

I. Introduction: Self Interest, Insurance, and Redistribution

- A. Within democracies there are a wide variety of programs that take money from citizens through taxes of various kinds and “give” it to others.
- i. In some cases, this occurs simply as part of the production of desired government services.
 - a. Providing public education requires hiring teachers and administrators, constructing or renting buildings, and purchasing books and other class room materials.
 - b. The sellers of all of those services and products receive money collected from taxpayers as compensation for services.
 - ii. Working for the government provides economic reasons for employers and employees to favor broader service levels, even if the salaries and prices paid are simply market ones.
 - a. Their voting and lobbying incentives are similar to Bureaucrats in a Niskanen model.
 - b. However, their payments are simply market transactions.
- B. In other cases, the transfers may be indirect, as regulations of various sorts favor some firms over others or some individuals over others.
- i. A patent may encourage innovation, but it often also tends to reduce entry into new product areas as producers purchase patents to block entry by other firms. Such laws clearly favor patent holders over others.
 - ii. Some licensing laws make entry into markets such as real estate, law, and medicine difficult--both within a state and across state lines.
 - (Licenses for these fields require new exams to be passed when trying to enter a market in another state.)
 - Such laws favor license holders over others, and “in-staters” over “out of staters.”
 - iii. In some cases, the right to enter into markets may be auctioned off by town governments as a revenue source--which tends to favor the winners of such contests over the losers. (Many towns have monopoly providers of garbage, cable tv, and/or electricity providers.)
- iv. Again those benefiting from such regulations have incentives to lobby and vote in favor of them.
 - a. However, in this case their higher than competitive incomes (rents) are not simply ordinary market transactions.
 - b. They are consequences of government regulations, which may or may not provide benefits to the typical voter.
- C. In other still other cases, the persons receiving payments are not service providers nor are they receiving “rents” in the sense of super-normal profits.
- i. For example, some particular group of “disadvantaged” persons may receive cash payments, subsidies, or the right to use particular government services.
 - a. Among these, one may include the unemployed and retired persons.
 - b. One may also include those who are poor enough to qualify for various “income security” programs (welfare, food stamps ...) special programs such as subsidized medicine and housing.
 - ii. Other recipients of cash or “in kind” transfers may qualify for them because of physical disabilities or past service--as with a wide variety of veteran’s benefit programs.
- D. Such programs are often called “transfer programs” and/or social insurance programs.
- i. These are the programs focused on in the next two lectures.
 - ii. One of the question addressed in these lectures is the extent to which such programs should be thought of as transfer programs or social insurance programs (or perhaps both).
 - a. The answer to this question sheds light on why the programs exist, and their magnitude.
 - b. It also has implications about the normative appeal of such programs.

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- E. The politics and economics of transfer programs differ from that of social insurance and public annuity programs.
- i. The politics of a transfer program may be motivated by recipients--as when those receiving welfare or rent-subsidies lobby a local or national government to create and/or extend such programs.
 - a. The demo-grant program of the famous Meltzer and Richards (1981) paper regards the entire enterprise of government as transfers, and the equilibrium size of government to be determined by deadweight losses generated by taxation.
 - b. The Becker (1983) paper has a similar implication insofar as interest groups compete with each other for direct transfers and indirect transfers accomplished through privileges and entry barriers of various kinds.
 - c. These models regard transfers to be the results of rent seeking. They are “extractive” in the sense that they take money from taxpayers and give it to themselves.
 - ii. Alternatively, the political support for transfers might be based on desires of the “givers” or donors (taxpayers).
 - a. For example, if voters are altruistic or utilitarians, they will voluntarily make transfer to poor persons as a method of making disadvantaged persons better off.
 - b. The Hochman and Rodgers (1969) piece shows how and why altruists may vote to create income redistribution programs financed by progressive taxation.
 - c. A similar argument is sometimes made among contractarians, who regard redistributive programs as part of a social contract.
 - For example, Rawls (1971 / 1999) argues that people who were designing a society from behind a “veil of ignorance” would adopt programs that maximize the welfare of the least advantaged.
 - Rawls reaches that conclusion by assuming rather strong risk aversion, but many contractarians would argue that transfer programs are necessary prerequisites for reaching agreements that characterize contract-based societies.
- (Although in some cases, it is social insurance rather than transfers that help generate the agreements.)
- d. Benebou (2000) suggests that such programs may actually increase, rather than reduce, economic growth if there are imperfections in credit and insurance markets.
- F. Social Insurance programs are, in principle, universal programs for which all voter-taxpayers gain some insurance benefit--e.g. reductions in their downside risks.
- i. This explanation differs from the transfer arguments in that shifts of money from taxpayers are not shifts from rich to poor as in the “giver” motivated models of redistribution nor are they simply efforts by the “takers” to maximize their take, as with extractive models of transfer programs.
 - ii. In an insurance model, the “transfers” take place from all premium payers (often all tax payers) to those directly damaged by some covered event: being unemployed, harmed by a natural disaster, or sick--rather than from the rich to the poor.
 - a. Such programs do not aim to make the distribution of income more equal, but rather pool risks in various ways.
 - b. From an insurance perspective, social security programs are state provided annuities that provide support for persons who live longer or shorter lives for reasons that are not entirely predictable.
 - iii. Voters demand government-provided insurance, because they can get it at a better price through the public sector than from the private sector, other things being equal.
- G. The politics of social insurance programs combines general interests in risk pooling with narrower recipient interests, social philosophy, and altruism.
- i. A super majority of voters may get a “good deal” on insurance from the state, because of superior risk pooling and reduced marketing costs.

