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0521540577 - Nations and Firms in the Global Economy: An Introduction to International Economics and Business

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Excerpt

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## Part I

# Introduction

# The global economy

## KEYWORDS

population	GDP in history	barriers to trade
distribution of population	GDP and GNP	GDP <i>per capita</i>
globalization	global market integration	capital flows
history of globalization	migration	

## 1.1 Introduction

Numerous factors active in the global economic environment affect the decisions that managers of firms have to make regarding the price to charge for their products, how much to produce, how much to invest in R&D, how much to spend on advertising and so on. Some of these factors are the number of firms competing in a market, the relative size of firms, technological and cost considerations, demand conditions and the ease with which competing foreign firms can enter or exit the market. The *economic globalization process* – that is, the increased interdependence of national economies, and the trend towards greater integration of goods, labour and capital markets (see section 1.4) – influences all these factors, and thus indirectly affects managerial decisions and market organization.

International economics analyses the *interactions in the global economic environment*. International business analyses the managerial decisions taken on the basis of a *cost–benefit analysis* in this global economic environment. In view of the above, we argue that central topics in international finance, business and public policy cannot be understood without a knowledge of international economics. Similarly, we conclude that the central topics in international economics cannot be fully understood without insights from international business.

This book provides an introduction to the global economy: what it is, how big it is, how it functions and how participants interact. Throughout the book, we analyse how international businesses are affected by the global economic environment and discuss the role played by firms in this process, thus allowing businesses to make better decisions. This is our primary perspective. In addition, we discuss

examples of the other causality: from international businesses to (inter)national economies.

Before we can begin to analyse the global economy in chapter 2 and beyond, however, this chapter provides and evaluates some basic theoretical and empirical background information about the global economy concerning population, income, international trade, capital flows and the phenomenon of globalization. According to OECD Secretary-General Donald Johnston (see Maddison, 2001, p. 3), John Maynard Keynes argued that the master economist should ‘examine the present in light of the past, for the purposes of the future’. We concur with this view, and shall not only pay attention to the current structure of the global economy, but also discuss how the economy has evolved over time – in particular, how globalization in its two basic manifestations (international trade and factor mobility) has progressed and culminated in the two waves of globalization of the nineteenth and twentieth centuries.

## **1.2 A sense of time: the universe and population**

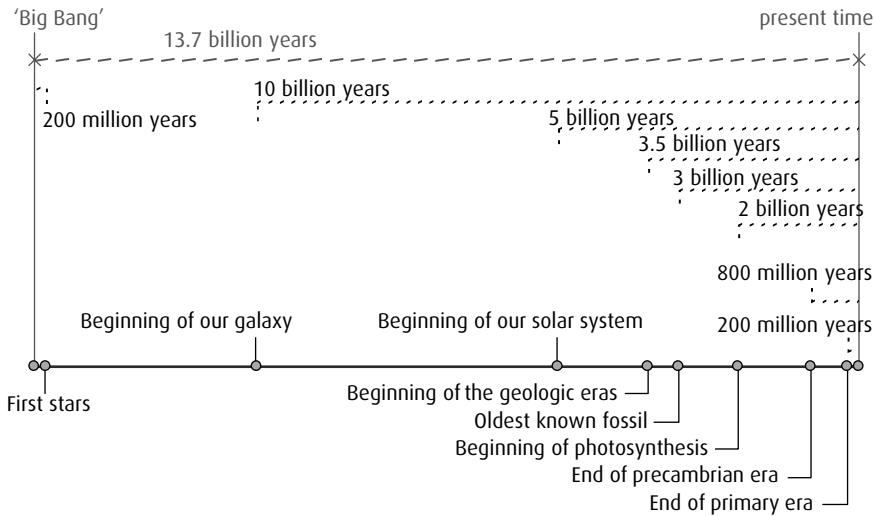
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Some knowledge of the roles of time and history is helpful if we are to appreciate the modest position of the human species on a cosmic scale, relative to its current dominant position on our planet, to which we have become so accustomed. It all started with a ‘Big Bang’ which created the ever-expanding universe about 13.7 billion years ago: at least, that is the most recent and accurate estimate of NASA’s cosmic background explorer (COBE) programme, based on measurements of minuscule differences in temperature. The first stars were formed some 200 million years later (earlier than initially anticipated). Our galaxy was formed some 10 billion years ago and our solar system some 5 billion years later. As further summarized in figure 1.1, the formation of planet earth took some 1.5 billion years, so the geologic eras started 3.5 billion years ago. The atoms gave way to molecules, the molecules to cells and the cells to life – the oldest known fossils (worms and algae) date back 3 billion years. The process of photosynthesis by plants began some 2 billion years ago. Mankind appeared on the scene ‘only’ 1.8 million years ago, taking *homo erectus* who invented tools as the starting point. In short, on a cosmic time scale mankind barely exists and our formidable achievements have not made a lasting impression.

