Faculté des sciences sociales | Faculty of Social Sciences

uOttawa

Département de science économique
Department of Economics

ECO2114A
First mid-term examination

ANSWER KEY

Professor David Gray Winter 2014

You may not consult with any written documents whatsoever, and no conversation is permitted while the examination is in progress. It is forbidden to look at other students' papers. There are 25 multiple choice questions and 25 points worth of short answer questions. For the multiple choice questions, it may not necessarily be the case that four of the responses are totally wrong, and one of them is unambiguously correct. In such situations, select the best answer. Respond to the multiple choice questions on the scan-tron sheet. Please grid in your name and your student number by filling in the appropriate ovals in each column. You must grid in the ovals below each digit of your student number, and below each letter of your name. Respond to the written questions in the examination booklet. Hand in both the scan-tron sheet and your examination booklet, but you may retain the questionnaire.

Part A: Multiple choice questions

1. What trait do the alternative perspectives (other than the neo-classical paradigm) of the labour market have in common?

a) They reject the neo-classical tenet that economic agents make rational choices based on their own free will.
b) It is believed that market forces are the primary determinants of labour market outcomes, but these outcomes are often unjust
c) They all hold that the conventional, neo-classical labour market model should take account of imperfect information, political constraints, and uncertainty
d) They all hold that analysis should be based on descriptive realism rather than mathematical tools and graphical analysis
e) None of the above

A

2. Which of the following statements regarding the neo-classical approach to labour economics is <u>false</u>?

a) All actors, whether they are firms or workers, make their choices free from coercion.
b) The equilibrium outcome represents an equitable allocation of labour.
c) The equilibrium outcome represents an efficient allocation of labour.
d) All actors, whether they are firms or workers, are motivated by selfishness.
e) That no one entity, whether among the firms or the workers, has too much power to determine the equilibrium outcome.

B

3. The empirical literature on labour supply patterns for married women has tended to find all of the following <u>except</u>: (find the falsehood)

a) Participation for married women peaks in the 35-44 age group
b) Women with children have lower rates of labour force participation
c) The higher the education level, the higher the labour force participation rate
d) The higher the husband's income, the lower the labour force participation rate
e) All of the above are true, so none of the above.

D

4. Which of the following statements concerning the elasticity of labour supply is <u>true</u>?

a) Empirical estimates tend to point to an inelastic value for the wage elasticity of supply.
b) It is generally higher for men than for women.
c) The compensated elasticity (reflecting the substitution effect) tends to be lower in magnitude (i.e. absolute value) than the uncompensated, gross elasticity.
d) It can never have a negative value in any certain circumstances.
e) The elasticity of labour supply with respect to income is positive.

A

5. Which of the following statements regarding the phenomena of discouraged workers and added workers is <u>false</u>?

a) In periods of high unemployment, discouraged workers tend withdraw from the labour force.
b) In periods of low unemployment, discouraged workers tend to re-enter the labour force
c) In periods of high unemployment, added workers (particularly married women) tend to enter the labour force
d) If discouraged workers were counted as officially unemployed, the unemployment rate would be higher.

e) All of the above statements are true, so none of the above is the correct answer.

E

6. The reservation wage is defined as:

a) The wage of the reservations agent in the tourism or transport industry
b) The maximum wage that an employer is willing to pay a worker for a given job
c) The minimum wage that an employee is willing to accept for working at a given job.
d) The wage level where the substitution effect exactly offsets the income effect
e) The wage rate at which no hours of labour are supplied by the workers

C

7. All of the following patterns of labour market behaviour can be analysed with the income-leisure framework except:

a) Moonlighting work
b) Overtime work
c) Labour force participation choices
d) Underemployment
e) Wage determination procedures

E

8. In the neo-classical model of labour supply, which of the following is always true?

a) A wage increase always causes an increase in hours worked.
b) If there is an income effect, it must stem from a change in the wage.
c) The income effect and the substitution effect stemming from a wage change work in opposing directions
d) The substitution effect causes the worker to work more hours if wages decrease
e) None of the above statements are always true.

