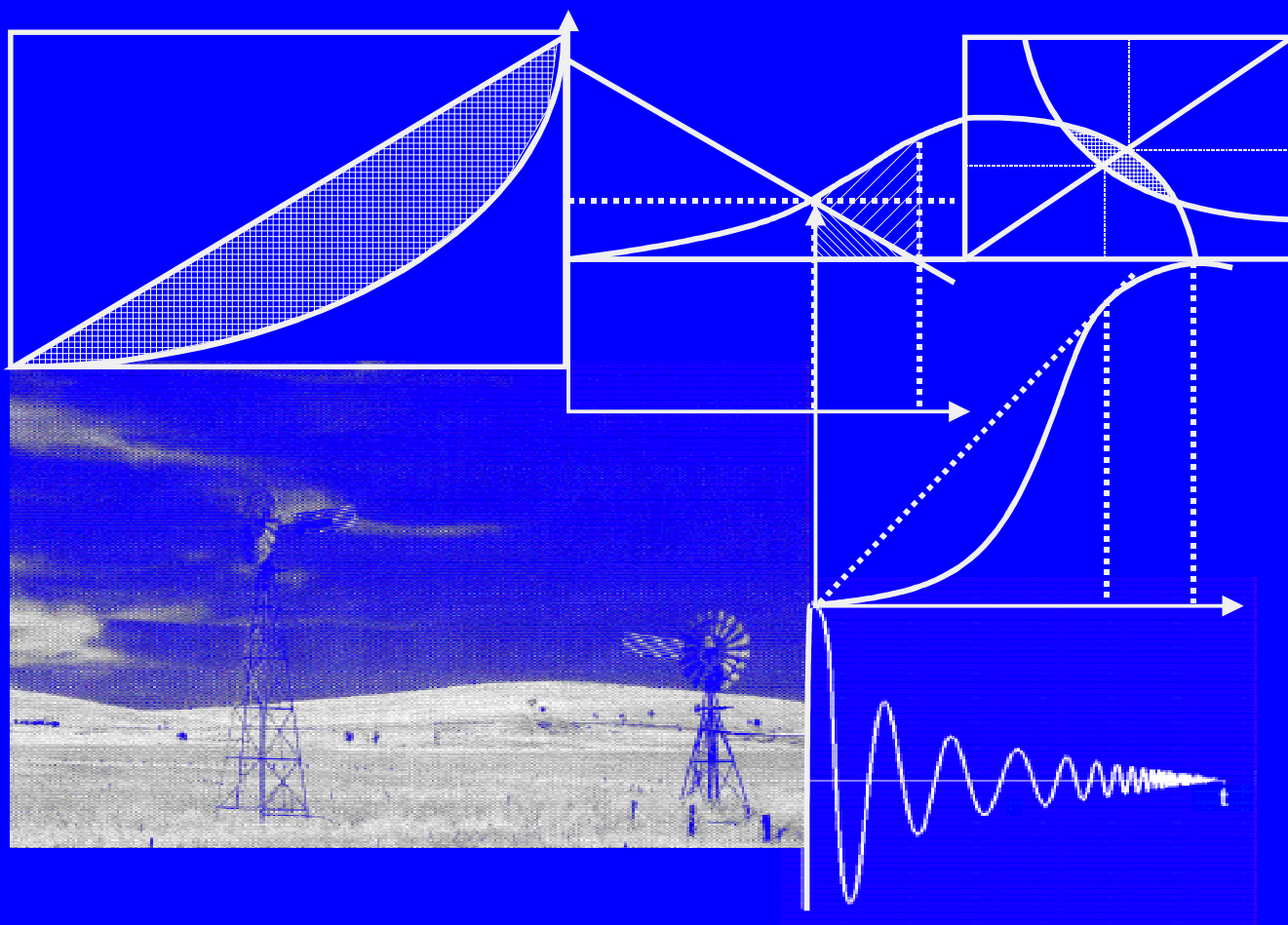


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Abstract

This paper begins by providing an overview and discussion of urbanisation in China since the beginning of the economic reform period in late 1978. In particular, the paper examines the effects of urbanisation on the consumption of beef in China. As is well known, there has been a dramatic growth in the output of beef during the 1980s and especially in the first half of the 1990s. One factor encouraging the development of this comparatively new rural industry in China has been the expansion in consumption of beef and hence in the market demand for beef. Urbanisation has played a major part in stimulating the demand for beef. This is because of such things as: the widening gap between disposable income in urban and rural areas; rapid changes in social and cultural attitudes in urban areas; changing lifestyles (including cuisine) among urban households; expansion in "eating out"; and the growing acceptance of beef dishes at "feasts".

