新经济英语

NEW ECONOMY ENGLISH

赵真 白素琴 王建生 编

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本书旨在反映国内外在新经济理论领域的前沿信息，比较工业经济理念与新经济理念之间的差异，将反映新经济时期的新理念引入到高校英语专业的教学中来，以全新的视野和不同的视角关注知识经济，使读者在英语阅读中把握时代发展的脉络，为培养新时代高素质复合型人才创设一个新的模式。

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Contents

Part One

Theory and Implications of New Economy

Unit 1

What Is the Knowledge Economy?

For countries in the vanguard of the world economy, the balance between knowledge and resources has shifted so far towards the former that knowledge has become perhaps the most important factor determining the standard of living—more than land, than tools, than labour. Today's most technologically advanced economies are truly knowledge-based.

World Development Report, 1999

For the last two hundred years, neo-classical economics has recognised only two factors of production: labour and capital. Knowledge, productivity, education, and intellectual capital were all regarded as exogenous factors, that is, falling outside the system. New Growth Theory is based on work by Standford economist Paul Romer and others who have attempted to deal with the causes of long-term growth, something that traditional economic models have had difficulty with. Following from the work of economists such as Joseph Schumpeter, Robert Solow and others, Romer has proposed a change to the neo-classical model by seeing technology (and the knowledge on which it is based) as an intrinsic part of the economic system. Knowledge has become the third factor of production in leading economies. (Romer, 1986; 1990)

Technology and knowledge are now the key factors of production

- Romer's theory differs from neo-classical economic theory in several important ways.
- Knowledge is the basic form of capital. Economic growth is driven by the accumulation of knowledge.
- While any given technological breakthrough may seem to be random, Romer considers that new technological developments, rather than

having one-off impact, can create technical platforms for further innovations, and that this technical platform effect is a key driver of economic growth.

- Technology can raise the return on investment, which explains why developed countries can sustain growth and why developing economies, even those with unlimited labour and ample capital, cannot attain growth. Traditional economics predicts that there are diminishing returns on investment. New Growth theorists argue that the non-rivalry and technical platform effects of new technology can lead to increasing rather than diminishing returns on technological investment.
- Investment can make technology more valuable and vice versa. According to Romer, the virtuous circle that results can raise a country's growth rate permanently. This goes against traditional economics.
- Romer argues that earning monopoly rents on discoveries is important in providing an incentive for companies to invest in R&D for technological innovation. Traditional economics sees "perfect competition" as the ideal. .

Enhancing human capital is critical for GDP growth

But sustained GDP growth doesn't just happen. In order to make investments in technology, a country must have sufficient human capital. Human capital is the formal education, training and on-the-job learning embodied in the workforce.

What is the knowledge economy? "A knowledge-driven economy is one in which the generation and exploitation of knowledge play the predominant part in the creation of wealth" (United Kingdom Department of Trade and Industry, 1998). In the industrial era, wealth was created by using machines to replace human labour. Many people associate the knowledge economy with high-technology industries such as telecommunications and financial services.

More than 60% of US workers are knowledge workers

Knowledge workers are defined as "symbolic analysts", workers who manipulate symbols rather than machines. They include architects and bank workers, fashion designers and pharmaceutical researchers, teachers and policy analysts. In advanced economies such as the US, more than 60 percent of workers are knowledge workers.

What is knowledge?

He who receives an idea from me receives instruction himself without lessening mine; as he who lights his taper at mine receives light without darkening me.

Thomas Jefferson

Unlike capital and labour, knowledge strives to be a public good (or what economists call "non-rivalrous"). Once knowledge is discovered and made public, there is zero marginal cost to sharing it with more users. Secondly, the creator of knowledge finds it hard to prevent others from using it. Instruments such as trade secrets protection and patents, copyright, and trademarks provide the creator with some protection.

Know-why and know-who matters more than know-what

There are different kinds of knowledge that can usefully be distinguished. Know-what, or knowledge about facts, is nowadays diminishing in relevance. Know-why is knowledge about the natural world, society, and the human mind. *Know-who* refers to the world of social relations and is knowledge of who knows what and who can do what. Knowing key people is sometimes more important to innovation than knowing scientific principles. *Know-where* and *know-when* are becoming increasingly important in a flexible and dynamic economy. Know-how refers to skills, the ability to do things on a practical level.

