

UNIT 13 – LABOR MARKETS, HUMAN CAPITAL AND INCOME (9 Days)

A student's lifetime income will depend on the choices he/she makes in high school and post-secondary education. Due to the importance of bringing this home to students, this unit elaborates on the theme of developing one's human capital for which the foundation was laid in Unit 6, "What will determine my income?" More than ever before, people will change careers and occupations. Also, more and more, the existence (or non existence) of jobs is influenced by globalization as discussed in Unit 10. An understanding of labor markets provides an essential underpinning to making choices about developing one's human capital. Details regarding types of income and employment benefits complete the income picture prior to tax considerations in the next unit.

EPF.10 The student will develop consumer skills by

b) examining the effect of supply and demand on wages and price

(BUS6120.044)

Days 1 and 2 Demand for labor

Day 3 Supply of labor

EPF.15 The student will demonstrate knowledge of income earning and reporting by

a) examining how personal choices about education, training, skill development and careers impact earnings

(BUS6120.084)

Days 1 and 2 How and where can you develop your human capital?

EPF.15 The student will demonstrate knowledge of income earning and reporting by

b) differentiating among sources of income

(BUS6120.085)

Day 1 Wages, interest, profits

EPF.15 The student will demonstrate knowledge of income earning and reporting by

d) investigating employee benefits and incentives

(BUS6120.087)

Days 1 and 2 Benefits and incentives

Evaluation Day

EPF.10 The student will develop consumer skills by
b) examining the effect of supply and demand on wages and prices

Days 1 & 2 - Demand for labor

Content Knowledge

Demand for labor changes with the demand for skills, which changes with the demand for goods and services. Comprehending this requires a review of what causes demand to change. Students need to realize that employability depends on having skills that are transferable among different jobs and that are in demand.

Vocabulary

Derived Demand - Demand resulting from what a good or service can produce, not demand for the good or service itself.

Determinants of Demand - Factors other than the price of a good or service that change (shift) the demand schedule, causing consumers to buy more or less at every price. Factors include income, number of consumers, preferences and prices of related goods.

Productivity - The amount of output (goods and services) produced per unit of input (productive resources) used. In this case, the value of a worker's output compared to the worker's wage.

Virginia Board of Education Framework

Workers who invest in their own human capital generally become more productive. Productive workers lower the cost of production, thus employers seek to hire the more productive workers. Workers with more knowledge and skill generally earn more than unskilled workers.

The demand for workers is derived from the demand for the goods and services they make. When demand for a good or service falls, demand for the workers who produce the good or service rises, demand for workers does too.

According to the law of demand, people buy more at lower prices and less at higher prices. All else being equal, prices rise with an increase in demand and fall when demand decreases. Demand is affected by non-price factors such as changes in the number of consumers, consumer income, taste, expectations, and the price of related goods (i.e., complements and substitutes).

Teaching Tips

- 1) Remind students that they learned about supply and demand in Unit 4. Ask a student to name a product. [If helpful for the later development of this example, have a student come to the board and draw a graph illustrating the supply and demand for that product. Numbers need not be included in the graph.] Ask the class: What resources go into producing this product? (*Guide the students into naming labor*). Ask: What determines how much labor is needed? Students should come to recognize that when there is more demand for the product, there is more need for labor to produce the product. Explain that this is the concept of derived demand – the quantity of resources, including labor that is

demanded, depends on demand for the product. This is true across all products and services. Therefore, the desire of employers to hire employees depends on the existence of demand for their products.

- 2) Remind students of the determinants of demand, in preparation for working with the suggested article on dying industries. What are the causes of shifts in demand? The teacher may wish to review Unit 4, “The Price System” in preparation for teaching this day’s lesson. Use the student-drawn supply and demand graph to go over some examples of how each determinant causes the demand curve to shift.
- 3) Have students read portions of the article on dying industries, or assign it for homework. (The teacher may choose to highlight the relevant sections.) Ask: What types of jobs may be affected? What is causing these industries to die? *(In many of the technological advance cases, it is a change in demand for the products that they produce; however, the external competition factor relates primarily to supply, rather than to changes in demand for the products. Supply will be addressed on the following day.)*
- 4) In cases where it is a change in demand causing the decline, what are the changes in determinants of demand that are shifting demand for these products? *(In some cases, the determinant is prices of related goods. For example, once a family has a computer, the presence of free content on the internet means that news from internet sources (a substitute good) is free, so demand for newspapers, which are not free, falls. Photofinishing is similar: once one has a digital camera, computer, and printer, home printing (a substitute for photofinishing) is very inexpensive, so people are switching to the substitute.)*
- 5) Continue the discussion of jobs being lost in the dying industries. Have students think beyond the retail to include manufacturing and service/support. Ask students to suggest industries that might require similar employees. What type of jobs would be available and how might they be affected by the shift? What type of skills will be necessary?