### **Population size**

Estimates of the size of the global population prior to 200 BC are based on archaeological and anthropological evidence, see Deevey (1960). In the nomadic period (before

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**Figure 1.1** 'Big Bang' and beyond

Data sources: Louis Henri Fournet (1998) and the website <http://www.nasa.gov>, 'A baby picture of the universe tells its age', 11 February 2003.

8000 BC), Fournet (1998, p. 5) notes that: 'the population subsisted primarily on gathering berries . . . and . . . it takes about five square kilometres to feed a human being.' Population growth rates were very low for a very long time period. According to the data sources in Kremer (1993), there were about 125,000 people 1 million years ago. Their number quadrupled to 1 million in the next 700,000 years and reached about 170 million when Christ was born. The estimates become more reliable after this, as they are based on Roman and Chinese censuses.

The developments in world population over the last 2,500 years are illustrated in figure 1.2. Despite the general upward trend there are periods of stagnation or decline in world population, for example as a result of the Mongol invasions in the thirteenth century, the bubonic plague (or 'Black Death', which wiped out a third of the European population in the sixteenth century and again in the fourteenth), the Thirty Years War (which raged throughout central Europe from 1618 to 1648) and the collapse of the Ming dynasty in China. A significant increase in the population growth rate began in the seventeenth century and reached a peak in the 1960s, leading to dramatic increases in population. There were 1 billion people in 1830, 2 billion in 1930 and more than 6 billion in 2000. The growth in world population is projected to fall significantly in the twenty-first century, partly as a result of a more rapid demographic transition process in many developing nations than originally anticipated and partly as a result of the raging AIDS epidemic, specifically in Africa.

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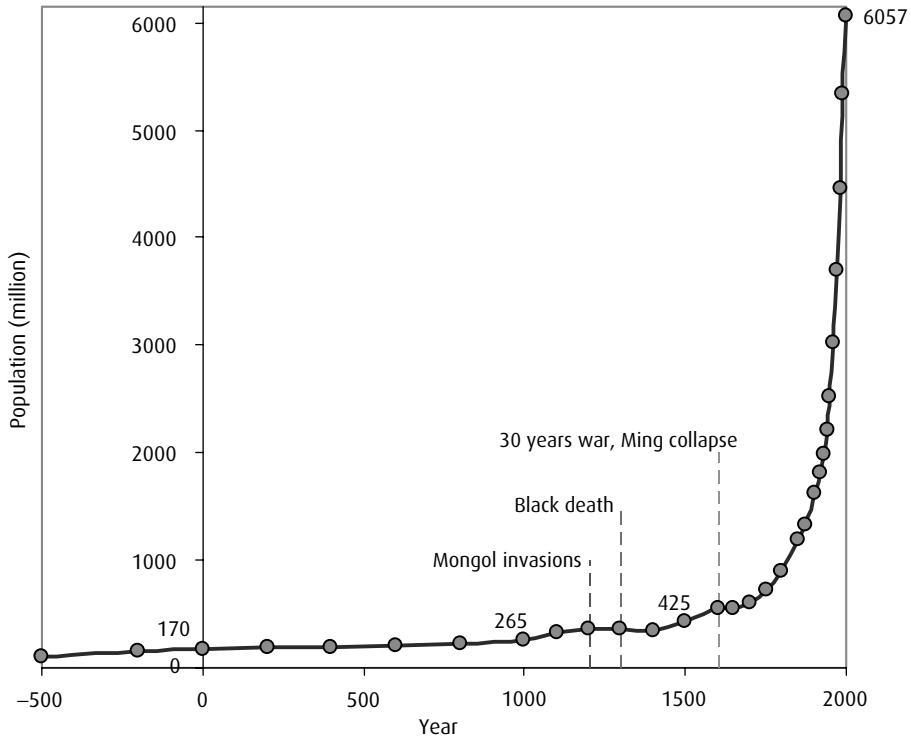
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**Figure 1.2** Development of world population over the last 2,500 years

Data sources: Kremer (1993, table 1) and UN Population Division (2001) (for the estimate of 2000), see <http://www.un.org/popin.data.html>.

