Income Redistribution and Anti-Poverty Programs

Inequality, reasons for intervention, and social welfare programs
Inequality and Poverty

• Income redistribution is justified on a number of different grounds
  – Some want to lessen income inequality (gap between rich and poor)
    • Arguments for equalizing income or wealth are generally based on fairness
    • But some argue it is unfair to take from those who work hard and give to those who don’t
      – Recall the parable of the Ant and the Grasshopper
  – Others are more concerned about eliminating or reducing poverty.
    • These people would say it’s not inequality per se that’s the problem but everybody should have enough to live reasonably.
  – Worth considering some data on both of these issues.
Inequality and Poverty

• Some background on income inequality in Canada
  – One way to think about inequality is to line people up by income (rank them) and see how much income each quintile (fifth) of the population earns
  – e.g. what fraction of income does the poorest twenty percent earn? The richest twenty percent?
  – If there was perfect equality, each quintile would earn 20% (1/5) of the total income.
Distribution of Income in Canada

Percent of Total Income Earned by Income Quintile (Canada, 2003)
How has inequality changed over time in Canada?

• If we wanted to parse things more finely, we could break people out by “vingtiles” (20 categories, each with 5% of population)

• Graph on the following slide shows how income changed by vingtile, from 1990 to 2000
Chart 1: Percent Change in Total Family Income by Vingtile\(^a\), 1990-2000, Census Data

Note: \(^a\)Ordering families by their total family income (after transfer, before taxes), from the bottom vingtile (the 5% of families with the lowest total family income) to the top.

Source: Statistics Canada, Census
Inequality

• Inequality has increased in Canada in spite of increased redistribution by government
  – Could suggest redistribution is ineffective or even makes things worse (disrupting work incentives)
  – Or could suggest that in absence of redistribution, inequality would have become even worse.

• Possible factors driving inequality
  – Globalization
  – Increasing returns to higher education (skills-biased technological change; greater demand for multitasking by workers)
  – Welfare cutbacks since 1990s
Issues in Measuring Inequality

• Usually use annual income data; but this ignores lifecycle issues
  – Young, old tend to earn less than middle-aged people
  – This year’s income may differ a lot from “permanent income” (avg. income over lifecycle); think of your own case
  – Certain types of income aren’t counted
  – Doesn’t take into account household size
    • Single person household in 2nd vingtile may be better off than 6-person household in 6th v’tile

• Arguably, consumption matters more than income.
Poverty

• The “Low Income Cut-Off line” (LICO) is often referred to as the Poverty line in Canada.
  http://www.statcan.ca/english/research/13F0027XIE/13F0027XIE.htm
  – Define income level at which families spend 55% or more of income on food, shelter, clothing
  – Varies by family size and whether family lives in urban or rural region
## Low income after Tax

Persons in low income after tax, by number

(1999 to 2003)

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
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<tbody>
<tr>
<td></td>
<td>numbers in thousands</td>
<td></td>
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<tr>
<td>All persons</td>
<td>3,851</td>
<td>3,741</td>
<td>3,394</td>
<td>3,536</td>
<td>3,552</td>
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<tr>
<td>Under 18 years of age</td>
<td>1,001</td>
<td>955</td>
<td>835</td>
<td>839</td>
<td>843</td>
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<tr>
<td>18 to 64</td>
<td>2,572</td>
<td>2,511</td>
<td>2,313</td>
<td>2,413</td>
<td>2,450</td>
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<tr>
<td>65 and over</td>
<td>277</td>
<td>275</td>
<td>246</td>
<td>284</td>
<td>258</td>
</tr>
<tr>
<td>Males</td>
<td>1,817</td>
<td>1,686</td>
<td>1,545</td>
<td>1,628</td>
<td>1,674</td>
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<tr>
<td>Under 18 years of age</td>
<td>522</td>
<td>469</td>
<td>418</td>
<td>448</td>
<td>441</td>
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<tr>
<td>18 to 64</td>
<td>1,223</td>
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<td>1,052</td>
<td>1,098</td>
<td>1,159</td>
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<tr>
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<td>73</td>
<td>75</td>
<td>81</td>
<td>74</td>
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<tr>
<td>Females</td>
<td>2,033</td>
<td>2,055</td>
<td>1,849</td>
<td>1,908</td>
<td>1,878</td>
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<tr>
<td>Under 18 years of age</td>
<td>480</td>
<td>485</td>
<td>416</td>
<td>391</td>
<td>402</td>
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<tr>
<td>18 to 64</td>
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<td>1,367</td>
<td>1,262</td>
<td>1,314</td>
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<td>205</td>
<td>202</td>
<td>170</td>
<td>203</td>
<td>184</td>
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</table>
Problem with Poverty Line Measure

• People disagree over how poverty should be defined.

• Also, severity of poverty difficult to ascertain from a raw count of families below LICO
  – A family of three with $3000 income looks the same as one with $19,215 income (i.e. both are below the LICO);
  – Clearly first family is in much worse shape
Why Redistribute Income?