Lessons and Resources

Reading

USA Today: Dying Industries

<https://www.usatoday.com/story/money/economy/2017/12/28/americas-25-dying-industries-include-sound-studios-textiles-newspapers/982514001/>

Day 3 - Supply of labor

Content Knowledge

The days of choosing a career, getting trained for it, and then settling into it have changed to a reality of rapid change and evolution. Students need to understand how earnings relate to supply and demand, and how they can seek out careers with good potential by building and continuously improving skills to make themselves employable.

Vocabulary

Determinants of Supply - Factors other than the price of a good or service that change (shift) the supply schedule, causing producers to supply more or less at every price. Factors include number of producers, production costs, and technology and productivity.

Human Capital - The health, education, experience, training, skills and values of people. Also known as human resources.

Human Capital Investment - Investment of time, effort and resources in education and training--to increase one's own knowledge, skills, health, etc., or to develop those assets in others.

Virginia Board of Education Framework

An increase in the supply of workers with a specific skill tends to decrease their wages, while a limited supply of such workers tends to increase wages.

Prices fall with an increase in supply and rise with a decrease in supply. Supply is affected by changes in the number of suppliers, cost of production, technology, expectations, government policies, and catastrophic events (e.g., hurricanes, wars).

Teaching Tips

- 1) In the dying industries article discussed on the previous day, several of the industries were suffering from external competition. Explain that lower priced labor in other parts of the world is replacing the use of US labor in many areas of manufacturing. This is particularly true with regard to manufacturing that uses unskilled labor.
- 2) The teacher may wish to use the simulation activity from the Personal Decision Making lesson below; however, the teacher will want to update the wage amounts to reflect current wages.
- 3) Explain that a supply and demand graph can be used to understand the pay that people receive for their labor. Have students tell you step by step how to draw a supply and demand graph. Label the graph "Supply and demand for labor in an industry". The idea behind this graph is that it illustrates the supply and demand for the labor that employees supply. So, the suppliers in this graph are workers. Ask: Who are the demanders of labor? (*Employers.*) Ask them to recall what they learned about derived demand. So if consumers want to buy a lot of the products that this industry makes, how will it change

the appearance of the graph? (*Demand will shift to the right.*) What does the price axis represent on this graph? (*The price of labor, which is the rate of pay to workers.*) What effect will the rightward shift have on workers' pay? (*An increase.*) What effect will there be if many people want to work in this industry? (*Supply shifts right.*) How will that affect pay? (*It will decrease.*)

- 4) What can we conclude about the characteristics of industries in which we want to work, assuming we want to earn high pay? (*We would like to find industries where demand for their products is projected to be strong, and where there is not a large supply of workers.*) What makes for a more limited supply of workers in an industry? Ask: Do you know many people whose parents are heart surgeons or nuclear physicists? (*Most likely not. The supply of workers will be more limited if special skills and education are required.*)
- 5) The teacher can provide pages of the Occupational Outlook Handbook, or have students visit the site and look for pre-selected careers or careers of interest. Students should be focused on the career requirements, training and job outlook over the next 10 years. Students should be reminded that in some cases, they may be in training for a good portion of that period.

Lessons and Resources

Personal Decision Making Lesson 4: A Student's Potential in the Labor Market: It's a Matter of Supply and Demand.

Readings

Occupational Outlook Handbook

<https://www.bls.gov/ooh/>

Add St. Louis Fed Labor Market video day 3. <https://www.stlouisfed.org/education/economic-lowdown-video-series/episode-4-the-labor-market>

Update the BLS link to <https://www.bls.gov/ooh/>

EPF.15 The student will demonstrate knowledge of income earning and reporting by
a) examining how personal choices about education, training, skill development and careers impact earnings

Days 1 & 2 - How and where can you develop your human capital?

Content Knowledge

Jobs and careers are changing. Students need to build an awareness of careers that can build on their natural abilities and interests, and the kinds and locations of training those careers require.

Virginia Board of Education Framework

Human capital refers to the knowledge and skills a person possesses.