Nonetheless, since demographic transition processes move as slowly as an oil tanker in the Thames, the world population is expected by the United Nations (UN) to increase to about 8.9 billion in 2050 (see figure 1.3).

According to the 2002 revision of the UN population division there were 6 billion 70 million 581 thousand people alive on our planet on 1 July 2000. Of course, given the inaccuracy of the data, the UN could have been off by a couple of million. Out of every 100 people alive more than twenty live in China and almost seventeen live in India. As the only two countries with more than 1 billion inhabitants, China and India are by far the most populous nations (see table 1.1). The world population is very unevenly divided, as indicated by the second part of table 1.1. The city-state of Singapore has the highest population density (6,587 people per km<sup>2</sup>), followed by two other small countries (Bermuda and Malta). Only three of the twenty most populous nations, all located in Asia (Bangladesh, India, and Japan), are also among the twenty most densely populated nations.

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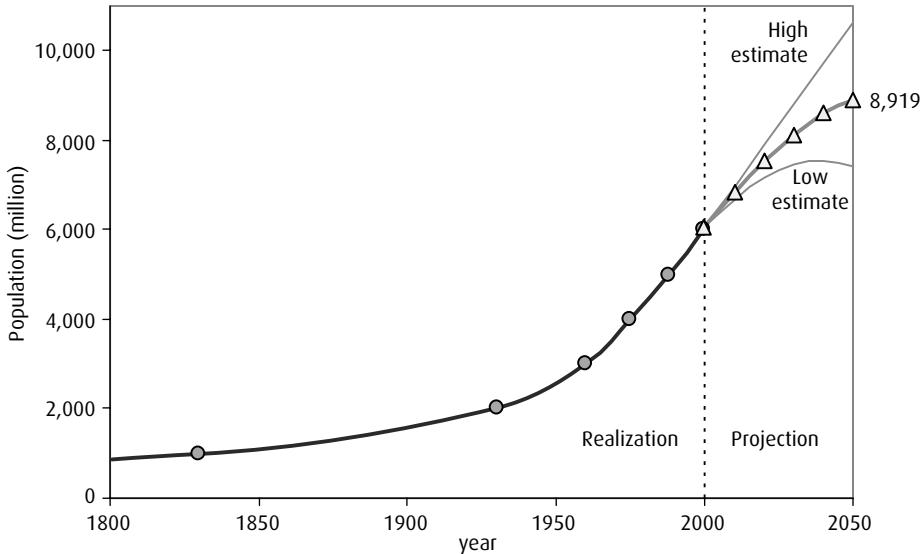
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**Figure 1.3** Developments in world population, 2000–2050, UN projection

Data sources: Kremer (1993, table 1) and UN Population Division (2001), see <http://www.un.org/popin.data.html>.

### Population projections

In 2000, eleven of the twenty most populous nations were located in Asia, which is home to almost 3.7 billion people, or about 60 per cent of the world total (table 1.2). Although the Asian population is expected to increase to 5.4 billion by 2050, its share is slightly falling to 58 per cent. The population of Africa is expected to increase most dramatically, from 796 million to 2 billion (from 13 to 22 per cent), while the only decline is expected in Europe, from 727 to 603 million (or from 12 to 7 per cent). This can be explained by the much higher total fertility rate – the average number of children per woman – in Africa (5.27) than in Europe (1.41). Total fertility is generally higher in the developing countries than in the developed countries. It is, for example, below the replacement level of 2.1 children per woman in Europe and Northern America. Total fertility will decline for all continents except for Europe, where it will rebound slightly from its current low level.

