

4. Make four copies of the map showing Papua New Guinea's provinces (figure 1.42). On each copy, colour the four provinces with the highest standards green, and the four provinces with the poorest standards red, using one capital map for figure 1.80 and two copies to show the two sets of data in figure 1.75.
5. Describe the pattern shown by the four maps you compiled in the previous question. What does this tell you about economic development in Papua New Guinea?
6. Whenever economic development occurs, some people gain while others suffer. Has this been true for Papua New Guinea? Illustrate your argument with specific examples, facts and figures.

CASE STUDY

China

Population distribution

China has the largest population of any country in the world. In 2016, China's population size was

1.371 billion people, or 18.7% of the world's population. Just over half a century earlier in 1960, China's population had been 0.667 billion people, or 22% of the world's population. This indicates that China's population is growing **more slowly** than the global average.

When many people first hear about the size of China's population, they jump to the conclusion that China must be a very crowded country. Although some parts of China do indeed have a high population density, over half the country is very sparsely populated.

Figure 1.81 shows the **distribution** of China's population. Overall, China's average population density is 146 people per square kilometre, almost triple the world average of 57 people per square kilometre. However, just as the world average figure obscures the significant differences between different parts of the world, China's average population density figure obscures variations between regions across the country.



181 The distribution of population in China. The green dashed line is the Hu Huanyong Line. The area west of the line has 57 people per square kilometre, but just 6% of the population. The area east of the line contains 43% of China's area and 94% of the population.

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Like Papua New Guinea, **landforms** and the availability of **water** play significant roles in influencing the distribution of China's people.

South-west China is sparsely populated because it comprises the Tibetan Plateau, a mountainous area with an average altitude of 4,000 metres and several peaks exceeding 6,000 and 7,000 metres. The Chinese refer to this region as 'the roof of the world', and most of the population lives in mountain valleys with altitudes between 3,000 and 4,000 metres altitude. Most of the people in this region are ethnic Tibetans, although large numbers of Han Chinese (the main ethnic group in China) have migrated and settled in the region since the Chinese took over the region in 1950.



182 Zhangduoxiang, a typical riverside settlement in a mountain valley north-east of Lhasa on the Tibetan Plateau. **North-west China is also sparsely populated** because it is an arid wasteland consisting of a large desert (the Gobi Desert). The desert lowlands are surrounded by mountains that create an intermontane basin that cause a rainshadow effect.



183 Yangyuan, a typical riverside settlement of the Gobi Desert, south-west of Lanzhou, the province of Gansu province and Xinjiang Autonomous Region.

Most of the inhabitants of China's north-west are ethnic minority groups such as Uygur oasis dwellers and Kazakh animal herders.

The green line in figure 1.81 is known as the **Hu Huanyong Line**. Developed by the Chinese population geographer Hu Huanyong in 1935, the line divides China into two parts on the basis of population density. The area west of the line contains 57% of China's land area (mainly the Tibetan Plateau and the North-west), but holds 6% of the population. On the other hand, the area east of the Hu Huanyong Line contains 43% of China's area and 94% of the population.

The area to the east of the Huanyong Line contains three broad regions. China's **north-east** is known as Manchuria. It contains the heart of China's heavy **manufacturing** industry, focussed on the cities of Shenyang and Harbin and their rich **mineral** resources such as coal and oil. The region is largely a rolling plain, and it contains 9% of China's population – half as many again as the area west of the Hu Huanyong Line that contains 57% of China's land area.



184 Heavy manufacturing industry in Harbin, Heilongjiang province in China's north-east (Manchuria).

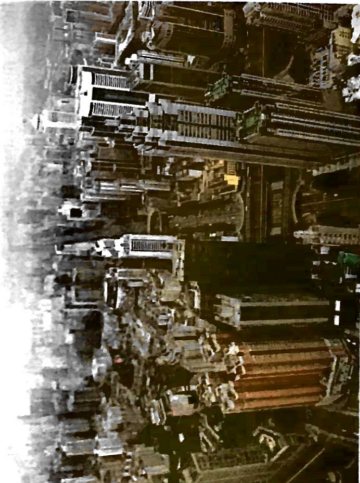
The **central zone of eastern China**, which comprises the Yellow River (Huang He) and Yangtze River (Chang Jiang) basins and floodplains, contains about one-third of China's population. Most of this region is made up of very rich, **fertile farmlands** with alluvial materials transported from the loess plateau upstream and deposited during the annual flooding of the major rivers.

