Econ 211 ¾ Economics of Taxation and Social Security

Course Outline for 2003

Prepared by Professor Peter Abelson

Introduction

Welcome to *Economics of Taxation and Social Security* (*ECON 211*). This course deals with the principles and practice of public finance, with a focus on taxation, and provides an introduction to the provision of social welfare.

ECON 211 is a companion course for *Public Economics* (*ECON 210*). Students are strongly advised to take *ECON 210* either before, or concurrently with, *ECON 211*. Students should also note that *ECON 200* is a prerequisite for *ECON 211*.

Overview of the Course

I Public Finance and Taxation
1 Introduction to Public Finance
2 Incidence of Taxation
3 Taxation and Efficiency
4 Optimal Taxation and Tax Reform
5 Public Sector Borrowing and Debt

II Applications of Taxation
6 Taxation of Income
7 Corporate Taxation
8 Taxation of Consumption
9 Taxation of Wealth

III Social Welfare
10 Poverty and Inequality
11 Social Welfare Policies
12 Families, Retirement and Incapacity

13 Revision Session

Staffing

Lecturer in charge	Professor Peter Abelson	C5C 323	Tel: 9850 8512
Alternate lecturer	Dr. Pundarik Mukhopadhaya	C5C 376	Tel: 9850 6476

Course Schedule

The course consists of 12 weeks of two-hour 'lecture' sessions, a revision session, and 5 tutorials.

Lectures will be on Wednesdays from 10.05 a.m. to 11.55 a.m. in C5A 301.

In addition, there are 5 weeks of tutorials, with the first one in week two.

It will be noted that the tutorials are bunched towards the start. One reason is that it is important for students to fully understand the basic principles of taxation.

Secondly, 'Lectures' 6 to 9 will be run as combined lectures and interactive sessions. The lecturer will talk for about an hour. Students will then divide into groups of 4-5 to consider particular topics for about 20 minutes. A spokesperson for each group will then report back to the class on the group's findings.

Week	Date	Lecture Topic	Tutorial
1	29.07	Introduction to public finance	
2	06.08	Incidence of taxation	Introduction to public finance
3	13.08	Taxation and efficiency	Incidence of taxation
4	20.08	Optimal taxation and tax reform	Taxation and efficiency
5	27.08	Public sector borrowing and debt	Optimal taxation
6	03.09	Taxation of income	
7	10.09	Corporate taxation	
8	17.09	Taxation of consumption	
9	24.09	Other taxation issues	
10	15.10	Poverty and inequality	
11	22.10	Social welfare policies	
12	29.10	Families, retirement and incapacity	Social welfare policies
13	05.11	Revision session	

Course Materials

The course text is Abelson, P., 2003, *Public Economics, Principles and Practice*, Applied Economics, Sydney.

Lectures 1-5 and 10-12 are available as chapters in this text. The course text also lays out the core questions for each chapter that students are expected to be able to answer.

Lecturers will provide copies of their overheads in ERIC.

Two other strongly recommended texts are:

- Stiglitz, J.E., 2000, *Economics of the Public Sector,* W.W. Norton, New York.
- Rosen, H.S., 2002, *Public Finance*, Mcgraw Hill, New York.

Recommended further reading for each topic is given below. A copy of the starred references will be available in ERIC and Special Reserve.

Course Assessment

The assessment will consist of:	Marks
An essay to be submitted by 9.0 p.m. 22 October	30
End of semester exam	70
Total	100

The end of semester exam will be a three-hour exam. It will consist of multiple-choice questions (25 marks) and three essays (15 marks each). The exam will cover the material for the whole course. We are allowing three hours for the exam in order that students can prepare thoughtful answers without undue race against time.

Students who collaborate excessively or without acknowledgment in preparing their semester essay will lose significant marks.

In order to pass the course, students are expected to achieve an overall mark of 50 or more for the course and a mark of 35 or more for the end of semester exam.

Students should work steadily through the semester and prepare physically as well as academically for tests.

A supplementary exam may be granted in the event of documented adverse personal circumstances, such as accident, illness, etc. However, when a student has extra time to prepare while suffering only a minor ailment, a higher standard is expected in the deferred exam. Also, students who sit the regular final exam and then request a supplementary exam should know that, if a supplementary exam is granted, his or her performance in the supplementary exam may raise **or** lower the result obtained in the regular final exam.

Tutorials

The following material will be discussed at the tutorials.

