

VISUAL 38.1

THE HUMAN CAPITAL MYSTERY

- During the 1970s, many Americans began to wonder about the value of education. In 1976 Richard Freedman, a Harvard economist, published a book called *The Overeducated American*.
- This book raised questions about whether it was worthwhile to obtain an education beyond high school.
- According to the U.S. Department of Education, about one out of ten American students drop out of high school. The number is much higher for students in urban schools.

BENEFITS VERSUS COSTS

Is education beyond high school worth the costs? Do workers who acquire more skills, technical know-how and experience in markets, trades, professions, organization, management and science earn more in the marketplace than those who only earn a high school diploma?

VISUAL 38.2

WHAT IS A KNOWLEDGE WORKER?

Knowledge workers use intellect rather than physical labor to provide goods and services. The knowledge worker is the employee who knows **what, why** and **who**.

- The knowledge worker who knows **what** is the person who has the information and facts about the job.
- The knowledge worker who knows **why** is the person who may possess a deep, comprehensive understanding about the science behind the work, intricacies of business and complexities of markets.
- The knowledge worker who knows **who** is the person who knows who can do what, when and where, and is able to motivate people to respond to requests.

THE ECONOMIC IMPORTANCE OF KNOWLEDGE IN A GROWING AND DEVELOPING ECONOMY

- Technology advances as knowledge accumulates, and knowledge accumulates as technology advances.
- Consequently, advancements in knowledge and technology stimulate economic growth.
- The American economy — especially in the past 50 years — has witnessed substantial advances in technology in such areas as biotechnology, telecommunications, computers science, energy, medical research and so forth.

Source: “What Is the Knowledge Economy?” Ministry of Economic Development. Retrieved on the WWW on February 3, 2006 at http://www.med.govt.nz/pbt/infotech/knowledge_economy/knowledge_economy-04.html.

VISUAL 38.3

COMPARING KNOWLEDGE WORKERS TO MANUAL WORKERS

KNOWLEDGE WORKERS

- Rely primarily on intellect and skills to produce goods and services.
- Apply acquired knowledge to fulfill several of responsibilities ranging from advancing technologically to problem solving to making improvements to the production process.

MANUAL WORKERS

- Rely primarily on physical labor to provide goods and services.
- Perform specific tasks with little expectation that their contribution will go beyond the assigned tasks.

VISUAL 38.4

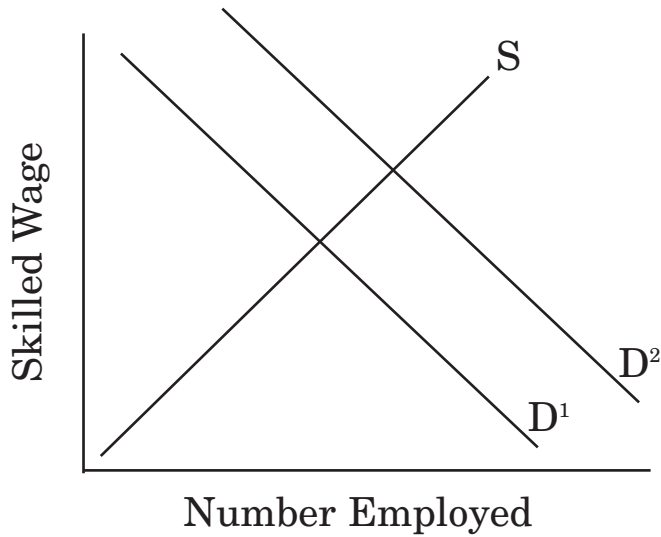
TECHNOLOGICAL CHANGES: SOME RECENT EXAMPLES

Advancement in specific knowledge areas	Technological change	Economic effect on consumers or businesses and production in the economy
Cancer research and the technology needed to detect and treat cancer	Magnetic resonance imaging (MRI)	<p>What does it do? MRIs make it more cost effective to produce images of any part of the human body.</p> <p>Effect on consumers: Patients benefit from early diagnosis and relatively low costs.</p> <p>Effect on producers: Increases production and employment in this area.</p>
Computers, software and information systems	Internet	<p>What does it do?</p> <p>Effect on consumers:</p> <p>Effect on producers:</p>
Space and the technology needed for exploration	Mars rovers	<p>What does it do?</p> <p>Effect on consumers:</p> <p>Effect on producers:</p>
Genes in the human body	Biotechnology-generated maps of DNA genetic codes	<p>What does it do?</p> <p>Effect on consumers:</p> <p>Effect on producers:</p>
Knowledge technology	Systems that filter information and organize it based on needs, wants and desires	<p>What does it do?</p> <p>Effect on consumers:</p> <p>Effect on producers:</p>
Additional example 1		<p>What does it do?</p> <p>Effect on consumers:</p> <p>Effect on producers:</p>
Additional example 2		<p>What does it do?</p> <p>Effect on consumers:</p> <p>Effect on producers:</p>

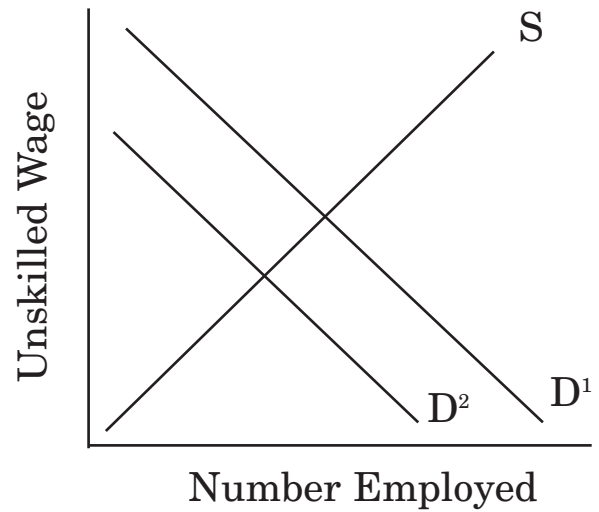
VISUAL 38.5

**LABOR MARKETS FOR KNOWLEDGE AND UNSKILLED WORKERS
ASSUME TECHNOLOGY ADVANCES**

**MARKET FOR
KNOWLEDGE LABOR**



**MARKET FOR
UNSKILLED LABOR**



VISUAL 38.6

BENEFITS OF INVESTMENTS IN HUMAN CAPITAL: THE VALUE OF GOING TO COLLEGE

- Increased income
- Better employment opportunities
- Jobs less sensitive to the business cycle
- Better opportunities for advanced training
- Better health
- Longer life
- Reduced criminal activity
- Increased voting and other civic participation
- Reduced participation in welfare