South-east China constitutes 'tropical China', the basin and delta of the Pearl River (Zhu Jiang) and

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1.85 Like many other cities in China's central eastern zone, Shanghai has attracted large numbers of rural-urban migrants, swelling its municipal population to about 25 million people.



1.86 The expanse of smog-shrouded high-rise buildings in Shenzhen reflects the city's high population density. Shenzhen is a new and rapidly growing megacity located in the Pearl River Delta of south-east China, adjacent to Hong Kong.

Hainan Island. This region contains fertile, well-watered farmland and many large cities, several of which have large-scale manufacturing and port facilities.

In the same way that internal migration is changing the distribution of people in Papua New Guinea, migration is having a significant impact in China. In the three decades following 1979, China's urban population grew from 182 million to 622 million people. Of the 440 million increase, 100 million was due to natural (biological) increase, while 340 million was due to a combination of rural-urban migration and a reclassification of some rural areas as urban as cities have expanded in area. This makes China's recent (and current) internal migration the largest movement of people in human history.

Economic development in China

In order to understand China's economy today, it is necessary to understand some of the country's recent history.

Before 1911, China was ruled by a series of emperors who had absolute control over their empire. Regarded as the Sons of Heaven, they were reluctant to change and modernise, and as a result China's economy (which had been the most advanced in the world for many centuries) fell into stagnation and backwardness.

Understandably, the Chinese people became more and more unhappy with their poverty. A series of rebellions occurred, but it was not until 1911 that China's last emperor was toppled and replaced with a republican form of government. The 1911 revolution was led by Sun Yat-sen, who later formed a political party, the Kuomintang (Guomindang, also known as KMT, or Nationalists). Another party, the Chinese Communist Party (CCP) was formed in 1921.

For several years, the two parties co-operated closely, but in 1926, differences between the two parties led to a civil war that lasted until 1949 when the Communists emerged victorious. The CCP declared victory in October 1949 when their leader, Mao Zedong, proclaimed the establishment of the People's Republic of China, and the KMT retreated to the offshore island province of Taiwan.

Following the Communist victory, China's economy entered a period of strong central control, where the government abolished private ownership of land and businesses, and the economy was coordinated through a series of five-year plans. This was a volatile period politically, and on several occasions the economy was plunged into chaos as a result of misguided government campaigns or rivalries between political sub-groups. Two periods of upheaval were especially damaging when ultra-socialist policies led China's economy into sharp decline — the Great Leap Forward from 1958 to 1960, and the Cultural Revolution from 1966 to 1976.

The period of strong central control of China's economy began to weaken when Mao Zedong died in September 1976, bringing the Cultural Revolution to an end. After some political

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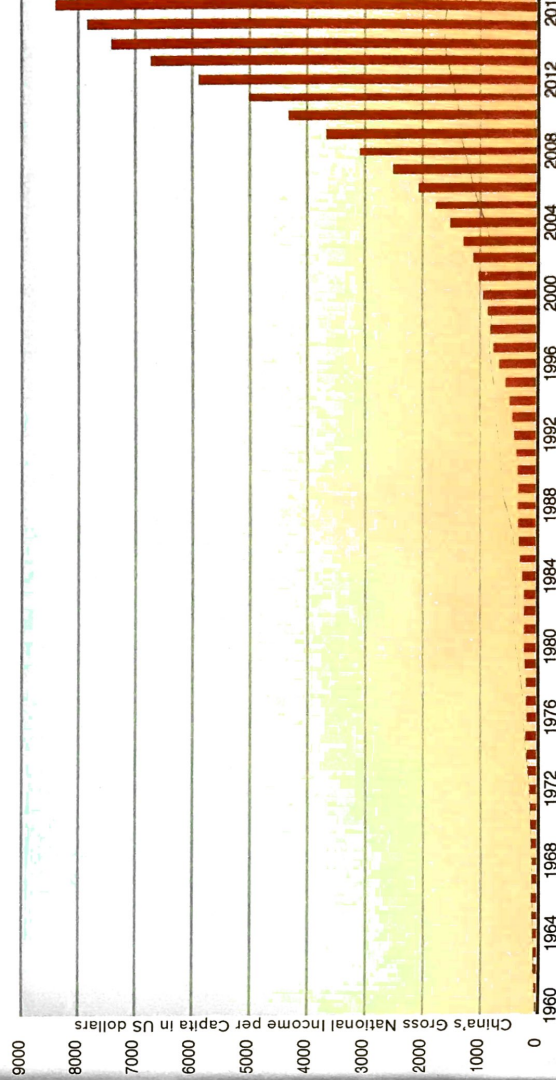


