INDUSTRIAL ORGANISATION OF THE CHINESE FOOD ECONOMY*

Fredoun Z. Ahmadi-Esfahani

Christopher G. Locke

Department of Agricultural Economics
The University of Sydney
New South Wales 2006

* Contributed paper presented at the 40th Annual Conference of the Australian Agricultural and Resource Economics Society, held at University of Melbourne, 11 - 16 February, 1996. An earlier version of this research appeared as a contributed paper at the Pacific Rim and Allied Economic Organisations 2nd Biennial Conference on "Economies in Transition", Hong Kong, January 10-15, 1996. The authors would like to thank session participants, in particular Maria DaCosta, for their helpful comments. This paper stems from a project on the Chinese food economy funded, in part, by the Rural Industries Research and Development Corporation in Australia. Any comments or suggestions will be gratefully be received by the authors at the mailing address above, or by phone (02) 351 3559 / 351 7367, fax (02) 351 4953, or e-mail to c.locke@agec.usyd.edu.au

INDUSTRIAL ORGANISATION OF THE CHINESE FOOD ECONOMY

The controversy on the convergence of socialism and capitalism has recently been focused on China. In this paper, an industrial organisation framework is used to portray the key features of "Socialism with Chinese Characteristics". The structure of supply and demand and the process of price formation is analysed to explicate the ramifications of the Chinese reform process, and the changing patterns of both government intervention and market forces in the Chinese food economy. An examination of this fusion reveals a number of implications for the world food economy and international socialism.

Keywords: China, food economy, socialism, capitalism

I. INTRODUCTION

The struggle between socialism and capitalism has often led to the proposition that the two are, in fact, polar extremes. However, the recent experience of socialist economies, in particular, a revisionist interpretation of the roles of these two economic systems, has served to challenge this view. The example of the Chinese food economy is an important case in point, as a much publicised variation on more conventional forms of market socialism is apparent. The difficulty, however, is that the concepts of socialism and capitalism both have quite independent implications for policy. Therefore, while "Socialism with Chinese Characteristics" may enshrine a theoretical neatness, it is the nature of these characteristics that is fundamental to developing our understanding of the Chinese food economy, and the success of this example of the phenomenon of international socialism. It is the hypothesis of this paper that the level of planning utilised in the reformed economy is not fundamentally different from many nominally capitalist economies, and that China is therefore following a model of extensive market intervention under the banner of socialism.

The paper seeks to explore these issues by examining the characteristics of the socialism that is displayed within the Chinese food economy. After a brief discussion on the nature of the Chinese food economy and its structure, the evolution of "Socialism with Chinese Characteristics" is developed. From this, it is argued that the most appropriate framework to analysing the level of intervention is through the industrial organisation paradigm. This

approach is then applied to the Chinese food economy in a subsequent section, focusing on the key concepts of supply, demand and price formation, as well as distortions on these relative to capitalist economies. The implications of the analysis for the specific case of the world food economy and international socialism are explored prior to concluding comments.

II. SOCIALISM WITH CHINESE CHARACTERISTICS

The conflict between socialist and capitalist schools of thought is often taken to extremes in economic analysis, rather than understanding each as an important tool in the formation of economic policy. The fundamental issues that need to be addressed in either system are remarkably similar. On the one hand are the requirements for economic efficiency, that is, the efficient allocation of scarce resources so that the productivity and hence economic power of a nation can be maximised, and on the other, are the concerns of equity and social welfare. No state can ever successfully avoid either of these goals. As a consequence of this common ground, most political stances lie, in practice, apart from the extreme - the relative mix of intervention and free enterprise determining this position.

The implication of this hybridisation is that to analyse the effects of any current policy stance, it is important to understand, not only the starting point for an economy's philosophical base (that is, whether it be socialistic or capitalistic), but also the size, direction, and even duration of any departure from this. While the former determines some of the weights to key economic goals, its ability to achieve these sustainably, and the future of different industries, depend crucially upon the latter. It is argued that in this case, even the structure of planned economies requires an examination of markets, notably the concepts of supply, demand and price formation. The key questions then relate to the extent of government intervention in the processes, what this level of influence implies about the form of the socialism displayed, and the implications of these for particular sectors within the socialist economy. Therefore, it is further argued, that the socialist-capitalist tension is best addressed by the study of the industrial organisation of the centrally planned economies (CPEs), such as in the case of the Chinese food economy.

The level of competition that can occur under socialism is the essence of the industrial organisation approach. In this context, competition fulfils both a stimulatory and regulatory role. Stimulatory, as incentives match supply with market demand, regulatory, as it applies force for efficient resource allocation. Competition, however, is not anathema to socialism as, despite a distrust in market forces, efficiency and productivity remain appealing goals. It is, therefore, often the case that CPEs may consider the role of non-market competition (Roman, 1986). Competition in the CPEs is usually significant in only a limited number of areas, mainly in foreign trade and through free-markets for typically agricultural goods. The latter arises from

a large number of sellers, volatility in even government determined prices, contestability in production, and fairly homogenous products. These characteristics of agricultural goods often tend to lead to the acceptance or promotion of market forces to improve supply in the food markets, where otherwise government control may be tighter. Similarly, exposure to trade requires that the market forces will further increase the importance by which the planners may have to address market conditions, in effect, enforcing a form of competitive force. Additional sources of competition may be taken into account during the planning process, there may also be informal competition by individual enterprises through unofficial channels and indirect instruments. The extension of this argument is that the forms of control structure, including the relative autonomy of individual units and incentives, *inter alia*, determine the potential efficiency and therefore stability of the socialist state in the long run. That is, the characteristics of the socialism in planned economies provide the basis for a number of observations relating to economic performance.

Traditionally, the "People's Republic of China" has declared itself to be openly socialist; however, this declaration has not come without its modifiers. The most noteworthy is Deng Xiaoping's embracing of market forces in what he refereed to as "Socialism with Chinese Characteristics". This distinction is most apparent in the expansion of the socialism versus capitalism debate, and particularly in the examination of the role of traditional Marxist thinking in the formulation of China's agricultural policy. Since the 1949 revolution, the Communists have sought to maintain strict discipline on the economy, especially on the inflation that coincided with their rise to power. To that extent, the degree to which their policies embraced central control of local taxes and the measuring of prices and wages in terms of commodity units, agrarian reforms - especially land redistribution, and the strategy of long-term centralised planning and industrialisation, remain, perhaps as barometers of their influence. In a similar manner, the prominence of "capitalist roader" or "revisionist" principles (as Mao termed them) that were in response to these policies, are a measure of the authority of market forces. The latter, championed by Deng Xiaoping and Liu Shaoqi, after the failures of Mao's Great Leap Forward[1], included calls for the introduction of material incentives, private plots of land and free markets, in an attempt to stimulate agricultural production. These factors lie at the foundation of the Chinese interpretation of the socialist market economy.

The market socialists argue that the key question left unresolved by the system theory was that of how to interpret the function of the law of value under socialism. In essence, claiming that the law of value should be allowed to play an independent and active role in developing and

[1] The Great Leap Forward was the first of Mao Zedong's major social experiments aimed at bringing stability to the Chinese economy and society. The 1958 strategy involved a greater push toward collectivisation and away from private enterprise. The subsequent economic

controlling the market in a socialist economy. In practical terms, this suggested that large sectors of a planned economy could be substituted by markets governed by the laws of supply and demand. The arrival of the political support for this market socialist substitution was a significant turning point for the Chinese economy, marked by the Eleventh Central Committee meeting of the Chinese Communist Party in December 1978. Following this meeting, it was decided that the previous emphases on state ownership and the centralised planned economy were handicaps to human initiative and could not ensure the proportionate development of the economy (Zhenying, 1990). The idea was not to convert to capitalism entirely - it was merely to use some of the principles of capitalism in order to get them back on the road to communism. In this respect, the Chinese government is stating that they are using some capitalist methods in order to move to a higher socialism. Deng's works on these issues are still seen as important guides to understanding this new path to socialism (Xinhua, 1994).

