO standards, and give full-time farmers legal rights to lease in a part of the land inefficiently held by part-time and absent farmers, while keeping the remaining part for self-consumption by the part-time and absent farmers rather than crowding them out of agriculture.

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References

1. Abramovay, Ricardo [9-13 April 1996]: 'Agriculture, the Rural Environment and the Development Gap', in Food and Agriculture Organization of the United Nations (ed.) (1997) Rome, *Rural Development: International Workshop*.
2. Anker, Helle Tegner (4 March 2002): Email, Unit of Economics, Royal Veterinary and Agricultural University of Denmark.
3. Atanasiu, Isabela (12 March 2002): Introduction of the Land Use Situation in Romania, European University Institute, Italy.

4. Austena, Torgeir (1992): 'Agrarian Land Law in Norway', in Grossman, Margaret Rosso and Brussaard, Wim (eds.) *Agrarian Land Law in the Western World*, CAB International, UK.
5. Beaumont, Hans-Christian (1 March 2002): Introduction of the Common Agricultural Policy of the European Union, Directorate-General Agriculture, Commission of the European Union, Brussels.
6. Beaumont, Hans-Christian (6 March 2002): Email, Directorate-General Agriculture, Commission of the European Union, Brussels.
7. Bhukuth, Augendra (22-23 November 2001): Introduction of the Land Use Situation in Mauritius, in Seminar 'Poverty and Sustainable Development', organized by the UNESCO Chair, in University of Montesquieu-Bordeaux IV, France.
8. Chakrabarti, Milindo (22-23 November 2001): Introduction of the Land Use Situation in India, in Seminar 'Poverty and Sustainable Development', organized by the UNESCO Chair, in University of Montesquieu-Bordeaux IV, France.
9. CICRED - Committee for International Cooperation in National Research in Demography (1999): *Population Dynamics in Rural Areas Freed from Onchocerciasis in Western Africa*.
10. Ciparisse, Gerard (19-21 March 2001): 'Cultural Elements of Agriculture in Some Developing Countries', in *Expert Meeting Summary Report*, First Expert Meeting on the Documentation and Measurement of the Roles of Agriculture in Developing Countries, Food and Agriculture Organization of the United Nations, Rome, ROA Project Publication No. 1.
11. Ciparisse, Gerard (25 February 2002): Email, Land Tenure Service, Food and Agriculture Organization of the United Nations, Rome.
12. Ciparisse, Gerard (13 March 2002): Email, Land Tenure Service, Food and Agriculture Organization of the United Nations, Rome.
13. CSO-HU - Central Statistical Office of Hungary (2001): Distribution of Agricultural Land Use by Organization Forms 1990-2000.
14. Destremau, Blandine (22-23 November 2001): Introduction of the Land Use Situation in Yemen, in Seminar 'Poverty and Sustainable Development', organized by the UNESCO Chair, in University of Montesquieu-Bordeaux IV, France.
15. EIU - Economist Intelligence Unit (1st quarter 1998): 'Limited Land Distribution to Encourage Private Ownership', *Country Report: Kyrgyz Republic, Tajikistan, Turkmenistan: Tajikistan*, London.
16. Elgar, Edward (4 December 1997): Email, Edward Elgar Publishing.
17. El-Ghonemy, M. Riad [9-13 April 1996]: 'Recent Changes in Agrarian Reform and Rural Development Strategies in the Near East', in Food and Agriculture Organization of the United Nations (ed.) (1997) Rome, *Rural Development: International Workshop*.
18. Gazzetta (16 August 1978) – *Gazzetta Ufficiale della Repubblica Italiana* [Official Gazette of the Italian Republic], No. 227: 5758-60.
19. Guidelines (version of 11 September 2000): 'Guidelines for Assessing Proposals with Relevance to the Common Agriculture Policy', Annex 10-a, *Vade Mecum for Experts Taking Part in Proposal Evaluation in the Quality of Life & Management of Living Resources Programme*, draft of the 6th edition 2001, updated version for the evaluation of proposals submitted from the 18 October 2001 deadline onwards, <<http://www.cordis.lu/life>>.
20. Hayami, Yujiro and Yamada, Saburo (1991): *The Agricultural Development of Japan - A Century's Perspective*, Tokyo: University of Tokyo Press.
21. Hungarian Land Act (1994): English version.