In addition, students are expected to be able to describe the **key concepts** in the each chapter.

Tutorial 1 Introduction to public finance

1. Given that taxation is painful and almost always imposes economic costs, why does not the government simply print money to finance its activities?

2. Under what circumstances will the choice of the tax unit affect the amount of tax paid? Given a progressive tax structure, what are the efficiency and equity considerations that arise in assessing whether the tax unit ought to be the individual or the family?

3. Australian tax law says that business arrangements made with the dominant purpose of reducing tax are a form of tax avoidance that is illegal and will be disallowed. What kind of difficulties may arise with this kind of legislation?

4. Consider the tax structure whereby individuals earning up to $20 000 pay a marginal tax rate of 20 per cent and every dollar earned in excess of this amount is taxed at 35 per cent. If an individual earns $60 000, what is his average tax rate?

5. Consider a tax system where individuals face a constant marginal tax rate of 25 per cent for every dollar they earn that exceeds $6000. Is this tax system an example of a proportional tax structure?

6. Consider a tax system, which taxes income up to $20 000 at 15 per cent, and income that exceeds this amount at 30 per cent Amy earns a salary of $35 000, and her husband Ben earns a salary of $45 000. Calculate their individual tax liability. If the tax unit were the family, calculate the joint tax liability of Amy and Ben. Which system would minimise their tax liability? Assuming that the tax system imposed was the family unit, what equity implications arise?

7. What are main attributes of a fair tax system? What are some alternative views of equity? Do the different notions of equity involve some contradiction? If so how is this dealt with?

8. What does it mean to say that a tax system is ‘efficient’? When might the tax system fail to achieve its goal of efficiency? Does taxation always drive resources away from their best use?

Tutorial 2 Incidence of Taxation

1. Why is the statutory incidence of taxation generally irrelevant when determining the actual effects of taxation? Given statutory incidence is irrelevant what determines the incidence of a commodity tax?

2. Under perfect competition to what extent does the incidence of a commodity tax depend on whether the tax is a unit tax or an ad valorem tax? What difference will an ad valorem tax have under monopoly production?

3. Who bears the incidence of a partial payroll tax levied on firms with a labour payroll in excess of say one million dollars?

4. What is tax capitalisation and when is it likely to occur?

5. Using the Harberger general equilibrium model, assuming that there are two sectors, manufacturing and food and that manufacturing uses labour more intensively than does food, what are the implications of a tax on labour in the manufacturing sector?

6. Assume that a good is fixed in supply at 30 units. Demand for the good can be represented by the demand equation Q = 50 – 4P where P is the price per unit. If government imposes a tax on the factor equal to $4 per unit determine the following:

   (i) The price paid by consumers before and after the tax is imposed.
   (ii) The price producers receive before and after the tax is imposed.
   (iii) The amount of revenue raised as a result of the tax.

7. Suppose that demand for shirts is represented by the demand equation $Q^D = 80 - 3P$ and the supply of shirts is given by $Q^S = 40 + P$. A commodity tax of $2 per shirt is imposed on the production of shirts, determine the following:

   (i) The pre tax equilibrium price and quantity combination.
   (ii) The post tax equilibrium price and quantity combination.
   (iii) The burden of tax born by consumers and producers.

8. Suppose that an individual earns $40 000 each year, and saves a quarter of that income in the first period for consumption in the second period. If the rate of interest is 5 per cent and the tax on wages and consumption is 20 per cent determine the following:

   (i) The present value of the individual's income and consumption without taxation.
   (ii) The present value of income and consumption with tax.
   (iii) What inference can be drawn about taxation equivalence.

9. The auction house, Sothebys, traditionally charged a percentage of the sale price as a commission on both the vendor and the purchaser and was heavily criticised for double charging. Show that the sale price is the same regardless of whether Sothebys charges the whole commission to the vendor or to the purchaser or splits the commission equally or in any other proportion between the vendor and purchaser. What is the implication for commodity taxation?

10. Suppose that a government introduces a general consumption tax such as a VAT or GST. Are firms likely to pass all the tax on to consumers? When would they not do so?

Tutorial 3 Taxation and Efficiency

1. Explain the difference between the income and substitution effects of commodity taxation. Why is the excess burden of taxation associated only with the substitution effect?

2. Is it possible to quantify the excess burden? What factors determine the magnitude of the excess burden of a tax? What implication do these factors have on determining the tax strucutre?