1.88 A large roadside sign in Shenzhen celebrates Deng Xiaoping's pragmatic policies that paved the way for China's recent economic growth and development.

In early 1992, China's leader Deng Xiaoping toured southern China. During a visit to the Shenzhen Special Economic Zone, he proclaimed 'to be rich is glorious'. Simply by making this statement, a period of very rapid economic growth began in China. Foreign investment and material incentives were encouraged and the economy shifted away entirely from central planning towards the market system. Although many economists outside China said that this represented a shift towards capitalism, the Chinese government insisted it was not capitalism, but socialism with Chinese characteristics.

turbulence, Mao's position as supreme leader was filled by Deng Xiaoping, whose approach was less ideological and more pragmatic than Mao's. Deng's famous saying became widely quoted in China as a catalyst of economic reform through pragmatism: "It doesn't matter whether a cat is black or white; if it catches mice, it is a good cat".

China's new leadership set the country on a course of economic development and increasingly close ties with Western capitalist nations in Europe, North America and the Asia-Pacific region. Foreign investment was allowed for the first time in certain areas (known as Special Economic Zones, or SEZs), and many inefficient factories were closed. The first SEZs were Shenzhen (next to Hong Kong), Zhuhai (next to Macau), and two port cities from which many Chinese had left in earlier decades to settle in many parts of South-east Asia, Shantou in Guangdong province, and Xiamen in Fujian province. To help these reforms proceed quickly, more incentives for private enterprise were given and profits were increased. Large numbers of foreign tourists began to come to China, and China followed a policy of increasing openness to the outside world. These policies were encouraged to earn money for the Chinese, to bring in new ideas, and to show the Chinese people that China was now fully accepted into the world community.



1.87 The red bars show Gross National Income per capita in China, 1960 to 2016, measured in US dollars. The dashed green line shows the changes in world average GNI per capita scaled to China's GNI per capita in 1962 as a base. Thus, if the world's average GNI per capita in 1962 had been US\$70 (the same as China), subsequent percentage increases would have seen this figure rise to US\$1,506 by 2016. Years where China's red bars are higher than the green indicate the period that China's economy has out-performed the world average.

Chapter 1

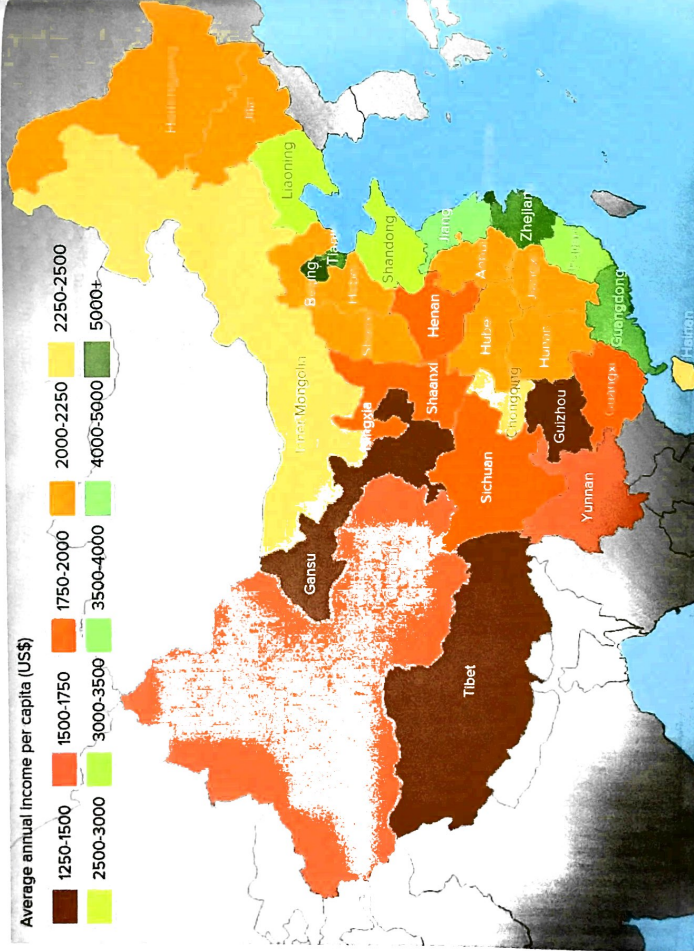
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Figure 1.87 shows China's economic growth since the end of the Great Leap Forward in 1960. The acceleration in growth following Deng Xiaoping's 1992 statement can be seen clearly. Economic growth in the early 1990s averaged 13% per annum, with the rate of growth in southern provinces exceeding 25% per annum. **Rapid growth** has been sustained since that time; indeed, China has experienced the world's highest consistent rate of economic growth for more than three decades with annual growth rates usually exceeding 10%.