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- ii. However some voters will support such insurance, because explicit or implicit subsidies (discounts) that they receive.
 - a. The tax price for many voters may be below the cost of their insurance.
 - b. For others, the tax price may be higher than the cost of their insurance.
 - iii. The degree of redistribution in social insurance programs varies with the tax systems used to finance them and also the extent to which benefits are linked to income.
- H. Overall, it is also possible that some redistributive programs are extractive, others altruistic, and other's instances of social insurance.
- i. And, it is possible that voters differ in their assessments of particular programs.
 - ii. What is social insurance to some may be extractive to others etc.
- I. We now go through some of the election-based models of transfers and social insurance in more detail, beginning with transfer models.

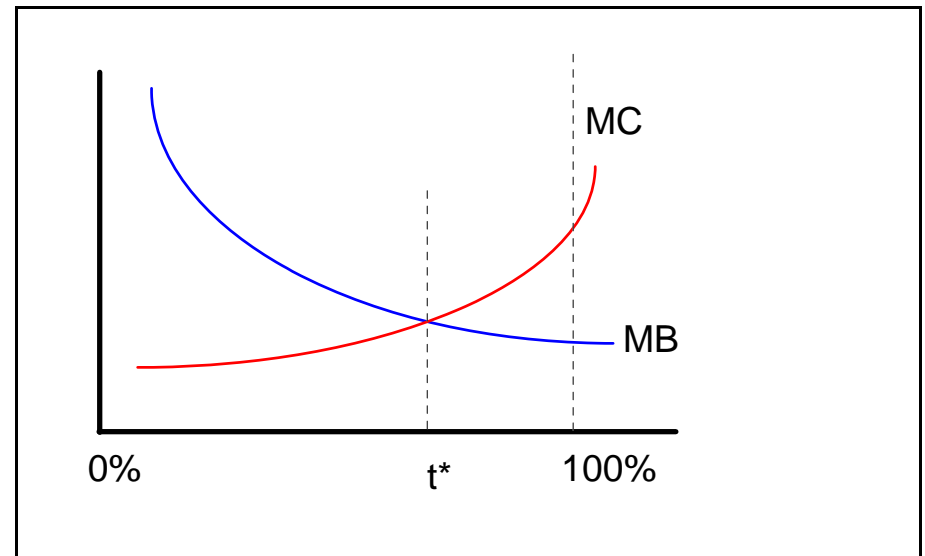
II. A Majoritarian “Extractive” Model of Transfers

- A. For the purposes of this section, we will focus on transfers from rich to poor and use the Metlzer and Richard model.
- B. Their model assumes that voters maximize their income in a system that for some reason uses proportional income tax to fund a demogrant program (a program that gives all taxpayers the same grant).
- C. They assume that income varies with tax rates, because of leisure labor trade offs and that there is a balanced budget rule.
 - i. A slightly simplified form of their assumptions yields:
 - ii. $Y = \sum y_i(t) = nY^A(t)$ (where y_i is personal income, Y is national income, $Y^A(t)$ is average income, and n is the number of voter taxpayers.
 - iii. The balanced budget assumption implies that $tY = nG$ where there are n tax payers, each receiving grant G .