Mackerras, Taneja and Young (1994) argue that China is distinct from other CPEs in its expressed commitment to the goals of socialism and communist ideology. Despite this, there has been extensive political change since the early days of the cultural revolution. This has included a substantial redefinition of politics in China, such as the manipulation of traditional Mao Zedong-Marxist-Lennist philosophy by Deng Xiaoping and others to make it more useful for present purposes - the so-called "Mao Zedong Thought" (Mackerras et al, 1994). Typically, this involves a reduction to more fundamental issues of ideology, without commenting on practicalities of implementation. These changes have resulted in a more economistic interpretation of socialism (where socialism is limited by the current level of economic growth), as well as the tendency to redefine socialism on the basis of the current policy stance. Despite this, China proclaims itself avowedly socialist, and guided by Marxist principles. This implies that the bastions of the need for planning and the importance of state ownership will remain as at least some constraint to market driven development in the future.

Much of the difficulties in interpreting the extent of the development of market forces in Chinese socialism lies in our understanding of semantics. For the Chinese Communist Party, "socialism" indicates a system of state ownership that leads to prosperity of all people, whereas "capitalism" represent code-words for exploitation, corruption, and division (Murray, 1994). While Deng Xiaoping has tried to confront this distinction in the recent years, this influence on policy dialogues clouds many earlier analyses. When interviewed on this subject in 1985, Deng commented "There is no fundamental contradiction between socialism and a market economy. The problem is how to develop the productive forces more effectively. We used to have a planned economy, but our experience over the years has proved that having a totally planned economy hampers the development of the productive forces to a certain extent. If we combined

---

downfall and catastrophic famine are commonly held as symbols of the failure of this plan,

a planned economy with a market economy, we shall be in a better position to liberate the productive forces and speed up economic growth" (Deng, 1994,p151).

Because its very nature was designed to be diffuse, there is little that is concrete about the defining nature of the "Chinese Characteristics" of socialism. As a consequence, it is often assumed that the model being worked under is a return to Marx's capitalism as a necessary stage to socialism, or a more equilibrium definition of the socialist-market economy. Murray (1994) notes that seven characteristics of Chinese socialism were offered by the Central Committee in 1984: the abolition of systems of exploitations, public ownership of the means of production, remuneration according to work, a planned commodity economy, political power in the hands of the workers, high productivity, and socialist ethics cultivated through Marxism (Murray, 1994). The socialist market economy is perhaps a greater progression from this starting point, where market forces are left to run under the macroeconomic control of the state, limiting the scope for direct administrative involvement in the day to day signals received by producers and consumers. This has been made all the more permissible by establishing a distinction in dialogues between capitalism and the use of markets, and central planning, which has made the use of these instruments appear more ideologically sound.

This discussion of the evolution of Chinese socialism has posed a number of questions with regard to the "Chinese Characteristics". Ultimately, the revision of socialism in China is based around the concept of market reforms that have occurred with different intensity in different sectors and sub-sectors. In the case of the food economy, this naturally gives rise to questions about the supply, demand and price formation processes in different food markets. It is argued that the most appropriate framework for synthesising these issues is in an industrial organisation analysis. That is, a microeconomic framework encompassing the performance of business enterprises, and especially with the effects of market structures on market conduct (pricing policy, restrictive practices, and innovation, for example), and how firms are organised, owned and managed (Scherer and Ross, 1990; Tirole, 1988).

III. THE CHINESE FOOD ECONOMY

China is the largest producer and consumer of food in the world in total and also for many individual products including grains, fruits and vegetables. It exports a number of these products and also imports certain foods such as wheat and meat in substantial quantities, making this country a very important player in world food markets. The influences on the world markets for these products are heavily dependent on China's domestic markets, notably,

---

which was discontinued in the early 1960s (Mackerras et al 1994).

the number and size distribution of sellers and the governments role in influencing demand and supply forces. The operation of Chinese food markets has changed considerably since 1978 from being almost totally government controlled in every aspect to having a much greater role for free market forces. The government now has different forms of intervention in the markets, while the international market has a much greater influence on China's markets. A number of reforms have had wide-ranging and inter-related impacts on supply, demand and price formation. These different components are dealt with separately below in an attempt to isolate some of the key components of the way central planning has been modified in major segments of the food sector.

A. *Supply*

Concern about agricultural productivity was the major catalyst for reform in China following the Great Leap Forward, and clearly at the basis of Deng's rural policy platform. In 1980, he argued that "The key task is to expand the productive forces and thereby create conditions for the further development of collectivisation. To be specific, the following four conditions should be realised: First, a higher level of mechanisation, one which is relatively well suited to local natural and economic conditions and welcomed by the people (here I mean mechanisation in a broad sense, not merely mechanised ploughing, sowing and harvesting). Second, a higher level of management, combining accumulated experience and a contingent of cadres with fairly strong management abilities. Third, a developed diversified economy that leads to the establishment of a variety of specialised groups or teams, which in turn leads to the large-scale expansion of the commodity-economy in rural areas. Fourth, an increase in the income of the collective, both in absolute terms and in relation to the total income of the economic unit involved." (Deng, 1984,p297-298). The motivation was, therefore, supply-driven with the aim of liberating price responsiveness in the supply process and improving the availability of resource to production.

According to Martellaro (1991), the actual policies introduced in 1979 included a number of changes to production. A program of crop diversification was introduced in order to allow supply to meet the growing demand for a wider variety of consumer goods. Additionally, the production responsibility system was introduced which more clearly defined the relationships between consumer and seller by allowing the production teams to directly contract with individual households (Riskin, 1987). As part of the new system, inputs were supplied to each family farm and the outputs were divided between the family and the state, under the banner of the "Household Responsibility System" (Ling, 1990). These changes signalled a period of substantial growth in total factor productivity; however, it is difficult to determine the end result for production due to discrepancies in official statistics (Johnson, 1994). Reforms were introduced to increase efficiency by increasing the incentives for private production and

improving access to inputs, including increased use of alternative sources of investment capital (Martellaro, 1991; Fan, Wailes and Cramer, 1994). These reforms have been typified by a decline in state ownership across all sectors, although the exact extent of this in agriculture is difficult to determine (State Statistical Bureau, 1993).

The issue of state ownership is central to many of the discussions on changes in productivity capacity; however, the actual significance of this element is often missed. As discussed previously, while the specifics of each case determine productivity gains, privatisation is not a necessary condition of this (Hay, Morris, Guy and Shujie, 1994). Therefore, the importance of the change in state ownership lies not in its implicit contribution to competition, but to the way that this led to a transitional form of governance in Chinese agriculture which has favoured collective ownership, such as township and village enterprises, which are typified by strong links with the rest of the sector, high factor productivity growth rates, and strong producer incentives for cost reduction (DaCosta and Pearson, 1996). While neither strictly private nor state-owned, they are able to capture some of the benefits of competitive pressures, including transference of risk-bearing, without some of the costs of ideological barriers. In this sense, the importance of Chinese state ownership declines is its proclivity to being gradually replaced by cooperative phase, which allows the market forces to work, provides opportunities to circumvent some of the barriers to supply and maintains some of the welfare goals that lie at the heart of socialism, while providing pressure for further reforms in terms of industry structure and institutional developments (Zweig, 1992; DaCosta and Pearson, 1996). In essence, the inertia generated by the departure from state ownership has provided roles for improving productive capacity which will lay the foundation for future, and more directly capitalistic, reforms.

