

Chapter 1

Manufacturing in a High Cost Environment: Basis for Future Success on the National Level

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ABSTRACT

This chapter explores the current state of flux in manufacturing. It examines the forces that drive fragmentation and dispersion of value chains on the one hand and those that drive concentration and integration of value chains on the other. These forces are underpinned by changes in technology, wage costs, business environment, importance of economies of scale for production, need for interaction with customers and input providers, needs for skills in the manufacturing workforce, and the workings of industrial commons and economic complexity. Analysing these changes at the level of the firm, this chapter puts the competitive focus on the creation of value more than on cutting costs (although both are important). The policy environment must provide both carrot and stick to ensure that firms align with these developments. In this dynamic world, an effective policy response requires a shift from any single dominating economic lens (e.g. neo-classical, neo-Keynesian, neo-Schumpeterian, evolutionary) to a situation-specific approach.

THE STRUCTURAL CHANGE OF MANUFACTURING: PAST-TO-PRESENT

Like all industrial activities, manufacturing is in a constant state of flux. Historically, change was driven by the mutual interaction of technology development and change in consumer demand. But with the reduction in trade barriers, consum-

ers were able to access a wider choice of products and receive value in different ways, beyond the performance of products when used.

Three different dimensions of value in the eyes of customers can be identified: Instrumental Value is the value of a product doing what it is supposed to do when put to use; Intrinsic Value is the appreciation of a product for what it is in itself, regardless of if its use e.g. the value of a

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coin to a coin collector is neither its face value nor its resale value but rather its value as a coveted object; Extrinsic Value is the value to the owner of others appreciating the owned object e.g. the value of a policy to a politician may lie in the fact that it is appreciated by the electorate, rather than in the outcome it delivers or that it is good as an action in its own right.

The above mentioned trade barrier reduction resulted in more choice and thereby the provision of many customers and consumers with higher total value-for-money by adding up contributions from all three value dimensions (instrumental, intrinsic and extrinsic)¹. E.g. same functionality different brand, same functionality higher collectability, higher functionality with higher desirability, etc.

From the producers' perspective, this provides benefits in terms of increased economies of scale due to increased volumes from larger markets, as well as potential for increased earnings due to maximising differing price levels and price elasticity in different markets. In addition, producers benefit from learning more from the rapidly increasing volumes of products in different markets.

This provides for more rapid growth of firms that serve export markets than for those that only serve the domestic market. Hence, a structural change has occurred that favours larger firms over smaller ones. Such firms have greater bargaining power and scale, demonstrated in particular by their ability to extract more value from their suppliers.

In summary, reduced trade barriers led to greater consumer choice and new understandings of value, resulting in economies of scale from serving larger markets which in turn drove exports and larger businesses with more bargaining power.

The next structural shift happened when firms started to realise that labour costs differed across countries and locations. This provided opportunities for reducing costs and led to the relocation of activities, most commonly production activities or service activities, to lowest cost jurisdiction or location, and hence offshoring was born.

The next structural shift was enabled by the rapid development of information and communication technologies (ICT) which provided the tools for coordination of activities on a scale and complexity previously not possible. Through deploying ICT, transaction cost could be reduced to a level where the firm was now able to sub-divide its operations into many discrete unit operations that could be dispersed, not only geographically, but also organisationally, leading to the birth of outsourcing. This development has resulted in the fragmentation, or dispersion of value chains which is a key characteristic of manufacturing at present.

The forces that drive fragmentation and dispersion of value chains that are normally discussed under the heading of globalisation are not the only forces at play. There are also forces that drive value chains towards concentration and integration and these will be discussed below. It is the balance between these two sets of forces that determines the structure of value chains at any given time and this balance is continuously changing. We are now probably at the peak of imbalance between these two sets of forces. It is interesting to note that in spite of the present imbalance being in favour of the fragmenting and dispersing forces, more than two-thirds of global manufacturing activity takes place in industries that tend to locate close to demand (George et al., 2014), be this demand in growing economies like China or resurging economies like the US.

The practicalities of the present situation can be illustrated by some insights from the Swedish economy where (SCB, 2013):

- In the period 2009-2011 6,200 jobs (equal to 1.3% of the workforce), were lost due to operations being offshored. This equates to about 1 in 250 jobs. Out of these the majority (60%) were in services and construction and not in manufacturing.
- Measured on the company level 308 companies or 13% had offshored some part of their operations in the period.

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