Preferences and Indifference Curves

The graph illustrates the concept of indifference curves. The horizontal axis represents the quantity of movies, $Q_M$, and the vertical axis represents the quantity of CDs, $Q_C$. Two indifference curves are shown: $IC_1$ (for $U = U_1$) and $IC_2$ (for $U = U_2$). The points A, B, and C are located on these curves, indicating different combinations of movies and CDs that provide the same level of utility.
Preferences and Indifference Curves

![Graph showing preferences and indifference curves](image)

The graph illustrates indifference curves for different locations and salaries. The curves represent the combinations of salary and location that provide the same level of utility or satisfaction to the individual. Points B, C, and A represent different cities (Minneapolis, Washington, D.C., and Phoenix) and their corresponding salary levels.

- **B** - Minneapolis, $50,000
- **C** - Washington, D.C., $40,000
- **A** - Phoenix, $30,000

The graph helps in understanding how preferences and indifference curves are used in public finance to analyze trade-offs between different policy options.
Marginal Rate of Substitution

Quantity of CDs, $Q_c$

Quantity of movies, $Q_M$

Marginal Rate of Substitution (MRS) is a measure of the willingness to substitute one good for another while maintaining the same level of utility. The diagram illustrates the concept with points on the indifference curve (IC). The slope of the curve at any point represents the MRS, which is the rate at which a consumer would be willing to substitute one good for another. For example, at MRS = -2, a consumer would be willing to give up 2 units of movies to obtain 1 unit of CDs, and at MRS = -1/2, the willingness to substitute is halved.
2.1 Budget Constraints

The budget constraint is given by the equation:

\[ Y = P_C Q_C + P_M Q_M \]

where:
- \( Y \): Total income
- \( P_C \): Price of CDs
- \( Q_C \): Quantity of CDs
- \( P_M \): Price of movies
- \( Q_M \): Quantity of movies

The budget constraint is graphed as a straight line. The slope of the line is:

\[ \text{Slope} = \frac{-P_C}{P_M} = \frac{-16}{8} = -2 \]

The intercepts are:
- \( Q_C \) at \( 6 \) when \( Q_M = 0 \)
- \( Q_M \) at \( 12 \) when \( Q_C = 0 \)
Putting It All Together: Constrained Choice
2.1 The Effects of Price Changes: Substitution and Income Effects

The substitution effect holds utility constant, but changes relative prices.

When prices change, real income and utility also change.
Demand Curves

(a) Demand Curves for CDs and Movies

- BC2 (PM = $12)
- BC1 (PM = $8)
- BC3 (PM = $6)

(b) Price of movies, PM

Demand curve for movies, DM
Equilibrium: Graphical Representation

The graph shows the market equilibrium where the supply and demand curves intersect at point $E$. The equilibrium price is $P_E$, and the equilibrium quantity is $Q_E$.
Consumer surplus is the area under the demand curve since demand = willingness to pay.
Producer Surplus: Graphical Representation

- Producer surplus is the area above the supply curve since supply = marginal cost.
Social Surplus: Graphical Representation

The diagram illustrates the concept of social surplus through a graphical representation. It shows the interaction between supply and demand in a market. The area labeled with triangles A, B, and C represents different types of surplus:

- **A** is the consumer surplus, which is the area above the demand curve and below the price line at the market equilibrium.
- **B** is the producer surplus, which is the area below the supply curve and above the price line at the market equilibrium.
- **C** is the total surplus (sum of consumer and producer surplus).

The diagram also indicates market quantities, with **$Q_R$** and **$Q_E$** representing the quantity at the price $P_R$ and the equilibrium price $P_E$, respectively.
Which of the following two individuals do you think is most deserving of a $1,000 tax break?

Individual A earns $50,000 per year, pays $10,000 in taxes and hence nets out $40,000. She greatly enjoys spending money, going out to expensive restaurants, or traveling to fancy destinations. She always feels that she has too little money to spend.

Individual B earns the same amount, $50,000 per year, also pays $10,000 in taxes and hence also nets out $40,000. However, she is a very frugal person who feels that her current income is sufficient to satisfy her needs.