• There is substantial debate over whether/how much income redistribution is a good idea
  – Redistribution often involves policy that could distort behavior--may involve reducing social welfare (focusing on narrow efficiency criterion)
  – Inequality, and especially poverty, are disturbing to some people==>implies that redistribution could make society better off (in other words, maybe more than narrow efficiency matters)
It has long been quest of philosophers to answer such questions

• Utilitarians argued that income should be redistributed to maximize overall happiness.
  – Problem: Requires interpersonal comparisons of happiness (impossible)

• Rawls (20th century philosopher) argued we should ask what distribution of income people would choose before they were born (veil of ignorance)
  – Most would want equality, because odds are high you’ll be born into poverty
Are There Efficiency Arguments for Redistribution?

• In general, economists consider redistribution to be inefficient
  – Distorts incentives to work, etc.

• But can think of cases where redistribution could redress inefficiency
  – Externalities associated with poverty
    • Crime, political instability
  – Equity in income distribution may be a public good
    • People may have a taste for equality (though others might have taste for inequality!)
Efficiency Arguments for Redistribution

• Arguably there is a missing market for income insurance
  – For some, poverty is caused by a bit of bad luck (lose a job, get sick, etc.)
  – Can’t buy insurance against such outcomes (due to adverse selection, moral hazard)
  – Social safety net replaces this missing market
Efficiency Arguments for Redistribution

- Redistribution addresses credit market failures
  - I may be poor today, but know I’ll be better off tomorrow. But will a bank lend to me on this basis? (again moral hazard, adverse selection cause missing market)

- Taxes that force the rich to pay more than the poor for public goods both redistribute and solve problems of underprovision of public goods
Program Design--Optimal Redistribution

- Cash transfers vs other mechanisms
  - Suppose we want to redistribute; does it matter what types of benefits we give?
  - Perhaps we’re worried about the ability of low-income individuals to buy good quality education
    1) Could give cash transfer
    2) Could subsidize education
    3) Could provide a voucher that can be spent on education only
    4) Could provide education in public schools
Analyzing Different Redistribution Methods

- Advantage: Cash transfers will give the greatest utility increase to recipients at the same cost to the govt as all the other programs
- Disadvantage: Expenditure on education may not increase (by much)
Analyzing Different Redistribution Methods

- A voucher for education gives a poor household education, rather than cash
  - Note that voucher gives less utility increase than cash for some
  - Leads to more consumption of education for some
  - Leads to same utility and same choices as cash transfer for some
Analyzing Different Redistribution Methods

- Optimal choice with subsidy and size of subsidy
- Comparison to cash transfer equal to size of subsidy

![Graph showing optimal choices with subsidy and cash transfer](image)
Subsidizing education

• For the same expenditure by the government, subsidy gives less utility increase than cash
  – Note optimal choice w/subsidy places person on lower indifference curve than cash
Analyzing Different Redistribution Methods

- Publicly-provided education gives a fixed amount of education to people for free
  - If they want to consume more, have to opt out of public system
  - In this case, public ed leads to more education; but gives lower utility gain than cash transfer.
  - Can you imagine a case where public ed would lead to less education?

Publicly Provided Education

![Graph showing public education vs. other goods](image)
Advantages of Cash Transfers

• Cash transfers give the most bang for the government’s buck, in terms of utility increases.
  – They only create an income effect, no substitution effect; and they don’t limit the choice of the individual.

• Administrative costs of cash transfers also tend to be lower
Advantages of In-Kind Transfers

• In-kind transfers (vouchers, subsidies, publicly providing the good) generally give more bang for the buck in terms of getting people to consume the targeted good.
  – Paternalism: Might want people to consume more education, even if they don’t want to, because “it’s good for them”
  – Addressing externality: Might want people to consume more ed, because there’s a positive externality involved
Advantages of In-kind Transfers

• Political considerations
  – Sometimes benefits of the in-kind transfer go to producers of the good
  – This can increase support for the redistributive program
    • Teachers unions are big proponents of public education
    • Farmers are big supporters of school lunch programs and food stamps in the US
    • Housing industry generally supports housing subsidies
Advantages of In-Kind Transfers

• In-kind transfers are often easier to target
  – Suppose you want to redistribute wealth
  – Could take wealth from a bunch of people and give it to others
    • Creates an incentive to accumulate less wealth or to hide wealth (pretend you’re poor)
    • It’s relatively easy to hide income/wealth
  – An alternative way to redistribute wealth is (for example) to educate poor children well
    • Less easy to pretend to be a poor child
    • Rich are unlikely to pretend to be poor in order to get housing vouchers
Universal vs. Targetted Programs

• Universal programs are available to everyone (e.g. CPP); targeted programs are only available to certain subgroups (e.g. Canada Child Tax Benefit)

• Methods of targeting
  – Means test (provide to those with low measured incomes--note incentive to change one’s real or apparent income)
  – Categorical aid. Targets a group whose members are likely to be poor (single moms, etc.)
  – Subsidize inferior goods (public housing, etc.) that rich don’t want to buy
  – Queues, welfare for work, stigma
Universal vs. Targetted programs