Key Words: China, urbanisation, beef consumption, income differentials, social and cultural attitudes, and life style changes.

Introduction

Beef production in China has risen substantially from 230 thousand tons in 1979 to 4.4 million tons in 1996 (China Agriculture Yearbook, 1997). Among the red meats, beef has seen the fastest growth over the last two decades (1979-1996) at an average annual rate of increase of over 6 per cent (see Figure 1).

Many factors have contributed to the dramatic growth in beef production such as high beef prices, freeing market channels, the development of specialized cattle raising regimes and the "straw utilization program". However, the increasing demand for and consumption of beef in China is undoubtedly one of the strongest forces to have stimulated recent cattle production. One factor encouraging beef consumption is the increase in urbanisation in China, with the share of urban population rising from 18 per cent in 1978 to 29 per cent in 1995 (China Statistics Yearbook, 1996). It has been observed that food consumption patterns and diets in most parts of Asia have changed quite dramatically as countries urbanise (Garnaut and Ma, 1992). This also seems true in China where urban dwellers tend to consume more meat, milk and fish and less staple foods such as rice than their rural counterparts. It would seem that increases in Chinese meat consumption have been driven by major increases in urban consumption levels and relatively minor increases in rural consumption levels.

For example, in 1995, urban per-capita consumption of red meat (including beef, pork and mutton) was 19.7 kg while rural per-capita consumption was 11.3 kg (China Statistical Yearbook, 1996). Beef

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consumption in urban China was 6.38 kg per head in the same year, while an average of only 1.47 kg of beef was consumed by rural residents (East-West Consultants Ltd., 1997). The consumption of red meat by urban consumers was nearly double that of rural residents, while beef consumption by rural consumers was only one-fifth of the level of urban beef consumption. Between 1991 and 1996, average per capita consumption of beef almost trebled in urban areas, while per capita consumption of beef in the rural regions increased about 2.5 times (see Figure 2). Hence, urbanisation is likely to have been one of the most important factors influencing growth in beef consumption in China since the economic reform of the late 1970s. Continuing urbanisation will play an important role in increased demand for beef in the future.

Few studies have been undertaken on China's beef consumption in terms of basic economic factors such as income and prices. Also, relatively few studies focus on the influence of general socio-economic factors such as urbanisation, differential disposable income between urban and rural residents, social and cultural attitudes, lifestyles and collectivized consumption. This paper focuses on these broader issues by emphasizing the impact of urbanisation on beef consumption in China. The purpose of this paper is to 'cast a brick to attract jade'. Owing to the limited data and the lack of specific criteria for measurement of social attitudes and lifestyles, the work is descriptive and will need subsequent empirical confirmation. Before examining the effects of urbanisation on beef consumption it is necessary to have a brief overview of China's urbanisation trends and what it is that makes China's urbanisation process particularly noteworthy.

Urbanisation Since the 1978 Reforms

Definition

The definition of the urban population and urban locations in China has changed at various times since 1949. Unlike most countries, China has classified urban populations not only on criteria related to minimal numbers in a given location or according to the percentage of individuals engaged in non-agricultural activity but also has also urban populations are defined in terms of a combination of where people live and who is responsible for providing their grain and other basic food needs. Cities are defined as places having a population of at least 100,000 or being the location of the provincial leadership organs. Towns are classified as urban if they have a population of 3,000 or more of whom at least 70 per cent are involved in non-agricultural activities, or if they have populations of between 2,500 and 3,000 with at least 85 per cent of the people involved in non-agricultural activities (Kirkly, 1985).