Knowledge gained by experience is as important as formal education and training

The implication of the knowledge economy is that there is no alternative way to prosperity than to make learning and knowledge-creation of prime importance. There are different kinds of knowledge. "Tacit knowledge" is knowledge gained from experience, rather than that instilled by formal education and training. In the knowledge economy tacit knowledge is as important as formal, codified, structured and explicit knowledge.

According to New Growth economics a country's capacity to take advantage of the knowledge economy depends on how quickly it can become a "learning economy". Learning means not only using new technologies to access global knowledge, it also means using them to communicate with other people about innovation. In the "learning economy" individuals, firms, and countries will be able to create wealth in proportion to their capacity to learn and share innovation (Foray and Lundvall, 1996; Lundvall and Johnson, 1994). Formal education, too, needs to become less about passing on information and focus more on teaching people how to learn.

Life long learning is vital for organisations and individuals

At the level of the organisation learning must be continuous. Organisational learning is the process by which organisations acquire tacit knowledge and experience. Such knowledge is unlikely to be available in codified form, so it cannot be acquired by formal education and training. Instead it requires a continuous cycle of discovery, dissemination, and the emergence of shared understandings. Successful firms are giving priority to the need to build a "learning capacity" within the organisation.

The importance of intellectual capital

Intellectual capital is a firm's source of competitive advantage

To become knowledge driven, companies must learn how to recognise

changes in intellectual capital in the worth of their business and ultimately in their balance sheets. A firm's intellectual capital-employees' knowledge, brainpower, know-how, and processes, as well as their ability to continuously improve those processes-is a source of competitive advantage. But there is now considerable evidence that the intangible component of the value of high technology and service firms far outweighs the tangible values of its physical assets, such as buildings or equipment. The physical assets of a firm such as Microsoft, for example, are a tiny proportion of its market capitalisation. The difference is its intellectual capital.

How do we measure a firm's intellectual capital? How can a firm tell whether its knowledge assets have increased or diminished over a certain period of time? According to Strassman (1998), intellectual capital is what is left over after suppliers, employees, creditors or shareholders and the government have been paid, and obsolete assets replaced. There are other approaches, including those of Sveiby (1997) and of Stewart (1997). One tool that is now widely used by US companies is Kaplan and Norton's Balanced Scorecard, which combines financial with non-financial measures, such as internal business processes, learning and growth, and various customer-related measures (Kaplan and Norton, 1996). Competency models seek to define and classify the behaviours of successful employees and calculate their market worth, while a business worth approach seeks to consider the value of information and the costs of missed or under-utilised business opportunities.

The importance of ICT

ICT releases people's creative potential and knowledge

What about information and communication technologies (ICT)? ICT are the enablers of change. They do not by themselves create transformations in society. ICT are best regarded as the facilitators of knowledge creation in innovative societies (OECD, 1996). The new economics looks at ICT not as drivers of change but as tools for releasing the creative potential and knowledge embod-

ied in people.

However, the ICT sector has a powerful multiplier effect in the overall economy compared with manufacturing. A 1995 study of the effect of software producer Microsoft on the local economy revealed that each job at Microsoft created 6.7 new jobs in Washington state, whereas a job at Boeing created 3.8 jobs (Mandel, 1997). Wealth-generation is becoming more closely tied to the capacity to add value using ICT products and services. The value of accumulated knowledge within New Zealand is an important indicator of its future growth potential.

The new economics of information

The rate of technological change has greatly increased over the past thirty years. Three laws have combined to explain the economics of information (Gilder, 1994). *Moore's Law* holds that the maximum processing power of a microchip at a given price doubles roughly every 18 months. In other words, computers become faster, but the price of a given level of computing power halves. *Gilder's Law*-the total bandwidth of communication systems will triple every 12 months-describes a similar decline in the unit cost of the net. *Metcalfe's Law* holds that the value of a network is proportional to the square of the number of nodes. So, as a network grows, the value of being connected to it grows exponentially, while the cost per user remains the same or even reduces.

While Metcalfe's Law has been applied to the Internet, it is also true of telephone systems. Gordon Moore first formulated Moore's Law in the early 1970s. There can be no doubt that the cycle of technology development and implementation is accelerating and that we are moving inexorably onward, out of the Industrial Age and into the Information Age.

