

Research on the Efficiency and Driving Elements of Manufacturing Transformation and Upgrading in the Context of Digitization

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Abstract : With the rapid development of the new generation of digital technology, various industries have created more and more value by using digital technology, accelerating the digital transformation of various industries. The economic form of human society has evolved with the progress of technology, and in this context, the power conversion, transformation and upgrading of the manufacturing industry in terms of quality, efficiency and energy change has become a top priority. Based on the digitalization background, this paper analyzes the transformation and upgrading efficiency of the manufacturing industry and evaluates the impact of the driving factors, which have very important theoretical and practical significance. This paper utilizes qualitative research methods, entropy methods, data envelopment analysis methods and econometric models to explore the transformation and upgrading efficiency of manufacturing enterprises and driving factors. The study shows that the transformation and upgrading efficiency of the manufacturing industry shows a steady increase, and regions rich in natural resources and social resources provide certain resources for transformation and upgrading. The ability of scientific and technological innovation has been improved, but there is still much room for progress in the transformation of scientific and technological innovation achievements. Most manufacturing industries pay more attention to green manufacturing and sustainable development. In addition, based on the existing problems, this paper puts forward suggestions for improving infrastructure construction, developing the technological innovation capacity of enterprises, green production and sustainable development.

Keywords : digitization, manufacturing firms, transformation and upgrading, efficiency, driving factors

Conference Title : ICMESS 2023 : International Conference on Management, Economics and Social Science

Conference Location : Macau, China

Conference Dates : December 11-12, 2023