Innovation and competitiveness

A potential divergence of objectives in innovation

If we focus on producer-centred innovation, we must recognise a potential divergence of objectives:

- As economists, our objective in encouraging innovation stems from its wealth-creating effects.
- But those who innovate have a **different objective: to ensure their competitiveness and survival**.

Does this difference in objectives matter?

This is a very fundamental question.

A potential divergence of objectives in innovation

If we believe in the simple linear model then it could be argued that the difference in objectives does not matter.

- For that simple model, the only way in which innovation can impact on wealth is if companies market new and improved products and services or offer better value for money.
- Companies have their own motivation, also if a different one, for doing this. And when they have innovated, we can wait for the wealth-creating effects to follow.

So even though there is a difference in objectives, innovation still takes place and will succeed in satisfying both objectives.

The value of innovations

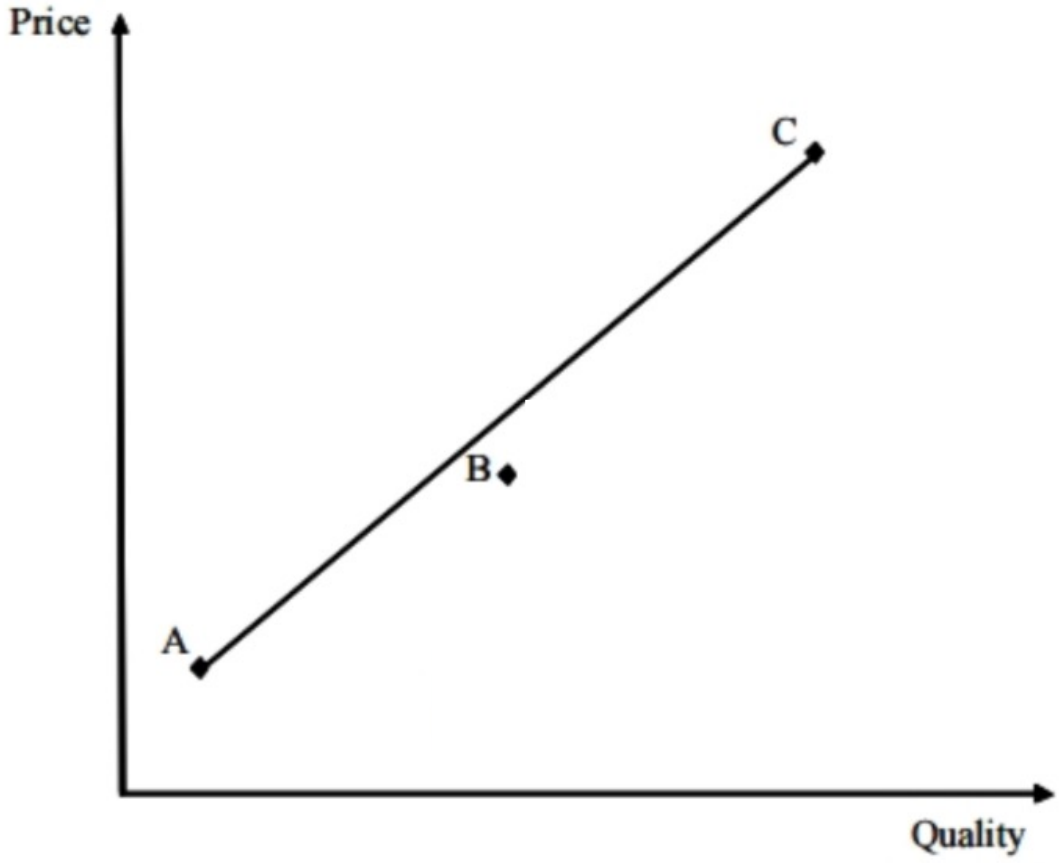
The value of innovations to the innovator is not necessarily directly related to the value of these to the customer for the innovations.

This means that the divergence in objectives may lead to an imbalance in the sorts of innovations we see.

