



Plastics Topics – Labour costs don't matter any more

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1. Introduction

J Churchman-Davies and R Kent

The UK plastics industry is concerned with the importing of products and the 'exporting' of jobs. 'Lower labour costs of overseas suppliers' is often quoted as a reason, but labour costs are now a minor part of the overall cost of most plastics products – the cost of resources and overheads are far more important than the cost of labour. Unless the UK industry addresses the real issues of resource usage and overhead management then business will continue to migrate offshore whilst the industry chases a mirage of 'labour cost reduction'. Labour costs don't really matter any more.

The industrial revolution was based on using machinery to increase labour productivity and as the home of the industrial revolution; the UK became a world power. The industrial revolution is now worldwide and labour productivity is available anywhere in the world.

This might seem a recipe for accepting the loss of UK manufacturing industry, but the rules have changed again.

We are in the middle of a 'second industrial revolution' in 'resource productivity' where the aim is to increase the effective use of materials to generate profits. Increasing resource productivity is now the key to achieving competitive advantage. Resource productivity means reducing the resources used (and paid for) and converting those that are used into higher added value products in the most effective way.

2. What is happening to costs?

The structure of costs in plastics processing is changing:

Cost category	1960	1986	1996	2016
Direct labour	25%	12%	10%	8%
Direct materials	60%	58%	55%	54%
Overheads	15%	30%	35%	38%

Table 1: The changing cost structure

- Direct labour costs are going down as a proportion of costs.
- Direct materials costs are rising as a proportion of costs.
- Overheads are rising as a proportion of costs.

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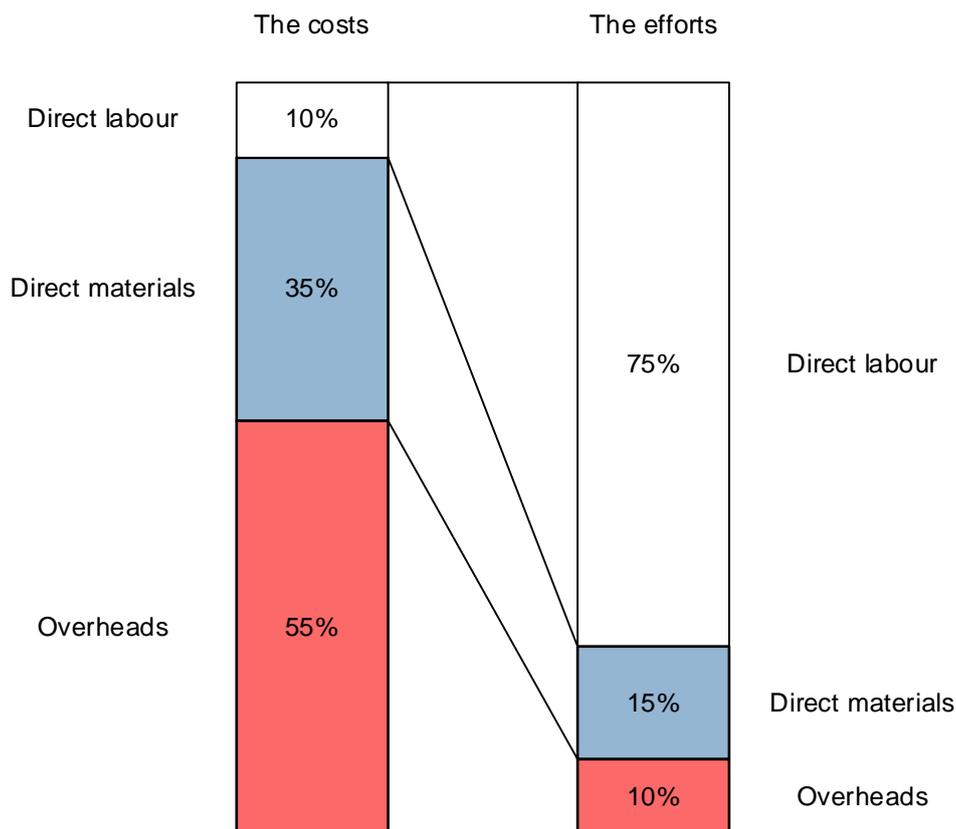


Figure 1: Not only is the cost structure changing but also the efforts to control costs are out of proportion to the structure of the costs.

Unless the industry realises and accepts this then cost management efforts will continue to be directed at the smallest component of costs and cost control efforts will be ineffective.

3. What matters today?

- The key targets are profitability and survival. Reducing the real costs is crucial – 85 to 90% of the real costs are in direct materials and overheads, not in labour costs. Other targets are:
- Adding real value to the customer.
- Changing the basics – the concept of the 'machine for hire' is dead.

4. What will matter in the future?

Leading the 'second industrial revolution' in resource productivity is the key to success in the future. To gain leadership requires management and control of the full product life cycle from cradle to grave. The issues of the future will be:

- Manufacturing
- Use
- End-of-life
- Raw materials

Achieving continued survival and profitability into the future will mean taking charge of the company's destiny rather than allowing it to be dictated to you.

