

THE IRISH TIMES

Prospering in a globalised economy

July 9, 2007

[Prof Richard K Lester](#)

Successful economies fail when success is seen as a birthright. The spectacular emergence of China as a global industrial power has put an end to most complacency in advanced economies. The bigger risk at this stage may be defeatism. Take manufacturing. The demise of manufacturing industry in high-wage societies has long been predicted. Economists and others have argued for years that advanced economies will evolve into service economies, because when people grow more affluent their consumption pattern becomes increasingly skewed towards services. Now, many say, the outlook for Western manufacturers is grimmer still, as huge numbers of low-wage, increasingly well-educated workers in China, India and other emerging economies flood into the global labor market.

But both arguments are wrong. Western consumers have not lost interest in manufactured goods. In the US, manufacturing purchases have accounted for a constant share of (increasing) household expenditures since the 1980s, and this share may even have risen recently. And there are plenty of successful, profitable manufacturing firms to dispel the notion that American and European manufacturers can no longer compete in global markets.

What *is* clear is that routine, rule-based work in the manufacturing sector is under great pressure in advanced economies. (This is also true of routine cognitive work in services, such as in call centers and accounting offices.) The pressure comes from low-wage Asian rivals, but also from automation at home. The latter may be more significant. In the

U.S., it is estimated that domestic productivity gains since 1990, fueled by new information technologies, have accounted for more than twice as many job losses in manufacturing as low-cost imports.

So how can Western manufacturers survive? The key is innovation. Firms – even those in traditional sectors like apparel and footwear – that continually develop innovative new products, find new markets for them, and improve on their production and delivery processes, will not only survive but prosper. Firms that fail to innovate, even those in high-tech sectors, will not survive.

The Apple I-Pod, one of the decade's most successful consumer products, demonstrates innovation's benefits while revealing other important lessons about what it takes to succeed in manufacturing today.

Apple makes almost none of the I-Pod itself, relying instead on components designed and manufactured by a small army of suppliers around the world. By exploiting the potential for 'modularity' in the design – itself made possible by digitization and standardization of the interfaces between components and between business functions – Apple could focus on what it does best: designing elegant form factors and user interfaces. And by relying so heavily on standard, off-the-shelf components, Apple could bring the I-Pod to market much faster.

The I-Pod supply chain stretches across the globe, and most of the manufacturing is done overseas.

Even so, about \$163 of the \$299 retail value of a typical I-Pod sold in the U.S. flows to American firms and workers, according to a recent study by researchers at the University of California, Irvine. Apple itself, despite manufacturing almost nothing in-house, receives \$80 of the value. Another \$75 goes to U.S. distributors and retailers.

Moreover, with the i-Tunes music downloading service, Apple found a creative and profitable way to combine its product with a value-added service. In fact, for the I-Pod, for the just-launched Apple I-Phone, and for countless other products, from medical devices to aircraft engines, it is no longer clear whether we are talking about a service-enhanced product or a product-enhanced service. The old distinction between manufacturing and services, preserved in government statistics and stale policy debates, is in practice rapidly disappearing. Innovation is the key to competitiveness in both.

So how can a country like Ireland ensure its place at the world's innovation table? As Irish economic leaders continue to develop their innovation strategies, they should keep three points in mind. First, innovation isn't just about research and discovery. It also entails commercialization (the translation of the invention into something useful), then the initial adoption of the new product or service, and then diffusion, or adoption at scale. A successful innovation 'ecosystem' must deliver all of these. Indeed, countries – especially small ones like Ireland – may be innovative at least as much because of low resistance to the adoption of new technologies developed elsewhere as because of

their own inventive prowess. Critical to the entire process is the ability to attract financial capital with an appropriate appetite for risk, and a workforce at all levels that is open to innovation – a key theme emphasized by the National Center for Partnership and Performance at its annual conference in Dublin last week.

Second, the widespread perception of manufacturing as a declining sector in advanced economies is mistaken. Most of the factory jobs that have been lost in recent years will not return. But the huge and growing appetite for manufactured products, as well as the increasingly fragmented supply chains which produce them, are creating new opportunities for firms and workers in high-wage societies. Most of these new manufacturing-related jobs aren't found in factories, nor even in traditional manufacturing firms. But they are essential to the development, production, marketing, and delivery of manufactured products.

Finally, for high-wage societies, there are no sunset industries, only sunset activities. Globalization and automation are inflicting a devastating one-two punch on standardized, labor-intensive production in both manufacturing and services. What's left at home in these economies, increasingly, will be those activities that are not rule-based and that benefit from proximity to each other and to consumers. And as long as enough of these activities are associated with innovation, a healthy future lies ahead for both manufacturing and services in high-wage economies.

* * *

Professor Richard Lester is director of the Industrial Performance Center at the Massachusetts Institute of Technology. He is the author of Innovation – The Missing Dimension (Harvard University Press, 2005.)

© 2007 The Irish Times