

Research on the Influence of the Circulation Industry and Economic Growth Based on Grey Relational Analysis

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Abstract. The effects of circulation industry and economic growth has always been an important content of current academic research, This article is based on the 2007-2016 10 years data using the grey correlation analysis of affecting the three industries of national economy growth and has carried on the empirical research of correlation between circulation industry, Results show that the 10 years of circulation industry and GDP correlation (0.347) is greater than the first industry and GDP correlation (0.332), The result shows that the distribution industry contributes slightly more to economic growth than the first industry. At the same time do an empirical analysis of the grey correlation industries inside the circulation industry, The results showed that the wholesale and retail trade and the correlation of circulation industry is the largest, These conclusions provide the basis for the development of the circulation industry.

Introduction

The circulation industry plays an important role in the economic growth in the whole process of social economy the circulation industry is positioned as the basic industry, the leading industry and the strategic industry in the economic operation. Circulation to guide consumption, promote the production and circulation to promote industrial structure adjustment, the development of circulation industry can improve the efficiency of the national economy, the circulation industry as an important part of the third industry, The development of the circulation industry has an important influence on the adjustment of the industrial structure and the optimization and upgrading. Supply-side structural reform brought historic opportunities to the development of the circulation industry. The aim of the reform is to reduce inefficient supply and low-end supply, expand effective supply and high-end supply, and focus on addressing the mismatch of supply and demand. In the new era, we should rethink the role of the circulation industry, its role and its impact on economic growth.

At home and abroad have a lot of research on the relationship between circulation industry and economic growth, Earlier, Adam Smith, who looked at the relationship between circulation and consumption growth from a division of labor, Adam Smith thinks that division of labor can promote long-term productivity growth, at the same time, the degree of division of labor is restricted by the market, and circulation can expanding the scope of the market, so as to promote the deepening of division of labor and productivity, increase consumer demand, drive economic growth; Marx looked at the effect of circulation on economic performance from the perspective of social reproduction, Marx thought that circulation was the intermediary between production, distribution and consumption, and consumption was reproducing as a medium. If the production process cannot be transferred to the circulation process, the production will be in a desperate situation. Thus, if there is no circulation intermediary function, the production will stop, distribution, consumption is not possible, thus the whole production process will be blocked or atrophy, In turn, the whole social economy is affected by the economic dislocation and turbulence which ultimately affects the growth and development of the economy. De-hai zhao (2004) used the statistics of 1990-2001 three times industry and circulation industry using the method of correlation coefficient of empirical research on the circulation industry's contribution to the national economy, comparing with the foreign circulation, make people better understand the role of circulation and status; Shi Mingming

(2009) uses statistics from the three industries and circulation industries of 1978-2007. Using grey correlation analysis method to study the circulation industry in the national economy development the role transformation, it is concluded that after the reform and opening up 30 years of circulation industry in the national economy in the four stages, from industry to the relatively independent development phase, from the end of the industry to lead the industry transformation. Yang longzhi (2013), based on the VAR granger causality test, answers whether the circulation industry plays a leading role in the national economy. The empirical research suggests that the circulation industry has certain characteristics of the leading industries, which are different from the leading industries.

The Development of the Circulation Industry

In recent years, China's economy has been in a particular stage of "three periods of superposition", and the economic development has entered a new normal, the transformation of the growth rate, the transformation of the kinetic energy and the optimization of the structure. The growth of the national economy has spread across industries, including circulation. The development of the circulation industry faces enormous challenges, Retail companies have been shut down, and some listed companies have seen their revenues start to decline, the proportion of their profits continues to grow, and the profitability of large supermarkets has declined. China's GDP was 74412.7 billion yuan in 2016, 6.7 percent higher than a year earlier. The first industry grew by 3.3 percent over the same period. The second industry grew by 6.1% in the same period. The third industry grew by 7.8 percent over the same period. Wholesale and retail sales rose 6.7% in the same period. Transport, warehousing and postal services increased by 6.5% over the same period. Retail sales of consumer goods in 2016 totaled 3323.16 billion yuan, up 10.4% from the previous year. The amount of retail sales of consumer goods above the limit was 15428.6 billion yuan, up by 8.1 percent. Deducting the price factor, growth is still in the downward trend, department stores, shopping centers, discount stores, large commercial outlets are facing huge challenges, such as some retail enterprises began to put up the shutters, the growth of the industry faces challenges as a whole. The growth of each business has been challenged, but the loss of the department store and the shopping center has been less than expected This has a lot to do with the transformation of the department store and the expansion of the shopping center. Only eight of the 122 listed retailers suffered losses, with a loss of 647 million yuan, an average loss of 0.8 billion yuan and a loss of 14 percent, less than the average loss in the industry. At the shopping center, the operating income was 2622.78 billion yuan, net profit was 9185 million yuan, and net profit margin was 3.5 percent, which was 1.1 percent higher than the industry average. Once the profitability of major supermarkets began to degradation of retail business modes, By the end of 2016, 122 retail listed companies in the 13 supermarkets achieved 141.37 billion yuan, accounting for 16% of the total amount of operating income, net profit of 2.385 billion yuan, accounting for 11% of the total amount of net income, net profit margin of 1.68%, 0.72% lower than the average.