The specifics of the past reform process involved two major stages. In the first stage conducted from 1978 to 1984, the state maintained the existing design of state commercial planning for major agricultural products but adjusted state planned quotas and prices. It relaxed restrictions for public trade allowing producers to engage in private selling provided they fulfilled their delivery quotas (Sicular, 1988). In the second phase, this distinction between above and below quota production was also removed. In grains, the largest Chinese food industry, this gave freedom for farmers to produce at higher levels with state-guaranteed purchase, which was only hampered by poor handling and storage facilities and disparate quotas among regions. The increased production led to greater self-sufficiency which in turn allowed farmers to diversify into more profitable cash-crops. The net effect of this was to open access to alternative marketing chains and service providers, and to more indirectly improve the demand for both food and food grain (Ceroils, 1994; Lyons, 1993; and Carter and Zhong, 1991).

Rural communities are now largely left to themselves in managing their activities so long as they meet the production quotas set by the central government (Koo, 1990). To a great extent this has meant the reduction in influence of state in production decisions (as argued by Nee and Young, 1991, p295), although it has had the side-effect of making these interventions more difficult to measure. The reforms have encouraged specialisation by providing for market determined resource allocation to a degree which has implied that the structure of food production has become much more diversified. Localities that were previously only planting grain crops diversified as opportunities arose, while many producers tried to move into higher quality produce. More importantly, the farmers now have much greater freedom in their choice of crops as aside from quotas and paying taxes, Chinese farmers now have the freedom to make cropping and input decisions and are allowed to retain any profits they earn (Feder, Lau, Lin and Luo, 1992, p1). Further, the ability of farmers to sell on the free market encourages them to specialise in certain crops and take advantage of economies of scale. A new organisational form of agriculture has arisen, orientated to the market and led by enterprises doing processing of agricultural and sideline produce, which has resulted in enterprises undertaking negotiations and signing production and marketing contracts directly with farmers (Agriculture Yearbook, 1993, p52). The farmers can now more readily respond to market opportunities as they emerge, an hypothesis that is supported by a number of empirical studies which have indicated that, since 1984, there have been limited moves toward positive and significant price elasticities, especially in soybeans (see, for example, Stanmore and Ahmadi-Esfahani, 1996).

With respect to the international market, until 1978 this was underutilised because of the tight controls on imports and exports wielded by the central government. However, the provinces are now more open to the world in terms of importing seeds and technology with the reforms leading to large amounts of foreign capital flowing into agricultural development (Agriculture Yearbook, 1993, p71). More importantly, there is now much greater leverage for provinces and private companies to export. This has resulted in the Chinese food markets being much more open to the outside world as foreign companies are able to set up joint ventures in provinces to export certain foods, providing increased access to technology and investment capital (Khan, 1991). In all, exports from firms involving foreign investment in 1993 rose to $US25.2 billion, up 45%, while their imports were $US41.7 billion, up 59% from the previous year. The coastal areas have been the leaders in accelerating the pace of opening up to the outside world, for example, Zheijan province which began accepting direct orders from foreign traders and developing large scale collection and distribution centres (Agriculture Yearbook, 1993, p72). The most massive increases have been in the special economic zones (SEZs) of Shenzhen, Zhuhai, Shunton, Xiamen and Hainan, where the level of new foreign investment contracts rose 190% from 1992 to 1993 (Ernst and Young, 1994).

The SEZs are different from the rest of China in two key areas: the autonomy that they enjoy over investment decisions and the freedom to manoeuvre in areas of pricing, taxation, housing, land and labour policies (World Bank, 1994). They have been seen by Deng Xiaoping as an important medium for introducing technology, management and knowledge, whilst being a window for foreign policy (Deng, 1994). The performance of these regions and the coastal cities has been impressive but variable, the main impact being the experience in the opening the country to foreign investment - although the vision thus far may be overly optimistic (World Bank, 1994; Murray, 1994). In terms of the food economy, the inflow of investment that is likely to follow an expansion of this policy means that resources should be diverted out of agriculture into industrial production, which have raised government concerns about the safety of food supplies. However, conversely, the introduction of productive capital should also improve the capital structure of agricultural supply, which would be of more benefit to the economy than antiquated self-reliance measures. This will be of particular importance as the freedoms associated with the SEZs expand, because their growth may lead to much needed infrastructure improvements.

The issue of the quality of this infrastructure is pivotal to the viability of food delivery. While the rise of supporting institutions such as better financial markets has been noted by many (see, for example, Agricultural Yearbook, 1993,p53), their shortcomings still persist as a major constraint on the productive potential of the Chinese food producers. As Johnson (1994) notes, farmers have often had to forego payments, or accept promissory notes in lieu, due to inefficiencies in directing funds from the central bank to their provincial branches. Similarly, there appear innumerable constraints on the access to international markets due to the influence of many different layers of bureaucracy with heterogenous trade strategies. In general, as Byrd (1992) notes, the network of support services for the rural sector is inadequate, and compounded by difficulties in state institutions.

The difficulties imposed by China's peculiar institutional structure should not be underestimated, as both their origins and level of impact on supply are deeply rooted in the reform process. Hussain and Stern (1991) note that the ownership status of an enterprise, which largely refers to an enormous diversity of institutional arrangements under the banner of state, collective or private ownership, is the main determinant of both the institutional constraints and opportunities. Even in the absence of direct government control over the planning process, restrictions on access to input or output markets may be afforded by many levels of the bureaucracy (Mackerras et al, 1994). For example, the most autonomous of these, the township seats (*xiang zhengfu suozaidi*) and rural market towns (*nongcun jizhen*), receive little state assistance and must extract their own funds through developing and taxing their own industries and rural structures (Zweig 1992). As Overholt (1993) observes, the intermediate

steps of the relation of government ownership and control have created enormous opportunities for corruption, misunderstanding, confusion and delay. Similarly, differences in pace of reforms between regions have created opportunities for inter-provincial predatory behaviour, such as the case of the "Wool War" discussed in Findlay (1992). The World Bank (1990) study on the Chinese economy concluded that, while decentralisation began with the realisation that the Chinese economy was too big to run from the centre, the process involved relinquishing power to a complex series of well-entrenched local authorities. This was perhaps achieved to the highest degree in the rural sector; however, these constituencies contained the most resilient form of provincial rural economic bureaucracies (see, for example, Zweig, 1992; Yan, 1995). The results were a tendency to protect local enterprise against different forms of competitive forces, including a common lack of financial accountability, which may limit efficiency and market integration.

Underlying much of the policy intervention is the continued adherence to the goal of self-sufficiency in food production. Despite the fact that China has never been able to achieve this, the memories of past food shortages and the importance of independence continue to keep this goal high on political agendas. Riskin (1988) notes that the principle of self-reliance dates back to the policies of Mao in the cultural revolution, and has a more regional than national focus. As Park, Rozelle and Cai (1994) observe, this emphasis on regional stability has a number of implications for production, principally in emphasising a combination of technology, crop choice and infrastructure construction that minimises production variability. Since infrastructure is typically poorly developed, especially in the areas of storage, these policy goals exist merely as constraints on production, rather than as a means of actual stability or self-sufficiency. It is anticipated that, as trade develops, and the population becomes more at ease with imported food products, resources will be able to move out of agriculture or into more diversified non-food production (see, for example, Anderson, 1992).

Of all the preceding changes, it would appear that the food sector is approaching a pattern of protection that is similar to many capitalist agricultural trading nations. Perhaps the possibility of making more concrete conclusions on these findings are prohibited by the complication brought about by the way that the changes in the policy environment have also directly impacted on supply, presenting an unusual source of departure from market-based norms. As Johnson (1994) observes, the way policies are implemented is in itself a major contributor to uncertainty, as vagaries in interpretation by a complex multi-layered political system contribute markedly to the final policies being implemented and the expectations built into the supply process.