- a. (Note that this constraint implies and can also be written as: $tY^A(t) = G$ or $t = G/Y^A(t)$.)
- b. Individual consumption is $C_i = (1-t)Y_i + G$, where $Y_i = y_i(t)$ and individual utility is $U = u(C_i)$.

D. Substituting the constraints into the voter's utility function and differentiating with respect to G allows a voter's preferred demogrant and tax to be characterized.

- i. $U = u[(1-t)y_i(t) + tY^A(t)]$
- ii. Differentiating with respect to t allows t^* to be characterized:
- iii. $(dU/dC) [-y_i(t) + (1-t) dy_i/dt + Y^A + t dY^A/dt] = 0$
- iv. G^* is then $G^* = t^*Y^A(t^*)$



E. Note that the first order condition that characterizes t^* can be written as: $y_i(t) - (1-t) dy_i/dt = Y^A + t dY^A/dt$

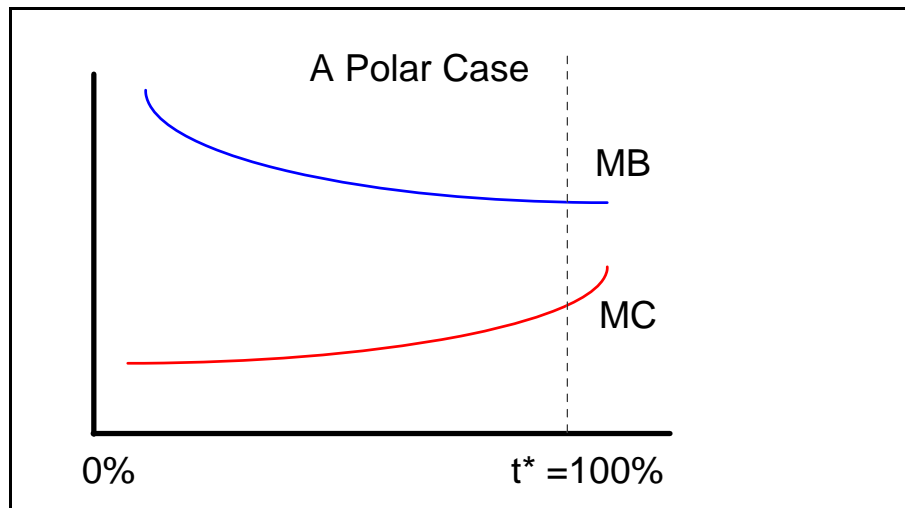
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- i. The left side is the marginal cost of higher taxes (reduced aftertax income) and the right side is the marginal benefit of taxes (higher demo grants)
 - ii. MC is rising in taxes because dy_i/dt is less than zero, while MB is falling because dY^A/dt is less than zero.
 - iii. These deadweight loss terms are the reason why the Melzer-Richards model has an equilibrium.
 - iv. The equilibrium size of government is that determined by the median voter's ideal t^* and G^* combination.
- F. To see this, suppose that both terms were zero--that is that there was no reduction in personal or national income caused by higher tax rates.
- i. In that case the first order condition becomes:
 - ii. $y_i(t) = Y^A(t)$ which can be satisfied only for the average voter!
 - iii. For any other voter their income will be above or below average income, which implies that their marginal cost are greater than or less than their marginal benefits from higher taxes.
 - iv. These voters thus prefer "corner solutions" in taxation, either a tax equal to zero (for $y > Y^A$) or a tax equal to 100% (for $y < Y^A$).
- G. It also bears noting that corner solutions may also occur when there is a deadweight loss associated with taxation if those losses are "small" at the margin.

- H. The polar cases imply that egalitarian states will tend to emerge whenever the median voter has less than average income and the deadweight loss of taxation is "small."
- Since we do not see any transfer programs that look like this, we can either conclude that the model is basically wrong or incomplete, or that voters believe there to be a relatively large deadweight loss from high taxes.

