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Knowledge Economy and Social Divide

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ABSTRACT

The structure of society and its underlying economic foundation are undergoing significant change and transition at the moment in which we live. In the ensuing decades, production, commerce, employment, and work will all seem significantly different from what they do now. In the knowledge economy, intellectual capital is the primary input. The primary components and knowledge that the system uses are explicit and implicit knowledge. Knowledge-based organisations, knowledge workers, and knowledge processes make up the majority of the constituents. Knowledge management is heavily emphasised through the generation, archiving, retrieval, and dissemination processes. The new economy includes high-tech manufacturing companies in addition to service-oriented businesses. The model grows when it produces innovations and evolutions. Competent personnel ought to process appropriate licences or credentials. They also possess relationship, technical, and problem-solving abilities. Inequalities concerning the chances and benefits of the various social groupings within a community are referred to as social divides.

Keywords: *IT - Information Technology, US - United States.*

I. INTRODUCTION

A novel approach to production has surfaced in every global big economy. The knowledge economy is the most straightforward and informative of its various titles. To emphasise its most distinctive approach to its own work, we may rather refer to it as the experimental economy. It has the potential to significantly increase productivity and growth while also altering some of the most ingrained and universal rules of economic life to our advantage. But thus far, its impacts have only been marginal. Rather of proliferating, it has been confined to the forefront of manufacturing, with relatively few jobs. Elites in technology and entrepreneurship govern it. The majority of the income it has generated have gone to a small number of very big international companies. It is a common misconception to associate it just with high-tech industries, yet it is present across the whole production chain. But it continues to be a small minority in every economic sector, leaving out the great mass of the labour force. Its groundbreaking procedures are still under quarantine, despite the increasing usage of its products. We would have created a strong engine of economic growth if we could just find a

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way to go from these socially exclusive vanguards to ones that are inclusive of society. Additionally, we would have provided an antidote to inequality that was considerably more effective than correcting inequities created in established market regimes after the fact by progressive taxation and redistributive social expenditure. The information economy is still in its infancy due to its isolation, which also conceals its actual nature and potential. The technologies with which it is most recently associated, such as robots and artificial intelligence, have riveted worldwide attention. Nevertheless, we have barely begun to grasp its significance for economic and social life or gained insight into its possible futures.³

(A) Knowledge Economy

From a mass production system where, human labour was the primary source of value creation to a new era of "innovation mediated production," where knowledge is the primary driver of productivity, economic development, and value creation, capitalism is experiencing an epochal transition. Defining the knowledge economy is challenging precisely because the commodity it rests on "knowledge" is itself hard to pin down with any precision. Perhaps for this reason there are few definitions that go much beyond the general and hardly any that describe the knowledge economy in ways that might allow it to be measured and quantified.

The knowledge economy is a vague term that refers either to an economy of knowledge focused on the production and management of knowledge, or a knowledge-based economy. In the second meaning, more frequently used, it refers to the use of knowledge to produce economic benefits.

The knowledge economy is the story of how new technologies have combined with intellectual and knowledge assets - the "intangibles" of research, design, development, creativity, education, brand equity and human capital - to transform our economy.

The Knowledge Economy is emerging from two defining forces: the rise in knowledge intensity of economic activities, and the increasing globalisation of economic affairs.

The rise in knowledge intensity is being driven by the combined forces of the information technology revolution and the increasing pace of technological change. Globalisation is being driven by national and international deregulation, and by the IT related communications revolution.

However, it is important to note that the term Knowledge Economy refers to the overall economic structure that is emerging, not to any one, or combination of these phenomena.

³ ROBERTO MANGABEIRA UNGER, THE KNOWLEDGE ECONOMY 3, (verso, 2019).

