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"Study of Role of Small Scale Industries in a Digital Era"

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Abstract:

The objective of the paper is to investigate the impact of digitization on the growth Small scale industries as well as Indian economy and its potential for creating employment opportunities. Digitization being a key economic driver in the present world it is important to integrate the economy by creating digital markets.

It is found that SSI unit has still use their traditional method of operations; through digitalization they can improve their productivity & efficiency of their plant. In this competitive era while multinational companies are main threats for this units. Government should try to focus on digitalization of this sector India being a developing economy has the potential of the digitization in creating employment opportunities. Researches show developing economies has more possibilities of gaining advantages of e-commerce than the developed economies as developing economies have wider scope of reducing inefficiencies and increase production. In India Domestic policies regarding growth of small scale industries would provide inputs for e-commerce trade.

Need of the Study:

To study role of small scale industries in Indian economy.

To study threats and opportunity in digitalization of small scale industries.

Methodology:

Only secondary data are used in the study. The study focused the collection of data from different government official websites, books, journals & articles.

Keywords: SSI, Digitalization, Problems.

Introduction:

This is a very important matter for our country where millions of people are either unemployed or under-employed. Further, the encouragement of small-scale industry would serve to counteract the seasonal unemployment in agriculture and thus to utilize labour which might otherwise go to waste.

Small-scale industries are capital-light, i.e., they need relatively smaller amount of capital than that required by large-scale industries, since the capital-output ratio is much smaller in the case of the former. Thus, one of the great advantages of small-scale industries is that they make possible economies in the use of capital. Capital is already scarce in an under-developed country like India.

Emergence of digitization has profound impact on the productivity of industries and socio economic standard of the society. Evolution of technology and associated information and knowledge help establish society's production capacity and standard of living which are decisive to the economic growth of the nation.

SSI Sector in India creates largest employment opportunities for the Indian populace, next only to Agriculture. The opportunities in the small-scale sector are enormous due to the following factors:

- ✓ Less Capital Intensive.
- ✓ Extensive Promotion & Support by Government.
- ✓ Reservation for Exclusive Manufacture by small scale sector.
- ✓ Project Profiles.
- ✓ Funding - Finance & Subsidies.
- ✓ Machinery Procurement.
- ✓ Raw Material Procurement.
- ✓ Manpower Training.
- ✓ Technical & Managerial skills.
- ✓ Tooling & Testing support.

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- ✓ Reservation for Exclusive Purchase by Government.
- ✓ Export Promotion.
- ✓ Growth in demand in the domestic market size due to overall economic growth.
- ✓ Increasing Export Potential for Indian products.

Small industry sector has performed exceedingly well and enabled our country to achieve a wide measure of industrial growth and diversification and if it is supported by digitalization the combination will work for the growth of Indian economy.

Digitization:

The mass adoption of Internet-connected digital technologies and applications by consumers, enterprises, and governments is a global phenomenon that touches every industry and nearly every consumer in the world. For every industry, digitization changes the way products are made, sold, and distributed, as well as how companies managed and with whom they compete. For many industries, digitization is completely revolutionizing the way companies interact with their customers.

Role of SSI in Indian Economy:

Small scale industries play an important role for the development of Indian economy in many ways. About 60 to 70 percent of the total innovations in India comes from the SSIs. Many of the big businesses today were all started small and then nurtured into big businesses. The roles of SSIs in economic development of the country are briefly explained below.

1. Small Scale Industries Provides Employment

- ✓ SSI uses labour intensive techniques. Hence, it provides employment opportunities to a large number of people. Thus, it reduces the unemployment problem to a great extent.
- ✓ SSI provides employment to artisans, technically qualified persons and professionals. It also provides employment opportunities to people engaged in traditional arts in India.
- ✓ SSI accounts for employment of people in rural sector and unorganized sector.
- ✓ It provides employment to skilled and unskilled people in India.
- ✓ The employment capital ratio is high for the SSI.