B. *Demand*

The structure of demand in China has been the subject of a great deal of contention over recent

times, empirical analysis of tastes and preferences only being possible recently with improvement in access to consumption data. Preferences vary with region, income classification, urban lifestyle, population, household structure, and education. Different components of the diet, which is normally a mixture of staples (*fan*) and more luxury foods (*ts'ai*), are also often the subject of discrete consumption choices (Kutschukian and Brittan, 1995). While previous studies on the nature of these influences have produced conflicting results, a number of themes in terms of reforms' impacts are apparent. The first is that policy changes have led to some definite shifts in the structure of demand, notably for grain, that may be characterised by a decrease in income elasticities, generally conventionally signed price elasticities, across most of the provinces. There is also evidence of a shift away from grains toward meat and other luxury foodstuff in both wholesale and retail markets (Kutschukian and Brittan, 1995; Ahmadi-Esfahani and Stanmore, 1996a). It would also appear from these studies that the changes in demand are not complete, and are perhaps just as transitional as the current policy directions.

Changes in demand have been influenced heavily, at least in wealthier urban areas, by the increased levels of foreign investment that were referred to earlier. While much has been made of the entry into these markets of McDonalds in 1992 and Kentucky Fried Chicken in 1988 (Murray, 1994), there exists a wide variety of different fast food chains from a variety of foreign sources, which are attracting a range of different custom. Huang (1993) argues that this trend has stimulated a shift in the country's local fast food trade from individual operation to chains with brand names, mass production and uniform standards. Huang argues that Chinese consumers go to western style fast food chains for the latter; however, they would prefer to eat more traditional styles of food (1992). If this is the case then the implication of this trend for agriculture is for an increasing of the derived demand for higher levels of processing, standardisation of production, improving quality control and reliability of supply and, consequently, a demand for improved signals to producers through the marketing chain. As these developments require changes to fundamental features of the market support structures, the effects of these changes in demand are yet to be fully realised.

The influence of China's massive and growing population on world food demand will be considerable for years to come. It would appear that not only has population been a key to rising demand and also the need for reforms, it may have also been indirectly responsible for the way that these reforms were implemented. The main departure of the Chinese food economy's current structure, from more traditional models of government intervention seen in capitalist economies, is the authoritarian nature of the government influence and the way that reforms have been slowly phased. This may be, as Mackerras et al (1994) have argued, because of the way that the large population has made China both difficult to govern and costly to reform, making harsher forms of governance seem more necessary.

Organisations 2nd Biennial Conference on "Economies in Transition", held in Hong Kong, January 10-15, 1996.

Deng Xiaoping, *Selected Works of Deng Xiaoping (1975-1982)*, Foreign Language Press, Beijing, 1984.

Deng Xiaoping, *Selected Works of Deng Xiaoping - Volume III (1982-1992)*, Foreign Language Press, Beijing, 1994.

Ding, Personal Communication. Internal Trade Ministry of China, Beijing, 1994.

Ernst and Young, *Asia Pacific Profiles: China*, Asia-Pacific Studies Group, Sydney, 1994.

Fan, Shenggen, Wailes, E and Cramer, G., "Impact of Eliminating Government Intervention on China's Rice Sector," *Agricultural Economics* ,11, 1994,71-81.

Feder, G, Lau, L, Lin, J and Luo, X, "The Determinants of Farm Investment and Residential Construction in Post-reform China," *Economic Development and Cultural Change* , 41, 1, 1992, 1-26.

Findlay, Christopher, ed., *Challenges of Economic Reform and Industrial Growth: China's Wool War*, Allen & Unwin, Sydney, 1992.

Gunasekera, H. Don B.H., Andrews, Neil P., Haszler, Henry C., Chapman, John N., Tian Weiming and Zhao, Zhao."Agricultural Policy Reform in China", *Discussion Paper*, 91, 4, ABARE, Canberra, 1991.

Harrold, Peter, ed., *China's Reform Experience to Date*, World Bank Discussion Paper 180: China and Mongolia Department Series, World Bank, Washington DC, 1992.

Hartford, K., "Socialist Countries in the World Food System: The Soviet Union, Hungary and China," *Food Research Institute Studies* , 20,3, 1987, 181-243.

Hay, Donald, Morris, Derek, Liu, Guy and Shujie Yao, eds., *Economic Reform and State-Owned Enterprises in China*,. Clarendon Press, Oxford, 1994.

Huang Wei, "Local Versus Foreign Fast Food", *Beijing Review*, 36, 11, March 15-22, 1993, 13-16.

Hussain, Athar and Stern, Nicholas, "Effective Demand, Enterprise Reforms and Public Finance in Rural China", *Economic Policy*, April, 1991, 142-185.

Intertwined with the focus on population has been interest in the nature of income changes that have come out of this reform process. While the incomes increase with economic growth, so too does inequality, leading to varying scenarios for the demand for raw and process food products. As previous interventions have involved massive consumer subsidies, there is significant evidence to show that the reforms, at least until the early 1990s, led to a substantial decrease in real wage as food costs rose (World Bank, 1990). While there is some evidence that this is changing, the problem has been compounded by the vagaries of policy implementation which have lowered expectations on permanent income.

The changes in the structure of demand have been strongly influenced by the policy changes on the supply side. The early reforms in agriculture, as indicated previously, had the impact of diversifying the products available in turn stimulating latent demand in a number of differentiated markets (Martellaro, 1991). In the grains markets, for example, there are now quite distinct demands for food grain, feed grain and seed. The food demand consists mainly of the end consumers, while some government outlets also purchase grain, acting as a middle man between farmer and household. The different sources of grain mean that there exist various prices in different markets although arbitrage limits the price disparity. Different prices also exist for different quality grains with grain quality actually determined by weight (Shun Yi County, 1994).

The demand for processed foods in China has also increased quickly, especially in the urban areas, where the market size is now estimated to be $42 billion (Samuel, 1994, p31). In 1979 only 5 per cent of meat was processed, whereas in 1994 this level has risen to 20 per cent (Institute of Agricultural Economics, 1994). This reflects a change in Chinese preferences away from traditional home cooked foods toward commercially processed foods as well as the associated income increase that China has experienced. Meat, cereals and fruit and vegetable products account for the majority of consumer expenditure on processed food and beverage products (Samuel, 1994, p15). The government has very little control over prices in food processing, although it is involved in some big food processing firms (Ding, 1994). This creates incentives for the private sector which is reflected by the significant foreign investment into China in the processing area, mainly in the form of joint ventures. This area of the Chinese food industry is likely to experience further growth from the private sector.

As with the supply side, the exact impact of the reforms on demand is very difficult to interpret; however, it would appear that a number of casual observations are warranted. The first is that consumers are increasingly freer to choose the type and source of food goods that they wish to consume, and therefore they are growing much more responsive to the price system. The second is that consumption subsidies are much lower than previously, again implying the

possibility of greater price responsiveness. Finally, the main emphasis of the reform process seems principally aimed at securing productive reforms on the supply side, following a more traditionally capitalist growth-orientated approach to accommodating what were previously planned welfare objectives. In these issues, it would again appear that the pattern of intervention is now much less socialist, and certainly not atypical of the models of government intervention in agriculture given by other major food traders.

C. *Price Formation*

The importance of the preceding supply and demand developments is perhaps most significant when one considers the influence of this modified socialism on price formation or, more especially, the current impact of distortions. As Ahmadi-Esfahani and Stanmore (1993) note, reforms will lead to prices moving toward their imputed or 'shadow' prices. This implies that, as factors of production approach their underlying value, resources will be diverted into areas of comparative advantage, and both positive and negative effects of the variability of certain sectors will be experienced as prices adjust. The way that these relative prices have been influenced by both past polices and reforms is crucial in assessing the impact of the movement to shadow prices.