The term '**circular economy**' began to be used in China around 2005 to describe an economy that balances economic development with environmental and resources protection. The concept arose from a growing concern about the decline in China's environmental quality during the period of rapid economic growth. Since the early 1990s, China's consumption of materials and energy per unit of gross domestic product (GDP) was far higher than in more established industrialised economies, and so a new concern for the environment and resource conservation emerged. It was felt that wasteful consumption of resources might have a negative impact on the

1.90 Paying insufficient attention to environmental quality, the period of rapid economic growth has resulted in severe pollution in many areas of China, such as Beijing shown here

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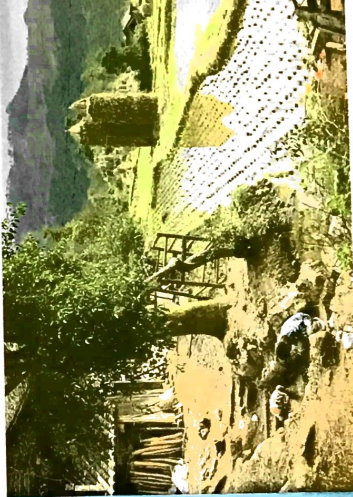
1.89 Average annual income per capita in each province, municipality and autonomous region of China, 2016. The national average income per capita at this time was US\$2500. Areas with reddish shadings are below the national average, while areas with greenish shadings are above the national average. When we compare this map to figure 1.81, we see that sparsely populated parts of China tend to be poorer, whereas wealthier areas are more densely populated.

rapid rate of growth and also place China at a competitive disadvantage. This was especially so as oil imports rose, water resources became depleted and some mineral resources were over-exploited.

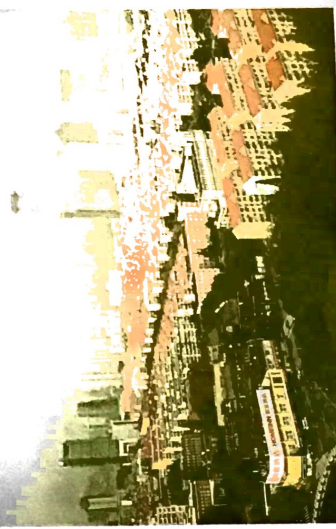
Since 2010, the official goal of China's economic development has been *xinokang*, which means 'moderately prosperous'. The government hoped to achieve the circular economy by requiring manufacturing and service sector businesses to exchange materials where one factory's waste (such as water, energy or materials) could serve as another's input. Furthermore, the government introduced many legislative, political, technical and financial measures to encourage development of the circular economy, including government subsidies and tax breaks. The government hopes to achieve the goal of a *xinokang* society by 2020.



1.91 Although city-dwellers are often wealthier than rural dwellers, much of China's urban population live in poor conditions, as seen here in Yichang, a city in Hubei province.



