Equity and Income Redistribution

1 Government Policies and Fairness

- Economic Functions of Government: [Richard & Peggy Musgrave]
  - Resource allocation: efficiency (經濟部)
  - Income redistribution: fairness (財政部)
  - Economic stability (中央銀行)

- Govt activities inevitably affect IncDist

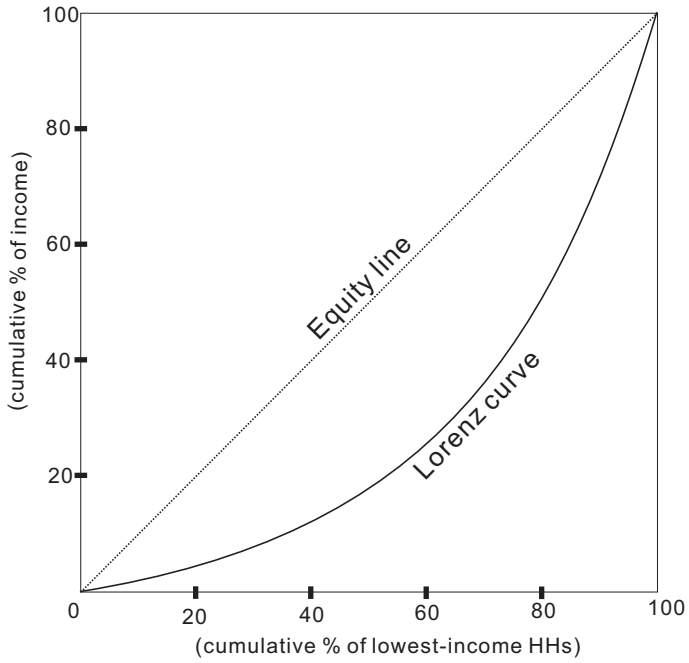
  E Govt procurement/contract, tax/expenditures

  ! What is「全民利益」?

- Sources of income disparities
  - Inequality in wage/salary: most important!
  - Property income (interest, dividends): only 10%

2 Examining IncDist Status

- Distribution table of national income among families
- Poverty line: sustainable living standards
- Poverty gap: $ needed to lift all HHs above poverty line
- Lorenz curve [Bruce 2e, p.197][1]



- Gini ratio: coefficient of income concentration [Bruce 2e, p.198][2]

[1] Plotted as cumulative % of income v. cumulative % of lowest-income HHs. Lorevz curve coincides with equity line if income is equally distributed across all HHs. With greater inequality, Lorenz curve further curves down.

[2] Ratio of area between equity line and Lorenz curve to the area below equity line. $G = 0$ if income is equally distributed across HHs. $G = 1$ if income is concentrated in one single HH.

3 Normative Justification for IncRed

3.1 Social Welfare Max

- Cardinal utilitarianism:

$$\max_{I_1,\cdots,I_n} \; SW \;=\; f(u_1(I_1),\ldots,u_n(I_n)) \quad \text{s.t.} \quad \sum_i I_i = I$$

- Additive/Benthamite SW:[3]

$$W \;=\; u_1(I_1) + \cdots + u_n(I_n)$$

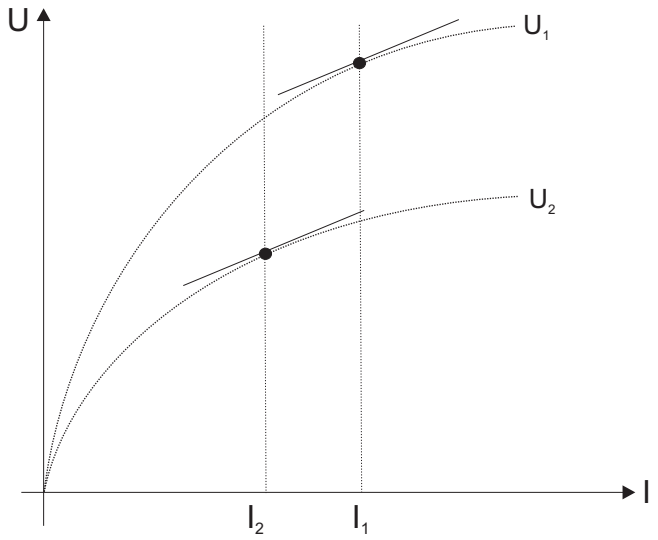
foc: equal marginal utility of income (MUI):

$$u_1'(I_1) \;=\; u_2'(I_2) \;=\; \cdots \;=\; u_n'(I_n)$$

- Further assuming u_i identical:

$$I_1 \;=\; I_2 \;=\; \cdots \;=\; I_n$$

! If $u_1'(I) > u_2'(I)$, then $I_1 \;>\; I_2$



[3] Jeremy Bentham, 1748 1832, 見《正義: 一場思辯之旅》, 第 66 頁, Michael J. Sandel, 雅言出版, 2011。