Moreover, when we admit a more complex model, then it is much harder to maintain that a difference in objectives does not matter. Innovation can impact on wealth creation in different ways.

The approach to innovation that might maximise wealth creation may look very different to the strategy for maximising competitiveness of the innovator.

HOW INNOVATION ENHANCES COMPETITIVENESS



Here we have a very simple diagram which describes how innovation enhances competitiveness.

The diagram shows a product market with three competing products: A, B, and C. As drawn, and if we assume that all consumers have WTP (willingness-to-pay) lines as shown, product B does not look very competitive. Most consumers would prefer A or C, and only a very few (such as those with the WTP line as drawn) will wish to choose B.

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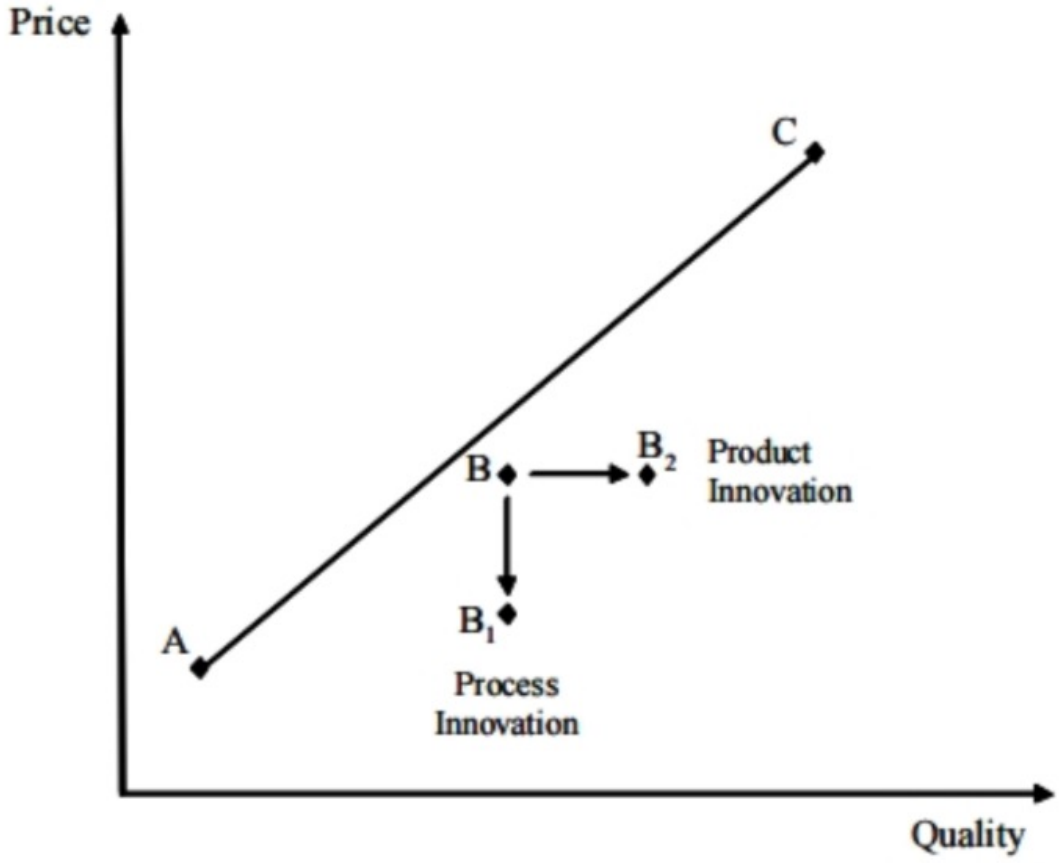

But the producer of B can change that if he uses a product or cost-reducing process innovation.

The cost-saving process innovation would allow that producer to relocate B to a reduced price (B1). Alternatively, the product innovation (with no addition to costs) would allow that producer to relocate B to a higher quality (B2). Both of these moves make B more competitive.