2. SSI Facilitates Women Growth

- ✓ It provides employment opportunities to women in India.
- ✓ It promotes entrepreneurial skills among women as special incentives are given to women entrepreneurs.

3. SSI Brings Balanced Regional Development

- ✓ SSI promotes decentralized development of industries as most of the small scale industries are set up in backward and rural areas.
- ✓ It removes regional disparities by industrializing rural and backward areas and brings balanced regional development.
- ✓ It promotes urban and rural growth in India.
- ✓ It helps to reduce the problems of congestion, slums, sanitation and pollution in cities by providing employment and income to people living in rural areas. It plays an important role by initiating the government to build the infrastructural facilities in rural areas.
- ✓ It helps in improving the standard of living of people residing in suburban and rural areas in India.
- ✓ The entrepreneurial talent is tapped in different regions and the income is also distributed instead of being concentrated in the hands of a few individuals or business families.

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4. SSI Helps in Mobilization of Local Resources

- ✓ It helps to mobilize and utilize local resources like small savings, entrepreneurial talent, etc., of the entrepreneurs, which might otherwise remain idle and unutilized. Thus it helps in effective utilization of resources.
- ✓ It paves way for promoting traditional family skills and handicrafts. There is a great demand for handicraft goods in foreign countries.
- ✓ It helps to improve the growth of local entrepreneurs and self-employed professionals in small towns and villages in India.

5. SSI Paves for Optimization of Capital

- ✓ SSI requires less capital per unit of output. It provides quick return on investment due to shorter gestation period. The payback period is quite short in small scale industries.
- ✓ SSI functions as a stabilizing force by providing high output capital ratio as well as high employment capital ratio.
- ✓ It encourages the people living in rural areas and small towns to mobilize savings and channelize them into industrial activities.

6. SSI Promotes Exports

- ✓ SSI does not require sophisticated machinery. Hence, it is not necessary to import the machines from abroad. On the other hand, there is a great demand for goods produced by small scale sector. Thus it reduces the pressure on the country's balance of payments.
- ✓ SSI earns valuable foreign exchange through exports from India.

7. SSI Complements Large Scale Industries

- ✓ SSI plays a complementary role to large scale sector and supports the large scale industries.
- ✓ SSI provides parts, components, accessories to large scale industries and meets the requirements of large scale industries through setting up units near the large scale units.
- ✓ It serves as ancillaries to large Scale units.

8. SSI Meets Consumer Demands

- ✓ SSI produces wide range of products required by consumers in India.
- ✓ SSI meets the demand of the consumers without creating a shortage for goods. Hence, it serves as an anti-inflationary force by providing goods of daily use.

9. SSI Ensures Social Advantage

- ✓ SSI helps in the development of the society by reducing concentration of income and wealth in few hands.
- ✓ SSI provides employment to people and pave for independent living.
- ✓ SSI helps the people living in rural and backward sector to participate in the process of development.
- ✓ It encourages democracy and self-governance.

10. Develops Entrepreneurship

- ✓ It helps to develop a class of entrepreneurs in the society. It helps the job seekers to turn out as job givers.
- ✓ It promotes self-employment and spirit of self-reliance in the society.
- ✓ Development of small scale industries helps to increase the per capita income of India in various ways.
- ✓ It facilitates development of backward areas and weaker sections of the society.
- ✓ Small Scale Industries are adept in distributing national income in more efficient and equitable manner among the various participants of the society.

General need for action

Small Scale Industry is one of the pillars of the Indian economy – the manufacturing sector in the. We stand on the brink of a new

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industrial revolution, driven by new-generation information technologies such as the Internet of Things (IoT), cloud computing, big data and data analytics, robotics and 3D printing. Digitalization has open new horizons for Small scale industry to become more adventurous, more efficient, to improve processes and to develop innovative products and services. It is estimated that digitalization of products and services can add more annual revenue in India in the next five years.