- Maximin/Rawlsian SW [Feldman 1980, Ch.8][4]:

$$\max W \;=\; \min\{\, u_1, \cdots, u_n \,\}$$

  – Allocation/state x is *Rawls superior* to y (ie, ${}_xR_y$) if:

$$\min\{\, x_1, \ldots, x_n \,\} \;>\; \min\{\, y_1, \ldots, y_n \,\}$$

  – Assume identical $u_i(I_i)$:

$$I_1 \;=\; I_2 \;=\; \cdots \;=\; I_n$$

    ▷ Egalitarianism: equal income distribution

  – Behind the veil: people are risk-averse

    ▷ "Social insurance" against future bad times [Rawls/Harsanyi]

  – Ex-ante game rule: to be followed "ex-post"

    [E] Rescue search period [Schelling]

    [!] Ex post: Rich against IncRed, poor for IncRed

  – Problems:

    [?] Are people extremely risk-averse?

    [?] May have to sacrifice majority's welfare.

    [?] Role definition not clear (eg: abortion legalizatn)

[4] *Welfare Economics and Social Choice Theory*

3.2 Pareto Improvement

- Assumption: "altruistic" rich people caring for the poor
- (Example) 3 consumers:
  - 2 rich:

$$U^1(x_1, x_3),\ U^2(x_2, x_3)$$

  - 1 poor:

$$U^3(x_3)$$

  ▷ x_3 is a public good

- Voluntary transfer by the rich:

$$t_1,\ t_2$$

  ▷ Consumption:

$$x_1 = I_1 - t_1$$

$$x_2 = I_2 - t_2$$

$$x_3 = I_3 + t_1 + t_2$$

- Utility:

$$U^1(I_1 - t_1, I_3 + t_1 + t_2)$$

$$U^2(I_2 - t_2, I_3 + t_1 + t_2)$$

$$U^3(I_3 + t_1 + t_2)$$

- Optimality: Samuelson foc

$$\mathrm{MRS}_1^{x_3,x_1} + \mathrm{MRS}_2^{x_3,x_2} = \frac{U_3^1}{U_1^1} + \frac{U_3^2}{U_2^2} = 1$$

- Nash equilibrium: not efficient

  foc:

$$U_3^1 = U_1^1$$

$$U_3^2 = U_2^2$$

- Pareto gains from further simultaneous small donation \$1:

$$2U_3^1 - U_1^1 > 0$$

$$2U_3^2 - U_2^2 > 0$$

- 2 views:

  ▷ Public good: x_3 is PG, equilibrium contribution too low

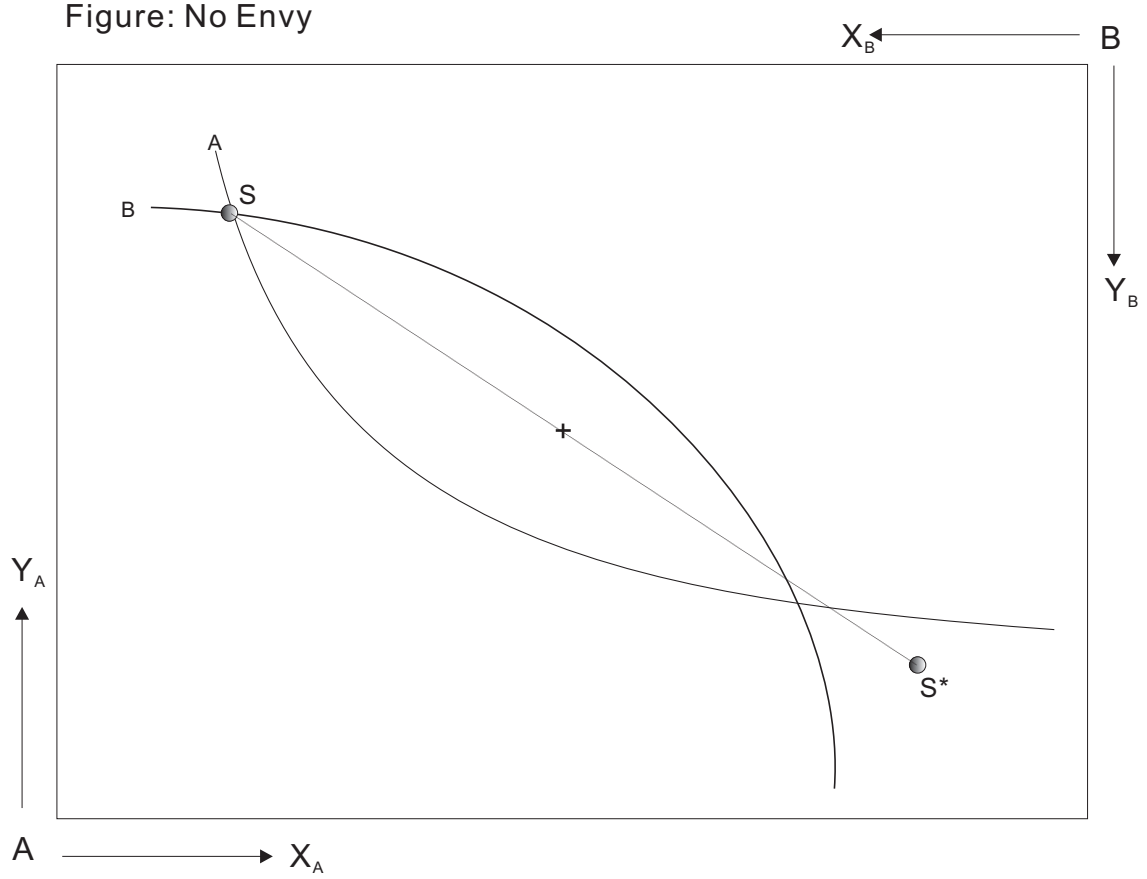
  ▷ Prisoner's dilemma: coordination issue

3.3 Super-fairness (SF)

- No envy:[5]

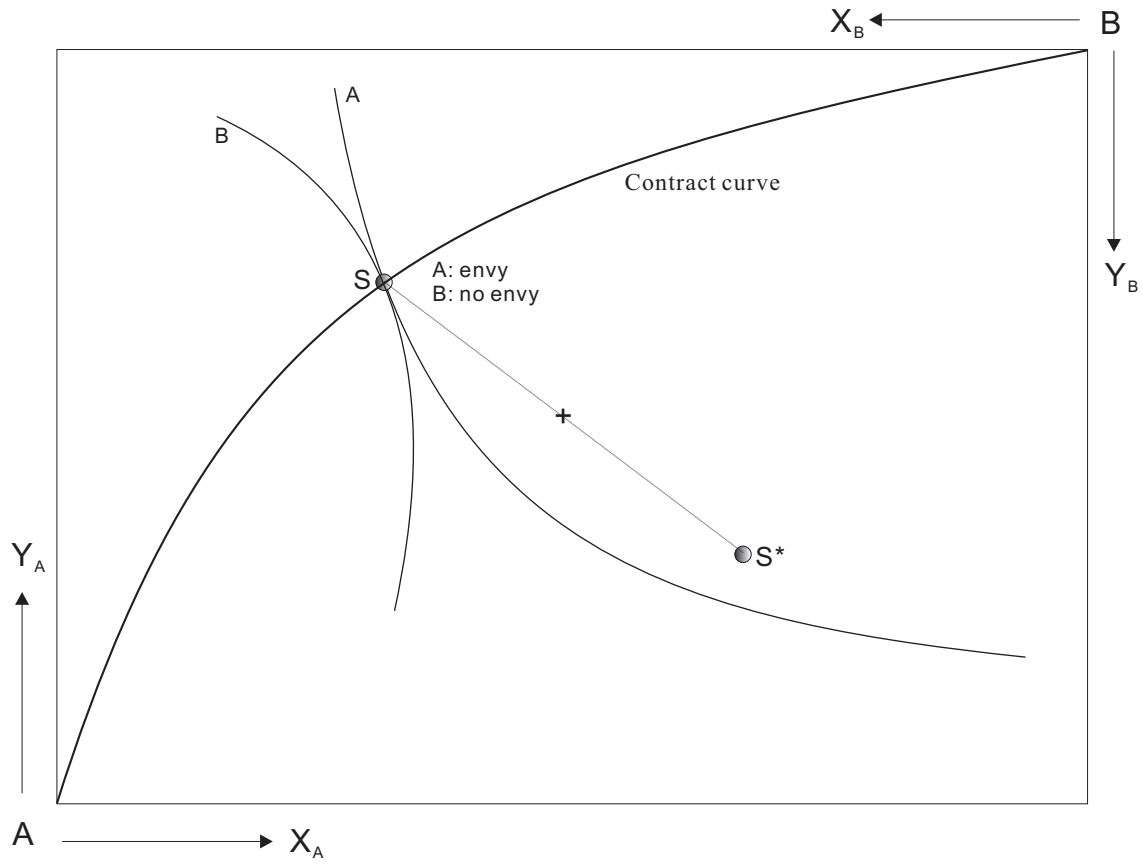
$$u_i(x_i) \geq u_i(x_j), \quad \forall j \neq i$$