III. Altruistic Voters and Redistribution.

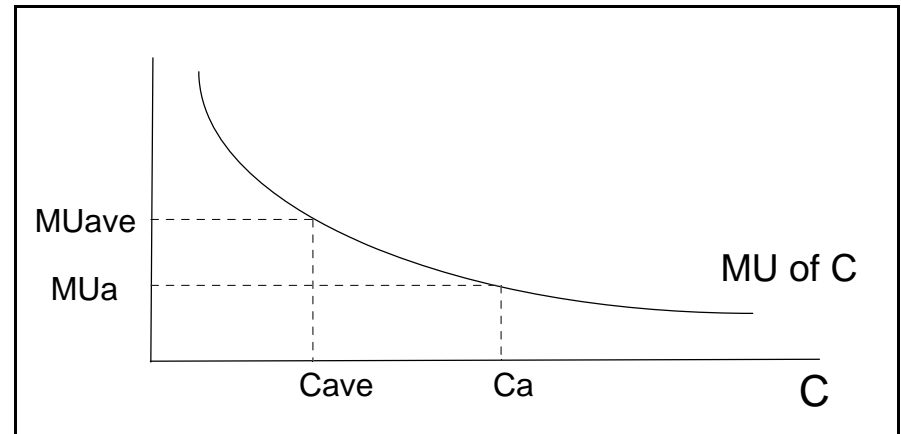
- A. The altruistic rationale for transfers and social insurance is older than the Meltzer Richards model (Hochman and Rodgers 1969), but the logic of models with Altruistic voters can be developed from their framework.
- B. Altruism in an economic context is a form of "self interest" with interdependent utility functions. An altruist's utility increases as other people become better off and falls as other persons become worse off, holding other things constant.
- i. Some people make a distinction between "pure altruists" who regard all utility people equally--so that their utility function looks like an Benthamite social welfare function.
 - ii. and "impure altruists" who care more about themselves than others, but are not indifferent about the welfare (utility or consumption levels) of others.
- C. Altruists of either sort will support charitable giving in both the private and public sector, but it turns out that the cost of giving in the public sector is lower. The average tax payer pays for only $1/N$ of the gift given to disadvantaged (poor) persons.
- D. To see this, consider an impure altruist's optimal gift giving behavior.
- i. Let $U_i = u(C_i) + z \sum_j u(C_j)$ where C_i is individual i 's own consumption and z is a "caring" parameter, which we'll assume to be less than one.



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- ii. Suppose that we focus just on the giving choice and that “Al” has income Y^a to distribute between her own consumption, C^a , and gifts to all others.
- iii. To simplify the problem, assume that the same gift is given to all “m” persons on i’s “caring list.”
 - This allows Al’s budget constraint to be written as $Y^a = C^a + mG$, where G is the gift given.
 - Note that C_i can be written as: $C^a = Y^a - mG$
 - Suppose that Al knows the income level (or pre gift consumption level of the persons on her caring list (Y_1, Y_2, \dots, Y_m))
- iv. Substituting the constraint into the objective function (U_i), yields:
 - $U^a = u(Y^a - mG) + z \sum_j u(Y_j + G)$
- v. Differentiating with respect to G produces the first order condition that characterizes Al’s optimal gift.
 -
 - a. $U^a_C (-m) + z \sum_j U_C = 0$
 - or
 - b. $mU^a_C = (z) \sum_j U_C$
 - or
 - c. $U^a_C = (z/m) \sum_j U_C$
 -
- vi. Written in the “b” form, the first order condition implies that the impure altruists will give (uniform) gifts such that her marginal cost (mU_C) equals the weighted sum of the marginal benefits conferred on those receiving the gifts ($(z) \sum_j U_C$)
- vii. Written in the “c” form, the first order condition implies that the impure altruist will set his or her own marginal utility from consumption equal to “z” times the average marginal utility of the recipients.

- a. Note that $z < 1$ and $m > 1$ implies that Al’s own consumption will be higher than that of the average gift receiver because Al’s marginal utility of consumption will be below that of the average gift recipient.
- b. (Al’s lower than average marginal utility implies more consumption than average, given diminishing marginal utility.)
- c. Note also that when $z = 1$, Al is a pure altruist, in which case Al’s gifts will cause her own consumption to be the same as the average gift recipient’s.
- d. [Note also that the mathematics cannot rule out “negative” gifts in cases in which the average person on Al’s list consumes more than she does. Explain Why.]
- e. [Is there a reason to assume that G is bounded at 0 in this case? Explain why.]