People invest in their own human capital when they gain knowledge and skills through education, training, and experience.

People with more education and skills tend to earn higher incomes than uneducated and unskilled workers.

Teaching Tips

- 1) As a reintroduction to the important role of human capital, the teacher may wish to use the activity simulating different levels of human capital in the lesson “Invest in Yourself” (below).
- 2) The teacher may wish to review Unit 6, “What will determine my income?” in preparation for today’s lesson. Students may already have participated in an inventory of their human capital. If so, refer them back to the results of that inventory. If not, refer to the resources set out at Day 1 of Unit 6. The guidance department may also have a variety of assessments of skills and interests.
- 3) Have students continue to seek information from the Occupational Outlook Handbook or elsewhere on jobs that may be of interest. Whereas the previous day’s focus was on the outlook for various occupations, focus now should be on the students’ aptitudes and interests, the particular education, training, and skill requirements. In addition to those requirements, students should consider geographical factors (are they willing to move; whether the type of training or schooling necessary is available nearby), and salaries.
- 4) Using materials in the guidance office as well as electronic media, students should investigate further what type of training is necessary for their job interest, where it is available, and how much it would cost. Students should also look critically at the job placement rate of the training institution.
- 5) Direct students once again to their goals and the estimated cost of achieving those goals. Do their cost estimates for post-secondary education need revision? How might they fund their post-secondary training? Are there alternatives that may be acceptable? Have students evaluate

alternatives and possible funding schemes. You may wish to have them use the PACED decision model for this purpose.

Lessons and Resources

Online

Occupational Outlook Handbook

<https://www.bls.gov/ooh/>

It's Your Paycheck Curriculum, Lesson 1 "Invest in Yourself"

http://www.stlouisfed.org/education_resources/paycheck.cfm

PACED Decision Grid

http://www.econedlink.org/lessons/docs_lessons/764_PACED1.pdf

Add the following:

1. Lesson 1 of <https://www.investinwhatsnext.org/>
2. The Invest in What's Next Human Capital Line Activity
3. Atlanta Fed Human Capital Infographic and part 1 of the Human Capital lesson.
<https://www.frbatlanta.org/education/publications/extra-credit/2016/spring/lessons-and-activities/high-school/personal-finance/teaching-human-capital.aspx?d=1&s=fre>

**EPF.15 The student will demonstrate knowledge of income earning and reporting by
b) differentiating among sources of income**

Day 1 - Wages, interest, profits

Content Knowledge

Some compensation packages involve different types of pay. Students need to understand what each kind is and how to calculate it.

Vocabulary

Bonuses – Additional compensation received in addition to wage or salary, usually awarded for meeting certain targets or successful completion of a project.

Commission – Compensation based on the amount of business transacted, usually measured as a percentage of sales.

Overtime – Additional compensation based on hours worked in excess of a maximum during a given period. In the U.S., overtime is usually awarded for time worked in excess of 40 hours per week, and usually at a rate equivalent to 1 ½ times the regular wage.

Piece Rate – Compensation based on the number of units produced.

Salary – A regular payment, often at monthly or biweekly intervals, made by an employer to an employee, especially in the case of professional or white-collar employees. Salaries are paid for services rendered and are not based on hours worked.

Tips – Additional compensation provided by customers to workers in certain service sector jobs. Tips are frequently given for services like waiting on tables or personal services like hair care.

Wage – Payments for labor services that are directly tied to time worked, or to the number of units of output produced.

Virginia Board of Education Framework

Income can be earned or unearned.

Earned income includes:

- Salary
- Hourly wages
- Overtime
- Tips
- Commissions
- Bonuses
- Piece rate.

Unearned income includes

- Interest
- Return on investment
- Inheritance
- Gifts

Teaching Tips

1) Explain that income is divided into two categories, earned and unearned. Ask: What do you think unearned income refers to? (*Interest, returns on investment, inheritance and gifts.*) Are all of those really unearned? (*They may have some interesting thoughts on whether inheritance and gifts are unearned.*) Remind them what they learned about savers earning interest as a payment in return for forgoing spending their money (Unit 11). In Unit 12 they learned about the relationship between risk and reward, where riskier investments pay higher interest as an inducement to take on greater risk. So from an economic point of view, interest and returns could be seen as “earned” by savers and lenders—but the convention is to term all of these items “unearned income.”