One of the main objectives of the Great Leap Forward was to improve the terms of trade between the agricultural and industrial sectors of the economy by significantly increasing state procurement prices for agricultural products (Martellaro, 1991). In addition to this, the introduction of the production responsibility system necessitated a change in the way farmers were paid by the state with the two-tier remuneration system. Under this policy, the farmer derives revenue from two different sources - revenue from goods sold to the state under a mandated quota and procurement price, and any remaining produce which can be sold on the open market. It has been estimated that in 1989, on average, this policy gave rise to 38 per cent of state-owned enterprise outputs being sold on markets and 56 per cent of its inputs also procured on markets (Harrold, 1992). The major benefits of this two-tier price system are that it has allowed an underlying continuity of supply and facilitated marginal resource allocation decisions to be made on the basis of market prices.

The second stage reforms heralded significant changes to the possibility of private trading, with modifications to the design of procurement planning. The most significant change was the elimination of the distinction between quota and above quota deliveries, which resulted in new prices being set equal to 30% of the quota price plus 70% of the above quota price (Sicular, 1988, p291). During this phase, grain quotas were replaced with a program of contract and market purchases. In theory, these contracts were meant to be voluntary, but in practice they closely resembled the old procurement system (Sicular, 1988, p291). There was, to some

extent, a redesigning of allocation mechanisms, notably substitution of markets and manipulation of prices (Lyons, 1993). Structural policies were introduced for further stimulating diversification of agriculture which reduced the emphasis on grains and encouraged the development of cash crops and livestock (Hartford, 1987, p212). Not surprisingly, this environment had different impacts on key sub-sectors within the food economy.

Of particular interest has been the effects of reforms on the grains sector. In April 1992, the state raised its monopolised selling prices of grain and realised the same prices for purchasing and marketing (Agriculture Yearbook, 1993, p54). This resulted in all provinces adjusting retail grain prices in line with purchase prices, while at the same time opening retail markets (Research Group on Annual Analysis of Rural Economy, 1994, p78). Further reforms occurred including grain and oilseed prices in 1991, while there has also recently been the introduction of wholesale and futures markets in grain (World Bank, 1992, p43). The role of these wholesale markets, which can include futures contracts at national, regional and local levels, is likely to increase further (Weiling, 1994). Empirical studies on wholesale market data, such as Ahmadi-Esfahani and Stanmore (1996a) demonstrate, however, a marked lack of price responsiveness in grains which was seemingly attributed to a continued high level of distortions in these markets, and to the fundamental nature of these products to the Chinese diet. This would appear a marked contrast to the meat and vegetables sectors.

While the meat industry is similarly characterised by free markets and some government intervention, meats are mostly sold through wholesale markets. Within this industry, the pig market is by far the most important. There are two main types of traders in the pig market; private market agents (which have around half the market) and state-run ones, while there are a couple of co-operatives, but their percentage of the market is small (Ke, 1992). There are hardly any business linkages between the private and state-run firms as the state sector wants to protect itself from the private sector competition, and is largely better equipped (Ke, 1992). The private meat traders are mainly farmers and have no modern marketing facilities with no long distance wholesale activities and often only limited information on price expectations (Zhangyne, 1992). The majority of private traders have no division of labour with all undertaking purchasing, slaughtering and retailing activities (Ke, 1992). However, the advantages for the state-run agents are likely to decline as the number of state traders decreases, the private agents grow in size and gain access to technology and specialisation. Further, the private wholesale markets are likely to create greater opportunities for the private meat traders. To keep consumer prices low and stable, the prices at the retail level in the state-run meat shops are often fixed, while there may also be upper price limits for the private retailing activities at free markets (Ke, 1992). In this environment, it is not surprising that empirical studies indicate a high degree of price responsiveness in these markets (see, for example, Ahmadi-Esfahani and Stanmore, 1996a).

In many ways similar to the meat sector, the vegetables industry is probably the most open of all the food markets with respect to price formation. Farmers sell vegetables either directly to consumers, through the free market or through the wholesale markets, with the purchasers being either households or retailers. The government does play a role in the administration and operation of some wholesale markets; however, the prices are determined by supply and demand. There are now more than 5,000 wholesale markets for vegetables and fruits accounting for more than a third of the transactions with the degree of competition between the wholesale markets varying from province to province (Agriculture Yearbook, 1992, pp46- 47). These wholesale markets are very competitive, for both the management who compete for sellers through their administration charges and between the sellers within each wholesale market. In a manner analogous to the studies on meat, the vegetables industry has shown a higher level of price responsiveness than the grains sector (see, for example, Ahmadi-Esfahani and Stanmore, 1996b).

In sum, the food industries in China are now characterised by a greater role for free markets. In 1991, for example, there were 72,600 rural and urban fairs which accounted for a quarter of the social retail sales (Agriculture Yearbook, 1992, p46). This increased presence is readily apparent in all the major feed industries: grains, meat, fruits and vegetables as well as the food processing industry. However, the government still plays a major role in these industries, particularly grains, and has a tendency to step in whenever the market is not operating as it desires with a number of direct and indirect policy interventions. The state sector remains important in wholesaling agricultural products, retailing commodities under price controls and the ration system (World Bank, 1992, p45). The state-owned enterprises compete strongly with emerging enterprises which suffer from disadvantages in terms of technology, management and economies of scale (Research Group on Annual Analysis of Rural Economy, 1994, p25). While, since the reforms 75 percent of all state-owned commercial and service companies had been sold or leased to private owners with free entry allowed for others (Harrold, 1992), freedom in this market is limited by the government's reputation for intervention when the market does not behave as desired. Pork rationing in 1987, direct controls on prices and markets in 1988, subordinating exports to procurement objectives, imposition of price ceilings in 1989-91, and suspension of trading for rice and rapeseed futures in October 1994 are all recent examples of this (Ling, 1990; World Bank, 1990; Johnson, 1994; World Bank, 1992; and Jie, 1994). These incidences reflect the government practice of modifying policy to allow a greater role for free market forces by stepping in the early stages to ensure that the markets operate in accordance with planning. Although this tendency to intervene is likely to decline over time, the government's actions in this regard continue to put strong limits on the efficiency of the price formation process.

Worthy of specific mention in this area of indirect intervention in the price formation is the controversial issue of exchange rates. Up until 1993, the government preserved a fairly stable official exchange rate by allowing "semi-legal" swap markets to operate volatile trading without official opposition. In 1992, conversion regulations were liberalised in an effort to move toward making the Yuan fully convertible; however, as the economy began to overheat in 1993, it was soon demonstrated that the government had insufficient resources to hold the currency in check. This admission led to the floating of the Yuan in early 1994, and its subsequent devaluation (Murray, 1994). The previous tight control over monetary policy acted as an implicit distortion on the economy, as it provided incentives for individuals to devote resources inefficiently in order to secure foreign exchange, and caused changes in money supply to affect relative, and not just average, prices (Martin, 1992). In a study on the wool sector, Martin (1992) found that a devaluation would increase exports of wool manufactures, which would, generally speaking, increase demand for primary commodities both domestically and abroad, and would also be expected to increase the profitability of food exports. The effect of similar changes on food prices is, however, difficult to determine as, on the one hand, prices may rise due to the diversion of food goods to export markets in processed or unprocessed forms and, on the other, increasing the availability of foreign exchange will lower the cost of imported intermediaries. The net result, therefore, is uncertain, but foreshadows the possibility of greater involvement for agricultural suppliers in more value-added export activities as institutional reform progresses.