The identification of the urban population has been on the basis of the household registration system (Hukou System) since the mid-1950s. The system requires that all neighborhood residents be registered with their local police station. The system was made more effective by the widespread rationing of goods and state control of jobs and houses through to the late 1970s. Since 1992, the registration system has been gradually relaxed as a result of the abolishment of food subsidies for urban residents in most cities. The latest reform of the Hukou System started from 1st July, 1997, which uses both new 'Long-term Stay Registering Form' and 'Residents' Hukou Certificate' and abolishes the 'Two Categories: Agricultural and Nonagricultural Hukou' (Shi, 1997). However, the general system is still in effect in large cities such as Beijing, Shanghai and Guangzhou to control migration.

Accelerators of Urbanisation

After 1978, some of the more restrictive urban policies were relaxed to allow cities and towns to respond to market forces free of central government intervention. The main policy themes on urbanisation are to continuously control big cities' migration, especially to the four municipalities, to seek the "proper" development of medium-sized cities, and encourage the growth of small cities and towns.³ The relaxation of controls on city growth had an immediate effect on accelerated urbanisation in China. Three indicators, namely urban population and its proportion, the number of cities, and the number and proportion of non-agricultural workforce, are usually considered to reflect the overall trend towards urbanisation.

Figure 3 shows the growth trend of both urban and rural populations in China between 1949 and 1995. Urban population has increased dramatically since the mid-1980s. For example, urban population increased more than twice (2.04) from 1978 to 1995 while total population rose less than one and half times (1.26). The changes in the proportion of urban and rural populations are presented in Figure 3, which shows that the share of population in urban areas increased from 18 per cent in 1978 to 29 per cent in 1995. According to Chinese official statistics, the number of national cities has increased from 229 in 1981 to 640 in 1995. Table 1 details the composition based on population in selected years from 1981 to 1995.

Concurrently, the nonagricultural workforce rose to some extent as many surplus rural workers flooded into cities, and many younger farmers abandoned unprofitable farming for higher-paying jobs (see Table 2). By 1995, the number of farmers who have been employed in cities and towns has increased 50 million, accounting for 30 per cent of the total urban employment (Feng, 1996). In 1978, nonagricultural employment accounted for 21 percent out of total workforce. By 1995, this had increased to nearly 28 per cent.

Other factors likely to have increased the size of the urban population were the designation of fourteen coastal cities as special development zones and the development of four special economic zones since the end of 1970s. More recently, the effect of Deng Xiaoping's 1992 southern inspection tour has led to accelerated urbanisation development in the first half of the 1990s after the period of retrenchment (1989-91). Pudong in Shanghai became another special economic zone in 1990. It is difficult to envisage how these cities would have been able to expand their industries without increasing their labor force through migration.

Issues of Underestimation

Although the household registration system presumably is designed to monitor migration flows, underestimation of urban population occurs. This is mainly because there is no single centralized agency responsible for its supervision. The "floating population" has been the largest group that has moved to cities without 'related' official permission since 1980. Surveys taken in 1985, for example, indicate that the Shanghai Municipality had as many as 1.1 million temporary residents (Zheng *et al.* 1985). Many come for personal reasons and a substantial percentage was provided with services. Others were representatives of companies in other parts of China, including rural-based enterprises. Among these temporary residents, around 50 per cent were from rural areas.

³ Chongqing City, which used to be the capital city of Sichuan Province, became the fourth municipality in 1997.

Shanghai is not the only destination for such temporary movements. Reports from as early as 1987 indicated that Beijing had to cope with an estimated one million transients from all regions of the country. About 60 per cent came to engage in some form of economic activity. Among those who come for work, more than half are from rural places (China Daily, March 24 1987). In 1997, some sources claim that the temporary residents number over 4 million in both Beijing and Shanghai. Moreover, cities of all sizes besides the national largest cities attract migrants as well. Around 80 million people from the countryside are wandering in urban areas according to the report from February of 1997's National Consultative Conference (China Digest, 1997). Because of these factors, it is highly likely that official Chinese statistics underestimate the number of urban residents.