- E. Now consider Al’s situation in which she can choose the demogrant level for a group that will pay taxes to pay for that gift.
 - i. In this case, Al’s consumption is $C_a = Y_a (1-t) + G$
 - and that of the persons on her list is $C_j = Y_j(1-t) + G$
 - Given an balanced budget constraint, $t \sum Y = mG$, where $\sum Y$ is the total taxable income for the entire group, including Al.
 - This implies that $t = G/Y^E$, where Y^E is average income.

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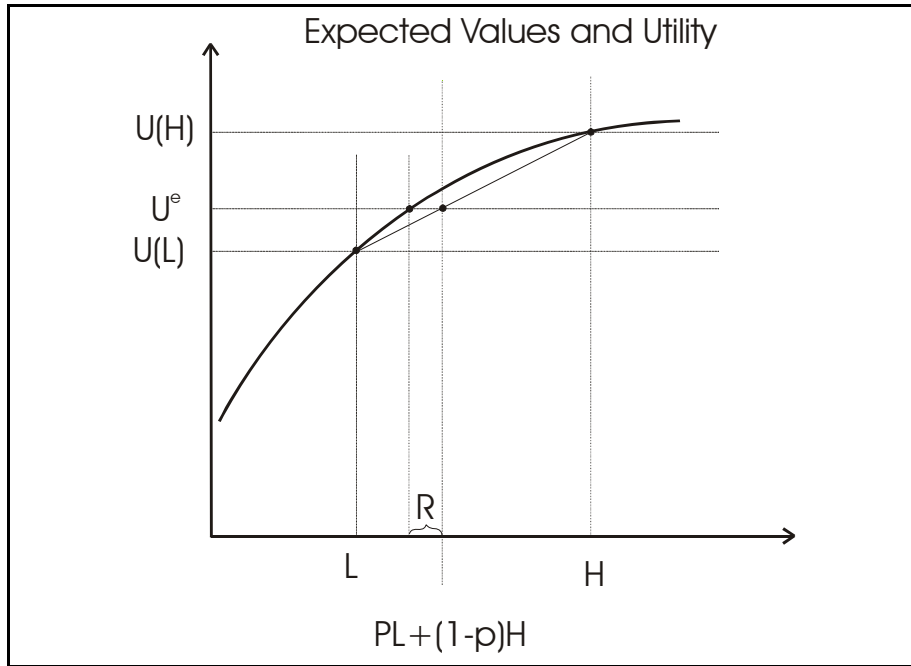
- a. Substituting the fiscal constraints into the AI's utility yields:
- - $U^a = u[Y^a (1 - G/Y^E) + G] + z \sum_j u [Y_j (1 - G/Y^E) + G]$
 -
- b. Differentiating with respect to G yields a first order condition that characterizes AI's preferred government gift (demogrant) level.
- - $U^a_c (-Y^a / Y^E) + 1) + z \sum_j U_c(-Y_j / Y^E) + 1) = 0$
 - or
 - $U^a_c (Y^a / Y^E) - 1) = z \sum_j U_c(-Y_j / Y^E) + 1)$
 - or
 - $U^a_c = z \sum_j U_c(-Y_j / Y^E) + 1) / [(Y^a / Y^E) - 1]$
 - or
 - $U^a_c = U^a_c = z \sum_j U_c(-Y_j + Y^E) / [Y^a - Y^E]$
 -
- ii. Note that for $Y^a < Y^E$, the first order condition cannot be satisfied, since the left hand side is positive and the right hand side is negative.
- a. This is the corner solution result, as we found in the non-altruistic Meltzer and Richards case developed in previous lectures.
- Note that for $Y^a > Y^E$, there may not be a corner solution at zero as I often is normally the case in the Metzger Richards model for such persons, since both sides are positive in his case.
- b. What might be called a limousine liberal or limousine altruist will favor some redistribution, rather than the corner solution with $G = 0$, as was the case in the narrow self interest model.
- [In effect the wealthy altruist's MB are larger in than those of the entirely self-centered voter.]
- iii. Whether AI prefers that more giving takes place in a public program than in her own personal program if she has above average income depends on whether:
- a. $U_c^E > \sum_j U_c(-Y_j + Y^E) / [Y^a - Y^E]$
- which would clearly be the case if
 - $[Y^a - Y^E] / (Y^E - Y_j) > m$ for all j 's
 - which is clearly not always the case.
- b. Other cases also exist where more is redistributed by limousine liberals in a public sector program than in their own program, but it is not always the case.
- iv. Notice, however, that there are now voters with above average incomes that "fill out" the space of voter preferences over optimal redistribution. I
- F. If a limousine liberal is the median voter, he or she would prefer intermediate levels of redistribution even if a tax system without deadweight losses were employed.