Figure: No Envy



- Effeciency versus fairness:[6]
  - SF may not be PO (figure above)[7]
  - PO may not be SF (figure below)

[5] Not 'wish I were you' (ID-envy), but 'wish I have your money' (wealth-envy)!
[6] Note that an allocation is Pareto optimal iff it is on the contract curve. It is super-fair iff it is in the fish tail.
[7] Market moving from SF to CE may also destroy SF.



- Achieving both optimality and fairness:

  Step 1: Start with equal endowment ($w_1 = w_2$): no envy insured.

  Step 2: Free market: CE is PO.

3.4 Other Reasons

- Needs for social insurance
- Social-political reasons: for social stability
- Commodity egalitarianism: goods be distributed equally
  - ▷ Non-individualistic Views: irrelevant of people's taste
  - ▷ To insure minimal sustainable level.[8]

[8]For example: votong, preliminary education, health insurance, unemployment insurance, pension.

4 Positive Explanation of IncRed

- Voting outcome: poor people are majority
- Special interest groups: congress lobbying, coalition

5 Argument against IncRed

- Income/consumption level is individual choice

  E 3 farmers: IncRed is robbery [Landsburg]

- What about other inequality?
  - Toy sharing by children
  - Sexually advantaged people: providing free sex service?
- Fair Process: make sure equal opportunity be available to all
  - Income redistribution is unnecessary
  - Any ensuing income distribution is just [free market]
  - Should have sufficient social mobility

  ? How about endowment equality?

  ? How to judge fairness of a process? (eg: 大學聯考)

6 Difficulties with IncRed

- Income definition and measurement:
  - Non-monetary income hard to value!
    - E HH productn/work
    - E Underground economy[9]
  - Fluctuating income in different stages of life
    - E Athletes, models
- Units of IncDist: "individual" v. "household"
  - People save by living together
  - Elders living separately raise income inequality

[9] Baby-sitting, wine brewing, haircut.

7 Allocation Choice [Feldman 1980, Ch7]

7.1 Comparision Schemes

- Pareto criterion: ${}_xP_y$, *Pareto-superior*

$$\forall\, i,\ {}_xR_y^i \ \text{ and } \ \exists\, j,\ {}_xP_y^j$$

- Kaldor criterion: ${}_xK_y$, *Kaldor-superior*

$$\exists\, z \in A(x) \ \text{ s.t. } \ {}_zP_y$$

  where: $A(x) \equiv$ allocatns/states accessible from x.[10]

  ▷ ${}_xK_y \ \rightleftharpoons\ u(y)$ lies in UPF(x)

  ▷ ${}_xP_y$ implies ${}_xK_y$, but not vice versa

  ▷ Kaldor inconsistency:[11] both ${}_xK_y$ and ${}_yK_x$

- Scitovsky criterion: ${}_xS_y$, *Scitovsky-superior*

$${}_xK_y, \ \text{ not } \ {}_yK_x$$

  ▷ To avoid Kaldor inconsistency

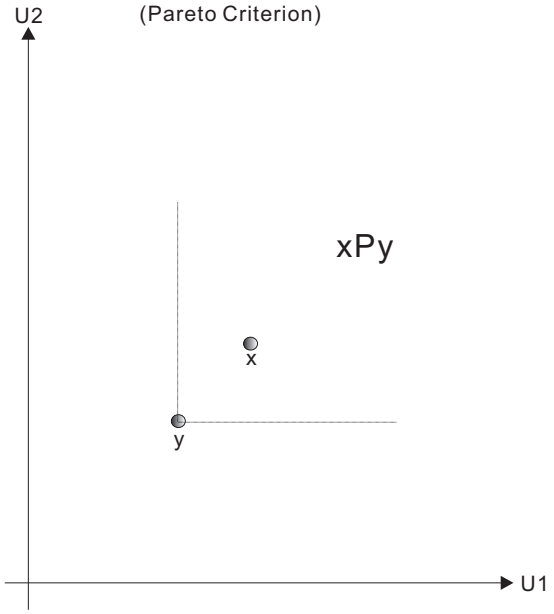
  ▷ ${}_xS_y$ implies ${}_xK_y$, but not vice versa

