Contract Damages

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When a contract is breached, how should the breaching party compensate the breached-against party?

Issue is not on insisting contract be performed, but on efficiency.

For example, when the cost of a product has soared after signing contract, so that cost of delivery exceeds benefit, on efficiency ground the contract should not be executed.

How should the contract be framed and, if not possible ex anxe, how damages should be measured ex post, to implement efficiency?
Different Measures of Damages

- **Expectation damages**: The amount of remedy which would put the breached-against party in the same position he would have been if the contract had been executed.

- **Reliance damages**: The amount of remedy which puts the breached-against party in the same position had he not entered into the contractual relationship.

- **Restitution damages**: The amount of remedy which equals to the sum of benefits the breached-against party has conferred upon the breaching party.
Liquidated damages: The breaching party pays the breached-against party an amount which has been agreed upon in advance.

Liquidated damages differs to the other three in that the remedy is specified by the contracting parties, rather than the court.
A seller \((S)\) produces a product at cost $150.

The product’s value to buyer 1 \((B1)\) is $200.

Before using the product, \(B1\) needs to spend a contract-specific investment of $10.

Before delivery (and after investment), there is a chance that another buyer, \(B2\), might also want to buy it.
• Value of the product to $B_2$ can be either $180$ or $250$.
• Contract price is $P$.
• Suppose $P$ is paid in advance.
• Naturally, $P \in [150, 190]$.
• Fully specified efficient contract: Deliver to $B_1$ if $B_2$'s valuation is $180$, and to $B_2$ if his valuation is $250$, with $S$ returning $P$ to $B_1$, and $B_1$'s investment of $10$ compensated by $B_2$. 
Generally, not all contingencies are foreseeable, so that contract cannot be fully specified (i.e., will be incomplete).

What breach remedy rule implements efficient outcome?
Example (Expectation Damages)

- $B_1$ is expected to benefit $200 from completion of contract.
- Expectation remedy is therefore $200.
- Suppose the price of product, if sold to $B_2$, is $P_1$.
- If breaching, the payoff of $S$ is

$$P + P_1 - 200 - 150.$$

- If deliver to $B_1$, payoff of $S$ is $P - 150$. 
Breaching is better if

\[ P + P_1 - \$200 - \$150 - (P - \$150) > 0, \]

i.e., \( P_1 > \$200. \)

This occurs only if \( B2 \)'s valuation is \( \$250. \)

Expectation damages facilitate efficient contract.

Note that if \( B2 \) also has to spend \( \$10 \) for the contract, then expectation damages replicates efficient contract.

Under expectation damage, the payoff of \( B1 \) is \( \$200-\$10=\$190 \) regardless of whether the good is delivered to him.
Example (Reliance Damages)

- B1’s reliance expenditure is $P + 10$.
- Reliance damages is then $P + 10$.
- Payoff of S when breaches is

$$P + P_1 - (P + 10) - 150.$$

- Payoff of delivery to B1 is $P - 150$. 
Breaching is better if

\[ P + P_1 - (P + $10) - $150 - (P - $150) > 0, \]

i.e., \[ P_1 - P - $10 > 0. \]

If B2’s valuation is $180, and, for example, \( P_1 = $170 \) and \( P = $155 \), then \( P_1 - P - $10 = $5 > 0. \)

There is possibility of inefficient breach.

Can also be inefficient retain of original contract.

Note that \( S \) will not breach if

\[ P_1 - P - $10 < 0. \]
If $B_2$’s valuation is $250$, but $P_1 = $162 and $P = $155, then the item should be sold to $B_2$ but will not.

This inefficiency, however, less likely in reality, as $P$ is already pre-set but $P_1$ is yet to be negotiated when $B_2$’s valuation is known to be $250$.

Reliance remedy does not implement efficient contract.
Example (Restitution Damages)

- The benefit $B1$ confers upon $S$ is $P$.
- The benefit of $S$ if he breaches is then

\[ P + P_1 - P - $150. \]

- Benefit of delivering to $B1$ is $P - $150.$
Example (Restitution Damages)

- Breaching is better if

\[
P + P_1 - P - $150 - (P - $150) > 0,
\]

i.e., \(P_1 - P > 0\).

- Restitution remedy encourages inefficient breach even more than reliance remedy.

- However, restitution damages make it less likely that a contract should be breached but does not.
Example (Liquidated Damages)

- Suppose remedy for breach, when $S$ breaches, is $P_2$.
- Benefit of delivery to $B1$ is $P - 150$.
- Benefit of breach is $P + P_1 - P_2 - 150$.
- Breach is not worthwhile iff
  \[ P - 150 - (P + P_1 - P_2 - 150) > 0, \]
  i.e., $P_2 - P_1 > 0$. 

Kong-Pin Chen
• Note that $P_1 \in [150, 180]$ when $B2$’s valuation is $180$, and $P_1 \in [150, 250]$ when valuation is $250$.