Various observers describe today's global economy as one in transition to a "knowledge economy", as an extension of "information society". The transition requires that the rules and practices that determined success in the industrial economy need rewriting in an interconnected, globalised economy where knowledge resources such as know-how, expertise, and intellectual property are more critical than other economic resources such as land, natural resources, or even manpower.⁴

a. The knowledge economy: its characteristics described at the level of management and production engineering

In every economic area, we are aware of the islands and peripheries that comprise the limited knowledge economy. We are inclined to identify it with its most popular manifestation, the high-tech sector, especially since a few of global mega-firms and a ring of start-up businesses engage in it. Alternatively, we confuse it with the use of its products and services, like when companies of all sizes make use of its products and services—especially computers and other information technologies—to better organise complex data and increase productivity without radically changing the way they do business. It is a red flag that this kind of utilisation is only using a tiny portion of the new production method's potential since it is likely to provide a brief output increase that soon wears out. The brief boost in productivity that occurred in the US between 1994 and 2005 was facilitated by this development; the gain was caused by a wave of adoption of digital technology, which was utilised to manage information to enhance efficiency. To truly comprehend how the most innovative manufacturing technique has been refined or radicalised, we must imagine it being widely disseminated. Its growth across a range of economic areas illustrates its strength and promise.

The knowledge economy is defined, broadly speaking, as the accumulation of capital, technology, technology-related capacities, and research in the conduct of economic activity. Its distinguishing goal is constant innovation in products and technology, as well as in procedures and practises. It doesn't want to be just another cutting-edge technical way to produce goods and services. It aspires to be a manufacturing paradigm that is always evolving. We can now understand what this ideal entails at the specific levels of production, administration, and coordination, as well as in three sets of deeper traits that characterise it not as it is today but rather as it would be once radicalised and widely diffused.

From the limited and relatively superficial perspectives of management and production

⁴ EMERGENCE OF KNOWLEDGE ECONOMY,LEGAL SERVICE INDIA, <https://www.legalserviceindia.com/article/1121-Emergence-of-Knowledge-Economy.html> , (last accessed on JUN. 09,2023,08:18 AM).

engineering, the knowledge economy is the strategy that balances large-scale production with "destandardization" or customization and the preservation of coherence and momentum in the production plan with decentralisation of initiative. The significance of these accomplishments may vary depending on how far they are pursued. Giving workers greater freedom to take initiative on their own and collaborate with others might act as little steps toward increasing productivity and developing motivational techniques (e.g., the Toyota method of production). Alternatively, they may be part of a bigger, more profound shift in the structure of work that would eventually have an impact on the regime of property.

It is hard to integrate scattered initiative and perseverance in a coordinated production plan when work is organised in a command-and-control manner. It demands a change in the way people who work together in the production process interact, or in the structure of the technical division of labour. The production plan must be continuously modified as it is implemented, rather than clearly separating the responsibilities of overseeing and implementing activities. The relativization of all specialist implementing occupations will follow the diminution of the difference between supervising and implementing responsibilities. Such strict specialisation requires a sharp separation between idea and practise. The expert is replaced by the team, which operates with a flexible internal structure. This alteration in the nature of the technical labour division of labour portends a more profound transformation in the relationship between production and science.

The seemingly superficial characteristics of the restricted knowledge economy turn out to be anything but superficial when analysed at the management and production engineering levels. To be fully realised, they need to be adjusted in extra substantial ways. These changes suggest a repressed potential for change.

To break free from the confines of isolated vanguards and become an economic force, the knowledge economy would need to fulfil promises that are still just theoretical at this point. Given the close relationship between the development of sophisticated production practises and radicalism, achieving this promise would need a greater adoption of these practises throughout the economy.

b. The deep structure of the knowledge economy: relaxing or reversing the constraint of diminishing returns

The three features of knowledge-intensive, experimentalist manufacturing that become apparent as it develops and flourishes. As long as the knowledge economy stays in the periphery that it now exists in, it hides its true character. Its potential must be extrapolated from the sparse

information that its current isolated form offers.

The first such essential characteristic of the knowledge economy is its capacity to relax or even reverse the constraint of diminishing marginal returns. The only component of economic life that has a better claim to be recognised as a timeless and universal law of economic activity is the limitation of declining marginal returns to increased commitments of an input in production. Whether the inputs are material, monetary, or made up of abilities and activities, the output grows less and less with each application over time. Only a brief rise in output brought on by certain organisational or technological advancements will be able to overcome the force of diminishing marginal returns.