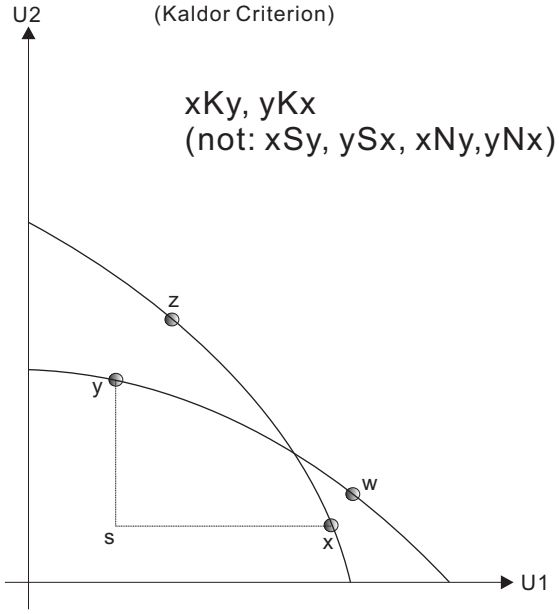
- Samuelson criterion: ${}_xN_y$, *Samuelson-superior*

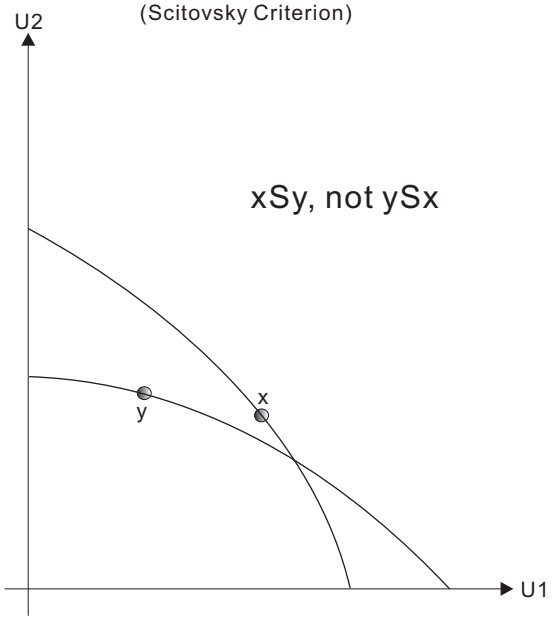
$$\forall\, z \in A(y),\ {}_xK_z$$

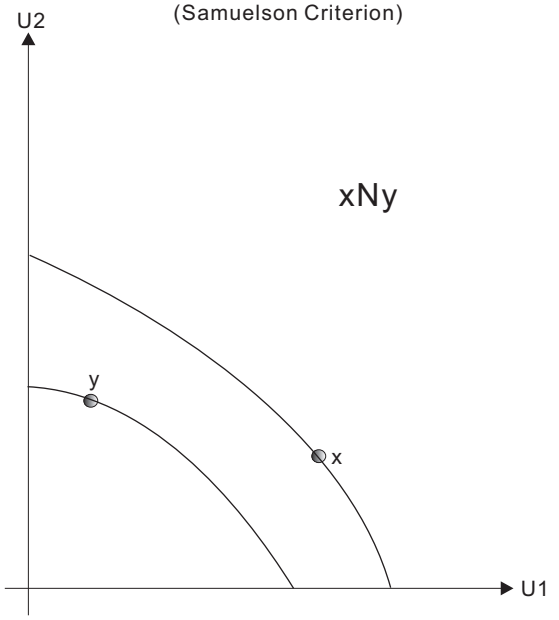
[10] Through transfer/tax/subsidy...

[11] For instance, 1 is an apple farmer, and 2 is a banana farmer. And point s is the status quo in the figure. Now project x is to build an apple-growing facility near 1 (so 1 has lots of apples, but no banana), and project y is to build a banana-growing facility near 2 (so 2 has lots of bananas, but no apple). An allocation z in $A(x)$ is achieved by transfering some apples from 1 to 2, whereas an allocation w in $A(y)$ is achieved by transfering some bananas from 2 to 1. As such, slope of UPF(x) will be steeper than that of UPF(y).