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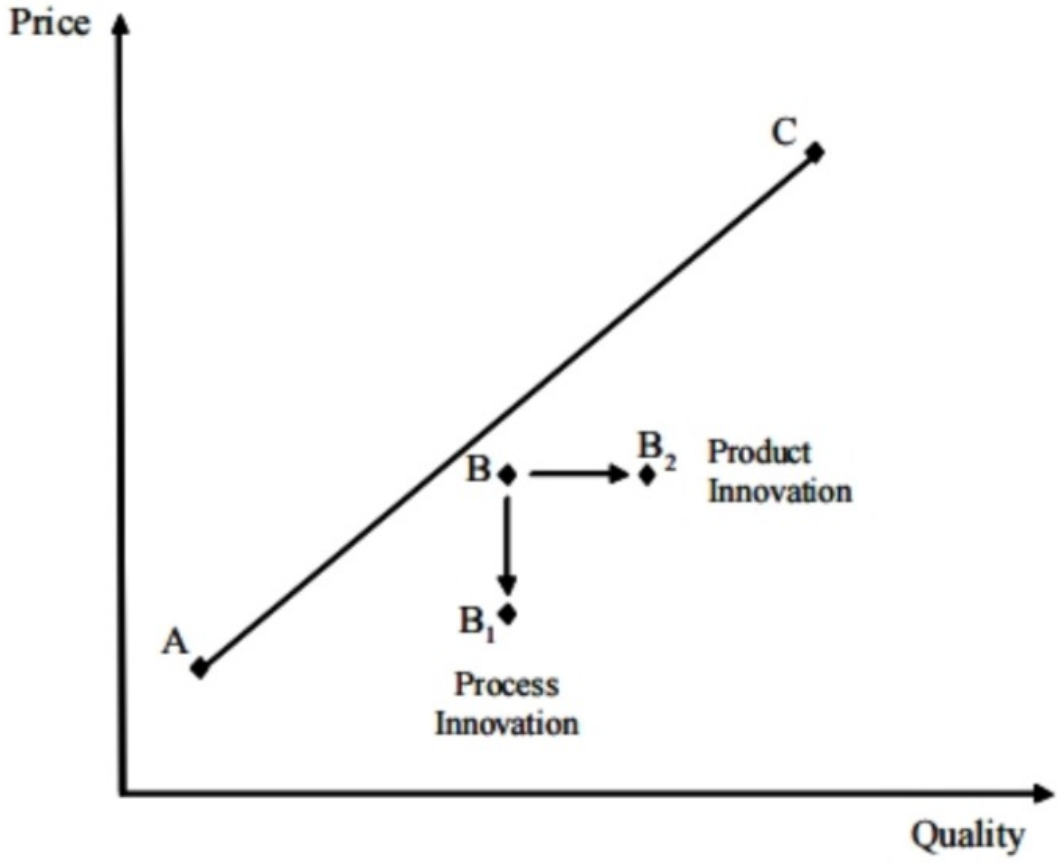
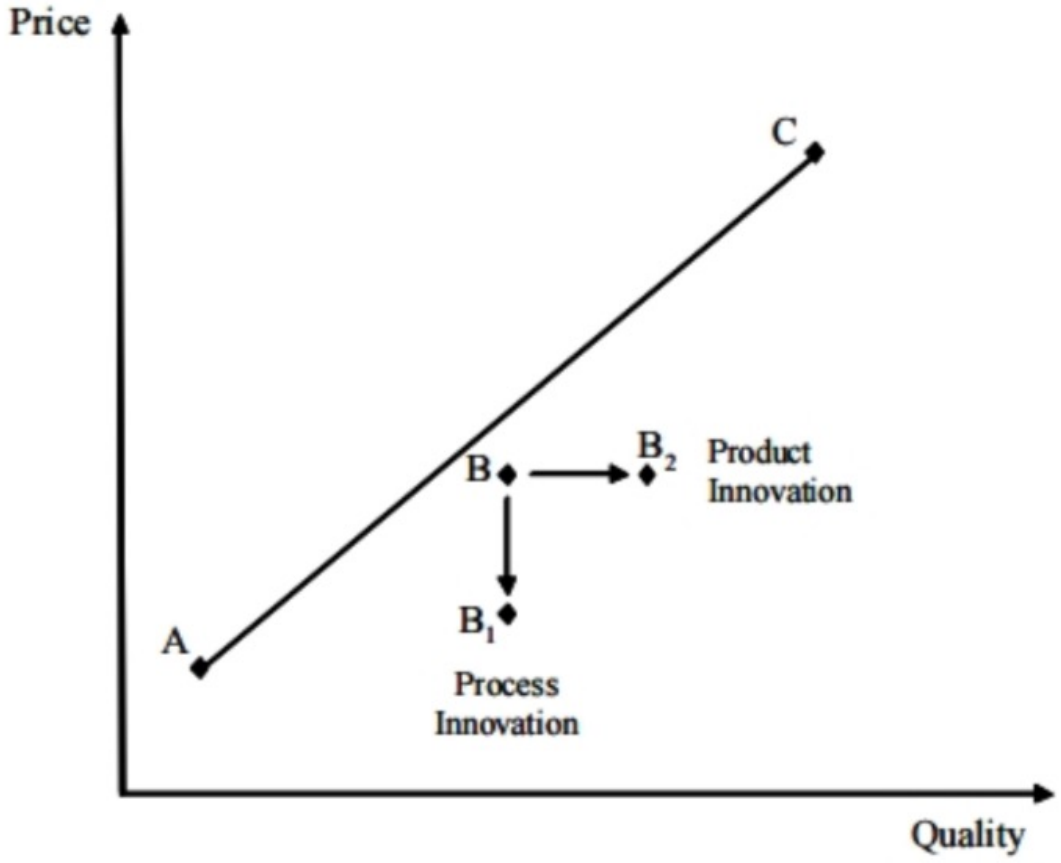