As a result of better health care systems, sufficient availability of food, and access to safe water supplies, life expectancy at birth is higher in the developed countries than in the developing countries (75 years versus 63 years in 2000). This gap will remain high, although it is expected to narrow over the next fifty years (82 years versus 75 years). Life expectancy is particularly low in Africa (51.4 years), which has been

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**Table 1.1** The twenty countries with highest population and population density, 2000

Rank	Country	Population	Country	Population density
1	China	1,262	Singapore	6,587
2	India	1,016	Bermuda	1,260
3	USA	282	Malta	1,219
4	Indonesia	210	Bangladesh	1,007
5	Brazil	170	Bahrain	1,001
6	Russian Federation (CIS)	146	Maldives	920
7	Pakistan	138	Barbados	621
8	Bangladesh	131	Mauritius	584
9	Nigeria	127	Aruba	532
10	Japan	127	Korea, Rep.	479
11	Mexico	98	Netherlands	470
12	Germany	82	San Marino	450
13	Vietnam	79	Puerto Rico	442
14	Philippines	76	Lebanon	423
15	Turkey	65	Virgin Islands (US)	356
16	Ethiopia	64	Japan	348
17	Egypt, Arab Rep.	64	Rwanda	345
18	Iran, Islamic Rep.	64	India	342
19	Thailand	61	American Samoa	327
20	UK	60	Belgium	312

Data source: World Bank (2002).

Notes: Population in millions, population density in people per km<sup>2</sup>.

**Table 1.2** Population projections, 2000–2050, the world and continents

	Population		Total fertility		Life expectancy		Median age	
	2000	2050	2000	2050	2000	2050	2000	2050
World	6,057	9,322	2.82	2.15	65.0	76.0	26.5	36.2
Africa	794	2,000	5.27	2.39	51.4	69.5	18.4	27.4
Asia	3,672	5,428	2.70	2.08	65.8	77.1	26.2	38.3
Latin America <sup>a</sup>	519	806	2.69	2.10	69.3	77.8	24.4	37.8
Europe	727	603	1.41	1.81	73.2	80.8	37.7	49.5
Northern America	314	438	2.00	2.08	76.7	82.7	35.6	41.0
Oceania	31	47	2.41	2.06	73.5	80.6	30.9	38.1

<sup>a</sup> Unless otherwise specified, the term 'Latin America' includes the Caribbean throughout this book.

Data source: UN Population Division (2001).

Notes: Population in millions, total fertility in average number of children per woman. Data for total fertility and life expectancy at birth are five-year estimates (for 1995–2000 and 2045–50). The projections for 2050 are based on the UN's medium variant.

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struck hard by the HIV/AIDS epidemic.<sup>1</sup> The most affected countries – Botswana, South Africa, Swaziland and Zimbabwe – are all in Africa. The toll of AIDS in terms of increased mortality and population loss can be devastating. In the thirty-five most highly affected countries of Africa, for example, life expectancy at birth is estimated to be 6.5 years less than it would have been in the absence of AIDS, and the population is projected to be 10 per cent less in 2015 than it would have been without AIDS. Life expectancy at birth at the world level is estimated to increase from 65 years in 2000 to 76 years in 2050. Although it will probably remain the world's laggard, the UN expects a huge increase in African life expectancy (from 51 years in 2000 to 70 years in 2050).

Population ageing will be the major demographic trend for the next fifty years. The rise in life expectancy at birth combined with the decline in fertility rates around the world will lead to rapid increases in the share of older people. The median age – the age that divides the population into two equal halves – is used as an indicator of the shift of the population age distribution towards older ages. In 2000 the median age was 26.5 years, indicating that half of the world population was younger, and half the world population was older, than 26.5 years. By 2050 the median age will have increased to 36.2 years. Currently, Africa has the youngest and Europe has the oldest population (a median age of 18.4 years versus 37.7 years). The most rapid increases in the median age will occur in Latin America and Europe (the '50–50–50' rule: by 2050 roughly 50 per cent of the European population will be above 50 years old).

**Population and business**

Do managers of international firms care about the population distribution, the age profile, demographic trends and projected developments? Yes, they do. In fact, firms study such trends closely (and many more trends not discussed above) and try to predict the implications that these trends are likely to have for their core activities and strategies. A few examples may illustrate this:

- First, many automobile firms have started production and assembly plants in China since 2000, all with the intention of benefiting from the potentially large and rapidly growing Chinese market: almost 1.3 billion customers! In case you are wondering why they have not done the same in India, the answer is that automobile firms have invested only modest amounts there because the Indian income levels (see p. 13) are too low to generate a substantial demand for cars despite having more than 1 billion customers.