3. What efficiency implications arise from the non-taxation of goods produced outside of the market?

4. Suppose that Craig is employed but is considering working an additional 100 hours a year, at $40 per hour. Craig faces a marginal tax rate of 40%. The ordinary supply elasticity for marginal work hours is 0.5 and the compensated supply elasticity for marginal work hours of 0.7. Determine the following

(i) the actual hours Craig will work given the tax rate and the amount of tax Craig will pay on the additional income

(ii) the excess burden of each dollar of marginal tax collected.

5. Suppose that the supply curve for beer is given by $Q^S = 20 + 4P$ and the demand for beer is given by $Q^D = 50 – 2P$. Suppose that a tax is imposed on the production of beer at $3 per unit of beer consumed. Determine the following

(i) the pre tax and post tax equilibrium price and quantity of beer

(ii) the tax burden born by the producer and consumer

(iii) the excess burden of the tax imposed on the production of beer.

6. Suppose that a chemical is fixed in supply at $Q_S = 12$, and that demand for the chemical is given by $Q_D = 50 – 6P$. The government imposes a tax of $2 per unit on the consumer. Determine the following

(i) the pre tax price paid by consumers and the amount received by producers

(ii) the post tax price paid by consumers and the amount received by producers, and the share of the tax burden borne by producers and consumers

(iii) the amount of government revenue raised by the tax

(iv) the deadweight loss of the tax.

7. The government wishes to impose a tax of $2 per unit on a commodity Z. The supply of Z is perfectly elastic, and the price elasticity of demand is -0.2. Currently, 100 units of Z are sold at a price of $4 per unit. Determine the excess burden that would arise as a result of the imposition of the tax on Z.

8. Suppose that, as a population policy, government taxes families for each child in excess of two in the family. Consequently no family has more than two children and government collects no revenue from the policy. Does this mean that the policy has no deadweight cost?

9. Does a tax on capital create an excess burden in the case where it does not affect the level of saving?

10. It is often commented that the ‘whole is not always equal to the sum of its parts.’ What implication does this statement have for analysing the total deadweight cost of (a) commodity taxation and (b) all taxes?

Tutorial 4 Optimal Taxation

1. 'Equality can always be increased by raising marginal income tax rates.' Discuss.

2. The trade off between efficiency and equity is always at the heart of all tax debates. Explain this tension with reference to the differences between proportional and progressive linear income tax schedules?

3. 'Efficiency and equity require a level playing field. Therefore both efficiency and equity imply uniform commodity taxes.' Discuss this argument.

4. Consider the case of a small country, which levies a tax on imports equal to \$2 per unit of import. Suppose that the supply of the domestic producer is given by $Q = 50 + 2P$ while domestic demand is given by $Q = 90 - 3P$. If the world price for the imported good is $P = \$3$ Determine the following

   (i) the quantity supplied by domestic producers, and the quantity supplied to domestic consumers by foreign producers
   (ii) the amount of revenue government raises from the tax on imports
   (iii) the deadweight loss that arises due to the tax on imports

5. The compensated demand curve for good A is given by $Q_A = 50 - 2P$. Supply is perfectly elastic, and the marginal cost of producing a unit of A is equal to \$10. A unit tax of \$2 per unit is imposed on good A. Suppose for a second good B, demand is given by $Q_B = 100 - 7P$, supply is perfectly elastic and marginal cost is equal to \$10. Determine the following

   (i) the change in quantity of good A consumed as a result of the tax
   (ii) the ratio of the deadweight loss to revenue raised for good A
   (iii) the quantity of good B consumed
   (iv) the tax rate to be imposed on good B that will minimise the deadweight loss

6. Some optimal tax studies find that given a choice between income and commodity taxation, the optimal solution is complete reliance on income taxation. Why should consumption be taxed as well as income in an optimal tax system?

7. Draw on public choice theory to explain why most governments fail to index income taxes. Does this have any implications for optimal tax design?

Tutorial 5 Social welfare policies

1. Outline the difference between social insurance and social assistance welfare systems. What is the guiding rationale behind each system? Which system do you think is most preferable?

2. Why is a negative income tax likely to be more expensive than a categorical income transfer system of assistance to the poor?

3. Do in-kind transfers sometimes affect the incentive to work? Why?

4. If a company supplies an employee with a company car and pays the annual operating costs to a total value of $6000 per annum, is the employee $6000 better off than without the car?