Moreover, we should add that the same diagram could equally well be used to represent other dimensions of competitiveness such as: delivery times, the service element, or any other factors that might make a customer choose product B rather than A or C

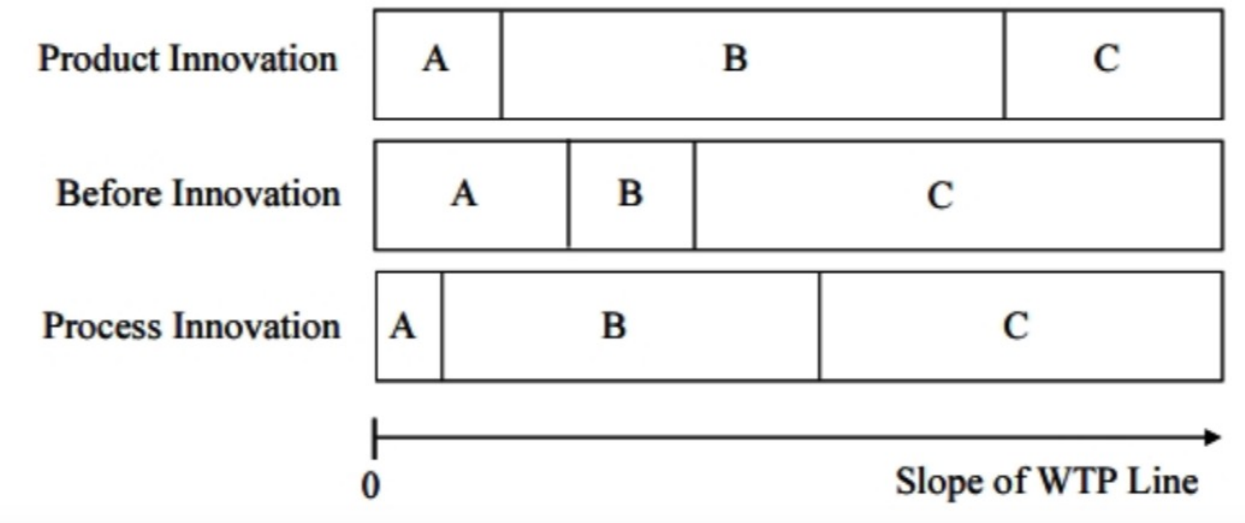
HOW INNOVATION ENHANCES COMPETITIVENESS



The move to B1 brings B closer (both in terms of the diagram and in economic terms) to product A. Intuitively, we would expect this price reduction to mean that B cuts significantly into the market share of product A. On the other hand, the move to B2 brings B closer to product C. Intuitively, we would expect this quality increase to mean that B cuts significantly into the market share of product C.

