10.18686/frim.v2i6.4690

The Constituent Elements and Generation Pathways of New Quality Productivity From the Perspective of Systems Philosophy

Qiang Huang[1], Hairen Wang[2]

1. Shanxi Beautiful Countryside Construction Co., LTD, Taiyuan City, Shanxi Province 030000

2. School of Civil Engineering Yulin University, Yulin City, Shaanxi Province 719000

Abstract: Driven by globalization, informatization, and intelligence, the traditional productivity paradigm is no longer able to fully cope with today's complex economic environment and technological changes. New quality productivity has gradually become a key element of modern economic development. However, new quality productivity is not just a single breakthrough in technology, but involves systematic improvement in multiple dimensions such as resource integration, innovation driven, and intelligent applications. In the face of this challenge, systems philosophy, as a theoretical approach that emphasizes holism and dynamism, provides an effective path for a deeper understanding and optimization of new quality productivity. Through the perspective of systems philosophy, the linkage effects between various factors of productivity can be better coordinated, and the overall efficiency and flexibility of the production system can be improved. This article will analyze the constituent elements of new quality productivity from the perspective of systems philosophy, and explore its generation path, in order to provide theoretical guidance and practical reference for the continuous optimization of productivity.

Keywords: Systems philosophy; New Quality Productivity Constituent elements; Generate route

Introduction

With the rapid development of technology and the deepening of globalization, new quality productivity has become the core force driving economic and social change. The improvement of new quality productivity not only relies on technological innovation, but also requires systematic integration and collaboration of various production factors. System philosophy, as a theory that emphasizes holism and dynamism, provides a new perspective for understanding and constructing new quality productive forces. Under the framework of systems philosophy, sustainable growth and improvement of productivity can be promoted by coordinating production factors, optimizing resource allocation, and strengthening innovation ecology, ensuring its competitive advantage in complex and ever-changing environments.

1. Coordinating Structure and Function: Building a Dynamic and Balanced Production System

From the perspective of systems philosophy, the improvement of productivity not only relies on the improvement of a single factor, but also requires the overall coordination of the functions of various production factors and the construction of a dynamic and balanced production system. The complexity of the production system requires it to be designed as a system with internal interaction and external adaptability. Therefore, coordinating the structure and function of production factors to achieve dynamic balance in a constantly changing environment is the core strategy for optimizing productivity. Dynamic equilibrium emphasizes the functional synergy between various factors of productivity, ensuring that the interaction between these factors can maximize production efficiency through effective management and organization. In this process, the rationality of resource allocation, effective application of technology, and smooth connection of production processes become key. Systems philosophy provides a holistic framework that emphasizes that production factors cannot exist in isolation, but rather need to maximize overall benefits through their internal interactive relationships.

In the actual production process, functional coordination is reflected in the allocation of physical resources, as well as the balance between factors such as technology, talent, and capital. The improvement of productivity requires ensuring that all elements are structurally stable and functionally flexible to adapt to changes in the external environment. For example, in high-tech industries, the flexibility of technological innovation and resource allocation has become the core driving force for improving productivity. Through continuous technological updates, enterprises can adjust their production structure in real time, optimize production processes, and ensure that the system can maintain

efficient operation in different contexts. This dynamic equilibrium is not a static equilibrium, but a process of continuous self adjustment with changes in the external environment. System philosophy emphasizes this dynamic system view, requiring the production system to have a certain degree of flexibility and adaptability to cope with changes in market demand, technological changes, and resource allocation.

To achieve coordination between structure and function, it is necessary to introduce more flexible organizational models in enterprise management. The traditional hierarchical management model often lacks sufficient adaptability, while modern production systems require management to quickly adjust in real-time according to changes in the market and productivity. This requires managers to have a systematic way of thinking, be able to grasp the interactive relationship between production factors as a whole, and maintain continuous improvement in productivity by flexibly adjusting the functional configuration of each factor. Ultimately, the coordination of structure and function brings about an improvement in production efficiency for enterprises, and also provides a solid foundation for the sustainable development of the entire production system.

2. Integration of elements driven by informatization: strengthening the linkage effect between systems

The rapid development of informatization has fundamentally changed the way productivity systems are integrated. In the modern production system, the widespread application of information technology has greatly enhanced the linkage effect between various production factors. Enterprises can achieve comprehensive monitoring and real-time optimization of the production process through technologies such as big data, the Internet of Things, and artificial intelligence, thereby improving the collaborative efficiency of various elements within the system. System philosophy emphasizes the interaction and synergy between various elements, and the introduction of information technology provides technical support for this goal. Through data-driven and information sharing, the operational efficiency of each production link can be improved, the interaction between various factors can be optimized, and the overall efficiency of the production system can be enhanced.

Under the drive of informatization, the integration of various production factors is not only about the improvement of technological means, but also involves the transformation of management modes. Empowered by information technology, enterprises can break through the limitations of information silos in traditional production models, achieve seamless flow of information and rapid allocation of resources. This integration of elements enhances production efficiency and provides more accurate data support for strategic decision-making of enterprises. For example, in the field of intelligent manufacturing, the automation of the production process is achieved through the integration of information systems in various links of the production line. Real time feedback of data can also dynamically adjust production plans and resource allocation to ensure the optimal operation of the production process.