U2
(Pareto Criterion)
xPy
x
y
U1


U2
(Kaldor Criterion)
xKy, yKx
(not: xSy, ySx, xNy,yNx)
z
y
w
s
x
U1


U2
(Scitovsky Criterion)
xSy, not ySx
y
x
U1


U2
(Samuelson Criterion)
xNy
y
x
U1

▷ For any $z \in A(y)$, there is a $w \in A(x)$ that is Pareto-superior.[12]

▷ ${}_xN_y \rightleftharpoons$ UPF(y) lies inside UPF(x)

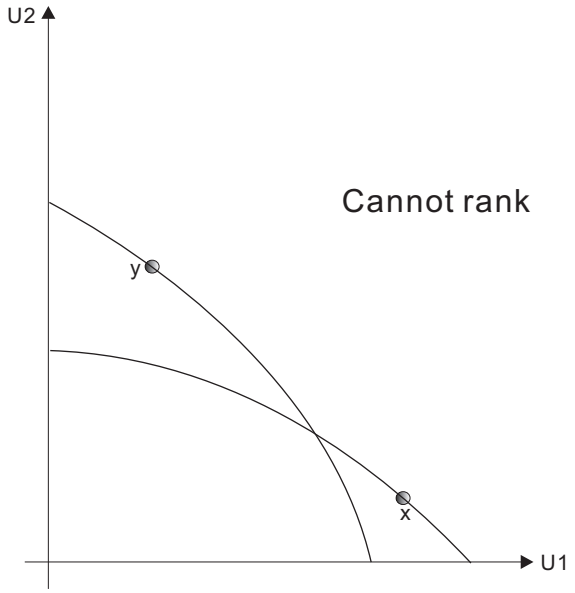
▷ Must be consistent: impossible to have both ${}_xN_y$ and ${}_yN_x$

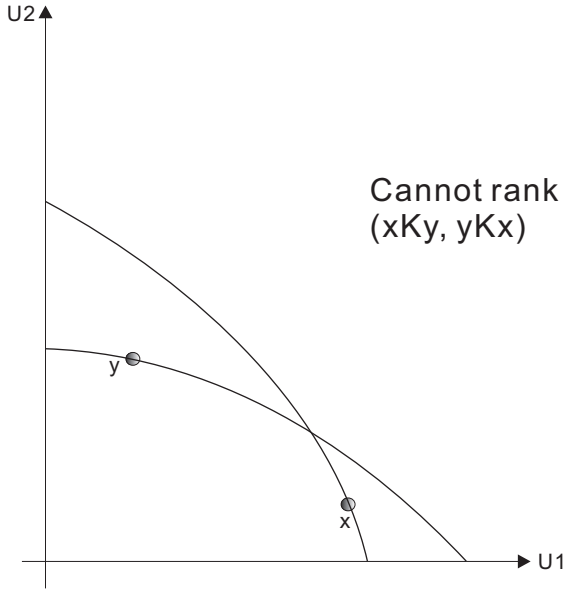
▷ ${}_xN_y$ implies ${}_xS_y$ and hence ${}_xK_y$, but not ${}_xP_y$

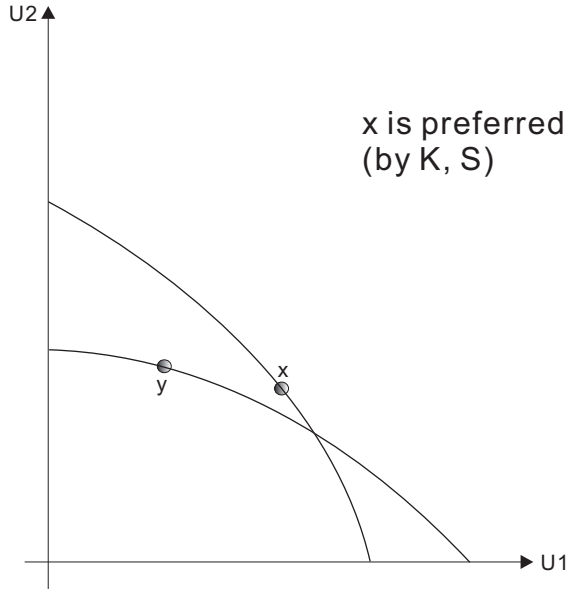
- Note: [Feldman 1980, Ch8]
  - Super-fairness may contradict all four rules.
  - Rawls may contradict Kaldor, Scitovsky, and Samuelson rules.