In the information economy, marginal returns can be increasing rather than declining. At minimum, the constraint of diminishing marginal profits might be relaxed. These two theories account for this amazing phenomenon. The first is poor and predicated on shaky data. The second argument is important and relates to the core feature of the experimentalist knowledge economy: the information-intensive nature of the experimentalist production practises is what causes the gap between intellectual development and economic activity to close.

If the declining returns restriction were relaxed or eliminated, production would undergo a fundamental shift in nature. In view of this shift, the economic history of humanity may be classified into three key periods. The primary growth constraint in the first period, which only holds true under the most basic circumstances, is the amount of surplus above present consumption, or what Marx referred to as primitive accumulation. Both Marx and Smith believed that it continued to be the principal impediment to economic development in the economies that constituted their core areas of study as well as in the civilizations of their own day. If the declining returns restriction were relaxed or eliminated, production would undergo a fundamental shift in nature. In view of this shift, the economic history of humanity may be classified into three key periods. The primary growth constraint in the first period, which only holds true under the most basic circumstances, is the amount of surplus above present consumption, or what Marx referred to as primitive accumulation. Both Marx and Smith believed that it continued to be the principal impediment to economic development in the economies that constituted their core areas of study as well as in the civilizations of their own day. Marx thought that the main functional reason for the class character of society and, by extension, the treatment of labour under capitalism as a product that can be bought and sold, was the need to ensure the compelled extraction of a surplus. Smith thought that the brutalization of the worker under a highly hierarchical and specialised kind of technical division of labour was one of the consequences of speeding development. It was a rise in the capital

stock required for additional growth.

Smith and Marx were mistaken: already in their own day innovation -- technological, organizational, institutional, and conceptual --, rather than the size of the surplus over current consumption was the overriding constraint on economic growth. Britain did not differ from the agrarian-bureaucratic empires of East, South, and West Asia by having a higher level of domestic private and public saving. On the contrary, historical research has shown that it had a lower level of saving than several of them. It differed from these other societies in its innovations and in the social, cultural, and political background propitious to them.⁵

A second period of economic history, spanning almost all of human history from the beginning of civilization to the present, saw innovation's level, breadth, and velocity, along with its link to innovation in science, culture, and institutions, become the primary impediments to economic growth. The primary force behind growth in our era is innovation, in all its manifestations. Savings is not so much a source of growth as it is an impact. Nonetheless, scarcity and diminishing marginal returns are two conditions that innovation-driven growth takes place in. Innovation, for all its complexity, is a punctuated process that involves several intermittent changes to apparently continuous patterns and arrangements. The inventions that incorporate our cooperative behaviours and those that modify nature or harness its forces for our advantage are the most important. The way our devices are made and how they work reflects our two sets of experiments: one with nature and the other with collaboration, and how we relate to each other.

A third stage in the history of the economy begins when innovation loses its episodic character and the constraint of declining marginal returns is relaxed or even reversed. Scarcity and the unequal impacts of different uses of scarce resources remain the most fundamental features of economic existence. The cycle of innovation never ends. The diminishing returns restriction starts to loosen as good enterprises begin to resemble good colleges and as output growth begins to approach knowledge growth.

c. The deep structure of the knowledge economy: production, imagination, and co-operation

The intimate connection that the knowledge economy forges between human labour and the creative process of ideation and discovery is another profound feature of this industry. With the use of technology that expand human capabilities, production has been the alteration and mobilisation of natural energy. It is now truer to state that economic activity revolves around

⁵ ROBERTO MANGABEIRA UNGER, *THE KNOWLEDGE ECONOMY* 15, (verso, 2019).

the advancement of knowledge. Simply said, new commodities and services are the results of our trials and conjectures realised in the form of new assets and products.

This description seems to leave out something fundamental to economic life: the ways in which we collaborate during production—the cooperative regime or the technical division of labor—and the institutional frameworks—both political and economic—that govern our cooperation. It's not; rather, when we radicalise the core idea of the information economy, our collaborative efforts to accomplish real-world objectives become a manifestation of our creative faculties. It is insufficient to alter our workplace collaboration on a micro level in order to go in this direction. In order to master and modify the established assumptions and structures of the market and the state, rather than taking them for granted, we must likewise reshape the institutional arrangements of the economy and politics.