Despite the uncertainty intertwined with the government's direct and indirect interventions in the food price formation process, reforms are likely to continue leading market forces to play an increasing role in determining allocations. P `form is expected to proceed in steps with the government still paying close attention to i. .pact on economic and social stability (World Bank, 1992). Products still under government purchase arrangements such as foodgrains, edible oils, cotton, sugar and tobacco are to be adjusted. The eventual goal is the abolition of direct control over most agricultural procurement prices, while retaining import barriers for some food products and using indirect intervention to dampen short term price fluctuations (World Bank, 1990). A key part of the next reform process is the setting up of specialised markets for trading in large volumes and in futures. These are likely to eventually substitute the former planned distribution networks and the present *ad hoc* trading fairs (World Bank, 1992, p108). Even in the grains industry, which receives the most intervention, substantial reforms in further reducing the governments role are probable . In February 1993, the state sponsored a national policy meeting on grain production and marketing during which it announced policies "advancing reform of the grain purchase and marketing system" (Research Group on Annual Analysis of Rural Economy, 1994, p78). The major policies were those of dividing the grain administration system into different levels and more specifically establishing a two-level (central

and provincial) control system. This meant that imports and exports of grain between provinces would be changed from centrally planned allocations to market-orientated allocations with the provincial supply and demand for grain being fulfilled through direct order or wholesale market. Reforms are also to occur in the grain circulation system and in particular, to separate management of the special grain reserve from normal business operations (Research Group on Annual Analysis of Rural Economy, 1994, pp79- 80). The continuing reform process and reduced intervention by the government will probably lead to a market structure which is characterised by much more competitively determined prices.

Similarly, the methods of government intervention have undergone some subtle evolution. Rather than controlling both supply and the market, the government now uses its participation in the markets to influence price. Additionally, the government is now an owner of some markets which it attempts to run as commercial entities and compete with private markets and has made commitments to invest in infrastructure by building "standardised wholesale markets and farmers markets around the country" (Xinhua, 1994, p1). Further, the reforms have led to a significant increase in managerial autonomy of state-owned enterprises, as the managers have more authority to decide production, supply and sales levels (Xiao, 1991).

Overall, there is much more freedom for government agencies at all levels, reflecting a new, and far more capitalistic, role for the government. While the level of government intervention has been generally decreasing, there are still some markets in which the state takes active roles. It would appear, however, that the use of more indirect mechanisms, combined with a less controlled macro-economy, are changing the bounds of this influence. The combination of these factors with a greater emphasis on consumer choice and free-enterprise is likely to see these changes in the food economy deepen, and lead to the development of a level and pattern of protection that is not dissimilar to many other capitalist economies which practise intervention in agriculture. The latter hypothesis is perhaps best served by making some broader comparisons on the international levels of government distortions.

D. *Comparative Influence of Government Distortions*

The freedom that the changes in pricing formation has brought to production and consumption decisions in the food economy is the most noticeable results of the Chinese reform. However, to say how this determines whether or not the economy is truly socialistic, or merely interventionist, requires much wider comparisons as to the absolute levels of government intervention. To go some way toward addressing this issue, a number of observations on intervention in capitalist food economies can be made. These observations are necessarily broad, as direct measurements of these distortions are subject to a great deal of difficulties, not the least of which are the reliability and availability of data, and the consistency of estimates

between different analyses (see, for example, Gunasekera, Andrews, Haszler, Chapman, Tian and Zhao, 1991, and World Bank, 1994).

To circumvent some of these difficulties, some taste for comparative levels of intervention can be gained from an examination of trade model database, such as that provided by Tyers (1994) for the World Food Model (Tyers and Anderson, 1992). The advantage of this model is that it covers aggregate levels of protection for seven major food products and has been subject to extensive peer review. While these estimates are somewhat contentions, their consistent procedures and database make comparison easier than using more country specific observations (Table 1). The figures reference both a price transmission elasticity, which reflects the way that government intervention insulates domestic prices from world reference prices (zero being perfect insulation), and protection coefficients, which represent the levels of tariff or subsidy (greater or less than unitary) that is the net result of the intervention (that is, the ratio of the consumer or producer price to the border price).

While care must be taken in representing what are ultimately stylised figures[2], some limited observations can be made. The first is that China does not appear to subsidise production to anywhere near the extent of the western economies shown, reflecting the high incidence of export tax that have been noted by other authors (for example, World Bank, 1994). However, the observations on the price transmission elasticities display a tendency to stabilise producer prices in a manner that is on average very similar in magnitude to that for the United States.

With regard to consumption, it may be expected that, while a socialist state may tax production, it is likely to redistribute these benefits by implicit or explicit consumer subsidies, which is reflected in the very low protection coefficients for China vis-à-vis the other nations. Similarly, the transmission elasticities betray a policy of protection of consumers from price volatility, with only sluggish adjustment to market prices. This is not dissimilar to the pattern of distortion that is apparent in the highly protected European economies due, to a large part, to the impact of the up to 70% consumer price increases which have accompanied reforms since 1991 (Johnson, 1994). Driven largely by the need to reduce the inflationary pressures from massive

[2] While most of the parameters in the World Food Model database are empirically estimated, it is not possible to directly measure the effects of policy distortions in the CPEs. This is so for several reasons: existence of complex pricing systems, elaborate quantitative restrictions, non-convertibility of currencies, and highly distorted non-food markets (Tyers and Anderson 1992). The exact details of how the China estimates were determined are not provided by the authors; however, it would appear that the techniques used mirror that of the United State Department of Agriculture (USDA) which has a more explicit formulation (see Webb 1990). Official prices and exchange rates are used in this process which tend, therefore, to underestimate the true level of the distortions. Price transmission elasticities, as described in Tyers (1984,pp98-99), are determined by estimation; however, there may have been some measure of *ad hoc* manipulation of these.

subsidies, the implication for this comparison would be that China's pattern of intervention is even more comparable to that of the western economies shown.

TABLE 1

Representation of Price Distortions for Select Countries in 1990

	Producer Price Distortions			Consumer Price Distortions		
	Price Transmission Elasticities		Price Protect.	Price Transmission Elasticities		Price Protect.
	Short Run	Long Run	Coeff't (Av.)	Short Run	Long Run	Coeff't (Av.)
China						
Rice	0.35	0.58	0.50	0.05	0.40	0.58
Wheat	0.44	0.60	0.69	0.05	0.60	0.67
Coarse Grains	0.54	0.87	0.86	0.05	0.70	0.75
Sugar	0.19	0.23	0.68	0.05	0.20	0.69
Dairy	0.10	0.16	2.68	0.05	0.12	2.04
Ruminant Meat	0.48	0.66	0.54	0.05	0.50	0.60
Non-Rum Meat	0.17	0.25	0.48	0.05	0.22	0.58
Australia						
Rice	0.62	0.84	1.28	0.23	1.00	1.79
Wheat	0.78	1.00	1.16	0.11	0.63	1.00
Coarse Grains	0.69	0.96	1.11	0.69	0.96	1.00
Sugar	0.49	0.54	1.19	0.00	0.00	2.22
Dairy	0.40	0.45	1.54	0.13	0.39	1.52
Ruminant Meat	0.73	1.00	1.12	1.00	1.00	1.00
Non-Rum Meat	0.46	0.52	1.05	0.25	0.34	1.00
European Community						
Rice	0.11	0.46	2.78	0.11	0.22	2.33
Wheat	0.09	0.20	1.75	0.08	0.11	1.54
Coarse Grains	0.24	0.58	2.22	0.13	0.26	1.89
Sugar	0.00	0.00	2.27	0.00	0.00	1.92
Dairy	0.08	0.30	4.00	0.08	0.30	2.50
Ruminant Meat	0.09	0.14	2.33	0.02	0.04	1.89
Non-Rum Meat	0.12	0.76	1.54	0.62	0.76	1.33
United States						
Rice	0.10	0.20	1.72	0.71	1.00	1.00
Wheat	0.10	0.20	1.75	1.00	1.00	1.16
Coarse Grains	0.10	0.20	1.27	1.00	1.00	1.00
Sugar	0.10	0.48	1.79	0.10	0.48	1.59
Dairy	0.07	0.36	2.78	0.06	0.18	1.89
Ruminant Meat	0.60	0.61	1.41	0.21	0.53	1.30
Non-Rum Meat	0.90	1.00	1.09	1.00	1.00	1.01

Source: Tyers and Anderson World Food Model Database (1994).

