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The Economic Impacts of Speculation

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Introduction

- Speculative markets serve to improve the price and allocation patterns across space and time as well as to help transfer risks.
- If we look behind the veil of money, we see that ideal speculation reallocates goods from times of feast (when prices are low) to times of famine (when prices are high).



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Ideal speculative markets can increase economic efficiency.

- Say that identical consumers have utility schedules in which satisfaction in one year is independent of that in every other year.
- Now suppose that in the first of 2 years there is a big crop — say, 3 units per person—while the second year has a small crop of only 1 unit per person.
- If this crop deficiency could be foreseen perfectly, how should the consumption of the 2-year, 4-unit total be spread over the 2 years?
- Neglecting storage, interest, and insurance costs, total utility and economic efficiency for the 2 years together will be maximized only when consumption is equal in each year.



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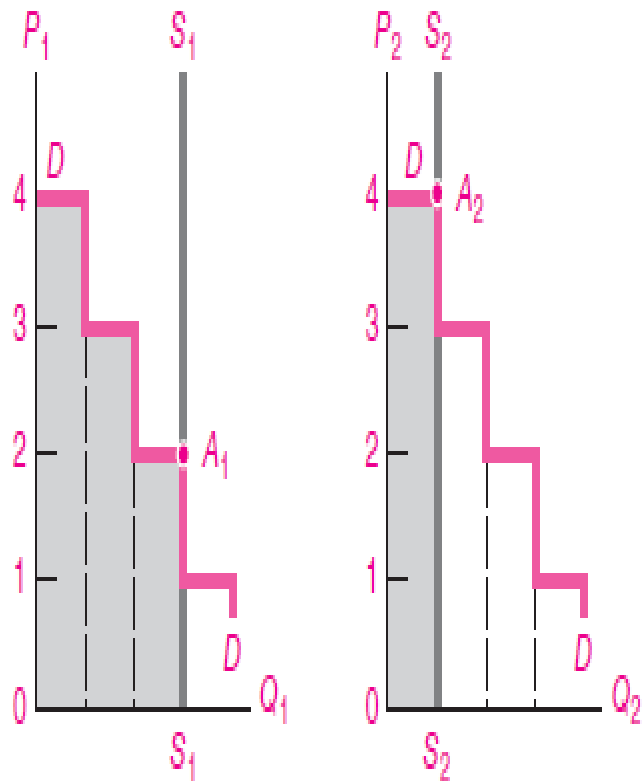
- Why is uniform consumption better than any other division of the available total? Because of the law of diminishing marginal utility.
- This is how we might reason: “Suppose I consume more in the first year than in the second. My marginal utility (MU) in the first year will be low, while it will be high in the second year.
- So if I carry some crop over from the first to the second year, I will be moving consumption from low- MU times to high-MU times.
- When consumption levels are equalized, MU s will be equal and I will be maximizing my total utility.”



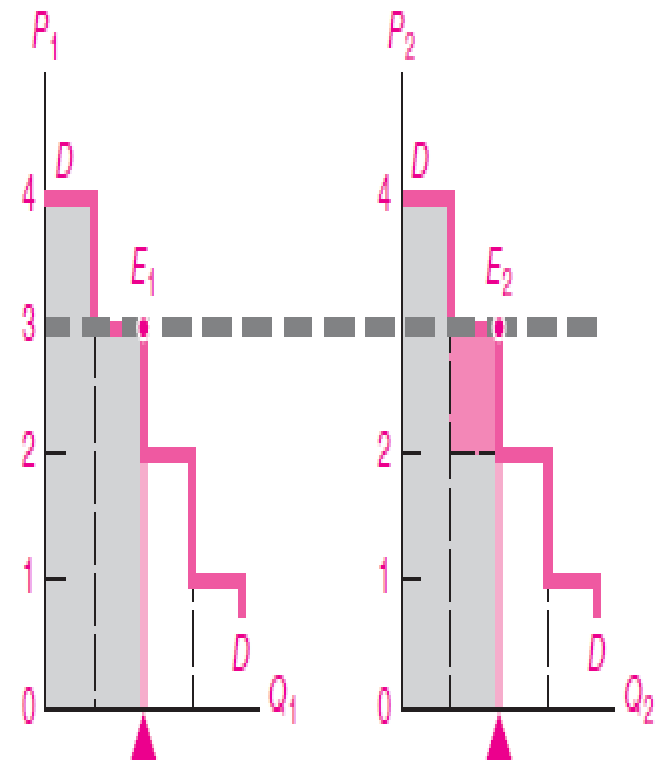
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(a) Without Carryover



(b) With Carryover





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- If we measure utility in dollars, with each dollar always denoting the same marginal utility, the demand curves for the risky commodity would look just like the marginal utility schedule of Figure.
- The two curves of Figure (a) show what would happen with no carryover and with unequal consumption. Here, price is determined first at A_1 , where higher S_1 intersects DD , and second at A_2 , where the lower supply S_2 intersects DD .
- Total utility of the blue shaded areas would add up to only $(4 + 3 + 2) + 4$, or \$13.



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- But with optimal carryover of 1 unit to the second year, as shown in Figure 11-2 (*b*), P s and Q s will be equalized at E_1 and E_2 , and the total utility of the shaded areas will add up to $(4 + 3) + (4 + 3)$, or \$14 per person.
- A little analysis can show that the gain in utility of \$1 is measured by Figure (*b*)'s dark green block, which represents the excess of the second unit's marginal utility over that of the third.
- This shows why the equality of marginal utilities, which is achieved by ideal speculation, is optimal.



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