The craft era

The first major era is now referred to as ‘ craft’ manufacturing and service ‘ shop’ delivery. This system was European in origin and linked to the way in which skills were developed: the apprentice–journeyman– master progression, which led to the creation of guilds of skilled people who sought to control the supply of their speciality, and the consolidation of skill within a subsector of society (as, for example, skills were passed on from father to son).

This was noted for low-volume, high-variety products, where workers tended to be highly skilled and quality was built into the very process of operations. It was also appropriate for largely national markets, supplied internally with minimal imports and exports. Some craft manufacturing still remains today, in markets where exotic products and services can control demands through some unique feature or high level of desirability. For instance, some house building, furniture making, clock and watch making are still carried out by skilled craftsmen/women working on a single or few items of output at a time.

While the processes and techniques used by these craftsmen/women are highly inefficient, the unique quality of their products commands a premium price, as illustrated by the secondhand value of products such as a Daniels pocket watch or a Morgan car. In the case of Morgan, however, it is a mistake to conclude that the passenger car industry might still be able to employ craft production. Morgan is unashamedly part of a sector that is closer to specialist toys than that concerned with personal transportation. It is also the end of a very thin tail, other parts of which (AC, Aston Martin, Rolls Royce, etc. have already been absorbed by volume producers, keen to operate in exotic niches for purposes that are closer to corporate advertising than to income generation. In the clothing industry, one significant sector of the industry – haute couture – is based on the craft production approach. In services, the craft era has also continued – perhaps even more so than in manufacturing. The slower pace of change within services derives from the extent to which customer processing operations can adopt new technologies and new systems.

Only services that require little skill at the operating level (such as FMCG or petrol retailing) or processing large amounts of information (such as financial services) are significantly different now from what they were like even 30 years ago. Many services such as hotels, schools, hospitals, hairdressers, vehicle repair and transportation have changed very little, despite new technologies. The mass production era The second major era is known as mass production, although once again its principles were by no means restricted to manufacturing.

This system grew in North America to accommodate three principal requirements of the developing giant: the need to export, the need to provide employment for a massive, largely unskilled workforce, and the need to establish itself as a world player, which meant infiltrating other regions with ideas clearly associated with the USA. In short, the Americans could not play by the European rules, so they reinvented the game: innovating by destroying the competitive position of craft production.

The system was massively successful and changed the working and buying practices of the world in the first three decades of the twentieth century. In order to sell the standardized products made by standardized operations practices, mass production had to standardize the market requirements too. Fortunately, the market was immature and would do what it was told to do. Thus, mass production reversed the paradigm of craft production: volume was high with little variety.

The marketing ploy (and the resultant manufacturing strategy) was exemplified by Henry Ford’s famous declaration, from now on, ‘ a customer can have a car painted any colour he likes, as long as it is black! ’ In mass production, workers were typically unskilled. This was the era owing much to the contribution of F. W. Taylor’s Scientific Management, whereby workers had very narrowly defined jobs, involving repetitive tasks, and quality was left to ‘ quality experts’ at the final stage of the overall process rather than being an integral part of operations at each step (Taylor, 1912).

Taylor enabled firms, for the first time, to control costs, times and resources, rather than rely on skilled craftsmen and women to decide what was appropriate. Coupled with the developments made in mechanization and employee co-ordination during the European industrial revolutions, Taylor’s ideas provided an entirely different way of operating. In 1926, Encyclopaedia Britannica asked Henry Ford to christen his system and he called it mass production. He meant ‘ mass’ in the sense of large volume production.

Perhaps he did not see the other meaning of mass as ‘ heavy and cumbersome’, which is what the system turned out to be (in terms of management systems and superstructure), once the market no longer bought what it was told. These principles originating in the 1920s were slow to be adopted in services, but by the 1970s, Ted Levitt, fromHarvardBusiness School, was able to identify the ‘ production-lining’ (Levitt, 1972) of service and the ‘ industrialization’ (Levitt, 1976) of service. He citedfast food, the automatic teller machine (ATM) outside banks and supermarket retailing as examples of this.

Schmenner (1986) coined the phrase ‘ mass service’ to exemplify this type of service operation. More recently, the aspects of working life that are typical in this mass production context have been extended to life in general by Ritzer (1993), who refers to it as the McDonaldization of society. The shift from ‘ craft’ marketing to marketing in the mass production age is clearly demarcated by the publication of Levitt’s (1960) article in the Harvard Business Review entitled ‘ Marketing myopia’.

In mass production, customers bought what was supplied; producers concentrated on keeping costs, and hence prices, down, and focused on selling to customers through aggressive advertising and sales forces. As organizations were product-led, operations management was relatively straightforward. Mass producing goods at the lowest cost meant minimizing component and product variety, large production runs and scientific management. The success of Ford made this view highly persuasive.

In 1909, the Model T automobiles were sold for $950, but by 1916, following the introduction of the assembly line, it had fallen to $345, and three-quarters of the cars on American roads were built by Ford (Bryson, 1994). However, as Levitt (1960) pointed out, Ford was eventually outstripped by General Motors, who were not product-led but market-led. They gave customers what they wanted – choice, model updates, a range of colours (not just black!). The symbol of this age is the brand.

Originally (in the craft era) the brand was a mark on the product, often a signature – for example, on a painting – or symbol, signifying its ownership or origin. But in mass production the brand took on far more significance. It became the means by which one product (or service) could differentiate itself from a competitor’s product (or service). Procter & Gamble set up brand managers in 1931 to sell their different soap products. Later the brand also became a guarantee of product/service quality.

Kemmons Wilson’smotivationin 1952 to open the first Holiday Inn hotel was his own disappointment with the ariable standards and sleaziness of the motels he stayed in whilst on afamilyholiday. The success of delivering a consistently standard level of service resulted in Wilson opening one hotel every two and half days in the mid-1950s. But by the 1990s, brands had come under threat. Markets are highly fragmented, the proliferation of niches makes target marketing more difficult, product and service life cycles are shortening, and product/service innovation is quicker than ever before; increasing customer sophistication has reduced the power of advertising.

As a result, a more holistic view of operations management is required, as Crainer (1998) suggests: Companies must add value throughout every single process they are involved in and then translate this into better value for customers. This is because the modern era has brought profound changes in operations management and operations has to be at the heart of successful strategic thinking.