Summary

Despite strict urban birth control policies, the urbanisation rate has increased rapidly, mainly owing to regional migration from the countryside. The Hukou System has been greatly relaxed, enabling over 100 million rural workers to find jobs in urban areas by early 1997 (EAAU, 1997). By the next century, it is expected that over half of China's population will live in urban areas. These huge populations will be almost entirely dependent on markets for their food needs after recent reforms in the urban economy. What is the implication for beef consumption and what factors have contributed to the rising trend of beef consumption in urban China?

Effects on Beef Consumption

It is generally believed that meat consumption of urban consumers in China has been rising rapidly since the start of economic reforms along with the growing general economy and soaring disposable income. Furthermore, since the mid-1980s the Chinese government has made some efforts to encourage more consumption of beef and chicken and less pork as part of its grain conservation policy. The government plans for this policy to continue into the next century. The policy has facilitated structural changes in dietary habits to some extent. Between 1978 and 1993, per capita consumption of beef and mutton increased over four times while consumption of pork rose three times, though the consumption level for beef and mutton is still relatively low (China Statistical Yearbook, 1994). Figure 4 presents the differences in per capita consumption of red meat and food grain for urban and rural consumers between 1981 and 1995 (Wu and Findlay, 1997). It shows that while urban per capita food grain consumption declined rapidly from 196 kg in 1981 to 131 kg in 1995, rural food grain consumption stayed almost unchanged at about 260 kg. Although red meat consumption for both urban and rural households increased, rural consumers' consumption level is only about half that of urban consumers regardless of under-reported figures for urban consumers' eating away from home.

Therefore, meat consumption in urban areas is usually higher than in rural areas, which is the general experience in most Asian countries. This is especially true in China where per capita disposable income, social and cultural attitudes and lifestyle are much different between urban and rural consumers. It is also interesting to note that collectivized consumption at hotels and restaurants accounts for a considerable proportion of total beef consumption in urban China.

Data Limitations

Although the East-West Consultancy Company report listed beef consumption for the last six years, the basis of these data was not provided and their reliability is uncertain. Some aggregate consumption figures (including beef and mutton) for urban and rural households are available from official statistical yearbooks in selected years. These include data from limited household surveys. However, there are a number of reasons why the data are not suitable for use in this type of analysis. First, the aggregate nature of the consumption figures groups beef and mutton together as single commodity. Secondly, although the absolute number of households surveyed is large, the number is small relative to the Chinese population. Finally, consumption of meat outside the home and in processed products was excluded from the survey. These forms of consumption are of increasing importance for urban consumers and will be as discussed later. For these reasons, analyses of socio-economic variables in this paper rely heavily on qualitative information.

Household Disposable Income

Disposable income is defined as income available for the urban household and net income for the rural household. Since 1978 per capita disposable income has increased dramatically for both urban and rural households. Between the period of 1978 and 1996, disposable income rose almost thirteen times. However, there is a great disparity between urban and rural households. Urban residents have much higher income levels than rural people as Figure 5 clearly shows (SSB, 1997). For example, in 1995, the average per capita urban income reached 4,283 yuan while the rural per capita income was only 1,577 yuan. This left a gap of 2,706 yuan that would have an affect on the consumption pattern of urban and rural households. Consequently, urban households could have much more income available to be allocated on non-staple food consumption such as beef. In Figure 5, it can also be seen that beef consumption is moving in line with incomes for both urban and rural consumers.

Four distinct changes can be observed in the pattern of food consumption and dietary habits as per capita disposable income rises. First, there has been growth in consumption of traditional staple foods such as rice. Secondly, the consumption of non-traditional staple foods, such as wheaten foods, has also increased. Thirdly, there is a shift in consumption patterns away from the non-traditional staple towards higher value and higher protein foods such as meat (Garnaut and Ma, 1992). Finally, income increases are associated with changes in lifestyles and cultural patterns. As Longworth (1983) points out, this can lead to a diversification of consumption patterns, such as the increasing trend towards eating out in urban China. The pattern of food consumption for Chinese urban consumers is complicated since wide disparities in income distribution exist, which may become even greater in the future. It is most likely that the food consumption patterns in urban China can be described by a combination of three stages. Under this scenario, low-income households stay at stage two, a majority of the middle-income group and small proportion of the high-income community move from stage three towards the final stage.