We cannot understand what is at stake in this translation of imagination into cooperation without first forming a view of the two sides of our mental activity. In one aspect, the mind is like an old-time machine, the kind of machine that was central to mechanized manufacturing and industrial mass production. It is modular: it has different parts, associated with distinct parts of the brain (insofar as there are limits to the plasticity of the brain). And it is formulaic: it operates under stable formulas, rules, or algorithms. As a consequence, it is also repetitious.⁶

d. The deep structure of the knowledge economy: trust, discretion, and the moral culture of production

The knowledge economy is characterised by its propensity to modify the moral culture of production, raise the bar for discretion and trust that is necessary and allowed in productivity activities, enhance our cooperative nature and ability, and moderate the conflict that is inherent in all social interactions between innovation and cooperation.

Like the kind of market orders in which they were effective, industrial mass manufacturing and mechanised production need very little faith. Max Weber and Georg Simmel, two prominent social theorists of the late 19th and early 20th centuries, emphasised the moral foundations of the "capitalist" economies of their day. Achieving these presuppositions required overcoming the glaring difference between the great degree of reciprocal trust shared by insiders tied by family and culture and the low level of trust shared by outsiders, characteristic of traditional modes of social and economic engagement. Therefore, the market economy might be viewed as a kind of foreign exchange cooperation that is unnecessary in high-trust environments and unfeasible in low-trust ones. It was predicated on a normally low level of reasonable trust

⁶ ROBERTO MANGABEIRA UNGER, *THE KNOWLEDGE ECONOMY* 16, (verso, 2019).

between unknown people.

The 19th-century classical contract law, which emphasised the instantaneous bilateral executory promise and marginalised continuing ties, gave rise to this idea as a legal standard and theory. The same is true of the unified property right, a construct of the 19th century that combined many rights over items as if they naturally belonged together and granted ownership to the owner as the one right holder. All other rights were modelled after unified property, which evolved from being one right among many.

As long as he kept inside the specific, limited boundaries of his claim, the owner might act whenever he pleased and paid little regard to the interests of others. Purchasing property has come to be seen as a replacement for the need for solidarity. A civilization that relied on the general acceptance of mistrust toward strangers was one in which such a law of things made sense.

Due to its emphasis on hierarchical specialisation, which was justified in the name of property, mass production, like the automated manufacturing it replaced, preserved a large lot of discretion to those who, as the representatives of capital, oversaw the production process. By limiting the amount of discretionary freedom available to each worker or work group, it lessened the need to trust wage workers or rely on worker trust.

In such an economic climate, the tension between the needs of collaboration and creativity remained. For every idea to be successful, its developers and implementers must work together. But any innovation—be it technological, institutional, philosophical, or organizational—endangers the stability of the existing cooperative structure. It achieves this by raising questions about the sustainability of the expectations and rights embedded in each of these regimes. The parties who would be affected start arguing over how the innovation will change their own perspectives as a result.

We may fortify the cooperative regime by adopting measures to reduce the tension that exists between the necessity for collaboration and creativity. As an example, we may ensure that every worker receives a set of portable, universal safeguards against monetary instability as well as a range of financial and educational resources to help them advance their skills. We can accomplish this while increasing the opportunities for innovation in the arrangements and the production technologies.

e. The confinement of the knowledge economy: the fact and the riddle

The knowledge economy is restricted to niche sectors around the globe, such as scientific agriculture, precision, information-intensive services, and advanced manufacturing. It has

persisted on the edges of all sectors, even if it is no longer directly related to industry.

After all this time, we would think that its containment is natural and requires no more explanation, as it has only existed as an insular vanguardism. However, it lacks any organic quality. Industrial mass production and mechanised manufacture soon revolutionised every sector of the economy, with the notable exception of conventional small businesses, whose tiny size precluded their adoption of the scale-dependent technologies and techniques of mass production.

Unlike earlier advanced processes of manufacturing, the knowledge economy is not inherently tied to any one industry of production. Its capacity, bolstered by its unique technology, to create goods and services at nearly any scale would allow it to infiltrate the small business sector, if it weren't for the reality that it is still mostly unavailable owing to other considerations. Still, its confinement to lone wolves has stubbornly persisted.

