

Short-term, Long-term, and Continuing Contracts

Maija Halonen-Akatwijuka and
Oliver Hart

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- A large literature in economics and law has studied why parties write long-term contracts. A leading explanation is that such contracts are useful to support specific investments, and there is much empirical support for this.
- See Williamson (1975), Klein et al. (1978), Goldberg and Erickson (1987), Joskow (1987), Crocker and Masten (1988), Pirrong (1993), Brickley et al. (2006), and Bandiera (2007).
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- In a way it has been more challenging for economists to explain why parties write short-term contracts, that is, contracts that are shorter than the likely term of their relationship.

- The conventional answer is that it is costly for the parties to anticipate the contingencies that will arise during the latter part of their relationship and to write down unambiguously how to deal with them.
- However, if parties are fully rational, ingenious mechanisms can be used to get the parties to reveal information as their relationship progresses, and to incorporate this information into an enforceable contract.
- If there is even a reasonable chance that the parties' relationship will endure it is hard to see why, under classical assumptions, such mechanisms would not be used.

- We investigate this question and also another question that as far as we know has received little attention from economists or lawyers.
- Why do parties often write contracts that are neither long-term nor short-term, but rather are of indefinite duration in the sense that most of the time they roll over ?
- Leading examples are rental contracts where the lease is typically renewed; month to month rental contracts; employment contracts where each party can (under some conditions) terminate the relationship, but where they usually do not--most of the time business continues “as usual”.
- We call such contracts “continuing”, although other terms are surely possible .

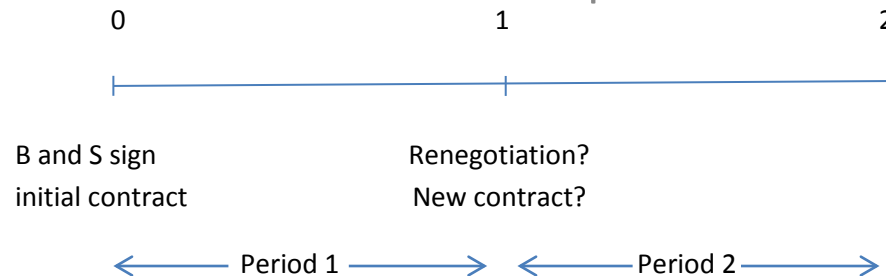
- We will focus on the idea that the parties are likely to apply notions of fairness, fair dealing and good faith when they renegotiate continuing contracts even if they are not legally required to do so.
- For some empirical support: see Kahneman et al. (1986), Okun(1981), Rotemberg (2011), Bar-Gill and Ben-Shahar(2003).
- We will take the view that fair dealing implies that the previous contract(s) will be a reference point for renegotiation. This means that the parties argue only about changes in value and cost. This is a plus. However, fair dealing may make it harder to incorporate outside options. This is a minus.
- For empirical support, see above references, particularly Kahneman et al. (more on this later).

- We adopt the contracts as reference points approach (as in Hart and Moore (2008)).
- Quick review: A contract (negotiated under competitive conditions) circumscribes parties' feelings of entitlement.
- If there is some uncontracted for surplus to divide, each party feels entitled to all of it. If he is shortchanged, he is aggrieved by the amount he is shortchanged and shades, hurting the other party and creating deadweight losses.
- Shading = θx aggrievement, where $0 < \theta < 1$ is exogenous
- Shading does not help the party doing the shading.
- Under these conditions HM show that simple contracts can be optimal.

- Related literature on reference points and fairness: Okun (1981), Kahneman, Knetsch, and Thaler (1986), Bewley (1999), Schwartz and Scott (2007), Herweg and Schmidt (2014).
- Related literature on determinants of contact length: Gray (1978), Dye (1985), Harris - Holmstrom (1982,1987), Diamond (1991), MacLeod- Malcomson (1993), Che-Hausch (1998), Segal (1999), Guriev & Kvasov (2005).

The Model

- Consider a buyer B and a seller S engaged in a two period, three date relationship. See time-line. In each period they can trade zero or one widget.
- At date 0 B and S sign an initial contract that may be long-term, short-term, or continuing.
- This contract is negotiated under competitive conditions at date 0 : there are many alternative sellers for B and so each seller receives her outside option for the two periods, which we denote by \bar{u} .
- If the contract is long-term, it may be renegotiated at date 1. If the contract is short-term or continuing, a new contract between B and S may be negotiated at date 1 for the second period.