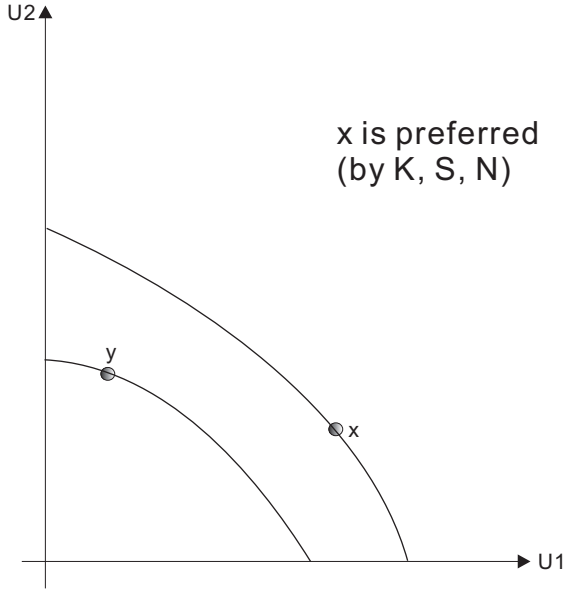
[12] Whatever you do, starting from y, you can do better starting from x.

7.2 4 possible Non-Paretian Outcomes









8 Expenditure Incidence of IncRed Programs

- Lump-sum money transfer: no tax shifting

- In-kind price subsidy: uncertain

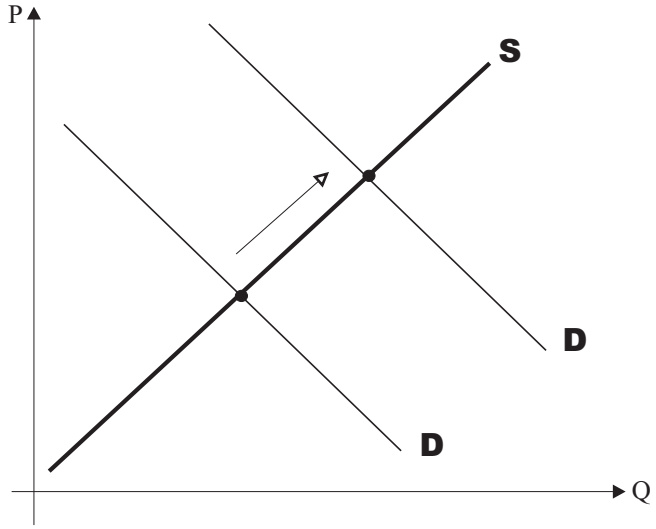
  E Housing subsidy:[13]

  – House price/demand (P, Q) higher

  – Winners: rich constructors/landlords

  – Losers: general buyers/renters

  – Uncertain: subsidized people ($r \downarrow$, $P \uparrow$)



  ▷ Should stimulate house supply: for $P \downarrow$, $Q \uparrow$

  E 1 house per person[14]

[13] E.g., 初次購屋優惠貸款利率, 青年成家方案優惠低利房貸, 提高房屋貸款成數。

[14] (2013/12/05 中國時報) 針對財政部長張盛和指出台北房價過高, 已達泡沫化, 台北市副市長張金鶚對此回應, 房價過高的情況「憑直覺就知道！」張金鶚認爲, 都市更新確能提升現階段已有房產民眾的居住環境, 但對「無殼一族」而言, 唯有靠中央政府改善稅制, 才能解決房價問題。張金鶚指出, 房價高漲已不需靠研究結果來證實, 已屬於「普通常識」。這代表大多數人民不僅負擔不起, 內心也感到不合理。張金鶚直

- In-kind goods transfer:[15]
  - Often valued less than direct cash transfer. Figure below
    - ▷ Worth only 80% of cash value![16]
    - ▷ DWL of Xmas gift-giving: SW down by 13%.[17]
  - High administrative costs (eg: 眷村分米油)
    (Blanchard et al. 1982) 36% higher than giving cash!
  - Why then in-kind transfer?
    1. Commodity egalitarianism: to maintain minimal sustenance
    2. Discourage ineligible recipients: hassles/humiliation
    3. Politically attractive: support from commodity producers

指, 房價高漲的問題癥結在於「稅賦太低」, 讓炒房投資客得以坐擁許多非自用的房產。他表示, 擁有 2 至 3 戶以上非自用房屋的持有者, 政府應提高持有稅, 將一般民眾與炒房客的界線區分清楚。「一間房子的稅拉高十倍, 還有人會這樣做嗎?」若是擁有多戶非自用房產者, 願將房屋租賃給弱勢家庭, 而非拿來炒房, 則反可考慮降低稅賦。