Not only has the knowledge economy eschewed industrial barriers while remaining insular, it has also eschewed an exclusive alliance with the world's wealthiest economies while finally moving closer to becoming economically present in each of them. Trade between labor- and capital-intensive economies was the axis of the global division of labour during the height of mass production and the main subject of research in the theory of international commerce. Industrial mass production dominated the most developed economies, while labour-intensive industry remained more primitive in the remaining developing world's vast periphery.

f. The confinement of the knowledge economy: consequences for economic stagnation and inequality

The knowledge economy's limitations have a significant impact on both the economy and society. It is now the primary factor contributing to both economic disparity and stagnation. In order to break free from this constriction and move toward an inclusive vanguardism, we must restore rapid economic development and start addressing the underlying causes of high inequality in the hierarchical economic division.

In its early forms, the most sophisticated production technique might not be the most effective. It is the one that has the best chance of sticking at the productivity frontier, though. The vast majority of workers and businesses would be denied access to a level of productivity that our technological advancements have already made possible but that our social and economic structures have failed to provide for regular workers, should we allow it to remain on the periphery of each economic sector.

Furthermore, historically speaking, the most sophisticated production method has the most

influence over imitation and change throughout the economy. Allowing it to stay the exclusive domain of a technology and business few would be tantamount to depriving the rest of the economy of its most valuable potential source of inspiration and guidance. We seem to have disconnected the locomotive from the remainder of the train. The failure is all the more shocking and disheartening if, as is the case with the information economy, the advanced practise has become established in numerous sectors, albeit always on the periphery, and has no inherent connection to any one industry. Even in those areas of the production system and labour force where this vanguardism thrives, confinement has an impact on the vanguard itself, which is one of the most important and least evident ways that it leads to stagnation. In addition, the insular shape of the practise is likely to be misinterpreted even by its own agents and beneficiaries if it is true that a production practise grows and displays its potential only when it adapts to a broad variety of conditions. It will be readily misinterpreted for its most flimsy or coincidental features, like those that identified the high-tech sectors and areas where it initially arose. It will not have a generally recognised philosophy or ideology that would give it a canonical shape and meaning, unlike mass production that came before it. It will be both trendy and esoteric at the same time.

The ramifications for inequity are equally important. The knowledge economy's relative employment poverty and insularity exacerbate the economy's hierarchical fragmentation. A smaller and smaller percentage of the worker force produces an increasing amount of wealth. There are two distinct parts to the work structure: that of the mass-production industry and that of the services sector.

The majority of the employment are low-paying positions in traditional manufacturing conducted in nations with the lowest labour costs and taxes, as well as those providing services to the local market. They may provide labour in the dwindling mass production leftovers, just making a living at the expense of poor labour returns and low take. Alternatively, as they learn how to routinize parts of their production process and assign the commoditized parts of their business to the sidekick firms, often in faraway places, they may offer work in a variant of mass-production manufacturing that has become the sidekick of the mega-firms of the knowledge economy. The second piece of the new labor market is the privileged one: the relatively small number of jobs established in the recesses of the genuine and exclusive knowledge economy. In the wake of the continuous decline of mass production and its reduction to leftover or sidekick, there results what has been described as the "hollowing out of the middle of the job

structure."⁷

g. Making the knowledge economy inclusive: the social--moral requirements

For inclusive vanguardism to succeed, the moral ethos of the manufacturing industry must change. This shift entails an approach to work that maintains a greater degree of discretion and trust that is required of all parties engaged in the assignment. It also lives in a fortification of our demanding and unique collaborative approaches.

Whether this shift in the moral basis of production is a cultural given over which we have no influence, or a practise and consciousness that may be intentionally created, is the crucial question. The enlarged and dispersed information economy's moral culture need not be only something that is unachievable via revolutionary action; rather, it can and ought to be jointly developed as a component of a plan for the advancement of inclusive vanguardism. But we cannot possibly hope to enhance it until we understand its composition and requirements.

