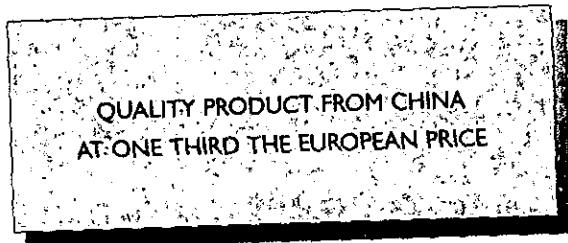


# SUPPLY CHAIN COMPETITION

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Executives in Europe and America are becoming day-by-day more aware of the threat to their survival and to their standard of living from the booming Far East.



Most executives know that they can:

- hire 50 Chinese engineers for the cost of one European engineer, and
- purchase quality product in China for one third of the European price.

So in order to compete they:

- implement the well known 100 techniques of Just-in-Time, Poka Yoke, Value-Adding etc. in their offices and factories, and
- outsource non core operations to suppliers.

This article assumes that members of The Institute of Operations Management:

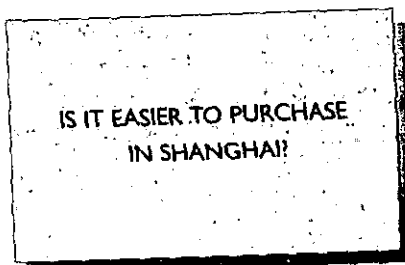
- 1) know these techniques
- 2) why they should be implemented
- 3) which are most effective, and
- 4) agree the need for continuous improvement.

This allows us to concentrate here on how to compete with the Far Eastern tigers.

Here is some good news. Current work in Europe and America has suggested a massive potential improvement in supply chains. Since the above techniques are successful it would be reasonable to assume that they have been introduced into all suppliers. In our experience this is not so. This potential is being neglected.

So why do companies limit their efforts at improvement to their own operations? Why do they give priority to internal operations when a significant percentage of their operations and costs are outsourced and 'out of their control'?

One of the reasons given is that they do not have the human resources to implement the techniques at their suppliers. In our seminars and projects we have discovered that the 3 quotation approach still survives. Buyers continue to rely on price negotiation and to terminate suppliers without warning as soon as they find alternative sources. Short terminism is not limited to our financial centres.



Today most companies that we work with are, either purchasing product from China, or developing joint ventures in China, or building factories there. Some are doing all three and in other countries such as Malaysia, Indonesia and Singapore.

So why is it such a challenge to persuade these companies to transfer winning techniques to their suppliers' plants? Can it be easier to purchase product in Shanghai than to make win-win changes in their supply chains? Since so many European companies are active in China and have not implemented the techniques in their local suppliers the answer seems to be yes.

Is it inevitable that European suppliers will be replaced by Chinese suppliers? So what about suppliers? Are they going to carry on as before until their customers phone up (on Friday evening) to cancel further deliveries? Are our European suppliers going to attend conferences, seminars and suppliers' days and do little, but wait for the inevitable termination? What would they do if they experienced the power of these techniques?

This case study shows just how one supply chain reacted to the introduction of the techniques. When a high percentage of business costs are with suppliers it seems naive to ignore this potential.

The truth is:

- it is no longer enough to compete company to company with the Far East
- the only way to survive is to compete total supply chain to total supply chain.

Let us not waste time on discussing why we should do this.

- how can we get our suppliers to reduce costs (not prices) and increase flexibility and customer service?
- how can we get our suppliers to think in terms of the benefits of change to themselves and their customers?

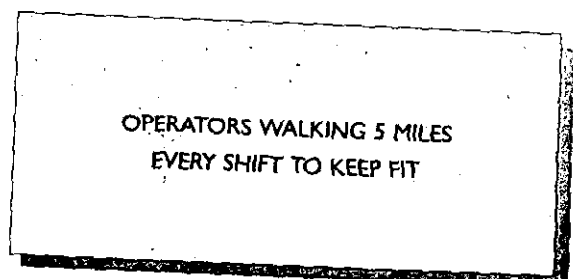
Further on we need to address how we are to share the massive savings that result from such an approach.

Maybe we can contribute in this short article to the spread of techniques throughout the supply chain by considering two 'how to do it' methods.