The product territory map confirms these intuitions.

Product territory maps before and after innovations



The figure shows the product territory maps before any innovation (the middle row), after the product innovation (top row) and after the process innovation (bottom row).

Compared to the pre-innovation picture, both innovations allow product B to capture a larger market share. But they achieve this increased market share in different ways.

- The process innovation takes market share from A and C: the territory for B expands more or less equally in both directions.
- The product innovation, by contrast, mostly takes share from product C and much less so from A.

As drawn, the difference between the top line and bottom line in figure may not seem great. But in more complex settings with more competing products and more dimensions of quality, the difference in effect of product and (cost-reducing) process innovations can be very substantial.

THE VALUE OF AN INNOVATION: INNOVATOR AND CONSUMER PERSPECTIVES

The value of the innovation to the innovator is the effect on competitiveness.

Increased competitiveness will show up as increased market share.

Now what we find in such cases is that if a product is only just competitive (that is, it would only be bought by a tiny proportion of customers, with WTP lines as shown), then even a small innovation in B will be of considerable value to the producer.

Even a small innovation may be enough to secure a substantial gain in market share.

This observation suggests that when the objective of innovation is to steal market share off rivals, then trivial innovations may be far more valuable to the producer than to the customer.

THE VALUE OF AN INNOVATION: INNOVATOR AND CONSUMER PERSPECTIVES

Consider the following selling innovations:

1. A telephone sales team ‘cold calls’ potential customers to try to persuade them to switch their electricity supplier.
2. Representatives of credit card companies try to persuade shoppers in supermarkets and service stations to take out a new credit card with preferential terms.
3. Companies send ‘junk mail’ to try to persuade customers to buy an improved product or service.