• Universal programs are administratively easier (no need to identify rich vs. poor)
  – More political support
  – Less effective at redistribution!
  – Very expensive
Welfare Programs in Canada

• Provincial governments are mainly responsible for social welfare programs
• Provinces maintain significant control over design and delivery of welfare programs
• Substantial cross-provincial variation in benefit levels
  – Single employable person in Nfld qualified for $1,341 in 1999; in Ontario would have qualified for $6,822
  – Differences due to differences in cost-of-living, differences in fiscal capacity, and difference in political environment
Welfare Programs in Canada

- Welfare assistance payments are need-based
  - Families assessed on basis of income, assets
  - Assistance is difference between assessed needs and available resources
  - Creates potential incentives for households to alter income or asset holdings on basis of assistance rules (i.e. hide resources)
Do Welfare Payments Eliminate Poverty?

• Most welfare payments are too low to single-handedly pull a family above the LICO

• In many cases, they bring households up above bare subsistence levels
  – Especially HHs with children
  – Single employable persons tend to fare pretty poorly in terms of welfare they are eligible for.
Welfare and Incentives to Work

• Can analyze effect of policy on work by considering effect of policy on wage
  – Then think about how workers respond to changes in wage

• Use consumption-leisure model
  – Person consumes 2 goods, leisure and stuff
  – Can think of stuff as dollars of consumption
  – With no saving this equals dollars of income
  – Has fixed hours T in a week that can devoted to leisure or labor (assume no other activity)
  – Ability to buy stuff is a function of income, which is a function of hours worked
Analyzing Effect of Welfare Program

• The typical welfare program has effects on both wage and income
  – Tend to lower the implicit wage, by taxing away benefits (i.e. those who make more, get smaller welfare payments)
  – Tend to increase income, by providing lump-sum benefits
  – Together, these effects tend to reduce worker hours supplied, and decrease labour force participation
Simple Welfare

• Suppose a person receives a certain amount of cash every month from govt (guaranteed minimum income).

• For every $ earned income, cash transfer is reduced by $1. This is known as a 100% clawback.

• This implies that person is looking at a 100% tax rate on the first dollars earned until earnings are above the amount of the cash transfer.
Welfare Program with 100% Clawback

- This provides particularly strong work disincentives
- It doesn’t make sense for a person to work less than $T-L^*$ hours but not zero hours.
- Either work more than $T-L^*$ hours and don’t go on welfare or
- leave labour force entirely
Welfare Program with 100% Clawback

- Effect is either people on welfare working zero hours
- Or people work and do not receive any assistance (working poor).
- Decreasing the clawback rate increases incentives to work.
Alternatives to Welfare--Negative Income Tax

• Spz program offers a cash grant to “eligible” individuals -- say $1000 per month if not working.

• Welfare recipients can work but the cash grant is reduced in proportion to the income earned in the labour market.
  – Let’s suppose the government takes away 50 cents for every dollar earned, i.e. there is a 50% clawback.

• e.g. Individual works 2 hours for $10 an hour
  labour income is $20 but grant is reduced by $10
  – Total Income = $1010.
  – Like a tax on the wage of 50%.
Negative Income Tax (NIT)

- With preferences as drawn the individual opts for the NIT program and chooses bundle C over A.
- NIT has a disincentive effect but less so than welfare with 100% clawback.

* Increases non-labour income
* Reduces the “net” wage
* If leisure normal, both of these things should reduce labour supplied
Advantages of NIT

- Reduces incentives to work, but less so than welfare with 100% clawback.
- The working poor receive some income support if they earn less than the break-even earnings.
- Introduction of universal NIT simplifies administration of welfare system. Just put it in federal income tax schedule.
Problems with NIT

• Very costly, if NIT should provide reasonable incentives to work and at the same time cover basic needs for those who are unable to work.

• While it would give an incentive to work to those currently on welfare, it would give the currently working poor an incentive to reduce their hours of work.

• Requires coordination of federal and provincial govts, special provisions for people with special needs.
Workfare

• Able-bodied individuals receive transfer payments only if they agree to participate in a work-related activity and accept employment, if offered.

• Proponents of workfare argue
  – More public support b/c recipients work.
  – Makes going on “welfare” less attractive.
  – Gives people the opportunity to gain work experience and skills
Questions about Workfare

• Is such a system an affront to the dignity of the poor?
• Can useful jobs be found for recipients?
• Can welfare administrators differentiate between people who are able-bodied and who are not?
• Administrative costs?
Welfare Programs with Better Incentives?

• A wage subsidy might increase labour supplied, while helping poor
  – Recall that theoretical effect of wage increase is ambiguous
  – But if start with someone who doesn’t work much, income effect should be small
  – Wage subsidies are expensive (especially if universally applied)

• A welfare program with no clawback would have no work-reducing substitution effect
  – Again, expensive to give this to everyone.

• Exercise: Draw each of these cases.
Specifics on Programs

- Ontario Works

- Article about BC’s program