1.92 Chengzhong village is located in a poor, rural area of Guizhou, one of China's poorest inland provinces. Houses do not have running water, so these residents wash in a small creek that irrigates the rice fields.



1.93 The Lujiazui residential district in Shanghai serves the Pudong financial area in Shanghai, one of China's richest areas.



1.94 The Maglev (magnetic levitation train) in Shanghai is a visible symbol of coastal China's economic advancement. The train connects Shanghai's Pudong Airport with the downtown financial district, transporting over 500 passengers along the 30 kilometre long route in just over 8 minutes at speeds of up to 431 kilometres per hour.

One of the consequences of China's rapid economic development is that most of the development has occurred in the coastal provinces, and there has been little impact on inland provinces. The gap between rich and poor areas of China has never been greater than it is now (figure 1.89).

The gap between China's coastal and inland provinces began to widen in the early 1980s when the SEZs were established. Public concern in China over the regional differences is growing in China. There are two main reasons that the gap between rich and poor has widened in China. First, the coastal provinces introduced economic policies as early as the beginning of the 1980s that encouraged foreign investment and trade. These policies led to

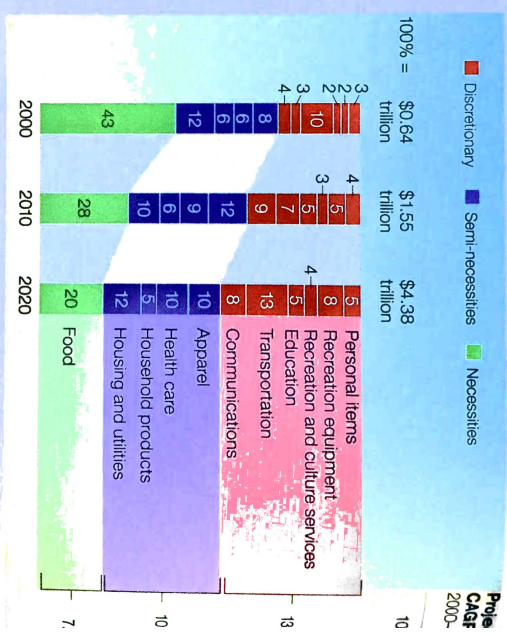
a rapid integration into world markets, huge inflows of foreign direct investment and the development of a modern industrial base in these provinces. In this way, the coastal provinces got a head start on economic development compared with inland provinces, and the inland provinces have never caught up with that lead.

Second, better natural conditions in the coastal provinces mean there is more arable land, better conditions to develop infrastructure and better access to the sea than the inland provinces enjoy. Coastal locations are also better for activities such as export-oriented processing industries, which have been developing very rapidly during recent decades.

As a consequence of China's rapid economic development and the introduction of open markets, great social changes have taken place, especially in China's large cities and coastal provinces. Traditional values and priorities are giving way to more materialistic and more Western priorities, including changing spending patterns (figure 1.96). Surveys of urban Chinese residents show that career is more important now than family, and that many Chinese families enjoy the trappings of modern life such as wearing designer clothes, eating fast food and using mobile phones. Chinese people are increasingly judging themselves and others by their material possessions and their purchases.



1.95 Advertising in the coastal city of Shenzhen emphasizes luxury consumer goods.



1.96 Chinese urban households' annual consumption by category, measured as percentages. Currency figures are dollars, adjusted to constant 2010 values. CAGR = compound annual growth rate. Figures for 2020 are forecasts. Source: McKinsey & Company.

QUESTION BANK 1H

1. What is the Hu Huangyong Line, and how does it help us understand China's population distribution?
2. Describe and account for China's population distribution.
3. In what ways are the explanations of China's population distribution (a) similar to the factors affecting Papua New Guinea's population distribution, and (b) different from the factors affecting Papua New Guinea's population distribution?
4. With reference to figure 1.87, describe China's trend of economic growth.
5. Explain why China's economic growth has accelerated since 1992.
6. Figure 1.89 is a map of China showing the average income per capita in each province, municipality and autonomous

7. Identify and describe the main trends shown in figure 1.96.
8. Using figures 1.81 and 1.89, describe the relationship between China's population distribution and its income distribution.
9. With reference to your answer to the previous question, suggest the cause-and-effect of the relationship between population density and average incomes.