• Let $P_2 = $200. Then $P_2 - P_1 > 0$ when $B2$’s valuation is $180$. Also, $S$ and $B2$ can always negotiate a price $P_1$ above $P_2 = $200 if $B2$’s valuation is $250$.

• Liquidated damages implements efficient contract.

• Since liquidated damages tries to replicate an efficient contract by pre-writing clause into contract, it always implement efficiency if all contingencies are anticipated.
Suppose after entering into contract, $B_1$ can make an additional investment of $24$ to increase the product’s value by $30$.

The product’s value to $B_2$ is $180$ with $2/3$, and is $250$ with probability $1/3$.

Not efficient for $B_1$ to make the additional investment under efficient contract: $30 \times \frac{2}{3} < 24$.

If $S$ and $B_1$ can sign complete contract, they will include provision that $B_1$ not make the reliance investment.

Unlikely in reality.
If $B_1$ does not spend the additional $24 investment, expectation damages will be $200.

If $B_1$ spends the $24, expectation damages will be $230.

Additional investment of $24 gives $B_1$ an additional payoff of $30. No matter contract is breached or not. $B_1$ therefore will make the (inefficient) additional investment under expectation damages.
Influence on Reliance Expenditures (Reliance Damages)

- $B_1$ will reap additional $30$ of product’s value if $24$ additional investment is spent, when product is delivered.
- $B_1$ will be returned the $24$ if contract is breach.
- Investing in $24$ is dominant strategy: $B_1$’s payoff increases by $6$ if contract is executed (Prob. $2/3$), and by $0$ if not (Prob. $1/3$).
Influence on Reliance Expenditures (Restitution Damages)

- Under restitution remedy, $B1$ is compensated by amount he confers upon $S$, which is $P$.
- $B1$ therefore internalizes the cost and benefit of the additional investment.
- Restitution remedy is efficient r.w.t. reliance investment.
Summary

- Expectation and liquidated remedies are efficient w.r.t. efficiency of breach.
- Restitution remedy is efficient w.r.t. reliance investment.
- No breach remedy is always efficient.
Suppose $B2$’s valuation now takes only two values; $250 or $0.

There is no question about breach when realization is $0: item will be sold to $B1$ regardless of damages.

Can concentrate on allocation of risks.

Assume private insurance is not available, so allocation of risks is determined by remedy.
Case I: Buyer 1 risk averse, seller risk neutral

- $S$ should bear all the risks.
- Expectation damages suffices: $S$ pays $B1$ $200 ($B1’s value attached to the good) in the event of breach.
- $B1$’s payoff is always $190.
- Reason for efficiency is easy: The very purpose of expectation damage is to ensure $B1$’s payoff even contract is breached.
- The profit of $S$ will be $P − $150 if good delivered to $B1$, and $P − $150 + $P_1 − $200 if to $B2$.
- None other damages efficiently allocates risk except liquidated damage.
Case II: Buyer 1 risk neutral, seller risk averse

- $B_1$ should bear all the risks.
- Achieved by making $S$ pay $B_1$, in the case of breach, the amount $P_1$.
- The profit of $S$ is then $P - $150 if contract not breached, and $P - $150 + P_1 - P_1 = P - $150$, if breached.
- $B_1$'s profit is $190 - P$ if not breached, and $190 - P + P_1$ if breached.
- None other allocates risk efficiently except liquidated damages.
Case III: Both risk averse

- Should share risks.
- Achieved by making remedy payment between $200 and $P_1$. The more risk averse $B1$, relative to $S$, the closer to $200$ (i.e. the lower) the remedy should be.
Effects of Remedies

- **Expectation remedy** allocates risks efficiently only if buyer is risk averse and seller risk neutral.

- **Reliance remedy** cannot achieve efficiency of risk allocation: Remedy is less than $200.

- **Restitution remedy** in this example corresponds to contract price, which is below $200. It therefore cannot achieve efficiency of risk allocation.
Since liquidated remedy is negotiated by buyer and seller in ex ante, they can always negotiate a remedy that fits their need of allocation risks.

For example, if the risk attitude is such that $S$ and $B1$ they want to equally split the possible benefit of $B2$’s higher offer.

Let $P = $175. If $B2$’s valuation turns out to be $250, then $S$ delivers the good to $B2$ with price $250, by paying the remedy of $225.
- Profit of $S$: $25$ if delivery to $B1$, and 
  $175 - 150 + 250 - 225 = 50$ if delivery to $B2$.
- $B1$’s profit: $15$ if receiving the good, and 
  $225 - 175 - 10 = 40$ if not.
- The joint profit of $B2$’s $250$ being realizing is $50$, and the 
  remedy makes $S$ and $B1$ to share it equally.
  ($S : 50 - 25 = 25$; $B1 : 40 - 15 = 25$.)