Globalisation

ICT open up global markets and foster competition

With the advent of information and communication technologies, the vi-

sion of perfect competition is becoming a reality. Consumers can now find out the prices offered by all vendors for any product. New markets have opened up, and prices have dropped. When businesses can deliver their products down a phone line anywhere in the world, twenty-four hours a day, the advantage goes to the firm that has the greatest value-addition, the best-known brand, and the lowest "weight". Software provides the best example: huge added value through computer code, light "weight" so that it can be delivered anywhere at any time.

Competition is fostered by the increasing size of the market opened up by these technologies. Products with a high knowledge component generate higher returns and a greater growth potential. Competition and innovation go hand in hand. Products and processes can be swiftly imitated and competitive advantage can be swiftly eroded. Knowledge spreads more quickly, but to compete a firm must be able to innovate more quickly than its competitors.

Brands are critical. They strengthen consumers' trust in nations and their products

In a global marketplace where consumers are overwhelmed by choice, brand recognition assures their trust in both the tangibles and intangibles that a product will deliver. Like intellectual capital, brand equity can be hard to measure, yet it may account for a significant proportion of a company's value. It is intangible in the sense that it often consists of customers' perceptions of the value they gain from using a product or service rather than any measurable benefit. A nation's brand can be as important (or more) as the firm's, and provide extra leverage for whichever firm's brand is attached to the actual product-Swiss watches, Scotch whisky, German cars, Japanese appliances, New Zealand butter.

Unit 2

The New Economy: What It Really Means

Stephen B. Shepard
Editor-In-Chief of ***Business Week***

Now that the stock market is apparently going through an overdue correction, a long-running economic debate has flared anew. Is there really a "New Economy"? Or is it just wishful thinking by Wall Street hypesters and a few economic renegades? This is no mere academic flapdoodle, for it goes to the heart of a crucial issue: how fast the US economy can grow without triggering inflation.

When the stock market started falling this autumn, the I-told-you-so traditionalists came out of the woodwork to attack the New Economy concept-even though some of them have been consistently wrong in their forecasts for the past three years. Unable to explain what's going on and wedded to deeply flawed statistics and models, many traditionalists find it easier to set up straw men and knock them down.

Here's straw man No.1, from our esteemed colleagues at The Economist: The new thinking in America, "verging on claptrap," says that the "old economic laws have been repealed and that America's stock markets can therefore keep on growing indefinitely at their present rate." Well, nonsense. Nobody I know says anything of the sort. The economic laws are intact, though the trade-offs may have shifted.

Straw man No.2 comes from columnist Robert J. Samuelson, writing in The Washington Post. Normally astute, Samuelson attacks the New Economy thusly: "We have not created permanent economic bliss." Well, of course not. Who ever said we had?

Since *BUSINESS WEEK* has written sympathetically about some New Economy thinking, permit me a rebuttal. Let's begin with some basic defini-

tions. First, here's what the New Economy isn't: It does not mean inflation is dead. It does not mean we'll never have another recession or that the business cycle is extinct. It does not mean the stock market is destined to shake off the correction and rise forever, like some beanstalk growing to the sky. It does not mean the financial turmoil in Asia won't affect the US.

So if the New Economy is not economic nirvana, what is it? How do we know it exists? Do the skeptics have a case?

Global Shift By the New Economy, we mean two broad trends that have been under way for several years. The first is the globalization of business. Simply put, capitalism is spreading around the world—if not full-blown capitalism, at least the introduction of market forces, free trade, and widespread deregulation. It's happening in the former communist countries, in the developing world of Latin America and Asia, and even in the industrialized West—with economic union in Europe and North America's free-trade agreement. For the US, this means international trade and investment play a much greater role in our economic life than before. Twenty years ago, exports and imports made up 17% of our economy. Today, they account for 25%.

The second trend is the revolution in information technology. This one is all around us—fax machines, cellular phones, personal computers, modems, the Internet. But it's more than that. It's the digitization of all information—words, pictures, data, and so on. This digital technology is creating new companies and new industries before our eyes. Here's a statistic that should amaze you: In Silicon Valley alone, 11 new companies are created every week. Not all succeed, obviously. But enough do. Last year, on average, a Silicon Valley company went public every five days, minting dozens of new millionaires in the process.

All of this entrepreneurial energy is transforming Corporate America. You can argue about whether there is a New Economy, but there sure as hell is a new business cycle. Housing and autos used to drive the US economy. Now, information technology accounts for a quarter to a third of economic growth. And remember, this is an industry that pays very good wages. And it is an in-