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5. A roadmap for the future

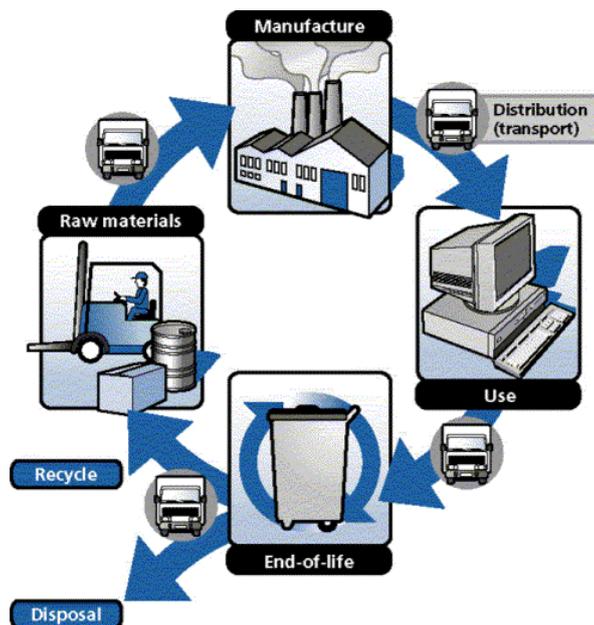


Figure 2: The product life-cycle

6. Manufacturing – targeting efforts

We need to recognise the reality of costs and accept responsibility for materials costs. We also need to accept responsibility for the controllable overheads and act to reduce the controllable overheads.

Keep the labour: sack the kilogrammes and kilowatt-hours.

Markets	Legislation
<ul style="list-style-type: none"> • Real cost savings from improved resource efficiency. • Reduce energy bills by 10-20% from no-cost and low-cost measures. • Reduce cost of waste by 25%. • Improve profit by 25-30%. 	<ul style="list-style-type: none"> • Incentives for reducing energy use. • Landfill taxes. • Integrated Product Policy in near future. • + more from EU and UK.
Strategies	Tactics
<ul style="list-style-type: none"> • Improve resource productivity. • Reduce resource usage in absolute terms. • Energy efficiency. • Waste minimization • Start to introduce Cleaner Design. 	<ul style="list-style-type: none"> • Start to measure and target the real costs. • Start surveys and benchmarking to reduce resource usage. • Improve technology to reduce resource usage.

Table 2: The manufacturing action plan

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7. Use – optimising use

'Cleaner Design' is a tool to optimise resource efficiency of products throughout the life cycle. It reduces the materials and energy content of products and reduces the environmental impact of the product and the manufacturing process.

'Cleaner Design' also improves 'end-of-life' options.

Markets	Legislation
<ul style="list-style-type: none"> • Achieve real cost savings by improving resource efficiency at the design stage. • Use clean technology to improve design and manufacturing impacts. • Improve customer focus. 	<ul style="list-style-type: none"> • Integrated Product Policy. • Ramping up of CCL and similar push-pull taxes and legislative instruments.
Strategies	Tactics
<ul style="list-style-type: none"> • Improve design processes and outputs to reduce the whole life cost of products. • Improve manufacturing processes to reduce the whole life cost of products. 	<ul style="list-style-type: none"> • Train and implement: <ul style="list-style-type: none"> ▪ Design for Manufacture ▪ Design for Assembly & Disassembly. • Reduce designed in resource use. • Reduce manufacturing impacts and costs.

Table 3: The use action plan

8. End-of-life and raw materials

'Manufacturing' and 'Use' are largely internal and localised actions and are driven by the internal costs and the need to reduce them for profitability. In the medium- and long-term future this balance will change. The drivers will become largely external, delocalised and driven by legislation and the cost/market impact of the legislation. Legislation is becoming a tool increasingly used to internalise social costs.

9. End-of-life – minimising outputs

Disposal is becoming increasingly expensive at any stage of manufacture. Disposal will become increasingly expensive at the end-of-life stage. Medium term destination shortages are currently being internalised, e.g., landfill, CO₂, effluent. Producer will increasingly take responsibility for end-of-life costs.

Markets	Legislation
<ul style="list-style-type: none"> • EMS will become an essential qualification. • Market effects of disposal costs will start to matter for producers and increasingly for customers. • Environmental design will become an essential cost control and marketing tool. 	<ul style="list-style-type: none"> • Climate Change Levy. • Landfill taxes. • WEEE. • RoHS. • Automotive End of Life (EOLV directive). • CFC regulations.

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Strategies	Tactics
<ul style="list-style-type: none"> • Improve resource productivity and reduce resource usage. • Manage tradeable resource credits, e.g., carbon trading, PRNs. • Formulate a 'take-back' strategy. 	<ul style="list-style-type: none"> • Monitor resource intensity; follow legislation as a tool, not as a minimum requirement. • Form customer and end user partnerships. • Verify resource intensity. • Change accounting systems.

Table 4: The end-of-life action plan

10. Raw materials – minimising inputs

- Design, manufacture and marketing to allow recycling and re-use.
- Design and manufacture using recycled and reused materials.
- Design for limited raw materials and scarce supplies of crucial parts.

Markets	Legislation
<ul style="list-style-type: none"> • Competition for recycle, sustainable and other raw materials will intensify. • Markets will be transformed. 	<ul style="list-style-type: none"> • EMS will become mandatory for success. • Compliance with enhanced and further environmental design standards.
Strategies	Tactics
<ul style="list-style-type: none"> • Corporate strategy for recycled and renewable materials. • Corporate strategy for the use of renewable energy. • Long term, sustainable and demonstrable corporate environmental plans. 	<ul style="list-style-type: none"> • Work with customers to define real market needs. • Work with customers to introduce recycled and renewable materials. • Work with customers to gain acceptance of new product life-cycles. • Cleaner technology.

Table 5: The raw materials action plan

11. Summary

- The markets have changed – both internally and externally.
- Focusing on labour costs is not the way forward for the UK especially
- External and legislatively driven costs are becoming the major key to success and survival.

That is why labour costs don't matter any more.