In addition, urban residents used to receive a wide array of income and consumption subsidies unavailable for rural people including allowances for food, housing, medical service and other facilities. Although most subsidies have been reduced or removed recently, a few items such as Public-Medicare are still applied in big cities to some degree, although this is currently under transformation towards a Medicare-Insurance type system as stated by the Government's reports. The extent of "non-salary" income can be substantial. For workers in state institutions and "efficient enterprises", the "non-salary" component of income usually accounts for around two-thirds of total earnings. For example, a worker can have about 1,000 yuan of actual income per month if 350 yuan is put on the pay-book as basic salary.

Accountants usually concoct various pretexts that are allowed by authorities such as special allowances for administrative positions and technical posts, regional allowances and bonuses etc. As a result, the Chinese official statistics probably seriously underestimate the level of average urban disposable income.

As disposable income increases, the expenditure on food moves up too but at a slower rate and hence, as predicted by Engels Law, the proportion of income spent on food declines. According to Chinese official statistics, between 1985 and 1996, urban households spent around 50 per cent of the total disposable income on food consumption while rural households spent almost 60 per cent of the family budget on food consumption (see Table 3). This pattern seems to have followed Engel's Law. It can also be observed that urban residents spent more money on food in absolute value. For example, in 1995 the average urban household spent an average of 1,766 yuan on food while rural households only spent 768 yuan on food (China Statistics Yearbook 1996).

Therefore, urban consumers in China have spent and will continue to spend more on food as per capita disposable income grows. This could be particularly true for beef products. According to the senior author's previous studies, beef in China has a relatively higher income elasticity at over 0.5 and lower own-price elasticity at 0.2 (Cai, 1995). Increases in per capita consumption of beef in China seem to have been stimulated more by continuous income growth than by price effects. The relatively high level of the Chinese Engel coefficient should not be considered as an indicator of a comparatively poor living standard in urban China. Instead it might have been the result of a short term over consumption of food under disequilibrium conditions in the Chinese consumer market.

Social and Cultural Attitudes

China has always been a conservative country. This is still largely true in rural areas. However, since 1978, large Chinese cities have been exposed to the influence of the outside world. Now, many urban consumers, especially young people, are ready to try new products and accept new cuisine and other cultural changes.

Cattle raising in China dates back a long way in history. As early as about BC 3000 years ago, cattle were reared originally for meat and then for transport. Cattle were used for draught purposes in Xizhou in the period BC 1100 to 770. Since then, cattle have traditionally been used as draught animals and have been highly protected through all dynasties (Zuo, 1997). Enacting laws and regulations to protect draught cattle has been a central plank in government policy through out history. It has always been argued that if draught cattle were abandoned, the fields could not be cultivated; without cultivated fields there was no food; without food the people would die; and without people whom would the government rule? As a result, the traditional Chinese ideology embraced cattle as productive forces since people use cattle to plough, transport and undertake other important tasks. In recent times, and especially since the 1950s, cattle were protected by the new government regulations, which stated that draught cattle must not be slaughtered without permission, even if they were sick or too old. After the 1978 economic reforms, this regulation was gradually relaxed as the household responsibility system was implemented in rural China. As mentioned before, beef production has substantially increased since then. Nowadays, many farmers raise cattle mainly for meat rather than for draught because of the higher producers' price for beef and the development of mechanization. However, cattle are still used for draught in some rural areas, particularly in the poorer or remote countryside for two main reasons. First, farmers find it more efficient and economical to use cattle to do farm work since they are assigned only a small plot of land. Second, farmers can not afford to own or use mechanical equipment such as tractors.