2) On a surface where all of the students can see, demonstrate how different types of compensation are calculated, using the following examples:

Salary

\$42,500 per year paid monthly =

\$42,500 per year paid bi-weekly (remind students there are 52 weeks in a year) =

Bonus

5% of the above salary =

Commission

2.5 % of weekly sales of \$900 =

1.5% of weekly sales of \$1,350 =

Wage

\$8.75 per hour for 35 hours =

\$10.25 per hour for 40 hours =

Overtime

Calculated on the first rate above, time-and-a-half for 8 hours =

Calculated on the second rate above, time and half for 5 hours =

Piece Rate

125 units at \$2.50 per unit =

75 units at \$6.10 per unit =

Tips

15% on a check of \$30.00 =

18% on a check of \$42.00 =

The teacher should provide additional examples, perhaps including combinations. Example: Work as a salesman with a basic wage of \$3.25 per hour for 20 hours and commission of 2% of weekly sales of \$1,650.

Add St. Louis Fed It's Your Paycheck Curriculum, Lesson 2 'W is for Wages, W-4, and W-2 lesson. <https://www.stlouisfed.org/education/its-your-paycheck-curriculum-unit/>

EPF.15 The student will demonstrate knowledge of income earning and reporting by
d) investigating employee benefits and incentives

Days 1 and 2 - Benefits and incentives

Content Knowledge

The total compensation package for many jobs goes far beyond the basic wage or salary. An understanding of the value of benefits is essential in choosing which job opportunities to pursue.

Vocabulary

Child Care – Deductions made from gross pay to fund certain kinds of child care expenses. Deductions may be made pre-tax.

Elder Care – Deductions made from gross pay to fund certain kinds of elder care expenses. Deductions may be made pre-tax.

Health Insurance Plans – Deductions made from gross pay to help pay all or part of health insurance premiums. These can include basic health, major medical, dental and vision plans. Some employees will pay the entire monthly premium. Some will pay part of the monthly premium with employees paying the rest. Some will make insurance available if the employee wants to purchase it – paying the full premium.

Matching Contributions – Additions made to gross pay by an employer to fund certain types of deductions like saving for retirement plans.

Paid Sick Days – Compensation given to employees when they are ill and can't work. This is usually made at the daily rate for a limited number of days.

Paid Vacation – Compensation given to employees during vacation time. This is usually made at the daily rate for a limited number of days.

Parking – Deductions from or additions made to gross pay to pay for parking in certain areas.

Profit Sharing – Additions made to gross pay of employees from profits. Employees receive a share of profits of the employer when certain levels are met or exceeded.

Savings Plans – Deductions from gross pay to help fund retirement or other savings vehicles. Deductions may be made pre-tax and may be partially matched by employers.

Virginia Board of Education Framework

Benefits are part of an employee's compensation, over and above wages or salary. They add to the financial value of a job and may include

- Matching contributions to tax sheltered annuities, such a 401 (k) and 403 (b) retirement savings plans
- Saving plans
- Parking
- Health insurance plans (medical, dental)
- Child care
- Elder care
- Paid vacation

- Paid sick days
- Profit sharing

Incentives are offered as motivation for employees to perform well and may include

- Bonuses
- Profit sharing
- Free travel or merchandise

Teaching Tips

1) Ask students to speculate about the difference between benefits and incentives. While all of the items on the above list from the Virginia Board of Education Framework would qualify as incentives to accept one job over another that offers fewer benefits, “incentives” in this context refers to extra compensation that is tied to how well the employee performs.

2) The teacher should spend time explaining basic and less common benefits. As background, the teacher will want to investigate the Bureau of Labor Statistics (www.bls.gov) resources devoted to employee benefits (below). Point out the dollar value of benefits such as paid vacation and paid sick leave and other readily quantifiable benefits such as matching contributions, paid parking, or employer-provided childcare. For the value of other benefits, one would need specific information about insurance costs, etc.

3) If computers are available, have students investigate benefits available at well known employers, or employers that they might like to work for, in government, business, or the nonprofit sector. Many company and organization websites include information about their benefits packages.

4) Use the second day to have students report on their findings.

Lessons and Resources

Occupational Outlook Quarterly Summer 2005, An overview of employee benefits
<http://www.bls.gov/opub/ooq/2005/summer/art02.pdf>

Employee Benefits Survey
<http://www.bls.gov/ncs/ebs/>

Article: How to Build a Competitive Employee Benefits Package
<http://www.inc.com/guides/2010/04/offering-competitive-employee-benefits.html>

EVALUATION DAY