IV. Risk Pooling and the Demand for Social Insurance

- A. This section analyzes (a) the possibility that many of the so called transfer programs may actually be government provide income insurance or other similar insurance programs, with the goal of pooling risks rather than redistribution per se.
- i. To see whether this might be a plausible explanation of various governmental programs, a model of a voter's demand for an income security program is developed below.
- ii. The model demonstrates that individual interests in social insurance varies with their risk aversion and with the risk faced in their ordinary lives. A wide range of possible income security programs may, thus, be voluntarily joined, according to circumstance and preferences of individuals. And, these programs may be privately or publicly provided.
- iii. Part 5 summarizes the results and suggests extensions.

iv. Overall, the analysis suggests that differences in risk aversion and the perception of economic and political risks may account for a good deal of the international variation in income security plans.

- (The model below is based on Congleton CPE 2007.



A. Consider a setting in which a debilitating disease randomly strikes people and saps their ability to work and play.

- i. To simplify the analysis, assume that only these two states of health are possible and that the probability of being sick is P and being healthy is $1-P$.
 - a. When healthy, a typical person, Alle, has H hours to allocate between work, W , and leisure, L ,
 - b. and that when sick, Alle has only S hours to allocate between work and leisure.

- ii. Work produces good Y , which is desired for its own sake, with $Y_i = \omega W_i$, where ω is the marginal and average product of labor.
- iii. The individual chooses his or her work week, according to his or her health, to maximize a strictly concave utility function defined over good Y , which will be referred to as income, and leisure, $U = u(Y_i, L_i)$.

iv. In the absence of an income insurance program, when Alle, is healthy, she (or he) maximizes:

$$\bullet U^{\text{woH}} = u(\omega W_i, H - W_i) \quad (1)$$

- and when Alle is unhealthy, she maximizes:

$$\bullet U^{\text{woS}} = u(\omega W_i, S - W_i) \quad (2)$$

v. In either case, Alle's work day will satisfy similar first order conditions:

$$\bullet U_Y \omega - U_L = 0 \quad (3)$$

vi. Alle works at the level that sets the marginal utility of the income produced by her (or his) work equal to the marginal cost of that work in terms of the reduced utility from leisure.

vii. The implicit function theorem implies that Alle's work day can be characterized as:

$$\bullet W_i^* = w(T, \omega) \quad (4)$$

viii. The work day varies with Alle's marginal product (wage rate) and state of health $T = H$ or $T = S$, as does her income, which varies from $\omega w(H, \omega)$ to $\omega w(S, \omega)$ according to Alle's health.

B. Now consider the case in which Alle can join an income security club that collects a fraction of the output produced by each member and returns it on a uniform basis to club members, guaranteeing each member G units of good Y .

- i. In this case, Alle's net income is $Y = (1-t) \omega W_i + G$.

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ii. If all club receipts are used to fund the guarantee, the income guarantee is $G = (t\omega \Sigma W_j)/N$, when there are N members of the income security club.

iii. Given such a program, Alle now maximizes

- $U^H = U((1-t)\omega W_i + G, H - W_i)$ (5)

- when healthy and

- $U^S = U((1-t)\omega W_i + G, S - W_i)$ (6)

- when sick, which in either case requires a work day that satisfies

- $U_Y [(1-t)\omega + t\omega/N] - U_L = 0 \equiv Z$ (7)

i. Equation 7 is very similar to equation 3, except that now Alle equates the marginal utility of net income produced by working (which is now a combination of direct effects of club dues and effects of the club's income security guarantee) to the marginal opportunity cost of the time spent working.

ii. The implicit function describing Alle's work day becomes:

- $W_i^* = w(T, \omega, t, N)$ (8)

a. Note that equation 8 is the same as equation 4 if the club dues and benefits equal zero.

b. T again represents the individual's state of health and takes the value H if he or she is healthy, and S if he or she is sick.

c. Note that Alle works more when she is healthy than sick and works less when she is in a social insurance program than when she is not.