There are several ways to implement these techniques at suppliers, for example:

- 1) **the short route.** Set targets and give each supplier a specific time to achieve those targets. Suppliers who are unable to perform 'under their own steam' can be supported by customers' engineers.
- 2) **the longer route.** Use Suppliers' Days and Workshops to educate the suppliers before inviting them to use the techniques in their companies.

What a good idea the longer route seems to be. Let us not rush into something that we are not sure about. After all these techniques have only been used successfully since 1960, or is it earlier? We all know that if people are not trained in the use of these techniques then results will be disappointing.



In practice the bigger the threat the more the short route is selected.

Here is a real life, longer route example dramatised both for effect and to maintain commercial confidentiality.

In Europe we are helping an assembly plant to use JIT and Value-Adding techniques. This includes practical training and essential hands on assistance during the implementation phase. The results are costs down, lead times down, quality up, flexibility up and customer service up. Significant improvements were in the first 4 weeks. The opportunities on these assembly lines demonstrate what can be achieved after an analysis of about three hours by two Directors using the techniques for the very first time. They found:

- a 2 hour assembly time with only 12 minutes adding-value
- operators walking 5 miles a shift, and
- sub-assemblies newly purchased being scrapped by the operators.

Frankly, the operators would not tolerate this in their homes, at their football clubs or in their bars. Yet management only found out what was going on by using the well known techniques in three hours. So the costs of discovery were small by comparison with the huge potential that they discovered in such a short time.

Management's first reaction was typical Victor Meldrew: "We cannot believe it...." Their second reaction was "this is how we keep our people fit and healthy". Let us step back from the detail. Prior to this simple analysis there were frequent tours by customers of the assembly lines of which the company was so proud.

**Did the customers see the potential for improvement?** If they did (and it is questionable) why did they not mention it to their guides? After all they were paying for the obvious inefficiencies in grossly inflated prices.

**Were the managers who acted as guides aware of the potential?** If they were they did nothing to improve. There is no doubt that the operators were aware of the potential and for whatever reason (fear of redundancy?) did not share their ideas with management.

SAMPLES FROM CHINA AT  
ONE THRID  
OF THE EUROPEAN PRICE

**Did the suppliers make their resources available to improve the assembly operations?** A minority certainly contributed, but since they did not know the techniques most of the potential was unrealised.

Immediately after the first analysis by the Directors action was taken to eliminate some non-value-adding operations, to improve the layout and to cancel orders for the parts being scrapped. So far so good.

Thinking Pareto the point was made that the assembly lines just analysed were not that important. After all 80% of the costs were incurred at suppliers' plants. Then came the big question. Since 80% of the costs are incurred at suppliers is there similar potential for improvement in their plants?

The subjective response was yes. The next question was how to persuade suppliers to trial the approach without upsetting them. Since this is a civilised and sophisticated part of Europe it was decided to adopt the longer route, the 'gentlemanly'

approach, to education and training followed by pilot trials of the selected techniques, if suppliers agreed to them.

The educational process started with a **Suppliers' Day Conference**. Since management are all Pareto followers only the biggest suppliers were invited. The day of the conference 120 suppliers were in the audience. Examples were given of what had been achieved in similar companies and on the assembly lines which they had the responsibility to feed. It was made absolutely clear that amateurs (Directors) with only 3 hours training had discovered amazing opportunities for improvement.

The Chinese threat was articulated by the Purchasing Director using samples of the parts produced by the Chinese at one third the price of the suppliers in the audience. In persuasive fashion he suggested that some of the audience might not attend future Suppliers' Days unless they used the techniques to reduce their costs.

Assembled machines were on display so that for the first time suppliers could see where their parts fitted in the machines. A tour of the assembly lines was organised so that they could see the way their products were assembled and the improvements made in only 4 weeks since the initial analysis.

WHAT DID THE SUPPLIER THINK  
WHO SUPPLIED SUB-ASSEMBLIES  
THAT WERE SCRAPPED ON THE  
ASSEMBLY LINES?

An un-asked question: "what did the supplier think who had been supplying the sub-assembly that was being scrapped on arrival on the assembly line"? The price of the sub-assemblies totalled £40,000 per year. The total cost to the business was far in excess of this.