<sup>1</sup> AIDS = acquired immunodeficiency syndrome; HIV = human immunodeficiency virus.

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- Second, all major investment firms are increasing the share of their investments in firms and activities that will benefit from the population ageing process, such as health care, travel and entertainment and retirement projects.
- Third, inspired by their marketing departments, firm R&D centres are being given instructions to find user-friendly solutions for an ageing population, such as milk cartons that do not spill, bottles and jars that can be opened without using pneumatic equipment and digital versatile disc (DVD) players that can be operated without reading the 150-page instruction book.

### Business and population

Businesses are also important drivers of much that happens at the population level, both nationally and internationally. Clearly, policy-makers are keen to take account of business developments and try to influence them so that the advantages for society at large are maximized (or, for that matter, any disadvantages are kept within workable bounds). Again, a few examples may illustrate this:

- According to standard economics logic, businesses are the key drivers of macroeconomic performance, such as employment and growth, particularly in capitalist societies. Within the business world, the production of goods and services is extensive; many innovations are developed and commercialized. Macroeconomic developments are thus heavily influenced by microeconomic businesses.
- The allocation of jobs across the globe, for example, cannot be understood without insights into the location decision of multinationals. In the late twentieth and early twenty-first century, much industrial employment moved out of the Western high-wage region into low-wage developing countries.
- Many other examples are industry-specific. The pharmaceutical industry, for instance, is the key producer of new medicines. Because most money is to be earned in the rich West, the multi-billion R&D efforts of the multinational pharmaceutical companies are heavily biased toward the invention, development and commercialization of drugs that can help to prevent or cure Western 'welfare diseases' (e.g. cancer), rather than the much more common Third World plagues (e.g. malaria).

### 1.3 Income levels: GNP and GDP

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The best indicator of the economic power of a nation is, of course, obtained by estimating the *total value of the goods and services produced* in a certain time period. Actually doing this and comparing the results across nations is a formidable task, which conceptually requires taking three steps:

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- First, a well-functioning statistics office in each nation must gather accurate information on the value of millions of goods and services produced and provided by the firms in the economy. This will be done, of course, in the country's local currency – that is, dollars in the USA, pounds in the UK, yen in Japan, etc.
- Second, we have to decide what to compare between nations: gross *domestic* product or gross *national* product.
- Third, we have to decide *how* to compare the *outcome* for the different nations.

### Domestic or national product?

As mentioned above, we can either compare GDP or GNP between nations. *GDP* is defined as the market value of the goods and services produced by labour and property *located* in a country. *GNP* is defined as the market value of the goods and services produced by labour and property of *residents* of a country. If, for example, a Mexican worker is providing labour services in the USA, these services are part of American GDP and Mexican GNP. The term 'located in' sometimes needs to be interpreted broadly – for example, if a Filipino sailor is providing labour services for a Norwegian shipping company, this is part of Norwegian GDP despite the fact that the ship is not actually located in Norway most of the time. The difference between GNP and GDP does not hold only for labour services, but also for other factors of production, such as capital

$$GDP + \text{Net receipts of factor income} = GNP \quad (1.1)$$

So does it really matter whether we compare countries on the basis of GDP or GNP? No, for most countries it does not. This is illustrated for 2000 in figure 1.4, where the GDP and GNP values are measured in current US dollars. Since almost all observations are very close to a straight 45° line through the origin, the values of GDP and GNP are usually very close to one another. For example, British GDP was \$1,415 billion, only 0.2 per cent below its GNP of \$1,417 billion. Only two of the thirty-six countries with an income level above \$100 billion have a deviation between GDP and GNP exceeding 5 per cent, namely Switzerland (where GNP is 5.8 per cent higher than GDP) and Indonesia (where GNP is 6.9 per cent lower than GDP). For some of the smaller countries the difference between GDP and GNP can be substantial in relative terms. For example, capital income from abroad ensures that Kuwait's GNP is 18.3 per cent higher than its GDP, while payments to capital reduce Ireland's GNP by 14.5 per cent compared to GDP. Unless indicated otherwise, we will use GDP throughout this book.