- B's value v_1 and S's cost c_1 for the widget in period 1 are already known when the initial contract is written. We assume $v_1 > c_1$.
- At date 1, B's value v_2 , S's cost c_2 , B's outside option r_B , and S's outside option r_S for period 2 are learned by both parties – there is symmetric information throughout (but v_2, c_2, r_B and r_S are not verifiable).
- Both parties are risk neutral, there are no wealth constraints, and we suppose no discounting.
- No non-contractible investments
- We do not model why market is more competitive at date 0 than at date 1. Could be relationship-specific investments. But lock-in is captured implicitly through the outside options.
- We assume that B has all the bargaining power both at date 0 (subject to S receiving her outside option \bar{u}) and at date 1.

- Choice of contract
- LT (specific performance in both periods)
- ST (traditional: no fair dealing in second period)
- C (fair dealing in second period)
- (In practice, only one of ST,C may be available.)

- It is convenient to start with the case where there are no outside options at date 1 -- $r_B \equiv r_S \equiv 0$.
- Example 1 (OF 3!!)
- $v_1 = 20, c_1 = 10, v_2 = 24, c_2 = 10, \bar{u} = 0$
- LT contract: $p_1 = p_2 = 10, U_B = 24, U_S = 0$, no shading
- ST contract: $p_1=10$. Then $p_2=10$ but S feels entitled to 24. S is aggrieved by 14 and shades by 14θ . $U_B = 24 - 14\theta, U_S = 0$.
- C contract: $p_1=10$. Then $p_2=10$ but S feels entitled to 14. S is aggrieved by 4 and shades by 4θ . $U_B = 24 - 4\theta, U_S = 0$.
- Obviously, LT optimal here.
- C better than ST—generally true in absence of outside options

- Example 2
- $v_1 = 20, c_1 = 10$
- $prob \frac{1}{2} v_2 = 20, c_2 = 10; prob \frac{1}{2} v_2 = 5, c_2 = 10$
- $\bar{u} = 3$
- LT: $p_1 = 10, p_2 = 13, \text{deadweight losses} = (2.5)\theta$
- ST: $p_1 = 13, \text{deadweight losses} = 5\theta$
- C: $p_1 = 12, \text{deadweight losses} = 0$

- Proposition . With no outside options, $U_B^C \geq U_B^{ST}$. Also the seller's participation constraint is always binding.

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- Horse-race between LT and C.
- C optimal if “business as usual or efficient for relationship to break up”.

- We now allow for the possibility that $r_B, r_S \neq 0$.
- How does this affect what is regarded as fair-dealing ?

- Kahneman et al. (1986), using telephone surveys, posed hypothetical situations to people to elicit their standards of fairness.
- They found that people think that it can be fair for a firm to raise prices when its costs go up or to lower wages if it is losing money, but not fair for it to raise prices if its product becomes scarce or to lower wages if other workers are willing to work for less.
- This suggests that using changes in value or cost within the relationship to justify a price change is consistent with good faith bargaining whereas using outside options is not.
- At the same time Kahneman et al. suggest that appealing to outside options may be more acceptable if these outside options represent general market trends.

- Case I (idiosyncratic): outside options cannot be used.
- Case M (market): they can be used.
- (More generally, context clearly matters!)
- Relative to no outside options, the analysis is much the same in Case M, but changes in Case I.

Example 3

$$v_1 = 20, c_1 = 10, v_2 = 20, c_2 = 10, r_B = 0, r_S = 1, \bar{u} = 1.$$

Consider a continuing contract (case I)

Choice between $p_1 = 10$, in which case seller quits in second period, and $p_1 = 11$. Latter better. Seller's utility = 2.

With ST contract, best to set $p_1 = 10$. Shading = 9θ .

If θ small enough, ST better

Of course, in this example, a long-term contract achieves the first-best since trade is always efficient.

See Example 3.2 in paper with uncertainty

- Proposition

- In Case I:

(1) The ex post allocation may be inefficient.

(2) The seller's participation constraint may not be binding.

(3) ST may be superior to C.

(4) Optimal contract can depend on \bar{u} .

Propositions 5 and 6 (rough)

Suppose either surplus doesn't change much (and in case I outside options are small); or it is efficient for the relationship to end. Then a continuing contract is optimal.

- Renewable and Exclusive Contracts...

Conclusions

- Trade-off between long-term, short-term, and continuing contracts.
- Can explain examples in intro.
- Can explain role of good faith (plusses and minuses).
- Don't think traditional (non-behavioral) models can do the above.
- In future work, model fundamental transformation explicitly by bringing back specific investments. Endogenize outside options. GE?
- Consider case where outside options are not exogenous but result from search. May explain why sometimes can be used in bargaining, sometimes not.
- Consider possibility that seller takes action that can affect buyer quality (moral hazard). Introduce risk aversion, wealth constraints, reputational concerns.
- Consider what happens if a short-term contract is not feasible. Perhaps in a continuing relationship a short-term contract will be thought of as "continuing"? More generally, can good faith be designed? (50:50 division of surplus ideal.)