The Empirical Analysis and the Main Conclusion

The grey correlation analysis is a quantitative description and comparison method for the development of the system, which can be used to analyze the influence of various factors on the results. It is suitable for the data of small sample and irregular, which can solve the problem of comprehensive evaluation of change over time. The basic idea is to make the evaluation index raw data without dimensional processing, then calculate the correlation coefficient, the correlation degree, according to the size of the correlation degree to order the index. In the empirical analysis of the calculation process, the output value of the circulation industry in the China statistical yearbook 2016 wholesale and retail trade, transportation, warehousing and postal service as well as the output value of the accommodation and catering industry aggregation.

The grey correlation analysis of GDP and three industries and circulation industries. With 10 years of GDP in 2007-2016 as the reference sequence, with three times industry, circulation industry output value to compare the sequence, using the method of initial value of the

dimensionless processing of raw data, looking for travel sequence, using the formula to calculate the correlation coefficient, Using the method of average, calculate of grey correlation degree and the first industry to GDP is 0.332, The grey correlation between GDP and the second industry is 0.448. The grey correlation between GDP and tertiary industry is 0.455, The grey correlation between GDP and circulation industry is 0.347. The ranking of grey correlation shows that the correlation between GDP growth and GDP growth is small in turn: tertiary industry, secondary industry, circulation industry, first industry.

The gray correlation analysis of Circulation industry and wholesale and retail, transportation and warehousing and postal services, accommodation and catering industry. Circulation industry output value in 2007-2016 as reference sequence, in circulation industry within the wholesale and retail, transportation, warehousing and postal service, accommodation and catering industry to compare the sequence, using the method of grey correlation analysis and excel tool to calculate the grey correlation coefficient. Using the mean method, the grey correlation degree of the circulation industry and the wholesale and retail trade is calculated is 0.515, and the ranking is the first. The gray correlation of the circulation industry and the transportation and transportation warehousing and postal services is 0.389, and the ranking is the second ;The grey correlation between the circulation industry and the accommodation and catering industry is 0.336, and the ranking is third.

In the last 10 years, the national economy is dominated by the third industry, and the third industry is dominated by the circulation industry. The development of the circulation industry directly affects the operation of the national economy .The second industry is more closely related to the GDP than the first industry, which is less than the third industry, which indicates that the second industry plays an important role in the operation of the economy. The first industry has the least grey correlation with GDP, It shows that in recent years agriculture has no longer played a leading role in economic development. This result accords with the stage characteristics of China's economic development.

From the second level, the interior of the circulation industry, the wholesale and retail industries have the largest grey correlation, It shows that the wholesale and retail development is stable and supports the development of the circulation industry. The economic performance of the national economy plays an important role, and the trend of the change of the correlation coefficient of 10 years shows that the gray correlation coefficient of wholesale and retail and circulation industry is on the rise. You can see the contribution of wholesale and retail to economic growth. This conclusion has a certain degree of mutual confirmation with cao jing (2010).

Countermeasures and Suggestions

According to the above analysis, we believe that the circulation industry plays an important role in GDP, economic growth, tertiary industry, social welfare and employment. The circulation industry in our country is increasingly becoming the basic industry and the leading industry (hong tao, 2004), The contribution of our circulation industry to economic growth is increasing. At the same time, the circulation industry also is faced with the problem of some industry in the new situation, it is necessary to fully aware of the status and role of circulation industry, the development of modern circulation industry, improve the level of circulation industry's contribution to the economic growth.

Build A Legal Business Environment. The essence of the market economy is the rule of law. Building and improving the business environment of legalization has great practical significance for mass entrepreneurship and innovation. Advanced business governance concepts and scientific system design are required. Good law is a prerequisite for good governance, so the science of doing business legislation is the foundation for building a legal business environment. Such measures as legislating, regulating the legal system of commercial affairs, revising the public law and revising the securities law should be promoted. We will improve the legal system for circulation and advance the legislative process for the circulation of goods. Establish the establishment of some basic institutions, such as the construction of circulation facilities, The protection of goods and the maintenance of order, Market supervision, Intellectual property rights, Internet information security

and e-commerce laws and regulations. Improving anti-monopoly and anti-unfair competition laws and regulations, We will strengthen market oversight and standardize law enforcement.

Establish a Mechanism for Promoting Innovation in Circulation. The "Internet plus circulation" has provided new impetus for the development of innovative drivers in the circulation industry. Under the new circumstances, modern information technologies such as the Internet, cloud computing and big data provide a favorable environment and conditions for the development of the circulation industry. Encouraging new models for sharing the economy, To stimulate entrepreneurship and innovation in the market, We will encourage the expansion of new space for products, new areas for consumer services, and flexible employment in the society. Supporting the innovation development of small and medium-sized enterprises. We will promote the e-commerce in rural areas and the e-commerce in the community, and promote the marketing of agricultural products and the circulation of agricultural products. Improve the informationization and integration of community business, integrate community service resources and improve the quality of life of community residents.

Promote the Upgrading of Business Transformation and the Adjustment of the Business State. Physical retail is the basis for the circulation of goods, and also the carrier for guiding production and expanding consumption. However, in the new normal economic development, the development of some business conditions has exposed the problems of the development mode, the failure to provide effective supply and the low efficiency of business operation. It has made clear the direction for the transformation and upgrading of physical retail by adjusting the business structure, promoting cross-boundary integration, optimizing development environment and strengthening policy support. At the same time, in the case of supply-side structural reform, the business layout should be adjusted, The idea of closing stores in large commercial outlets is hard to ignore. The business mode should enhance the consumer's experience, pay attention to the quality of service, and develop the business mode of precision, specialization and facilitation.

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