(2013/10/07 ERA 記者徐義平台北報導) 爲遏止房市不當炒風, 近來國稅局不僅針對總價三千萬元以上的房屋買賣交易進行追稅動作, 甚至將查稅門檻降低。以往國稅局是針對一年內買賣房屋超過六件的民眾, 才會認定爲專門以房地產營利, 得加課 5% 營業稅及 17% 的營業所得稅。但近年來國稅局悄悄調降門檻, 只要一年內買賣不動產超過三件, 便認定是以房地產營利爲目的, 加課營業稅與營所稅。

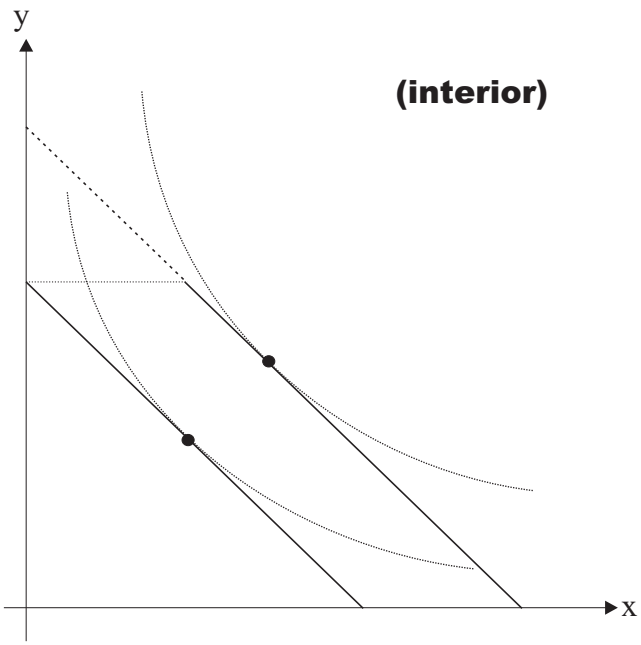
同時, 2014/4/23 立法院財政委員會初審過「房屋稅條例第五條修正草案」, 將非自用住宅房屋稅率從 1.5% 提高到 3.6% 的區間。但此囤屋稅被質疑有可能促使房東收回租屋出售, 因而減少租屋供給, 提高市場租金, 對買不起房屋的租屋者是雪上加霜。

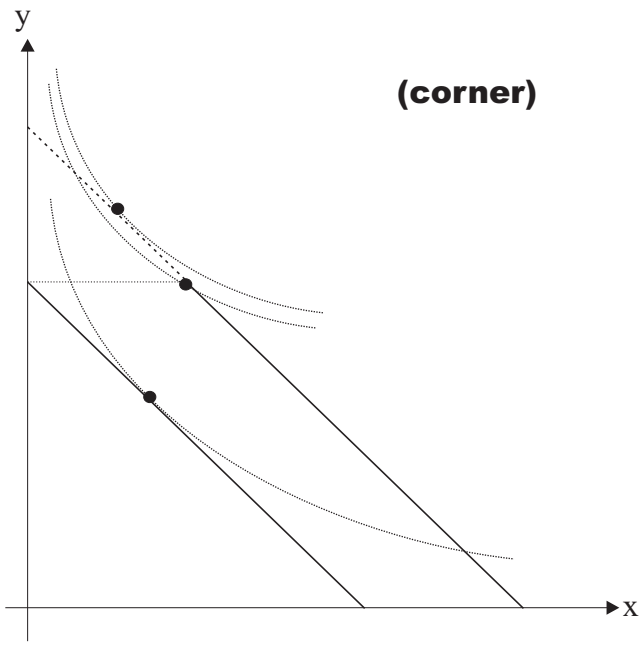
(2015/2/217 蘋果日報記者黃揚明台北報導) 台北市長柯文哲上月16日接受北市建國中學校刊《建中青年》專訪, 完整訪談內容在農曆年前出刊。對要如何降低台北市房價, 柯文哲說:「只要規定說第2棟房子不准貸款的話, 它就掉了。」此外, 他還表示可從房屋稅下手, 例如以人計坪, 超過20坪以上就課重稅, 所以1家5口最多100坪, 超過就課重稅。

[15] For example: food stamps, Medicaid/Medicare, public housing.

[16] Smeeding, 1982.

[17] Waldfogel, AER/1993v83 and EI/2002v40.


y
(interior)
x


y
(corner)
x