In sum, the Chinese food economy has been dramatically altered by the reforms to supply, demand and price formation. A variety of initiatives in different areas imply that free market forces now determine the majority of prices, although these are still largely influenced indirectly through the government's involvement. Both producers and consumers have significantly more freedom in their production and consumption decisions, while the Chinese markets are significantly more open to the international market. Thus, the market structure is now much more characterised by market prices and quantities which reflect more individuals' own decisions and tastes. Relative to other economies, it would appear that the overall pattern of protection of the food economy is now converging with models of intervention that could just as easily ascribed to the recognised diversity of capitalist institutions (Stiglitz 1994). From this perspective "Socialism with Chinese Characteristics" is a banner for what is merely another form of government intervention, albeit harsher.

IV. IMPLICATIONS FOR THE WORLD FOOD ECONOMY AND INTERNATIONAL SOCIALISM

The overriding implication of the analysis is that capitalism and socialism are, indeed, converging in the Chinese food economy. Whether this is due to the intrinsic nature of the food sector or the inherent characteristics of Chinese socialism is unclear and perhaps unimportant. What matters is that the Chinese food sector is moving along the capitalist path and exhibits clearly all the key attributes of a market-orientated economy under distortion.

On the supply side, these attributes are reflected in the numerous reforms conducted since 1978, the main aim of which has been to improve agricultural productivity and price responsiveness. Diversification and production responsibility system have emerged, while state ownership has declined. The quota system has been under continuing pressure and opportunities for accumulating profits and specialisation have been enhanced. Diverse marketing and processing chains have also materialised. More importantly, greater access to international markets and increased foreign investment through the SEZs have boosted possibilities for export growth. Finally, self-sufficiency appears not to be a sustainable goal for China given the various supply rigidities and pressures on the demand for food stemming, particularly, from population growth. On the demand side, the capitalist attributes include freedom of choice, enhanced price responsiveness and improvement of demand signals in the marketing and value-adding chians. These together with conventional factors of population and income provide strong evidence of structural change in demand - the research on which is of significant interest. The structure of pricing also exhibits attributes of capitalism. This is evident in the fact that shadow prices are approaching their international counterparts and price ceilings and floors are gradually being relaxed. Recent devaluation of the overvalued exchange rate, in

particular, works well for agricultural exporters, although it will have a heavy cost on imported intermediaries. There is an increased use of wholesale markets for price determination, although distortions remain high in these markets. The main trend, however, tends toward more competitive price determination and less direct forms of intervention.

On the whole, and in view of the fact that China's subsidies are comparable to those in a number of capitalist economies, it is reasonable to suggest that China provides a model of market intervention under the banner of socialism. It is also reasonable to suggest that given the size of the Chinese food economy and the dynamic market-orientated policy changes occurring in the country, major opportunities are emerging for international food interests. These include, among others, various production, consumption and distribution enterprises of the Chinese economy as well as areas of infrastructure and foreign investments.

The apparent equilibrium that has been reached between socialist and capitalist extremes in China is a useful source of information, not only for developing the background to the Chinese food economy, but also for drawing some conclusions for the future of international socialism. The selectiveness with which reforms have been carried out, combined with the drawn-out pace of change, has led a number of researchers to comment on the stability of the model which has allowed the Chinese Communist Party to outlive many of its socialist peers (see, for example, Lippit 1992). Of particular interest is the commentary on the evolutionary (Marxist) model that has been embraced by the revisionists, and the doubts this raises as to the importance of classical capitalism to the transitional economy (Wisman 1993).

In the traditional Marxian model, as has been observed earlier, the underdeveloped country moves through a stage of capitalism to the eventual evolution into socialism. Under such a paradigm, China would still be classed as underdeveloped, due to the absence of full-fledged capitalism. In separating capitalism from the use of free market, the Chinese are implicitly trying to re-write this model. In essence, the capitalist stage has been replaced by a phase which may more accurately be termed a market stage, where institutional impediments to market forces are gradually minimised, government controls are at a more macro level, and there are attempts to provide incentives that work in the absence of removing state ownership of the factors of production. As it is the private ownership of factors of production that is pivotal to the rise of capitalism, this alternative framework may serve to provide the growth typified by the capitalist stage, without the same level of class conflict, in essence leading to a greater stability in the socialist stage. The success of this simplification depends on the ability of the state to exist in harmony with the market forces, while using the rents it gains to pursue socialist equity goals.

Perhaps the closest analogy we have to this equilibrium is a transitional stage of development that is characterised, not by its level of industrialisation, but by its level of social policy. Akin to

the notions of the conventional "welfare state", this is typified by a western growth focus concomitant to a high priority of social welfare programs. From this perspective, the stability of China's position is perhaps more obvious as, although there exists the accumulation of capital, the possibility of conflict and therefore evolution into a classless society with no private ownership is minimised. The implication for other would-be socialist economies is that privatisation, and the concomitant woes that this provides for structural adjustment programs that have been at the centre of many conflicts around the world, may not necessarily have a negative impact on an economy, nor might public ownership, if these can involve a reform of goals that are similar to the Chinese model.

V. CONCLUDING COMMENTS

The convergence of socialism and capitalism that has been witnessed in the Chinese economy is fertile ground for future analyses. The gradual transition of China from centrally planned to free enterprise has been along a continuum defined not so much by ideology, but the intricacies of "Socialism with Chinese Characteristics". For the food economy, growth and trade patterns have been altered by the specific acts of reform to supply, demand, and price formation which have revealed areas of weakness and opportunity for world food trade. Changes in availability of resources for production and improvement of incentives and marketing signals, have seen a higher and more diversified level of supply. Changes in income and population, together with reduced control over consumption levels, have similarly diversified and increased demand. Price mechanisms have become freer and more market orientated, and have a greater role in production and consumption decisions.

Despite all these advances, the Chinese government remains strongly interventionist. It has exhibited an inherent distrust in the ability of the markets to seek equilibrium, and has swiftly intervened in times of disruption. Similarly, the government has been piecemeal in the nature of reforms, more involved in staple food markets, such as grains, than others, and has maintained innumerable institutional constraints through complex devolved bureaucracies, and varied measures of state ownership. This plethora of influences necessitate the broadness of any discussion on the food economy.

Within this breadth, the food markets reveal a structure of intervention that is not confined to socialist economies. Whether this is because of the nature of agriculture, or by the intent of reformers, is irrelevant. As is the nebulous nature of the distinction between socialism and capitalism, at least in the case of the food economy. It would appear that this "unity of opposites" has created a middle ground that is perhaps best typified by our previous understandings of a capitalist economy with high level of market intervention. In this, the

lesson for international socialism is that the traditional Marxian notions of progressional development may no longer apply, when one considers the way the private ownership that this embraces may not have been integral in the dramatic performance of the Chinese economy to date.

REFERENCES

Agriculture Yearbook, *China Agricultural Yearbook*. Beijing, Agriculture Publishing House, Various Issues.

Ahmadi-Esfahani, Fredoun and Stanmore, Roland, "Some Methodological Issues in the Measurement of Shadow Prices for a Centrally Planned Economy". Paper presented at the 37th Annual Conference of the Australian Agricultural Economics Society, held at the University of Sydney, 9-11 February, 1993.

Ahmadi-Esfahani, Fredoun and Stanmore, Roland, "Demand Responsiveness in Beijing's Largest Wholesale Food Market" Working Paper, Department of Agricultural Economics, University of Sydney, Sydney, 1996a.

Ahmadi-Esfahani, Fredoun and Stanmore, Roland, "Estimation of Demand for Vegetables in a Chinese Wholesale Market", Working Paper, Department of Agricultural Economics, University of Sydney, Sydney, 1996b.

Anderson, Kym, "China's Industrialisation and Fibre Self-Sufficiency" in *Challenges of Economic Reform and Industrial Growth: China's Wool War*, C. Findlay, ed., Sydney, Allen & Unwin, 78-97, 1992.