5. Suppose that government provides $500 each month to everyone with no income. Clare can work for $16 per hour. The benefit falls by $1 for every $4 that she earns. What does Clare receive in total if she works 20 hours? How many hours does she have to work to reduce her benefits to zero? How much does she then earn?

6. Using a diagram, show the income leisure trade-offs that Clare faces with and without the government grant. What kind of indifference curves would ensure that Clare participates in the labour market?

7. Should income tax rates on individuals be adjusted to allow for their family or other responsibilities? If so, on what basis should these responsibilities be determined?

8. In 2000 the McClure report on welfare reform stated that the goal of welfare reform 'is to minimise social and economic exclusion.' How do welfare programs affect labour supply decisions? What is the evidence that welfare programs affect labour supply?

9. If you were asked to estimate how a welfare program affected labour supply, how would you determine the answer?

Readings

Week 1: Introduction to public finance

Hyman, D.N., 1999, *Public Finance,* Chapter 10, Harcourt Brace, Florida.

(*) Musgrave, R.A., 1985, 'A brief history of fiscal doctrine', pp. 1-60 in *Handbook of Public Economics*, Vol.1, eds: A.J.Auerbach and M.Feldstein, North Holland, Amsterdam.

Noord, P. and C.Heady, 2001, *Surveillance of Tax Policies: A Synthesis of Findings in Economic Surveys*, Working Paper 29, Economics Department, OECD, Paris.

Stiglitz, J.E., 2000, *Economics of the Public Sector,* Chapter 17, W.W.Norton, New York.

Week 2: Taxation incidence

(*) Cordes , J.J. and H.S.Watson, 1998, 'The theory and practice of tax incidence', pp.93-134 in *Handbook of Public Finance*, eds: F.Thompson and M.T.Green, Marcel Dekkar, New York.

Harding, A. and N.Warren, 1999, *Who pays the tax burden in Australia? Estimates for 1996-97*, Discussion Paper no 39, National Centre for Social and Economic Modelling, University of Canberra.

Lambert, S., and N.Warren, 1999, *STINMOD-STATAX, A comprehensive model of the incidence of taxes and transfers in Australia*, Technical Paper no 16, National Centre for Social and Economic Modelling, University of Canberra.

Seligman, E.R.A., 1923, 'The effects of taxation', *Political Science Quarterly,* XXXVIII, 47-61.

Rosen, H, 2002, *Public Finance,* Chapter 12, McGraw Hill.

Stiglitz, J., 2000, *Economics of the Public Sector*, Chapter 18, W.W.Norton.

Week 3: Taxation and efficiency

(*) Blundell, R., 1996, 'Labour supply and taxation', pp. 107-36, in *The Economics of Tax Policy,* ed: M.P.Devereux, Oxford University Press, Oxford.

Diewert, W.E., Lawrence, D.A. and F.Thompson, 1998, 'The marginal costs of taxation and regulation', pp.135-171 in *Handbook of Public Finance*, eds: F.Thompson and M.T.Green, Marcel Dekkar, New York.

(*) Freebairn, J., 1998, 'Efficiency issues', pp. 46-70 in *The Tax Reform Debate*, ed: P.Abelson, Allen and Unwin, Sydney.

Rosen, H., 2002, *Public Finance*, Chapter 13, McGraw-Hill, New York.

Stiglitz, J., 2000, *Economics of the Public Sector*, Chapter 19, W.W.Norton, New York.

Week 4: Optimal taxation and tax reform

Benham, F., 1942, 'What is the best tax system?', *Economica*, IX, 115-26, reprinted in Jackson, P., (ed.), *The Foundations of Public Finance*, Vol. 1., 1996, 124-135, Edward Elgar, Cheltenham, UK.

Carver, T.N., 1904, 'The minimum sacrifice theory of taxation', *Political Science Quarterly*, XIX, 66-79, reprinted in Jackson, P., (ed.), *The Foundations of Public Finance*, Vol. 1., 1996, 110-123, Edward Elgar, Cheltenham, UK.

Heady, C., 1996, ‘Optimal Taxation as a Guide to Policy’, pp.21-54 in *The Economics of Tax Policy*, ed; M.P.Devereux, Oxford University Press, Oxford.

(*) Stern, N., 1987, ‘The Theory of Optimal Commodity and Income Taxation: An Introduction’, pp. 22-59 in *The Theory of Taxation for Developing Countries*, eds: D,.Newbery and N.Stern, Oxford University Press.

Rosen, H.S., 2002, *Public Finance*, Chapter 14, McGraw-Hill, New York.

