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Growth in World Food Consumption Slowed in the Late 1980's

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Global per capita food consumption continued to grow in the late 1980's, but slower than in the 1960's or 1970's. All nations, however, did not share in the increase. Developed North America and centrally planned Asia had the strongest growth, while Africa endured a decline. Africa has become the poorest fed geographic region, containing 8 of the world's 10 poorest fed countries.

As the 1980's progressed, however, the world increase slowed. Consumption increased 92 calories between 1980 and 1986, but 1988 consumption was unchanged from the 2,678 calories consumed in 1986. Developed North America (see box for regional composition), with a pace-setting 3,645 calories per capita in 1988, and centrally planned Asia (primarily China) were the only two regions whose growth in the 1980's exceeded the previous two decades.

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Developed Countries

Consumption in the developed countries increased by 66 calories between 1980 and 1988, to reach a total of 3,410 calories per capita per day. But the growth was not consistent across regions (fig. 1).

Consumption in North America, especially strong in both Canada and the United States, increased by 156 calories.

Europe (which has been redefined to include eastern Europe), Oceania, and "other" developed countries have not kept pace. In fact, 1988 consumption in Europe and Oceania fell below 1986 levels. (Consumption in eastern Europe mirrored the rest of Europe in 1986, so combining the two areas had little effect.)

Most of the growth in the "other" developed region came from large increases in South Africa and Israel—not from Japan. They had increases of 248 and 180 calories, respectively. In contrast, Japanese consumption, at only 2,848 calories in 1988, increased by only 56 calories. Japan's underreporting of processed food imports and omission of high-fructose corn

syrup from consumption data are thought to cause a downward bias in their consumption data.

The Japanese case illustrates one of the problems with food consumption data. Another problem, especially in developing countries, is underreporting of home-grown production. Furthermore, the data measure food available for consumption. Food lost in storage, processing, or simply wasted is not deducted. Finally, food consumption may be measured in several different units. Calories are the most common unit, but pounds, protein, and fat are also used—and each may result in much different comparisons.

Situation in the Former Soviet Union

Consumption growth in the former Soviet Union came to a virtual standstill during the 1980's after very modest growth during the two previous decades. This area has been notorious for people waiting in lines to purchase limited quantities of low-quality food. Nevertheless, consumption in 1988—at 3,386 calories per person per day—was on a par with the developed

countries. Food production reached a record high in 1989, and livestock product consumption was at a record level in 1990.

Last fall, after the breakup of the Soviet Union, there was concern that there would be inadequate food to last through the winter. After a modest decline in 1990, food production in 1991 fell 14 percent and cereal production fell 27 percent. There were reports of local shortages causing some cities to restrict the sale of food to local residents. On the other hand, tangential information indicated that the shortages were not as severe as was being suggested. For example, the potato—a basic staple of the Soviet diet and a good indicator of the general food situation—was in plentiful supply. In addition, a wide variety of domestic and foreign food was available in the “free market,” albeit at relatively high prices in hard currency.

The shortages have been blamed primarily on macroeconomic policies. First, beginning in 1988, the Soviets began a major increase in imports of durable goods and non-food consumer goods. At the same time, exports fell, resulting in a large trade deficit in 1990. Instead of reducing imports of nonfood items in order to import more food, the Soviets waited to secure U.S. export credit guarantees before making large food purchases.

Second, large wage increases, combined with price controls and subsidies (especially on meat), inflated demand—consumers could not spend all their money. At the same time, the government printed so many rubles that they rapidly became nearly worthless as a medium of exchange. This evoked supplier hoarding—at the farm, region, and republic levels. Consumers wanted to buy, but producers did not want to sell products for rubles. Instead, commercial transactions in hard (foreign) currencies and barter became common.

Price controls were removed from many food items at the first of this year. Now, prices more realistically reflect costs. The ruble has reportedly regained some strength. As a result, food is reportedly becoming relatively more available. Calorie consumption has not changed greatly, but more grain and potatoes and considerably less meat are being consumed.

Developing Countries

Food consumption grew faster in developing countries than in developed countries during the 1980's, but slowed after the mid-1980's (fig. 1). Africa was the only region to experience a decline throughout the period, including a 45-calorie reduction between 1986 and 1988.