- $W_i^*_{T} = [U_{YT} [(1-t)\omega + t\omega/N] - U_{LL}] / -[Z_w] < 0$ (10)

- $W_i^*_{t} = [U_{YY} (W\omega + \omega \Sigma W_j/N) ((1-t)\omega + t\omega/N) +$

$$U_Y(-\omega + \omega/N) - U_{LY} (W\omega + \omega \Sigma W_j/N)] / -[Z_w] < 0$$

(11)

- where

- $Z_w = U_{YY} [(1-t)\omega + t\omega/N]^2 - 2 U_Y [(1-t)\omega + t\omega/N] - U_{LL} < 0$

iii. Strict concavity of the utility function along with the assumed club funding structures (proportional taxation and demogrants) allows both derivatives to be signed unambiguously.

C. This result shows, as critics have long maintained, the existence of a social insurance program reduces the extent of labor supplied to market activities and thereby reduces expected income.

i. There is an unavoidable "moral hazard" problem associated with income security programs.

ii. Nonetheless, an income security program may increase expected utility for those eligible to join.

A. Alle's reservation price for joining an income security club is the price, M , which sets the expected value of lifetime membership in the club equal to that of non-membership.

i. That is to say, M , makes Alle indifferent between having an income guarantee and not having one.

ii. Individuals will join an income security club if their reservation price is greater than zero. Alle's reservation price, M , satisfies:

- $(1-P) U^{H*} + P U^{S*} = (1-P)U^{woH*} + P U^{woS*}$

- or substituting,

- $(1-P) [U((1-t)\omega W_i^* + G - M, H - W_i^*)] + P [U((1-t)\omega W_i^* + G - M, S - W_i^*)] - (1-P) [U(\omega W_i, H - W_i)] - P [U(\omega W_i, S - W_i)] = 0 \equiv \ell$ (12)

iii. The implicit function theorem allows M to be written as a function of the other parameters of Alle's decision problems:⁶

⁶ Recall that $G = (t\omega \Sigma W_j)/N$, which, when N is large, can be written as $t\omega [(1-P)w(H, \omega, t, N) + Pw(S, \omega, t, N)]$. The income guarantee is the average amount of tax revenue collected.

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• $M = m(t, P, S, H, \omega, N)$ (13)

i. Three derivatives of Alle's reservation price for income insurance are of special interest for the purposes of this lecture: first, that with respect to the probability of being sick; second, that with respect to the severity of the illness; and third, that with respect to the size of the income guarantee, which can be represented with the club's "tax" rate t over the range of interest.

• $M_P = [\partial_P] / [-\partial_M] = [(U^{woH} - U^H) + (U^S - U^{woS})] / [-\partial_M] > 0$ (14.1)

• $M_S = [\partial_S] / [-\partial_M] = [P(U^S_L - U^{woS}_L)] / [-\partial_M] < 0$ (14.2)

• $M_t = [\partial_t] / [-\partial_M] = [(1-P)U^H_Y(\omega W^{Ave} - \omega W_i^{H*}) + P(U^S_Y(\omega W^{Ave} - \omega W_i^{S*}))] / [-\partial_M] < 0$ (14.3)

• where $[-\partial_M] = (1-P)U^H_Y + PU^S_Y > 0$

- ii. Alle's willingness to pay for club membership increases as the probability of being sick increases,
- iii. but decreases as the loss from illness declines ($H-S$) and may increase or decrease with the extent of the social insurance provided according to whether the higher guarantee is more valuable than the higher dues that must be paid.⁷
- iv. (Recall that the tax or club dues rate t must increase to pay for higher income security payments.)

A. Alle's ideal income security club of interest is the one that maximizes her reservation price.

- i. The optimal insurance program sets the club dues or "tax rate," t^* , so that equation 14.3 equals zero.

- ii. Alle's reservation price rises as t approaches t^* , thus, M^* increases with increases in t if $t < t^*$ and it falls with increases in t for $t > t^*$. It bears noting that corner solutions are possible for t according to the degree of perceived income risk and the extent to which Alle is risk averse.
- iii. Note that the first term of equation 14.3 is negative and the second is positive.
- iv. Alle gains from the program when she is sick, but loses when she is healthy.
- v. Only if $[(1-P)U^H_Y(\omega W^{Ave} - \omega W_i^{H*}) + P(U^S_Y(\omega W^{Ave} - \omega W_i^{S*}))] > 0$ over the entire feasible range of t , Alle will prefer a program with complete income security to one that with modest benefits.⁸
- vi. This tends to be the case if the marginal utility of income declines very rapidly or the income losses are very large and club members have a very inelastic supply of labor function (e.g., $W_i^{Ave} - W_i^{Ave/wo}$ small), the benefits of insurance exceed its costs.
- vii. On the other hand, it is also possible that $[(1-P)U^H_Y(\omega W^{Ave} - \omega W_i^{H*}) + P(U^S_Y(\omega W^{Ave} - \omega W_i^{S*}))] < 0$ over the entire range of interest; in which case, Alle will never voluntarily join an income security club.
- viii. Such would be the case if the supply of labor is very elastic, the losses from illness are minor, and Alle is not very risk averse.

