

Does Contract Law Matter for Economic Efficiency?

Ram Singh

August 5, 2015

Why do people sign contracts?

People make contracts guided by many considerations. However, the following are the primary reasons:

- To ensure future provisions of goods and services, e.g. production contracts;
- To smoothen consumption overtime, or to alter the timing of consumption, e.g., contracts b/w borrowers and lenders;
- To trade/reallocate/share risks, e.g., insurance contracts, partnership contracts;
- Due to differences in perception about probability of future events or their consequences.

Question

In the above contexts, do the contracting parties benefit from the contract?

Contracts and Economic Efficiency I

Example

- Individual B needs a customized piece of furniture. S can prepare it for B.
- However, if B does not buy it, the piece will fetch little or no price in the market.
- The two sign a contract. The contract is signed at time $t = 0$. At this time the contract price $P = 170$ is also decided.
- S is required to deliver the good in future, at $t = 2$, say one month from now.
- If the good is supplied by the S to B, the benefit to B is V . Let, $V = 200$.
- Assume, at $t = 0$, there is uncertainty about the cost of production to the Seller, C , of the good. Assume that at $t = 0$, C is unknown to both the parties.

Contracts and Economic Efficiency II

- C can take any of the values in the set

$$\{50, 90, 175, 205, 235\}$$

each with probabilities, $1/5$.

- The uncertainty w.r.t. C gets resolved and both the parties get to know its value at $t = 1$.
- At $t = 2$, S decides whether to produce and supply the good or not.
- B will pay the contracted price only if S supplies the good.

Contracts and Economic Efficiency III

Question

What is the **K-H efficient** production decision w.r.t. C ?

Question

- What is the ex-post Pareto efficient production decision w.r.t. C ?
- What production decision will make both parties better off, if the contract were to be signed at $t = 2$.

Question

For which values of C , an ex-ante Pareto efficient contract will require S to produce?

Pareto Efficient Contracts

Proposition

If contracting is costless, at $t = 0$ parties will sign a Complete and (ex-ante) Pareto Efficient Contract.

Ex-ante Pareto Efficient (P.E.) contract will have the following 'Breach Set'

$$\{205, 235\},$$

and

$$\{50, 90, 175\}$$

as the 'Performance Set'.

Example of a ex-ante Pareto Efficient Contract:

$$\begin{cases} \text{If } C \in \{50, 90, 175\} & \text{S will supply for } P, \text{ otherwise will pay } K; \\ \text{If } C \in \{205, 235\} & \text{No trade,} \end{cases} \quad (0.1)$$

where P denotes the payment to be made by the B to S, and K is a large number (amount) that S will have to pay to B if he does not supply. K can be interpreted as the penalty of breach by S.

Contracts and Damages I

Definition

A contract can be defined as specification of actions that parties are supposed to take under various contingencies that may unfold in the future.

Definition

Damages-measure: is a rule that specifies the entitlement of the victim of the breach, when there is 'breach' of the contract.

Let,

D denote the damages provided by the contract law. That is,

- D is amount the promisor has to pay to the promisee as compensation, in the event of non- performance.
- D can be a function of several contract characteristics.

Contracts and Damages II

- \bar{D} is the total payment made by promisor to the promisee as compensation, in the event of non-performance. E.g.,

$$\bar{D} = D + P'$$

if P' is the advance payment made by B to S.

Assumption

Contract price is to be paid on delivery at $t = 2$.

So,

$$\bar{D} = D.$$

Damages and Incentive to Perform I

Let,

- V be the (gross) valuation of the contract to the Buyer; $V = 200$.
- P be the contract price; $P = 170$.

Let $D = 30$.

Question

What will S do if at $t = 1$, C turns out to be 175.

If S performs, his profit is

$$P - C = 170 - 175 = -5$$

If he does not perform, his profit will be

$$-D = -30$$

Damages and Incentive to Perform II

For any cost C , S will perform iff

$$P - C \geq -D, \text{ i.e., iff}$$
$$170 - C \geq -D.$$

Question

What will S do if at $t = 1$, C turns out to be 225.

If S performs, his profit is

$$P - C = 170 - 225 = -55$$

If he does not perform, his profit will be

$$-D = -30$$

Damages and Incentive to Perform III

For any cost C , S will breach iff

$$P - C < -D, \text{ i.e., iff}$$
$$170 - C < -D.$$

So, the breach set induced by $D = 30$, is

$$\{205, 235\}$$

i.e., it is P.E.

Note that

$$D = 30 = 200 - 170 = V - P$$

Damages and Incentive to Perform IV

Remark

When $D = V - P$:

- B is indifferent between performance/delivery by S, on one hand, and breach by S on the other hand.
- the damages-measure meets the expectations of the Promisee, i.e., B. So,
- It is known as the *Expectation Damages*.
- The breach or performance decision of S does not depend on the contract price $P(\cdot)$.

Expectation Damages and Social Efficiency I

Question

Does the expected production cost for S depend on the damages measure?

Proposition

- *If $D = v - P$, the outcome will be socially (Kaldor-Hicks) efficient.*
- *If $D \neq v - P(C)$, generally, the outcome will NOT be socially (Kaldor-Hicks).*

Example

Assuming $P = 170$, suppose $D \neq 30$, say $D = 60$, you can show that: Now,

- the Breach Set will be $\{235\}$, i.e., it is NOT P.E.
- the Performance Set is $\{50, 90, 175, 205\}$, i.e., there will be excessive performance by S.

Reliance Damages I

Definition

Reliance:

- is the set of things the promisee does *relying* on the promise made by the promisor.
- is the set of things the promisee can do will vary across contracting contexts.
- can be efforts put in or monetary expenditure undertaken by the promisee relying the promise made by the promisor.
- We will consider the money-equivalent of reliance - cost of expenditure and cost of other efforts put in by the promisee.

Example

In the above example, assume that

Reliance Damages II

- $V = 200$, if B spends 20 to make best use of the good;
- if B spends nothing the good is worth only 100.

Question

What is the level of reliance in the above example?

Reliance Damages I

Definition

Under Reliance Damages, the promisor is required to compensate the promisee for the reliance. The compensation is equal to the cost of reliance.

So, $D = 20$.

Question

What will S do at $t = 1$, if C turns out to be 175.

Question

What will be the Breach and Performance sets if $P = 125$?

Now, for any cost C , S will perform iff

$$P - C \geq -D, \text{ i.e., iff}$$
$$125 - C \geq -20.$$

Reliance Damages II

Suppose $C = 175$. If S performs, his profit is

$$P - C = 125 - 175 = -25$$

If he does not perform, his profit will be

$$-D = -20.$$

You can verify that now the Breach set will be

$$\{175, 205, 235\},$$

and the Performance set will be

$$\{50, 90\}.$$

Reliance Damages III

Remark

Under *Reliance Damages*:

- The promisee is compensated for the cost of reliance activities.
- B is indifferent between receiving the compensation in the event of breach by S, on one hand, and not signing the contract at all, on the other hand.
- So, the reference point for determining the compensation is the situation of 'no-contract'.
- The breach or performance decision of S does depend on the contract price $P(\cdot)$.

Restitution Damages I

Definition

Under Restitution Damages, the promisor is required to *return* whatever he has received from the promisee.

Recall, we are assuming payment on delivery. So, $D = 0$.

Question

What will D be, if B had made an advance payment of say 100 ?

Under restitution damages, for any cost C , S will perform iff

$$P - C \geq -D, \text{ i.e., iff}$$

$$P - C \geq -0.$$

Question

What will be the Breach and Performance sets if (a) $P = 125$, (b) $P = 85$?