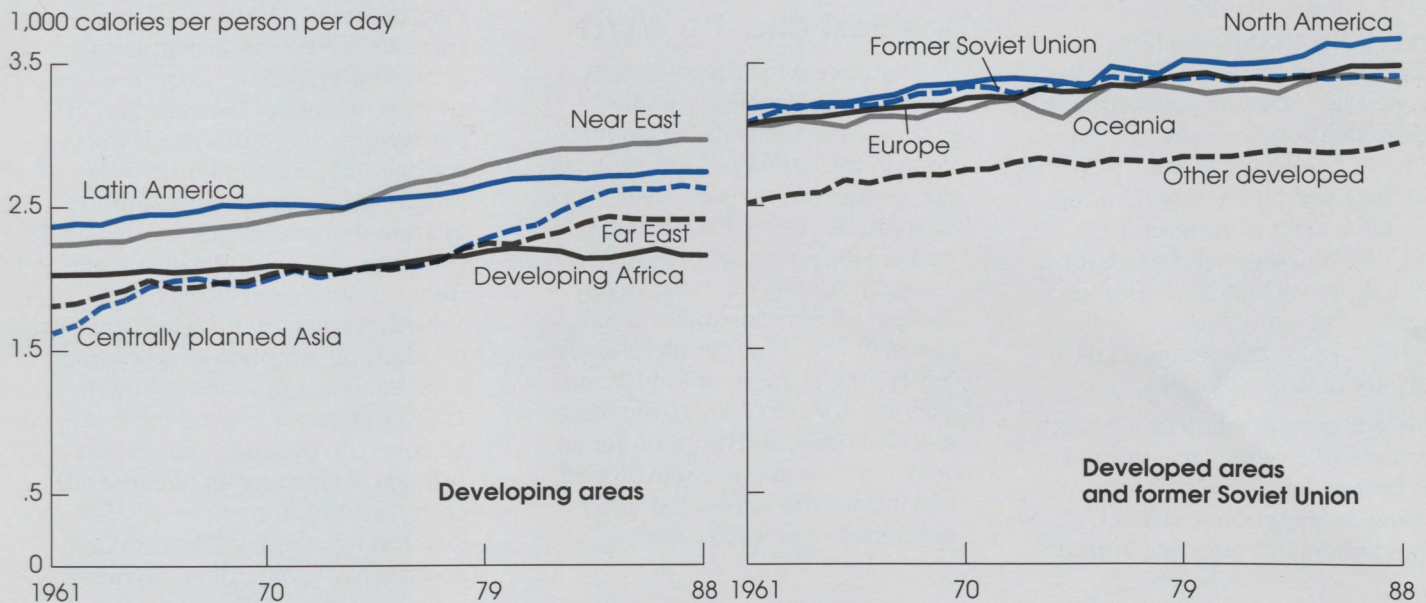
World Economic Regions

The Food and Agriculture Organization of the United Nations classifies the nations of the world into economic regions:

Developed countries	Developing countries	Unclassified
North America Canada United States	Far East Bangladesh Bhutan Brunei Burma East Timor Hong Kong India Indonesia Laos Macau Malaysia Maldives Nepal Pakistan Philippines Singapore South Korea Sri Lanka Thailand	Near East Afghanistan Bahrain Cyprus Egypt the Gaza Strip Iran Iraq Jordan Kuwait Lebanon Libya Oman Qatar Saudi Arabia South Yemen the Sudan Syria Turkey United Arab Emirates Yemen
Europe All countries excluding the former Soviet Union and Turkey	Centrally planned Asia China Kampuchea Mongolia North Korea Vietnam	Africa All countries, excluding Egypt, Libya, South Africa, and the Sudan
Oceania Australia New Zealand	Latin America the Caribbean, including Cuba; Central America, including Mexico; and South America	Former Soviet Union
Other Israel Japan South Africa		

Figure 1

There Are Wide Disparities in the Growth and Level of Food Consumption



Consumption in the three Asian regions (centrally planned, Near East, and Far East) increased rapidly. But only centrally planned Asia (dominated by China) improved upon the rapid growth of the 1960's and 1970's. China rapidly increased food production in the early 1980's through economic reforms. Production growth slowed after 1985, leading to modest increases in consumption. However, production of grain, oilseeds, and meat jumped again in 1990, which likely led to increased consumption. The favorable weather and increased input use—which led to the increases—are not indicative of a new round of rapid food production growth.

The Near East and Far East have made major gains since 1961. Consumption increased by over 700 calories in the Near East and by nearly 600 calories in the Far East. But there were differences among countries. For example, high consumption in the high-income oil exporters in the Near East masks low

consumption elsewhere, such as in Afghanistan. Similarly, rapid increases in countries in East Asia (such as Indonesia, Thailand, and South Korea) offset the lack of improvement in South Asia (particularly Bangladesh, India, and Pakistan). Rapid population growth, especially in the Near East, continues to impede improved levels of food consumption.