Byrd, William "Rural Collective and Private Industry" in *The Sectoral Foundations of China's Development*, Shahid Javed Burki and Shahid Yusuf, eds, 1-13, World Bank Discussion Paper 148: China and Mongolia Department Series, World Bank, Washington DC, 1992.

Carter, Colin A. and Zhong, Funing, "Will Market Prices Enhance Chinese Agriculture? A Test of Regional Comparative Advantage," *Western Journal of Agricultural Economics*, 162, 1992, 417-26.

Ceroils, Personal Communication, Beijing, 1994.

DaCosta, Maria Nevada and Pearson, Candace, "China's Township Village Enterprises: An Empirical Analysis." Paper presented at the Pacific Rim and Allied Economic

Institute of Agricultural Economics, Personal Communication, Chinese Academy of Agricultural Sciences, Beijing, 1994.

Jie, X. "State Orders Suspension of Rice, Rapeseed Futures", *Chinese Daily Business Weekly*, Beijing, 1994.

Johnson, D. Gale, "Does China Have a Grain Problem?" *China Economic Review*, 5,1, 1994, 1-14.

Ke Bingsheng, *Marketing of Pork and Vegetables in China*, Boulder, Westview Press, Colorado, 1992.

Khan, Zafar Shah, ed., *Patterns of Foreign Direct Investment in China*, World Bank Discussion Paper 130: China and Mongolia Department Series, World Bank, Washington DC, 1991.

Koo, A, "The Contract Responsibility System: Transition from a Planned to a Market Economy," *Economic Development and Cultural Change*, 38, 4, 1990, 797-820.

Kutschukian, Jean-Marc and Brittan, Barnaby, *The Demand for Food in China*, Unpublished undergraduate thesis, Department of Agricultural Economics, University of Sydney, Sydney, 1995.

Lippit, Victor D., "China's Economic Reform in Comparative Perspective," *Review of Radical Political Economy*, 24, 2, 1992, 132-38.

Ling, Zhu, "The Development of Operating Mechanisms in Chinese Agriculture," *Journal of Development Studies*, 26, 2, 1990, 229-242.

Lyons, Thomas P., "Commercial Reform in China: The Grain Trade of Fujian Province, 1978-88," *Economic Development and Cultural Change*, 41, 4, 1993, 691-736.

Mackerras, Colin, Taneja, Pradeep and Young, Graham, *China Since 1978 - Reform, Modernisation and "Socialism with Chinese Characteristics"*, Longman Cheshire, Melbourne, 1994.

Martellaro, Joseph A., "Some Aspects of Agricultural Reform in the PRC." *Singapore Economic Review*, 36, 1, 1991, 58-69.

Martin, Will, "Analysing the Effects of China's Foreign Exchange System on the Market for Wool" in *Challenges of Economic Reform and Industrial Growth: China's Wool War*, C. Findlay, ed., 35-64, Allen & Unwin, Sydney, 1992.

Murray, Geoffrey, *Doing Business in China - The Last Great Market*, Allen and Unwin, St. Leonards, 1994.

Nee, Victor and Young, Frank, "Peasant Entrepreneurs in China's "Second Economy", An Institutional Analysis," *Economic Development and Cultural Change*, 39, 3, 1991, 293-310.

Overholt, William H., *China: The Next Economic Superpower*, Weidenfeld and Nicolson, London, 1993.

Park, Albert, Rozelle, Scott and Cai, Fang, "China's Grain Policy Reforms: Implications for Equity, Stabilisation and Efficiency," *China Economic Review*, 5, 1, 1994, 15-33.

Research Group on Annual Analysis of the Rural Economy, *Green Report: Annual Report on Economic Development of Rural China in 1993 and the Development Trends in 1994*, China Social Sciences Publishing House, Beijing, 1994.

Riskin, Carl, *China's Political Economy - The Quest for Development Since 1949*, Oxford University Press, Oxford, 1988.

Roman, Z., "Competition and Industrial Organisation in the Centrally Planned Economies" in *New Developments in the Analysis of Market Structure*, Joseph E. Stiglitz and G. Frank Mathewson, eds, 315-336, Cambridge, MIT Press, Massachusetts, 1986.

Samuel, Nicholas, "The Market for Processed Foods and Beverage Products in Urban China", *Research Paper*, 94/11, Rural Industries Research and Development Corporation, Canberra, 1994.

Scherer, Frederic M. and Ross, David, eds, *Industrial Market Structure and Economic Performance*, Houghton Mifflin, Boston, 1990.

Shun Yi County, Personal Communication, Beijing, 1994.

Sicular, Terry, "Plan and Market in China's Agricultural Commerce," *Journal of Political Economy*, 96, 2, 1988, 283-306.

Stanmore, Roland and Ahmadi-Esfahani, Fredoun, "Chinese Grain Supply Response in a Reform Environment" Working Paper, Department of Agricultural Economics, University of Sydney, Sydney, February 1996.

State Statistical Bureau, *China Statistical Yearbook*, China Statistical Information and Consultancy Service Centre, Beijing, 1993.

State Statistical Bureau, *China Statistical Yearbook*, China Statistical Information and Consultancy Service Centre, Beijing, 1993.

Stiglitz, Joseph E.,*Whither Socialism*, MIT Press, Cambridge, Massachusetts, 1994.

Tirole, Jean, *The Theory of Industrial Organization*, MIT Press, Cambridge, Mass, 1988.

Tyers, Rod and Anderson, Kym, *Disarray in World Food Markets: A Quantitative Assessment*, Cambridge University Press, Cambridge, 1992.

Tyers, Rodney, "Agricultural Protection and Market Insulation: Analysis of International Impacts by Stochastic Simulation," *Research Paper No.111*, Australia-Japan Research Centre, 1984, 1-53.

Webb, Shwu-Eng H, "China" in *Estimates of Producer and Consumer Subsidy Equivalents*, Alan J. Webb, Michael Lopez and Renata Penn, eds, USDA ERS Statistical Bulletin 803, Washington DC, United States Department of Agriculture, 1990.

Weiling, L., "Futures Exchanges Brace for Upcoming Regulations," *Chinese Daily Business Weekly*. Beijing, 1994.

Wisman, Jon D., "Should Formerly Socialist Economies Attempt to Leapfrog Classical Capitalism?," *International Journal of Social Economics*, 20, 2, 1993, 12-26.

World Bank, *China: Between Plan and Market*, World Bank, Washington DC, 1990.

World Bank, *China: Reform and the Role of the Plan in the 1990s*, World Bank, Washington DC, 1992.

World Bank, *China: Foreign Trade Reform*, World Bank, Washington DC, 1994.

Xinhua, "Study of Deng's Works Seen as Crucial for Party," *China Daily*, Beijing, 1,4, 1994.

Yan Huai, "Organizational Hierarchy and the Cadre Management System" in *Decision-Making in Deng's China: Perspectives from Insiders*, Hamrin, Carol Lee and Zhao, Suisheng, eds, 39-50, Studies on Contemporary China, M. E. Sharpe, Armonk, 1995.

Zhenying Zhao, "Chinese Economics and the Economy During the Period of Reform" in *The Transformation of Socialism . Perestroika and Reform in the Soviet Union and China*," Mel Gurtov, ed., 224-239, Westview Press, Boulder, 1990.

Zhangyue Zhou, "Expert Judgement on the Effects of the Grain Marketing System on Grain Production in China: A Survey," Paper presented at the 36th Annual Conference of the

Australian Agricultural Economics Society, held at the Australian National University, Canberra, 10-12 February, 1992.

Zweig, David, "Urbanizing Rural China: Bureaucratic Authority and Local Autonomy" in *Bureaucracy, Politics, and Decision Making in Post-Mao China*, Kenneth G. Lieberthal and Lampton David M, eds, 334-364, University of California Press, Berkeley, 1992.