The integration of elements driven by informatization is not only about optimizing internal systems, but also includes the ability to adapt to external environments. Enterprises can monitor changes in market demand in real time through big data and intelligent algorithms, and quickly adjust production strategies based on data analysis results. This rapid response mechanism enables the production system to have stronger adaptability and maintain sustained competitiveness in a fiercely competitive market. Systems philosophy emphasizes the interaction between elements, and the application of information technology greatly enhances this interaction. Each production process is no longer an isolated individual, but interacts on an information platform to achieve efficient utilization of resources and maximization of production efficiency.

3. Building an innovative ecosystem: promoting cross-border integration and knowledge reproduction

In the context of constantly changing global economy, innovation has become the core driving force for the generation of new quality productivity. The innovation ecosystem from the perspective of systems philosophy emphasizes the continuous improvement of productivity through cross-border integration and knowledge reproduction. Innovation is a breakthrough in technology, which also includes the synergistic effect of multiple elements such as knowledge, talent, and resources. Through cross-border integration, enterprises can integrate resources from different industries and fields, achieve effective integration of technology and market demand, and thus give rise to new forms of productivity. The reproduction of knowledge is a crucial link in this process, and enterprises can continuously innovate and enhance their innovation capabilities through the diffusion and reuse of knowledge.

The construction of an innovative ecosystem requires enterprises to rely on internal resources and actively participate in external cooperation and communication. By collaborating with research institutions, universities, and other businesses, enterprises can obtain more innovative resources and expand the boundaries of innovation. For example, many high-tech enterprises attract innovative talents and technologies from around the world by establishing open innovation platforms, promoting the sustainable development of the enterprise. This open innovation ecosystem can enhance the competitiveness of enterprises and provide new growth points for the productivity improvement of the entire industry.

Knowledge reproduction is a crucial part of the innovation ecosystem. Systems philosophy emphasizes the interaction between internal and external systems, and the flow and reproduction of knowledge are the core manifestations of this interaction. Enterprises can maintain the sustainability of innovation through the continuous transmission, transformation, and application of knowledge, and improve the level of productivity through the application of new knowledge. Knowledge reproduction relies on the internal research and development of enterprises, and also requires cooperation with external parties to form multi-level and multi domain knowledge exchange. This cross-border knowledge fusion enables enterprises to continuously absorb new technologies and concepts, and apply them to production practice, resulting in a qualitative change in productivity.

4. Dynamic generation of intelligent productivity: cultivating flexibility and adaptability

The rapid development of intelligent technology has transformed the way productivity is generated from traditional fixed processes to more flexible and dynamic modes. Systems philosophy emphasizes the self-organization and dynamism of systems, which is highly compatible with the generation of intelligent productivity. The production system can quickly adjust according to changes in the external environment through the introduction of intelligent equipment, algorithms, and management systems, and has stronger flexibility and adaptability. Flexibility is an important feature of modern production systems, and the application of intelligent technology enables the production system to flexibly adjust production processes and resource allocation in different contexts, maintaining maximum production efficiency.

Adaptive capability is another important feature of intelligent production systems. Traditional production systems often rely on fixed standards and processes, lacking sufficient flexibility and adaptability. And intelligent technology achieves real-time monitoring and dynamic optimization of the production system through the application of big data, artificial intelligence, and the Internet of Things. This adaptive ability is reflected in the adjustment of the production process, and also covers multiple levels such as changes in market demand and the application of technological progress. The dynamic perspective of systems philosophy provides a theoretical basis for understanding this adaptive ability, emphasizing that the productivity system must have sufficient flexibility to cope with rapid changes in the external environment.

The process of generating intelligent productivity is not a single technological improvement process, but a system optimization process involving multiple interactive factors. Through the introduction of intelligent devices, the various elements of the production system can interact within a more flexible framework, enhancing the synergy between them. This dynamic generation improves production efficiency and enables enterprises to quickly respond to market changes, maintaining a competitive advantage. System philosophy provides theoretical support for the generation of intelligent productivity, emphasizing the continuous improvement of productivity through dynamic adjustment and system optimization.

5. Conclusion

From the perspective of systems philosophy, the constituent elements and generation paths of new quality productivity provide a new way of thinking and action framework. The comprehensive improvement of productivity can be achieved in theory and practice through the coordination of structure and function, integration of information driven elements, construction of innovative ecosystems, and dynamic generation of intelligent productivity. In the face of the complex and ever-changing environment, the holistic and dynamic nature of systems philosophy points the way, not only helping to address current challenges, but also laying a solid foundation for future development. The transformation and upgrading of productivity is a continuous process, and only by continuously optimizing the linkage and innovation of various factors can long-term development goals be achieved in the construction of new quality productivity.

References

[1] Peng Zhien. The World of Material Practice - An Understanding of the Three Fundamental Categories of Marxist Philosophy [D]. Central Party School of the Communist Party of China, 2019.

[2] Zhang Xiaheng, Feng Xiaoyu On the Development of New Quality Productivity: The Overall Architecture and Promotion Measures of Data Element Empowerment Journal of Hohai University (Philosophy and Social Sciences Edition), 2024, 26 (3): 120-130.

Author:

Qiang Huang(1989—), Male, Han nationality, Datong City, Shanxi Province; Intermediate Certificate; Master's Degree; Research Direction: Systems Philosophy.

Hairen Wang (1988—), Male, Han nationality, Yantai City, Shandong Province; Lecturer; PhD; Research Direction: Impact Dynamics.