22. International Symposium (8-11 January 2002): 'Call for Papers', 'Sustaining Food Security and Managing Natural Resources in Southeast Asia - Challenges for the 21st Century', organized by University of Hohenheim, Germany; Kasetsart University and Chiang Mai University, Thailand; International Center for Research in Agroforestry and International Water Management Institute, at Chiang Mai, Thailand.
23. Johnson, D. Gale (1983): Endorsement Quote, in Schultz, Theodore W. [1964] *Transforming Traditional Agriculture*, reprinted in (1983), Chicago: University of Chicago Press.
24. JSY (1977): *Japan Statistical Yearbook 1977*, Statistical Bureau of Japan, Tokyo: Japan Statistical Association.
25. JSY (1981): *Japan Statistical Yearbook 1981*.
26. Kanda, Mohan (28-30 October 1998): *India: Impacts of the Asian Crisis on Agricultural Trade and the Agricultural Financial Situation, Policy Reform and Labor Adjustment, and Agricultural Land Reform and Farmland Markets*, Emerging Market Economy Forum, Forum on Agricultural Policies in Non-Member Countries, Organization for Economic Cooperation and Development, Paris.
27. Kroeschell, Karl (1982): 'Landbewirtschaftungsrecht', in Von Volkmar Gotz, Herausgegeben; Kroeschell, Karl and Winkler, Wolfgang (eds.) *Handwörterbuch des Agrarrechts*, Berlin: Erich Schmidt Verlag.
28. Lerman, Zvi (28-30 April 1999): *Record of Land Reform in Transition Economies*, Emerging Market Economy Forum, Forum on Agricultural Policies in Non-Member Countries, Organization for Economic Cooperation and Development, Paris.
29. MOA-SK - Ministry of Agriculture of the Slovak Republic (2000): Green Report, Bratislava.
30. OECD - Organization for Economic Cooperation and Development (1998): *Agricultural Policy Reform and the Rural Economy in OECD Countries*, Paris.
31. OECD - Organization for Economic Cooperation and Development (28-30 April 1999-7): *Macroeconomic Overview and Recent Development in Agricultural Policies, Markets and Trade in Brazil*, Emerging Market Economy Forum, Forum on Agricultural Policies in Non-Member Countries, CCNM/EMEF/CA(99)7, Paris.
32. OECD - Organization for Economic Cooperation and Development (2000): *Agricultural Policies in Emerging and Transition Economies*, Paris.
33. Onchan, Tongroj (8-11 January 2002): 'Access Questions to Natural Resources and Their Relevance to Poverty and Vulnerability', International Symposium 'Sustaining Food Security and Managing Natural Resources in Southeast Asia - Challenges for the 21st Century', organized by University of Hohenheim, Germany; Kasetsart University and Chiang Mai University, Thailand; International Center for Research in Agroforestry and International Water Management Institute, at Chiang Mai, Thailand.
34. Oshima, Harry T. (1987): *Economic Growth in Monsoon Asia*, Tokyo: University of Tokyo Press.
35. Razafindravonona, J. (22-23 November 2001): Introduction of the Land Use Situation in Madagascar, in Seminar 'Poverty and Sustainable Development', organized by the UNESCO Chair, in University of Montesquieu-Bordeaux IV, France.
36. Rodgers, Christopher P. (1992): 'Agricultural Tenure, Land Use and Conservation in the United Kingdom', in Grossman, Margaret Rosso and Brussaard, Wim (eds.) *Agrarian Land Law in the Western World*, CAB International, UK.
37. Romano, Donato (8 March 2002): Discussion on Self-Sufficiency Prospective of the Cereal Production of the European Union.

38. Schiller, Otto (1956): 'Aspects of Land Consolidation in Germany', in Parsons, Kenneth H.; Penn, Raymond J. and Raup, Philip M. (eds.) *Land Tenure*, Madison: University of Wisconsin Press.
39. Schultz, Theodore W. [1964]: *Transforming Traditional Agriculture*, reprinted in (1983), Chicago: University of Chicago Press.
40. SDD-FAO - Sustainable Development Department, Food and Agriculture Organization of the United Nations (22-24 November 1995): *Current Thinking and Activities*, paper prepared for the Oversight Panel on Sustainable Development, Rome.
41. Thompson, Ginger (18 June 2001): 'Rural Mexican Towns on Border of Extinction – Northern Migration Is Bleeding the Heartland', *International Herald Tribune*: 2.
42. Treaty Establishing the European Community (25 March 1957; amended version of 2 October 1997 enforced on 1 May 1999): *Consolidated Treaties, Treaty on European Union, Treaty Establishing the European Community*, Luxembourg: Office for Official Publications of the European Communities, <http://europa.eu.int/abc/treaties_en.htm>.
43. United Kingdom Agriculture Act (6 August 1947): in *The Public General Acts and the Church Assembly Measures of 1947*, Council of Law Reporting, Vol. II.
44. Van der Velde, Menno and Snyder, Francis (1992): 'Agrarian Land Law in the European Community', in Grossman, Margaret Rosso and Brussaard, Wim (eds.) *Agrarian Land Law in the Western World*, CAB International, UK.
45. Van Eylen, Frans (7 March 2002): Email, Directorate-General Agriculture, Commission of the European Union, Brussels.
46. Winkler, Wolfgang (1992): 'The Law of Agricultural Land Use in the Federal Republic of Germany', in Grossman, Margaret Rosso and Brussaard, Wim (eds.) *Agrarian Land Law in the Western World*, CAB International, UK.
47. Wulff, Helge (1992): 'Agrarian Land Law in Denmark', in Grossman, Margaret Rosso and Brussaard, Wim (eds.) *Agrarian Land Law in the Western World*, CAB International, UK.
48. XHNA - Xin Hua News Agency (6 April 1998): 'The Egyptian Government Regards Idling and Wasting Cultivated Land as Illegal', in (8 April 1998) *People's Daily (overseas edition)*. (In Chinese)
49. Zhou, Jian-Ming (1 October 1997): 'A New Proposal for Land Consolidation and Expansion in Japan and Other Economies', *Sustainable Development Dimensions in the Internet* of the Food and Agriculture Organization of the United Nations, Rome (voted *Internet's No. 1 website* - leading 78 top sites - on sustainable development by Lycos visitors, March 1998), <<http://www.fao.org/sd/LTdirect/LTan0018.htm>>.
50. Zhou, Jian-Ming (2001): *Sustainable Development in Asia, America and Europe with Global Applications: A New Approach to Land Ownership*, Cheltenham, UK: Edward Elgar Publishing.