D. The point of this analysis is not to suggest that a voluntary income security program is necessarily large or small, but to demonstrate that *voluntary* social insurance clubs are possible and that the insurance demanded *is not necessarily trivial*.

- i. A wide range of income security clubs may advance an individual's interest in income stability according to his or her risk aversion and assessment of the objective risks faced.

⁷ Note that each component of equation 12 is a utility function optimized with respect to time spent working. Thus, the envelop theorem implies that all partial derivatives with respect to W^* can be ignored (e. g., net out to zero).

⁸ Note, that risk aversion may partly explain the emergence of salary-based compensation schemes in private industry, more than piece rate-based schemes, in which salaries are not affected by sick days below some threshold.

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- ii. Historically, many individuals have joined private “friendly clubs” or belonged to church-based organizations, guilds, and labor unions that provided income security among other services.
- E. The fact that individuals may voluntarily join income security clubs suggests that a “liberal” (libertarian) welfare state is conceptually possible, insofar as governments can be regarded as clubs.
- i. The local governments of colonial America and those of the early American West clearly can be considered to be clubs.
 - ii. And, insofar as individual and families are free to live or not live in particular communities, the suburban local governments of modern metropolitan areas are also more or less clubs, as implied by the assumptions and results of the Tiebout (1956)-based literature on local public finance.
 - iii. Prior to the 20th century, income security was often publicly provided by such local governments.
 - iv. (Indeed, this is still substantially the case, at least institutionally, in the United States and Scandinavian countries, although the national governments often mandate minimal income guarantees).
- F. A modern nation state, however, differs from local governments and private clubs in many respects.
- i. Individuals do not often freely join national clubs, because the entry and exit costs are so high.
 - a. Rather "membership" in nations tends to be determined, for the most part, by the location of one's parents at the time of birth.
 - b. Exit is possible, but relocation to other nation states is difficult and heavily regulated.
 - ii. It is largely for these reasons that there is less movement of people across national boundaries than among municipalities (and other clubs) within a given country.
 - iii. Club logic alone cannot justify national income security programs, because affiliation with national governments tends to be less voluntary than affiliation with private clubs, firms, or local governments.
- G. Overall, the extent to which the various programs of a welfare state should be regarded as transfers or social insurance is an empirical issue.
- It is quite possible that support for existing programs combine “extractive” and “insurance” aspects, rather than being generated by a single factor such as the ones discussed above: transfers, redistribution, or social insurance.
- V. Applications: Public Pension and Medical Insurance Systems: How do they work? What do they Cost? Are they Sustainable?**
- A. Public pension programs and medical insurance arose in Europe at about the same time as universal male suffrage did, in the late nineteenth and early twentieth centuries.
- B. In the US, this occurred well after (essentially) universal male suffrage occurred--more or less in the 1930s (social security) and 1960s (medicare).
- C. Nonetheless, most social insurance programs were relatively small until after WWII when they began growing at rapid rates.
- D. In Europe, the size of the social insurance programs as a fraction of GNP stopped growing in the early 1990s.
- E. In the US, the medical component has been the fastest growing part of social insurance programs for the past two decades.
- i. In the US, the medical component is growing at an unsustainable rate. The two major programs (medicare and medicaid) will consume all of GNP in a few decades at current growth rates.
 - ii. Public pensions (social security) are also growing somewhat and in cash flow deficit (eg payouts are greater than collected from payroll taxes).
 - Note that public pension programs are analogous to annuity programs sold by private insurance companies, rather than an income security programs per se.

- Public pension programs like social security pool risks associated with random longevity. Explain the nature of those risks.

iii. We will take a closer look at these programs later in the course.

Figure 1:
Social Insurance as a Fraction of GDP
1960-2000