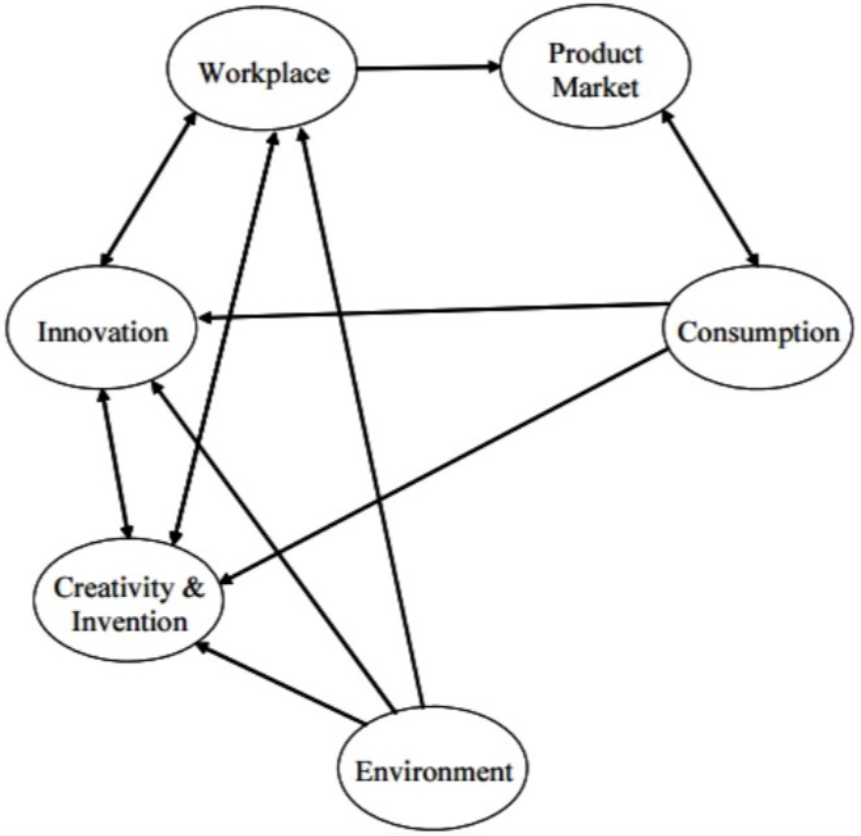
THE VALUE OF AN INNOVATION: INNOVATOR AND CONSUMER PERSPECTIVES

In each case, these innovations can be very successful from the point of view of the seller because even if only a few customers ‘bite’ at the offer, this will be enough to make a mark on market share.

But the value of these innovations to the customer is very limited – and in some cases is negative!

The view that any innovations are good for the competitiveness of the innovator will automatically be equally good for the wealth of the consumer is too simplistic!!

A SUBSET OF THE COMPLEX MODEL



The literature on how innovation enhances competitiveness tends to focus on the linkages identified in the figure.

This is only a subset of what we have seen at work in the complex model.

Some linkages are ignored altogether; others are treated as if they operate in one direction only.

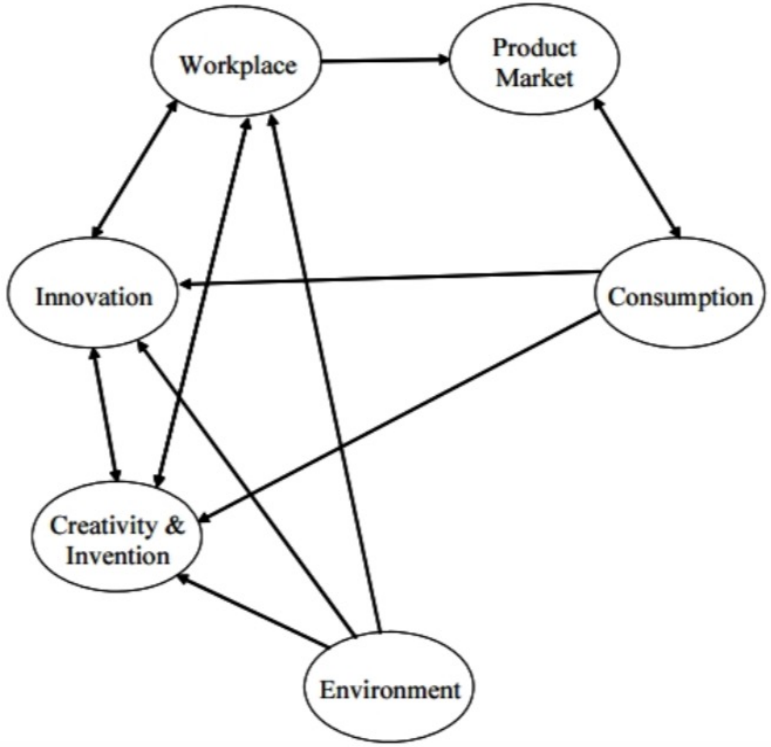
Specifically, the interest in this context will focus on those linkages that influence how the outputs of the workplace will look in the product market – for, in essence, that is what competitiveness is about.

A SUBSET OF THE COMPLEX MODEL

This view of innovation recognises more than the simple linear model.

- It recognises a role for the **customer** in influencing the firm's strategy **for creativity and innovation**, influencing those who design the **marketplace**.
- It recognises that **creativity** and the **environment** may have a direct impact on the **workplace**.

And it recognises the potential importance of feedback from **innovation** to **creativity**. But it misses everything else.



A SUBSET OF THE COMPLEX MODEL

Does that matter?

- For those charged with ensuring the competitiveness of a company, no, it doesn't matter. They are right to limit their attention to those relationships in Figure.
- But for those trying to design policies to promote the wealth-creating effects of creativity and innovation, then yes, it does matter.

The approach to policy that will maximise the effects on competitiveness in Figure will not necessarily be the same approach as that which would maximise wealth creation in the complex model.