The gentlemanly pace of progress continued. A month later these same suppliers were thanked for their attendance and invited by letter to partake in a two day workshop. Pareto won again. This time Pareto applied the other way around. The companies who accepted the invitation selected themselves and they were the top 15 in terms of sales.

**Workshop Day 1** consisted of:

- welcome
- reasons for the 2 day workshop - the Chinese threat
- the potential for everyone in context of market place survival and increased sales
- description of the performance of competitors in the Far East who since the Suppliers' Day had become suppliers
- results obtained since the Suppliers' Day on the company's assembly lines
- explanations of how to use the techniques.

HOW SHOULD THE SAVINGS  
BE SHARED OUT?

The delegates were invited to trial the techniques in their companies and to present their findings on the second day of the workshop. They were invited to use video as the best way to prove a before and after situation.

**Workshop Day 2** was fascinating.

Yes, we did check to see what results were being obtained in the intervening 4 weeks. Significantly no one asked for help or reported the amount of non-value-adding in their operations.

An attempt was made to structure the day in a positive mode. The supplier who had been negative during day 1 was asked to make the first presentation. He gave a 30-minute talk not having used any of the techniques. He was unable to quantify the potential at his company, but had implemented some knee jerk changes. He summed up by saying that the techniques were only common sense.

Recognising the warning signs we selected as the second presenter a supplier that we knew had done some analysis and had results. He had analysed the work flow on a major machine centre and although his results were staggering (70% waste) he had not followed the product through all operations. He explained that this was because the operations were spread all over the factory.

A third supplier had analysed the sub assembly that he produced and developed a prototype with reduced number of parts and reduced costs. He had avoided trials of the techniques as he felt that his integrity was being attacked. Since he was very positive he was encouraged for thinking along the right lines and making a valuable contribution to the supply chain.

The fourth delegate demonstrated the potential in this supply chain:

- he had not attended day 1
- he did not understand the goals of day 2, and
- he had only been told of the presentation the evening before.

However, he gave a fascinating and polished presentation of a project (dates on his slides) 4 years before on an unrelated subject.

After 15 'professional presentations' it was clear to everyone why the Purchasing Director was purchasing from China and why he felt the need to inform his European suppliers of what he had discovered in China, Korea and Indonesia.

It should be stated that these companies are successful businesses in Europe just beginning to feel the pressure from Asia. Of the suppliers we visited prior to workshop day 2 we found that at least 75% of their operations were not adding-value.

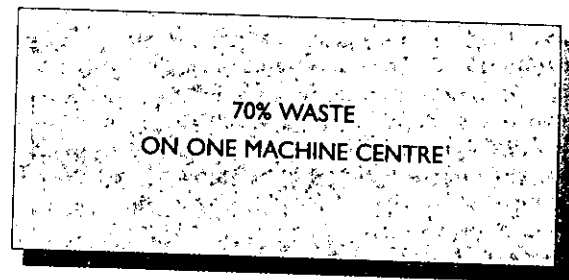
Suggestions for Institute Members:

If supply chain competition is relevant to your business then we suggest the following:

- re-visit the operations of your suppliers
  - check out the potential for you in China
  - inform your suppliers of the potential in the Far East and the likely impact on their sales to you
  - recalculate the percentage of your costs that are under the control of your suppliers
  - check to see if your suppliers are using the winning techniques
- if your suppliers use the techniques find out what percentage of the processes producing your products are non-value-adding and what they are doing to eliminate this waste
  - take the short route to making change
  - if your suppliers are not using the techniques
  - take the short route to making change.

Why do we recommend the short route in Europe?

We all know that Suppliers' Days and Workshops are necessary to train people in the effective use of the winning techniques. We also know that training does not guarantee that results are obtained.



Most companies need both a threat and frequent hands on assistance to ensure that improvement is a continuous action. In our experience learning by doing is much more productive than learning in the classroom. Then the major challenge is to decide where you are going to invest the money that you save in your supply chain. On second thoughts this is the sort of challenge that members of the Institute can meet without our help.

#### About the author

Brian O'Connor set up his own management consultancy in 1970. He is a frequent speaker at APICS and Institute of Operations Management conferences. O'Connor International organises seminars and conferences in 15 countries and also consults to companies in America and Europe. He is a Fellow of the Institute of Operations Management and is an occasional lecturer at the Ecole des Mines in Paris.

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