☐ Individual A is most deserving of the $1,000 tax break
☐ Individual B is most deserving of the $1,000 tax break
☐ Both individuals are exactly equally deserving of the tax $1,000 break

Source: survey in Saez and Stantcheva (2013)
Which of the following two individuals is most deserving of a $1,000 tax break?

Individual A earns $30,000 per year, by working in two different jobs, 60 hours per week at $10/hour. She pays $6,000 in taxes and nets out $24,000. She is very hard-working but she does not have high-paying jobs so that her wage is low.

Individual B also earns the same amount, $30,000 per year, by working part-time for 20 hours per week at $30/hour. She also pays $6,000 in taxes and hence nets out $24,000. She has a good wage rate per hour, but she prefers working less and earning less to enjoy other, non-work activities.

- Individual A is most deserving of the $1,000 tax break
- Individual B is most deserving of the $1,000 tax break
- Both individuals are exactly equally deserving of the $1,000 tax break

Source: survey in Saez and Stantcheva (2013)
We assume now that the government can increase benefits by $1,000 for some recipients of government benefits.

Which of the following four individuals is most deserving of the $1,000 increase in benefits?

Please drag and drop the four individuals into the appropriate boxes on the left. The upper box, marked 1 should contain the individual you think is most deserving. The box labeled "2" should contain the second most-deserving individual, etc.. Please note that you can put two individuals in the same box if you think that they are equally deserving.

Individual A gets $15,000 per year in Disability Benefits because she cannot work due to a disability and has no other resources.

Individual B gets $15,000 per year in Unemployment Benefits and has no other resources. She lost her job and has not been able to find a new job even though she has been actively looking for one.

Individual C gets $15,000 per year in Unemployment Benefits and has no other resources. She lost her job but has not been looking actively for a new job, because she prefers getting less but not having to work.

Individual D gets $15,000 per year in Welfare Benefits and Food Stamps and has no other resources. She is not looking for a job actively because she can get by living off those government provided benefits.

Source: survey in Saez and Stantcheva (2013)
Table 2: Revealed Social Preferences

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<th>(3)</th>
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<tbody>
<tr>
<td><strong>A. Consumption lover vs. Frugal</strong></td>
<td>Consumption lover &gt; Frugal</td>
<td>Consumption lover = Frugal</td>
<td>Consumption lover &lt; Frugal</td>
<td></td>
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<tr>
<td># obs. = 1,125</td>
<td>4.1%</td>
<td>74.4%</td>
<td>21.5%</td>
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</tbody>
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| **B. Hardworking vs. leisure lover** | Hardworking > Leisure lover | Hardworking = Leisure lover | Hardworking < Leisure lover |
| # obs. = 1,121        | 42.7%      | 54.4%     | 2.9%      |

| **C. Transfer Recipients and free loaders** | Disabled person unable to work | Unemployed looking for work | Unemployed not looking for work | Welfare recipient not looking for work |
| # obs. = 1,098        | Average rank (1-4) assigned  | 1.4 | 1.6 | 3.0 | 3.5 |
| % assigned first rank |                       | 57.5% | 37.3% | 2.7% | 2.5% |
| % assigned last rank  |                       | 2.3% | 2.9% | 25.0% | 70.8% |

Notes: This table reports preferences for giving a tax break and or a benefit increase across individuals in various scenarios. Panel A considers two individuals with the same earnings, same taxes, and same disposable income but high marginal utility of income (consumption lover) vs. low marginal utility of income (frugal). In contrast to utilitarianism, 74% of people report that consumption loving is irrelevant and 21.5% think the frugal person is most deserving. Panel B considers two individuals with the same earnings, same taxes, and same disposable income but different wage rates and hence different work hours. 54.4% think hours of work is irrelevant and 42.7% think the hardworking low wage person is more deserving. Panel C considers transfer recipients receiving the same benefit levels. Subjects find the disabled person unable to work and the unemployed person looking for work much more deserving than the abled bodied unemployed or welfare recipient not looking for work.