Hence, it could be expected that rural consumers have been influenced by traditional ideology which placed an effective taboo on eating beef. They might still be reluctant to eat beef rather than pork even though beef and pork are assumed to have the same price and availability. This would be particularly true for senior rural residents, who do not want to slaughter cattle, let alone eat the meat. This strong social and cultural tradition means that it may be a long and slow process for rural consumers to change their diet from pork to beef.

On the contrary, urban consumers are generally more acclimatized to changing environments. This is particularly true for young people who follow fashions and go with the times. They would change their dietary habits toward consuming more beef to less pork if possible. With the arrival of Western fast food companies such as McDonald's in large Chinese cities, they may be keen to try Western style foods, including many dishes containing beef.

In addition, farmers in China usually need more calories and fat than protein since they are involved in relatively heavier physical work. In China, farmers generally eat more fatty meat such as pork. Many of them even use lard as the main edible oil to directly stir the plain rice or to cook dishes. Lard used to be very popular in both urban and rural areas before 1980. Since living standards have increased, (particularly in cities), and other quality edible oils have become available in local markets, most urban residents would rather consume vegetable oils, such as soybean oil and peanut oil, than lard. Urban consumers are concerned more about the health and nutrition to the food they consume. They prefer more protein than calories and fat because they are scared of becoming overweight and developing cardiovascular diseases. Since beef has a high content of protein, less fat, a relatively low level of cholesterol and all necessary ammonia acids for human nutrition, it can be assumed that urban residents would consume more beef products rather than pork, if it was conveniently available and priced competitively.

Changing Lifestyles

The Chinese lifestyle has changed greatly since the open-door policy was implemented in the late 1970s. However, there is a differential between urban and rural consumers in terms of diversification in consumption habits, preference for convenience foods and eating for pleasure. In urban China, consumers have much more access to convenience-processed food markets, fast-food chains and restaurants. Additionally, many urban residents live in modern apartments with kitchen areas, wider use of gas and electricity in cooking facilities such as microwaves and ovens, and use of refrigeration in households. All of these mean that their food consumption preferences have shifted towards more western food, and resulted in an increase in the demand for beef.

According to the latest survey by the State Committee of Family Planning, China had 320 million households at the end of 1996, of which one-child families accounted for over 20 per cent (China Digest, August 1997). The proportion of one-child families in cities is presumably much higher than that of countryside mainly because of the strict implementation of the one-child policy in cities. "Little emperors" have played very important roles in directing households' meat consumption patterns. In particular, fast food chains such as McDonald's, Japan's Mos Burger and California Beef Noodle King emerged in big cities in the early 1990s, and have developed rapidly since then. For example, starting in 1990, McDonald's had opened 130 restaurants in China by 1996, and intended to open 200 more stores by the end of 1997 (Marr and Hatfield, 1997). In addition, most promotions appeal to younger people such as 'Happy Meal Package'! and 'Free Movie Pass' in which incentives are directed towards this junior but significant group. Thus, western foods have become very popular, not only attracting children

but also teenagers and a wide range of other consumers. As a result, since beef as one of the major ingredients used by fast food restaurants, the consumption of beef has been increasing.

As economic growth has been extremely fast in China, consumers, particularly urban consumers have busier lives than in the past and they are willing to pay more for convenience and service. In addition, women in China have high workforce participation rate compared with other countries. For example, even in 1982, Chinese women had the worlds highest labor participation rate of 74.1 per cent while the corresponding figure for the United States was 52.6 per cent (Taylor, 1986). Hence, urban dietary preferences have been gradually changing away from traditional home cooking and home preparation towards processed food. According to a four-cities' survey conducted by Samuel in 1994, about 63 per cent of total food expenditure was spent on processed food and beverages of which meat products accounted for 26 per cent. In terms of meat products, expenditure on dried and canned beef were the dominant components particularly for dried beef, accounting for 35.4 per cent (Samuel, 1994). Another important fact explaining this higher proportion might be that processed beef snacks such as beef jerky have become very popular in China and people like to eat them for pleasure while they are watching TV or movies and traveling around, particularly by train and coach.