C

9. Over the backward-bending portion of the labour supply curve, which one of the following statements is true?

a) The substitution effect of a wage change dominates the income effect
b) Leisure becomes an inferior good
c) The wage elasticity of labour supply turns from inelastic to elastic
d) There is no longer a trade-off between income and leisure
e) The wage elasticity of labour supply is negative

E

10. For a worker who is deciding how many hours of labour to supply (at the intensive margin), all of the following are true <u>except</u>: (select the falsehood)

a) The marginal rate of substitution between income and leisure is equal to the wage rate
b) The rate at which she is willing to exchange leisure for income equals the rate at which the market allows her to do it.
c) The marginal utility of leisure divided by the marginal utility of income is equal to the wage rate
d) The income effect of a wage change equals the substitution effect
e) The worker cannot increase total utility by working more or fewer hours given the wage rate and the non-labour income.

D

11. What was the essence of the article from the literature that I posted concerning the “Working Income Tax Benefit”? The title of this article is “Time for a ‘made in Ontario’ Working Income Tax Benefit”.

a) That taxes on most workers are too high.
b) That social assistance recipients face fairly strong disincentives to enter the labour force and work
c) That child care should be subsidized by the government, like it is in Quebec.
d) That among social assistance recipients, the wage is greater than the marginal rate of substitution.
e) None of the above

B

12. Which of the following countries <u>tends</u> to have the lowest labour force participation rates?

a) Continental European countries
b) Canada
c) United States
d) United Kingdom
e) There is no enduring ranking, as in some years one country will have higher rates, but in other years another country’s rates will surpass them

A

13. Consider the following figures from the December 2013 Labour Force Survey. Working-age population, 28.8 million; labour force, 19.1 million; employment, 17.8 million; unemployment, 1.3 million. The equation for the unemployment rate (UR)

is:

a) UR = 17.8 / 28.8
b) UR = 1.3 / 28.8
c) UR = 1.3 / 17.8
d) UR = 1.3 / 19.1
e) UR = 19.1 / 28.8

D

14. What is the nature of a social insurance benefit that takes the form of a demogrant?

a) All recipients get the exact same amount.
b) The benefits is paid on a sliding scale such that it is clawed back as the worker earns more income
c) The worker receives a tax credit
d) The amount that recipients receive is independent of the number of hours worked.
e) None of the above

D

15. Which of the following is NOT a way to improve work incentives for welfare (or social assistance) recipients?

a) Increase the market wages for jobs for which welfare recipients might be qualified to perform
b) Reduce the very high implicit tax rate that is applied to earnings of welfare recipients when they work
c) Alter the preferences that certain recipients might have for leisure compared to work
d) Raise the benefit level
e) Provide welfare recipients with job training and counselling services

D

16. What does the term negative refer to in a negative income tax scheme?

a) The individual does not have to pay income tax on any of his/her earnings
b) The individual receives a subsidy or a credit rather than paying taxes for a number of hours worked within a certain range.
c) The program does not involve any disincentives to working
d) The program involves fewer disincentives to working than does a conventional welfare or social assistance program
e) None of the above

B

17. Which of the following programs is thought to be superior in terms of its ability to direct payments to those individuals or families in greatest need of assistance?

a) Social assistance or welfare
b) Unemployment insurance
c) A guaranteed annual income benefit
d) Canada Pension Plan
e) None of the above

A

18. The reason for which worker's disability insurance can potentially have adverse effects on work incentives is because:

a) The income that it provides enables one to reach a certain income level without any work obligation.
b) The opportunity cost of leisure increases.
c) The recipient is allowed to work as many hours as he/she can without losing any of the benefits.
d) The taxes that finance the benefits can have negative effects on labour demand
e) All of the above apply

A

19. Consider a worker who has small children at home. All of the following are effects of child care expenses (not day-care subsidies) except:

a) They serve to increase reservation wages
b) They might decrease labour force participation
c) For those who do participate, the hours of work are likely to be longer
d) For those who do participate, the hours of work are likely to be shorter
e) All of the above apply

D

20. Which of the following statements concerning social assistance programs is <u>false</u>?

a) The high implicit tax rate on welfare benefits is an important work disincentive.
b) Lowering benefits can cause undue hardship on certain recipients, even if it increases incentives to work.
c) The negative income tax program gives more incentives to work than a situation of a labour market with no welfare program at all.
d) Under a negative income tax program, workers do face a clawback in labour market earnings

e) The disincentive effects brought on by Social assistance payments involve both income effects and substitution effects.