(*) Stiglitz, J., 2000, *Economics of the Public Sector*, Chapters 20 and 25, W.W.Norton, New York.

Week 5: Public sector borrowing and debt

Treasury, 2002, *Budget Strategy and Outlook, 2002-03*, AGPS, Canberra.

Bailey, S.J, 2002, *Public Sector Economics*, Chapter 11, MacMillan, London.

(*) Robinson, M. (Queensland University of Technology), ‘Accrual accounting and Australian fiscal policy’, *Fiscal Studies*, forthcoming.

(*) Rosen, H.S., 2002, *Public Finance*, Chapter 18, McGraw Hill, New York.

Week 6 to 9: Applications of taxation

Readings to be provided

Week 10: Poverty and inequality

Atkinson, A.B., 1997, ‘Bringing income distribution in from the cold’, *Economic Journal*, 107, 297-321.

Australian Bureau of Statistics, 2001, *Income Distribution, Australia, 1999-00*, Cat.no.6523.0, AGPS, Canberra.

(*) Barr, N, 1998 *The Economics of the Welfare State*, Chapter 6, Oxford University Press, Oxford.

Northwood, K., Rawnsley, T. and L.Chen, 2002, ‘ Experimental Estimates of the Distribution of Household Wealth in Australia, 1994-2000’, 31st Annual Conference of Economists, Adelaide.

Oxley, H., Burniaux, J-M, Dang, T-T, and M.M.d’Ercole, 1997, ‘Income distribution and Poverty in 13 OECD Countries’, *OECD Economic Studies*, no.29, OECD, Paris.

(*) Piachaud, D., 1993’ The definition and measurement of poverty and inequality’, pp. 105-129 in N.Barr and D.Whynes,(eds:), *Current Issues in the Economics of Welfare*, MacMillan, London.

Week 11: Social welfare policies

Atkinson, A.B., 1987, ‘Income Maintenance and Social Insurance’, pp.779-908 in *Handbook of Public Economics*, Volume II, eds: A.J.Auerbach and M.Feldstein, North Holland, Amsterdam.

(*) Barr, N., 1998, *The Economics of the Welfare State*, 1998 (3rd ed.), Chapters 4,5,10,11, Oxford University Press, Oxford.

Dawkins, P., Beer, G, Harding, A., Johnson, D., and R. Scutella, 1998, ‘Towards a negative income tax system for Australia’, *Australian Economic Review*, 31, 237-57.

Moffit, R., 1992, Incentive effects of the U.S. welfare system: a review’, *Journal of Economic Literature*, XXXI, 1-61.

Papers in 'Policy Forum: The Interaction of Tax and Social Security', *Australian Economic Review*, 31, 258-89. Authors include P.Dawkins and D.Johnson, G.Beer, D.Ingles, and M.Keating and S.Lambert.

Stiglitz, J.E, 2000, *Economics of the Public Sector*, W.W.Norton, New York, Chapter 15.

(*) Whiteford, P. and G.Angenent, 2002, *The Australian system of social protection ¾ an overview*, Occasional Paper No.6, Department of Family and Community Services, Canberra.

Week 12: Families, retirement and incapacity

Atkinson, A.B., 1987, ‘Income maintenance and social insurance’, pp. 779-907 in *Handbook of Public Economics*, eds: A.J.Auerbach and M.Feldstein, Elsevier Science, North Holland.

(*) Barr, N., 1998, *The Economics of the Welfare State*, Chapters 8-10, Oxford University Press, Oxford.

(*) Bateman, H., Kingston, G. and J.Piggott, 2001, *Forced Saving, Mandating Private Retirement Incomes,* Cambridge University Press, Cambridge, especially Chapters 1 and 6 and Appendix 1

Haveman, R. and B.Wolfe, 2000, ‘The economics of disability and disability policy’, pp. 995-1051 in *Handbook of Health Economics*, eds: A.J.Culyer and J.P. Newhouse, Elsevier Science, North Holland.

(*) Krueger, A.N and B.D.Meyer, 2002, *Labour Supply Effects of Social Insurance*, Working Paper 9014, NBER, Washington.

Treasury, 2002, *Intergenerational Report*, 2002-03, Budget Paper No. 5, AGPS, Canberra.

Whiteford, P. and G.Angenent, 2002, *The Australian system of social protection-an overview*, Occasional Paper No.6, Department of Family and Community Services, Canberra.