

# Needed, a policy framework in step with technology

With the rapid pace of technology blurring boundaries, a holistic view of schemes is a must



As technology has evolved in the latter part of the 20th century and the early part of the 21st century, the traditional boundaries between goods and services have blurred. By virtue of Moore's law, computing capabilities have surged faster than capabilities in traditional industries. These information based technologies have been widely adopted across a broad range of industries and products that traditionally have not been perceived as electronic or software based. Information is the new currency powering economies. The expansion of computing power has driven the pace of information gathering and analysis. The new currency drives processes and decision making across a wide array of products and services, making them more efficient and value accretive for consumers.

## DATA IS A NEW CURRENCY

Let us look at a traditional good, the automobile. A modern automobile has 40% of its component value from electronic based products and a modern electric vehicle has close to 100 million lines of code, which is more than that used by a Boeing 787 or the Chrome browser. This is a paradigm shift as the amount of "value add" from intangible technology services as opposed to physical objects, even in traditional goods, is being transformed by information. Even if you look at a conventional "metal based" industrial product, information and electronics are becoming all pervasive, ensuring that we set boundaries to control quality or the uptime of the equipment. There is increasing digitisation and electronification of industrial activities, products and services, influencing the evolving skill sets in industry.

This revolution is taking place across products, as information availability drives efficiency and creates value for customers by providing greater control over the product and its surrounding environment. And, this is what impels customers to value products that have utilised these evolving technologies.

## **WORKING IN SILOS**

As governments have focused on improving the lives of people, they have looked at economic development and industry as catalysts to progress. To address the needs of various stakeholders, governments have tended to build specialized departments and designed policies that govern those areas. However, over time, as each of these departments grew, they have tended to operate in silos. This has for most of the 20th century been reasonably successful in driving economic development in countries.

The recent developments in technology have, however, blurred standard boundaries that dictate policy framework in most governments. If you take India, industrial promotion policies look at encouraging capital formation from a manufacturing perspective. As technology is driving an increasing share of the value add coming from digitisation and data analytics in products and services across industry segments, there needs to be a way of encouraging capital formation by way of intangibles in traditionally tangible industries.

If you look at the automobile industry, policies are governed by the Heavy Industries and the Surface Transport Ministries, respectively. However, increasing electronification and digitisation of the automobile are not covered by industrial policies that govern the Electronics and Information Technology Ministry.

Another example involves drones that could serve different sectors, including agriculture, and would require a lot of interdepartmental clearances outside of the Department of Agriculture. There is increasingly a need for interdepartmental cooperation and synergy not only in policy framework but also in deployment.

## **TAKING AN AGGREGATE VIEW**

This departmentalisation of policies is facing a challenge from technology that very often blurs the boundaries served by different policies. There is a need to have a holistic view of policies for economic development as technology is becoming a significant enabler in most industries. A change in policy framework regarding economic development that enables various ministries to work together is essential. A sufficiently empowered policy clearing cell could ensure a holistic view on policy across departments of government, at the State and the Centre.

In terms of attracting investments, policies have always been driven by subsidies and incentives but increasingly, in a competitive scenario, these are becoming hygiene factors. More significantly, a nourishing ecosystem for industry, including the hard infrastructure and softer areas such as education, skilling, technical institutions, laboratories, testing centres, etc., has to be cultivated. The creation of clusters of companies in adjacent but complementary areas could constitute such an ecosystem that encourages multi and cross disciplinary learning and spur innovation and economic development. Moreover, this type of ecosphere could also attract investment and capital formation.

There is also the larger issue of a shift of value between manufacturing and services as technology changes. The policy, by and large, promotes and gives incentives for manufacturing, whereas the share of intangibles, even in traditional manufacturing companies, whether it be software, research and development or even servicing of products, are not adequately covered in industrial policies. It is important to include these to encourage innovation and technological development.

In this evolving policy framework, it is important that there is close cooperation and alignment between the Centre and State to ensure effective implementation on the ground. Some of these thoughts could help us navigate through an ecosystem that is changing with technology.

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