C

21. Canada’s unemployment insurance program has received much criticism from most (but not all) policy analysts. Their greatest concern is that:

a) the ‘Employment Insurance’ regime (EI) has evolved in some situations (particularly part-year workers) into an income maintenance program upon which some workers have developed a long-term dependency
b) benefits are paid for too long a period, causing individuals to delay their job search
c) it serves to insure workers from income loss associated with the risk of unpredictable unemployment
d) it has an unfunded liability
e) the premiums are judged to be too high

A

22. The current value for the official rate of unemployment in Canada is:

a) 6.1 %
b) 7.8 %
c) 8.7 %
d) 7.0 %
e) none of the above

D

23. The approximate value for the labour-force participation rate in Canada is:

a) 70 %
b) 76 %
c) 57 %
d) 80 %
e) 67 %

E

24. I briefly went over the circular flow model. Which of the following statements is <u>false</u>?

a) The labour market fits into the input or factor market.
b) In the input markets, it is the households who receive the income and the firms that do the spending.

c) In the output markets, it is the firms who receive the income and the households that do the spending.
d) In the aggregate, spending must be equal to income
e) All of labour economics is based on micro-analysis, and so this model does not apply.

E

25. I have said a number of times that two labour market phenomena that have occurred over the past 25 years or so are a widening distribution of labour market earnings (i.e. a higher degree of inequality) and a decline in the share of aggregate income that is paid to labour. What are thought to be the causes?

a) Union busting and legislation that is anti-worker
b) Technological change and globalization
c) Unfavourable labour market conditions caused by recessions and their aftermath
d) Government spending cuts that disproportionally hurt the disadvantaged
e) Free trade with foreign countries

B

II Short Answer Questions

Answer all of the questions below in an exam booklet using complete sentences. Point form is not acceptable.

1. Explain the relationship between tool of the wage elasticity of labour supply and its application to tax policy. (4 points)

Taxes are never free in the sense that they always have an impact on the choices made by economic agents. If a new tax is imposed on workers, or if an existing tax is increased or decreased, it will have an impact on the supply of labour. This is turn will have an impact on the equilibrium level of employment in the labour market. The question is only what the magnitude of the impact on the quantity supplied of labour will be. Take the case of a 1 % point increase in the payroll tax. This translates into a 1 % decrease in the worker's take-home wage. If the WES is elastic (say 2.0), this will result in a 2 % decrease in the quantity supplied of labour. Although we do not know what the equilibrium level of employment will be (because we do not have information on the demand for labour), it is likely that tax revenues will fall, as the higher tax rate is collected over disproportionately fewer hours. If the WES is inelastic (say 0.5), this will result in a 0.5 % decrease in the quantity supplied of labour. Although we do not know what the equilibrium level of employment will be (because we do not have information on the demand for labour), it is likely that tax revenues will rise as the higher tax rate is collected over less than proportionately fewer hours.

You certainly did not have to write all of this in order to receive full credit for the question.

2. Describe the event of moonlighting in the context of the model of labour supply. Your explanation should make some mention of income effects and substitution effects. (4 points)

The moonlighting worker is typically constrained to work a certain number of hours at his/her primary job. If at this number of hours, w > MRS, he/she is underemployed (even if he/she is well paid), which means that he/she wants to work longer hours. Moonlighting occurs when the wage of the secondary job is lower than the wage at the primary job. This implies a wage decrease as the number of hours worked increases. The substitution effect is pulling the worker towards not working those additional hours, as they are remunerated at a lower rate. On the other hand, the income effect is pushing the worker to work those extra hours, because the lower wage implies a lower level of income, which means that the worker will work longer hours if leisure is a normal good. As i said in class, i fit the bill of a moonlighter perfectly. My labour supply choice is driven by a very strong income effect over that particular range of hours.

3. Explain in words how the supply of labour is derived. Your discussion should start from ground-zero, and include one equation and all of the ingredients that I spelled out in class. (5 points)

To derive the labour supply curve means to explain where it comes from. What are the foundations? We commence with a greedy worker who seeks to maximize his/her utility. Utility is an increasing function of the level of income received and the leisure taken. This utility function contains the worker's preferences for income and leisure. The worker faces a budget constraint, and is forced to trade off leisure and income on the labour market. The equilibrium condition is the marginal rate of substitution for income for leisure (MRS) is equal to the market wage, which the worker does not control. At this point, the rate at which the worker can trade income for leisure on the labour market is equal to the rate at which he/she prefers to do so. Given any possible values of the wage, the worker sets that wage level equal to the MRS, and figures out how many hours of work (and hence how many hours of leisure) are consistent with that value of the MRS. Recall that for labour supply (or the supply of anything), the procedure is to name a wage level to the worker, and determine how many hours of labour will be supplied.