An approach to work division that relies on command and control eliminates room for judgement and replaces trust with authority and oversight. The repetitive nature of labour, akin to that of inflexible machinery, gives specialist implementers of productive activities little opportunity to rethink the plan they are responsible for carrying out. Within the bounds of the law and collective bargaining, managers hired by owners retain all residual discretion to guide the production process. This is an implicit provision of the employment contract, the contractual form of wage labour.

Even a technical breakthrough has unknown effects on the actors in the industrial process as well as on society at large. When machines are designed and conceived, assumptions about how, by whom, and for what purposes are made, which set the stage for these outcomes. In fact, the ideal approach to conceptualise technology is to see it as the materialisation of a relationship between our efforts in reconstructing cooperative regimes and our experiments in manipulating natural forces and matter to our advantage. The fact that one fruitful technique connects these two sets of trials more thoroughly than another distinguishes it as superior to the other. The knowledge gained from doing the prior experiment may then be used to each series of experiments.

The demands of creativity and collaboration are mutually exclusive as well as interdependent. Nonetheless, they do not consistently contradict one another. Even while we can never aspire to completely eliminate the tension, one cooperative regime differs from another by reducing

⁷ ROBERTO MANGABEIRA UNGER, THE KNOWLEDGE ECONOMY 28-29, (verso, 2019).

the conflict between the demands of collaboration and creativity. For example, it may dissociate the way in which it gives people safeguards against insecurity from measures that inhibit the innovative recombination of people, machines, and other resources. It may deepen the plasticity of social arrangements while preventing this plasticity from resulting in fear and haplessness.⁸

h. Emergence of the knowledge economy

The growing contribution of knowledge as a component of production and its effects on learning, skills, organisation, and innovation may be used to define the growth of the knowledge economy.

- There is an enormous increase in the codification of knowledge, which together with networks and the digitalisation of information, is leading to its increasing commodification.
- Increasing codification of knowledge is leading to a shift in the balance of the stock of knowledge – leading to a relative shortage of tacit knowledge.
- Codification is promoting a shift in the organisation and structure of production.
- Information and communication technologies increasingly favour the diffusion of information over re-invention, reducing the investment required for a given quantum of knowledge.
- The increasing rate of accumulation of knowledge stocks is positive for economic growth (raising the speed limit to growth). Knowledge is not necessarily exhausted in consumption.
- Codification is producing a convergence, bridging different areas of competence, reducing knowledge dispersion, and increasing the speed of turnover of the stock of knowledge.
- The innovation system and its ‘knowledge distribution power’ are critically important.
- The increased rate of codification and collection of information are leading to a shift in focus towards tacit (‘handling’) skills.
- Learning is increasingly central for both people and organisations.
- Learning involves both education and learning-by-doing, learning-by-using and

⁸ ROBERTO MANGABEIRA UNGER, THE KNOWLEDGE ECONOMY 42-45, (verso, 2019).

learning-by-interacting.

- Learning organisations are increasingly networked organisations.
- A knowledge-based economy is so fundamentally different from the resource-based system of the last century that conventional economic understanding must be re-examined.⁹

II. CONCLUSION

For the past 200 years, labour and capital have been the only components of production acknowledged by neo-classical economics. This is beginning to change. Information and knowledge are replacing labour and land as the primary assets that create prosperity, just as energy and capital did 200 years ago. Additionally, the bulk of jobs that create income were no longer "knowledge-based" but rather "physically-based" in the 20th century due to technological improvements. These days, technology and knowledge are the primary production-related components. Thanks to increased information and labour mobility, knowledge and expertise can be instantaneously shared globally, and whatever competitive advantage a company may have built up might be quickly eliminated by new developments from other companies. A corporation's innovation process which combines market and technological expertise with the creative talents of knowledge workers to develop answers to an endless stream of competitive issues will be its only competitive advantage. Its ability to extract value from information will also be crucial. Knowledge management is essential in today's knowledge-based economy.

⁹ EMERGENCE OF KNOWLEDGE ECONOMY,LEGAL SERVICE INDIA, <https://www.legalserviceindia.com/article/1121-Emergence-of-Knowledge-Economy.html> , (last accessed on JUN. 09,2023,08:18 AM).