On the other hand, the recent urban Chinese tendency to eat away from home much more often than in the past has accompanied the rising standard of living. Particularly among those so-called 'middle-class' households whose annual income is over US\$5,000, dining out has become a common occurrence. According to a 1995 survey in Shanghai, around half of Shanghai households surveyed dined out at least once each month. Twenty-five per cent of them was reported to dine out six or more times per month (American Agricultural Trade Office, Shanghai, 1997). Regarding eating away from home, there is an unusual but important phenomenon in China termed "collectivized consumption" which will be discussed in the next section.

Collectivized Consumption

In this paper, collectivized consumption is defined as a group of people eating out at middle-class or superior hotels or restaurants financed either by individual or collective enterprises or state institutions. Collectivized consumption in China is very popular. This is particularly so in urban China.

Food is historically a cultural and social product in China, where communal eating has long been a tradition and custom. Urban consumers have enjoyed dining out with family, friends, colleagues or business partners. However, in terms of meal values, family or individuals eating out only accounts for a very small proportion of total expenditure on food outside the home in China, which is different from most developed countries. In contrast, billions of yuan of public money are spent on collectivized consumption according to the reports, although the constant regulation to ban these sorts of lavish lifestyles has been stipulated by the government. For example, some 800,000-yuan was spent on hosting visitors only in Fengrun County of Hebei Province in 1996 (China Daily, Friday August 15 1997). Based on the recent regulations, the spending of public funds on extravagant meals or entertainment is strictly forbidden (China Daily, May 25, 1997). This apparent draconian policy response indicates how significant this phenomenon has become in China.

Food and hospitality are an important part of Chinese customs. Many officials take advantage of their position to overspend public money on hosting their superiors, business partners, friends or schoolmates. A group of their colleagues are usually invited to accompany the guests to make the right number for a table. These could easily cause excessive consumption. Although there is no specific statistics on this

consumption, it is notable that collectivized feasts at 'Star' hotels and restaurants have contributed significantly to the total consumption of high quality protein food including beef dishes. The Chinese people like to eat dishes outside the home that is not easily prepared and cooked at home. Such dishes include: beef steak, 'Mongolian Beef', Hot Pot Beef Dish (huoguo), Sizzling Beef Plate' (tiebansao), Fried Tenderloin (caoniuliu) and Sauce-dressed 'Bible Tripe' (niubeiye). Beef dishes are usually placed as second preferred plates following seafood when people make orders at expensive restaurants. For example, Hot Pot Beef Dish (Niurouhuoguo) has become fashionable all over China in recent years and it is gradually replacing pork as the ingredients for Huoguo. As well, a series of "Complete Beef Hot Pot" (quanniuhuoguo) have become popular on the menu including beef slices, beef liver, beef tripe, beef heart, etc (Liu, 1997). What is also interesting to note is that most Chinese consumers often order a plate of 'Bible Tripe' to go with strong drinks such as alcohol. 'Bible Tripe' dishes have tended to become as popular as chicken feet ('phoenix claw') recently. As a result, the local supply of ox tripe may not be able to meet the increasing consumer demand in urban China and may need to be imported from overseas. This has been one of the reasons for the recent rapid growth in the export of tripe from Australia to China.

Based on the above analysis, the official household survey data on meat (and especially beef) consumption is likely to seriously underestimate actual consumption when the amount eaten out is also taken into account. It can be expected, therefore, that per capita urban consumption for beef and mutton might be well above the official reported figure of 2.77 kg in 1995.

Conclusions

From the above discussion, it is apparent that increasing urbanisation and rising beef consumption in China are closely related. The difficulty in refining this relationship empirically arises from data problems since no separate consumption data for beef are available, let alone time-series for different communities. However, beef consumption in China is likely to grow strongly into the next century as a result of increasing urbanisation that will bring with it rises in disposable income, adoption of western life styles and a continuation of the "tradition" of collectivized feasts. At the same time, it is important to note that some other issues such as a growing intra- and inter-regional inequality in income levels and standards of living and recent rises in the urban cost of living (such as housing, health care and schooling costs) may retard the strong positive impact of urbanisation on beef consumption.

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