Excluding Africa, Latin America had the lowest growth rate in the 1980's, up by only 50 calories. The region was hit hard by the debt crisis in the early 1980's and with political turmoil in Central America, Haiti, and Chile. Many countries are recovering from the debt crisis and are implementing reforms that should stimulate economic growth. Combined with reduced population growth rates, food consumption should improve. Likewise, improving political stability in Chile and Central America should help the food situation. For example, the amount and variety of food on grocers' shelves in Nicaragua

have improved dramatically in the last year, albeit, at relatively high prices.

Africa: An Impending Disaster?

Developing Africa may be facing a food crisis. The major culprit: exploding population compounded by civil strife, drought, and low incomes. During the 1960's and 1970's, the 2.7-percent annual population growth was the highest in the world. And the rate increased during the 1980's to 3 percent—an additional 13.3 million mouths to feed each year. The United Nations projects that Africa's population will reach 724 million in the year 2000 (an average annual increase of 18 million people) and will swell to 1.264 billion by the year 2020 (an average annual increase of 27 million people).

Although food production is increasing rapidly, it has not been able to keep pace with the burgeoning population. And, the region

lacks the resources to fill the growing gap with commercial imports. After small but steady increases during the 1960's and 1970's, consumption peaked in 1980 and then fell 55 calories over the next 8 years. Total food production increased an impressive 28 percent over those 8 years (compared with U.S. expansion of 25 percent in the 18 years between 1970 and 1988). But, on a per capita basis, production fell 3 percent between 1980 and 1988 and another 5 percent by 1990. If production continues to grow at the rapid pace set in the 1980's, consumption would fall to only about 2,090 calories.

It is uncertain whether the rapid production growth can continue. On the one hand, the environmental degradation that is taking place will have a negative impact

on yields. On the other hand, African yields are very low relative to world levels, so there is considerable room for improvement.

The Best and the Worst

There are wide disparities in consumption levels across the globe—from the well-fed populations in the developed countries to the meager subsistence levels faced by many Africans. People in the 10 poorest fed countries in 1988 ate fewer than 2,000 calories per day, and per capita consumption has declined in 7 of these countries since 1980 (table 1). Eight of the 10 countries are in Africa, where the recommended daily consumption for an active male is about 2,700 calories. In contrast, the 10 best fed nations consumed over 3,500 calories.

Per capita income is the primary determinant of food consumption. The disparity in income between the countries with the highest and lowest consumption is clearly evident in table 1. A statistical analysis of 1975-1988 for 46 countries showed that income accounted for over 60 percent of the variation in consumption, but this can be misleading. Income has a much greater influence on consumption of animal products than on consumption of crop products (fig. 2). While income influences the mix of crops consumed, it has very little influence on total consumption of crop products. Instead, population growth and the capacity to produce and import crop products may be the primary determinants of per capita crop consumption, especially for developing countries. Low exports and relatively high debt payments

Table 1
Food Consumption: The Best and Worst

Economy	Food consumption per capita		Income per capita		Export earnings less debt service	Fertilizer use
	1980	1988	1980	1988	1988	1987
	Calories per day		\$US		\$US per capita	kilograms per hectare
Mozambique	1,814	1,649	NA	100	15	1
Ethiopia	1,809	1,688	120	120	8	6
Angola	2,169	1,787	NA	NA	236*	4
Rwanda	2,000	1,799	240	310	23	1
Sierra Leone	2,056	1,829	320	240	31	0
Chad	1,783	1,870	160	160	40	2
Haiti	2,026	1,911	250	380	32	2
Namibia	1,870	1,917	NA	NA	NA	NA
Bangladesh	1,899	1,925	140	170	10	83
Somalia	2,043	1,963	140	170	17	2
Czechoslovakia	3,398	3,564	4,742	5,286	1,598*	314
Italy	3,631	3,566	7,480	13,320	2,969	172
Denmark	3,572	3,577	13,120	18,440	7,877	239
Hungary	3,507	3,601	4,390	4,717	868	268
Bulgaria	3,611	3,614	3,559	4,155	2,025*	222
United States	3,510	3,666	12,000	19,870	2,153	94
Greece	3,527	3,698	4,370	4,790	736	165
Ireland	3,632	3,699	5,040	7,670	6,133	718
East Germany	3,640	3,890	5,909	6,865	1,908*	367
Belgium-Luxembourg	3,676	3,942	12,516	14,775	8,967*	504

NA = Not available. * Excludes debt service. Angola's exports under 1988 are for 1985. Sources: Food consumption and fertilizer data are from FAO; income and export data are from the World Bank.

limit the amount of foreign exchange available for commercial food imports, while the lack of inputs and modern production technology constrains domestic production.