4. Define the raw, or the total, wage elasticity of labour supply, and distinguish between it and the compensated wage elasticity of supply. Note that this question does not ask explicitly about the income elasticity of labour supply. For the first one, you should give the mathematical expression. In both cases, give the interpretation. (4 points)

WES = % change in quantity supplied of labour divided by the % change in the wage rate. This quantity can be calculated and observed. It is interpreted as the % change in the quantity supplied of labour that is caused by a 1 % change in the wage rate. It is the broadest measures of the responsiveness of the quantity supplied of labour to changes in the wage rate. The compensated elasticity of labour supply is the WES with the income effect netted out, which means that we are keeping the worker equally well-off before and after the wage change. It thus reflects only the substitution effect of the wage change. It is always positive, meaning that the wage change and the change in the quantity supplied of labour always move in the same direction. It will be higher than the magnitude of the raw WES as long as leisure is a normal good.

5. Consider the situation of a worker who is participating in the labour market, and is thus at his/her intensive margin. Suppose that at the current number of hours that are being worked, the marginal rate of substitution of leisure for income is greater than the going market wage. This is a disequilibrium situation. Explain step by step how this worker will reach his/her optimal labour supply choice, which will be an interior solution. I strongly hinted to you that this question might appear on the examination, and here it is. (4 points)

We are told that the MRS < wage, and that the worker is working a positive number of hours. This means that he/she cannot be in equilibrium, and that we expect an adjustment to occur. Remember that the worker cannot control the wage (although all workers would love to have that power). The only change that the worker can make is the number of hours that he/she chooses to work. Since the wage exceeds the MRS, it means that the wage rate is higher than the worker's valuation of leisure (he/she values the hour's worth of income more than the hour of leisure given the price of leisure), so he/she will work longer hours. Recall that mrs = mu of leisure / mu of income. As the number of hours worked rises, the numerator increases due to the law of diminishing marginal utility for leisure, while the denominator decreases due to the law of diminishing marginal utility for income. The ratio will fall, and equality will be restored, thus giving us equilibrium.

6. Explain the major differences between the dominant neo-classical paradigm of the labour market and the institutionalist approach to analyzing the labour market In other words, what are there salient features that set them apart? What is the significance of the existence of different paradigms? In other words, why did I spend time in class presenting them? (4 points)

According to the former, dominant paradigm, almost all labour market players, be they workers on the supply side or firms on the demand side, make economic choices based on their own free will. Some are well-endowed while others are not, but they are not coerced when they make their choices. They are all greedy and seek to optimize, but of course they all face constraints due to scarcity. Both sides

of the market have a very atomistic structure, which means that neither a small group of workers nor a small group of firms can influence the market outcomes. The underlying ideology is that market forces generally lead to higher levels of well-being. The methodology consists of analytical models such as supply and demand that are thought to be applicable to many but not all situations. It is not quite like 'once size fits all', but there is an overarching conceptual framework that is thought to be able to explain many of the labour market outcomes that we observe.

According to the latter paradigm, labour market outcomes are determined by a finite set of entities, such as labour unions, large corporations, and governments – not by individual workers and firms. Almost any individual player is coerced. These outcomes are shaped by social mores, customs, conventions and institutions, as opposed to supply and demand forces. The forces of history, both sociological and political in nature, are thought to be more important than the forces of supply and demand. The underlying ideology is that market forces do not generally lead to higher levels of well-being. The methodology consists of descriptive realism, which means that almost every single case merits its own detailed study whose findings cannot be applied to many other situations. One size does not fit all – one size is specific to only one firm, one occupation, one narrow labour market, etc.

The significance is that two researchers can analyse the exact same labour market outcome using the same information and data, and arrive at radically different conclusions depending on the paradigm in which the conduct their analysis.

You could raise only a fraction of these points and still receive full credit. This answer is much more complete than my expectations.