Indian industry has large scope in digital sectors such as electronics for automotive, security and energy markets, telecom equipment, business software, laser and sensor technologies. Europe also hosts world-class research and technology institutes. However, high-tech sectors face severe competition from other parts of the world and many traditional sectors and small and medium enterprises (SMEs) are lagging behind. There are also large disparities in digitization between regions.

Technological innovation is rewriting every industry and the way in which human beings manage their lives. In this world, the ever-increasing acceleration of change is one of the few constants.

Digital means effectively disrupting existing business models, products and services enabled by data and technology across the enterprise. The industrial setting is no exception. We see how new technologies are enabling our clients to do things in new exciting ways:

- ✓ Internet-enabled sensors collect data around the clock and provide real-time tracking of production.
- ✓ Automotive manufacturers use advanced analytics to calibrate driverless cars for self-navigation.
- ✓ Machine learning enables predictive maintenance and condition monitoring.
- ✓ Automated delivery of parts and subassemblies optimizes production processes.
- ✓ Cyber security becomes an integral part of all business in order to protect data and gain the trust of customers.

Data and technology are transforming every aspect of our lives, disrupting the status quo and creating exciting new ways of doing things. The disruption of the industrial products sector is no exception; companies in the field are focusing on how best to leverage digital to derive value and unlock opportunities for further growth and optimization.

We are currently part of a constantly evolving and innovative context that persistently gives us new products and services. As products become increasingly smarter and flexible, new applications emerge based on digitalization. Within the industrial context, an industrial internet, or Industry 4.0, is emerging – the fourth wave of the industrial revolution. In this new phase of development, autonomous factories are becoming reality that effectively reduces economies of scale and enables production of individualized products at a lower cost and with reduced lead times. Products turning "smart" – with the help of sensors collecting data continually, coupled with connectivity – lays the foundation for the changes in the industry.

As technology advances, barriers to entry and commercialization will be eroded. The digital development within business-to-consumer (B2C) is the cause and the changes under way within the business-to-business (B2B) market are the effect that, together, will undoubtedly result in major repercussions across all associated supply chains. Recent data from Forrester suggests that, over the past six-plus months, there has been a distinct uptick in digital investments in industries like industrial products, manufacturing and logistics. Behind this is the need to adopt a more customer-centered strategy to keep up with changes in B2C client expectations.

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To deal with this challenge, companies in the sector must develop an exhaustive response. They need to devise a comprehensive digital strategy and rethink their business and operating models to deliver this. Such a strategy must go far beyond mere marketing: it has to be about omnipresent cross-channel connectivity, and it must enable continual engagement with customers, suppliers, employees and investors. It must also incorporate C-level leadership and, most critically, innovation and differentiation through the business and operating models

Challenges in the sector:

The digitalization within the industrial products sector means that companies are digitalizing their horizontal and vertical value chains. The vertical value chain includes its own operations where the company's various functions for marketing, sales, product development, purchasing, manufacturing and distribution are linked and integrated via a digital information flow. The horizontal value chain encompasses the external ecosystem and involves suppliers and customers.

Corporations are effectively linking their own organization with that of their customers and partners. However, digitalization also enables new product offers and innovative digital business models where data and information are being commoditized without any direct connection to machines or physical products.

The common denominator for success within the sector is the connection between machines and sensors, interlinking the different actors in the value chain, as well as the ability to analyze large amounts of information so as to make decisions based on quantitative data.

The ability to store, share and analyze vast amounts of data is becoming integral to new disruptive business models. As new cross-industry partnerships emerge, the digital development will affect existing business models Furthermore, all companies in the industrial products sector need to understand not only how digitalization is setting new demands on products and services, but also how it is changing the way we communicate with customers.

Consequently, industry leaders need to change their business models, design new products, services or experiences that deliver the right solution, create value for the customers and leveraging sales. The digitalization of all industries creates new opportunities and challenges, and the industrial products sector is no exception.