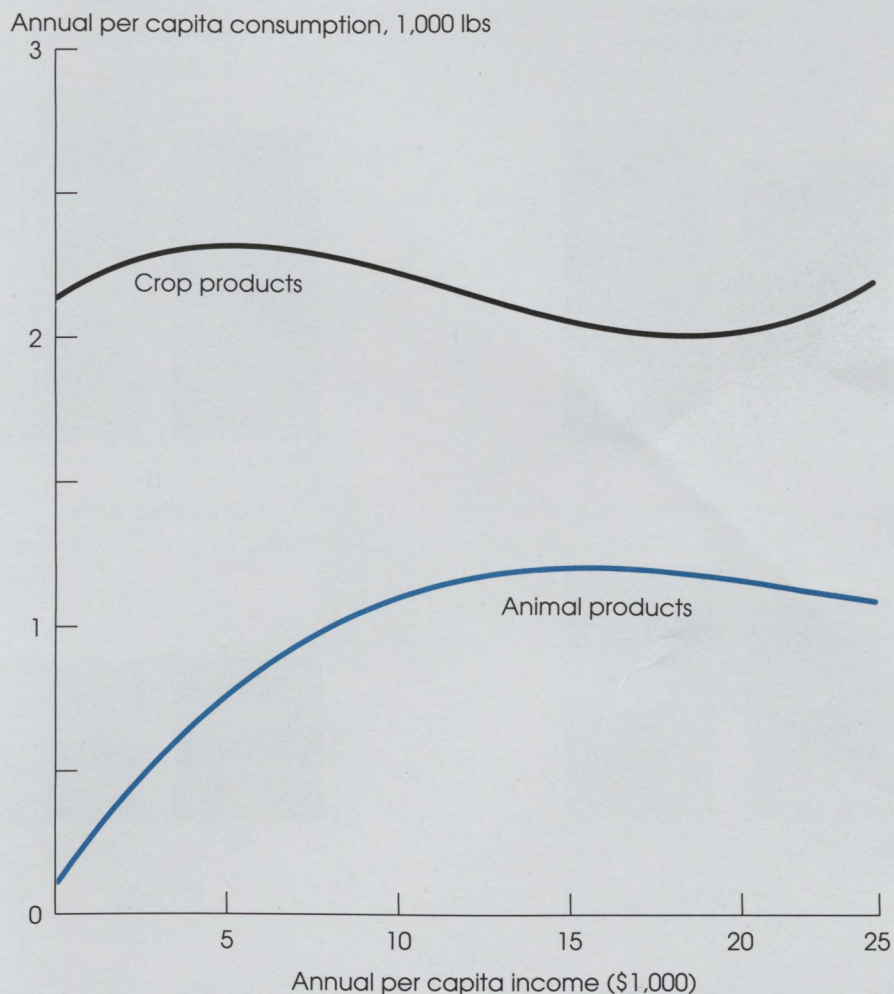
Composition of the Diet

The diets in most regions are improving in both quality and variety. While year-to-year changes in the composition of diets are generally modest, changes become evident over the long run. People on subsistence incomes typically consume mostly "inferior" foods, such as starchy roots and tubers. As incomes rise from a subsistence level, people consume more grains—first coarse grains (corn, oats, barley, and sorghum) and then food grains (wheat and rice). As incomes rise further, more animal products and other products are consumed to improve the quality and variety of the diet as well as to show status. At higher income levels, consumption of grains frequently declines. In the process, the diet becomes more nutritionally balanced.

Developing Africa has a subsistence diet, including relatively large amounts of starchy roots and virtually no animal products. The African diet has remained virtually unchanged in the last 27 years. In contrast, all the other developing regions consumed substantially more grain. China's grain consumption, for example, rose dramatically from 282 pounds per capita in 1961 to 512 in 1988. The Near East rose from 384 to 444 pounds and Far East from 315 and 430. These areas also increased their consumption of fruit, vegetables, and animal products. ■

Figure 2

Consumption of Animal Products Is More Sensitive to Income



Source: Regressions based on FAO and World Bank data for 46 countries.