1. **New Disruptive Business Models:**
   - ✓ Moving from stand-alone product sales to bundling of products and services and consequently increasing perceived end-client values significantly
   - ✓ New business models that center around customer experience and address the changing demand of customers
   - ✓ Higher demand on operational efficiency through the use of data and predictive analysis

   Mitigating strategies
   - ✓ Consider new business models where products are turned into product-service hybrids
   - ✓ Address real-time and emergent customer needs in a predictive manner by fine-tuning the way value is created and captured
   - ✓ Develop an ecosystem around products and services jointly with partners and use data for data mining and predictive modeling
2. **Workforce lacks vital skills**
   - ✓ Retiring workforce creates a talent gap in manufacturing.
   - ✓ Manufacturers struggle to recruit workers with the right mix of technical and problem-solving skills.
   - ✓ While employers are in a great need of skilled talent, the next generation sees more attractive career development opportunities in other industries.

   Mitigating strategies

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- ✓ Training and apprenticeships can strengthen workforce skills.
- ✓ New roles, incentives, benefits and career paths must be created to recruit and retain next generation workforce.
- ✓ Employers must adopt workplace flexibility and build global teams.

3. **Competition and global operations bring data management challenges**
   - ✓ Vast amounts of data can be generated – and gathered – through the implementation of industrial internet of things (IIoT) systems. If manufacturers do not have adequate experience or resources to analyze this data, they may fall behind competitors who move more quickly.
   - ✓ Data gathered and stored through IIoT systems must be maintained in compliance with privacy laws. These laws change frequently with the emergence of new risks.
   - ✓ When there are conflicts in regulation between countries, manufacturers with global operations can face compliance challenges as data moves from one jurisdiction to another.

   Mitigating strategies:
   - ✓ Sustained investments in data analysis resources are needed to stay competitive.
   - ✓ Companies must be able to modify business models built on legally approved uses of data quickly, should laws change.
   - ✓ Companies must stay on top of regulation in all jurisdictions, particularly when there are conflicts.
4. **Predictive maintenance (PM) can reduce service opportunities**
   - ✓ PM can create a decline in hardware and service sales because of:
     - Fewer equipment replacements
     - Reduced sales of spare parts
   - ✓ Manufacturers who provide regular services under a long-term agreement contract, or provide interval-driven services, are exposed to higher risks as customers using PM can preempt breakdowns and buy services only when needed.

   Mitigating strategies:
   - ✓ Scope-of-service offerings can be broadened by bundling different products and services (e.g., sensors, measuring devices and associated electrical equipment).
   - ✓ Bundling of software offerings can differentiate players from competitors who are more focused on products.
5. **Cyber attacks leave systems vulnerable**
   - ✓ Sensors and equipment, such as industrial control systems used by manufacturers to implement IIoT, are vulnerable to cyber attacks.
   - ✓ Since machines and industrial systems rarely go offline for security updates, risk of cyber attacks is high.

   Mitigating strategies:
   - ✓ Cyber threat intelligence strategies are needed to protect equipment and customers.
   - ✓ Manufacturers traditionally focused on hardware will need to develop competency in cyber security, either organically or through mergers and acquisitions.

Conclusion:

Indian economy is an under developed economy. Its vast resources are either unutilized or underutilized. A major section of man power is lying idle. The per capita income is low. Capital is shy and scarce and investment is lean. Production is traditional and the technique is outdated. The output is insufficient and the basic needs of the people remain unfulfilled.

Reorientation in the attitude of the entrepreneur, educated youths and capitalist

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class of the nation in general is the urgent requirement for paving the way of digitalization in the country. It is an accepted fact that people with right attitude, total commitment and right conception can change the existing system. People of the India must give up the lure to earn easy money and set their mind to take risk.

The small scale industries have a talent of dispersal. They are accessible to the remote rural areas of the country and do not lead to regional imbalances, concentration of industries at one place.

Digitalization is the only answer to this present state of disrupted economy. The problem is of the approach which should be direct, utilitarian and pragmatic. Such industries do lots of paper work and mostly they are unaware about the international scenario hence it is suitable for a country like India.

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