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Influencing factors of Urban Residents' Consumption: A case study of Henan Province

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SUMMARY

Guo Yuguang. **Influencing factors of Urban Residents' Consumption: A case study of Henan Province.** (Scientific supervisor: Doctor of Science in Economics, Professor, Merkulova T.).

Consumer behavior has long been a significant area of interest across multiple disciplines, including economics and sociology. Numerous scholars have investigated consumer behavior from various perspectives. However, due to the complex interplay of multiple factors influencing consumption and the diversity of economic, social, cultural, and other regional contexts, existing theories of consumer behavior exhibit certain limitations when applied to urban residents in Henan Province. This study seeks to thoroughly analyze the characteristics and influencing factors of consumer behavior among urban residents in Henan. Specifically, the research focuses on the following aspects: a) Conducting a comprehensive analysis of the current consumption behavior of urban residents in Henan Province, including consumption structure, consumption patterns, and consumption habits. This aims to gain an in-depth understanding of residents' expenditures across various consumption domains and the evolving trends in consumer behavior; b) Exploring in depth the various factors that influence consumer behavior in this demographic. These include economic factors (such as income level, price level, and employment status), social factors (such as population structure, social security systems, and consumer culture), and psychological factors (such as consumption attitudes, expectations, and risk preferences). A combination of quantitative and qualitative research methods is employed in this study. Through an in-depth investigation of the determinants of consumer behavior among urban residents in Henan Province, this research aims to expand and refine the theoretical framework of consumer behavior, offering new empirical evidence and perspectives to advance scholarly understanding in this field.

Keywords: consumption, consumer behaviour, income level, consumption expectation, urban residents.

АНОТАЦІЯ

Го Юйгуан. **Фактори, що впливають на споживання міського населення: приклад провінції Хенань.** (Науковий керівник д.е.н., проф. Меркулова Т. В.).

Поведінка споживачів вже давно є важливою сферою дослідження в межах кількох дисциплін, зокрема економіки та соціології. Багато науковців вивчали поведінку споживачів з різних точок зору. Однак через складну взаємодію численних факторів, що впливають на споживчу поведінку, а також через різноманіття економічного, соціального, культурного та іншого регіонального контексту, існуючі теорії споживчої поведінки мають певні обмеження при поясненні споживчих практик міських жителів провінції Хенань. Метою цього дослідження є глибокий аналіз характеристик споживчої поведінки міських жителів провінції Хенань та чинників, що на неї впливають. Зокрема, дослідження зосереджене на таких аспектах: а) Комплексний аналіз сучасної споживчої поведінки міських жителів провінції Хенань, включаючи структуру споживання, моделі споживання та споживчі звички. Це дозволить глибше зрозуміти витрати населення в різних сферах споживання та тенденції змін у споживчій поведінці; б) Глибоке дослідження різних чинників, що впливають на споживчу поведінку міських жителів. Серед них – економічні чинники (рівень доходів, рівень цін, зайнятість), соціальні чинники (структура населення, система соціального захисту, споживча культура) та психологічні чинники (споживчі уявлення, очікування, схильність до ризику). У дослідженні використовується комбінація кількісних та якісних методів. Завдяки глибокому вивченню факторів, що впливають на споживчу поведінку міських жителів провінції Хенань, можна розширити й поглибити теоретичні основи споживчої поведінки, а також надати нову емпіричну базу й перспективи для подальшого розвитку наукових досліджень у цій галузі.

Ключові слова: споживання, споживча поведінка, рівень доходу, споживчі очікування, міське населення.

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INTRODUCTION

Research Background.

Henan, as a major economic and populous province in China, holds a pivotal position in the national economic landscape. In 2024, the province's regional GDP reached 6,358.999 billion yuan, increasing by 5.1% year-on-year. This figure demonstrates the strong impetus and huge potential of Henan's economic development. From the perspective of industrial structure, the structure of the three industries is 8.6:38.3:53.1, presenting a favorable situation of coordinated development of the secondary and tertiary industries and jointly supporting economic growth. Meanwhile, Henan Province has a population of nearly 100 million. The huge population base has given birth to a huge consumer market. As one of the "three horses" driving economic growth, consumption plays a key role in the economic development of Henan.

To calculate the year-on-year GDP growth rate r for Henan in 2024, we use the formula:

$$r = \left(\frac{GDP_{2024} - GDP_{2023}}{GDP_{2023}} \right) \times 100\% = 5.1\%$$

Under the current new development pattern of dual circulation at home and abroad, the fundamental role of consumption in economic growth has become increasingly prominent. Residents' consumption not only directly affects the prosperity of the market and the production and operation of enterprises, but also has profound significance for the stable growth and structural optimization of the economy (Wu & Zhao, 2021). With the development of the economy and the improvement of residents' living standards, the consumption behavior and consumption concepts of urban residents in Henan Province have undergone significant changes. The consumption structure is constantly upgrading, shifting from traditional survival-oriented consumption to development-oriented and enjoyment-oriented consumption, and the demand for high-quality goods and services is increasing day by day. Consumption patterns are also becoming increasingly diversified, with emerging consumption models such as online consumption and experiential consumption flourishing.

Research Significance.

From a theoretical perspective, this study is conducive to enriching and improving the theoretical system of consumer behavior. Consumer behavior has always been an important field of concern in multiple disciplines such as economics and sociology (Cheng & Zhang, 2023). Different scholars have conducted research on consumer behavior from different perspectives. However, due to the comprehensive influence of multiple factors on consumption behavior and the differences in economic, social, cultural and other backgrounds in different regions, the existing theories of consumption behavior have certain limitations when explaining the consumption behavior of urban residents in Henan. Through in-depth research on the influencing factors of consumption behavior of urban residents in Henan Province, the research scope of consumption behavior theory can be further expanded and deepened, providing new empirical basis and research perspectives for the theoretical development in this field.

Research Objectives.

This study aims to deeply analyze the consumption behavior characteristics and influencing factors of urban residents in Henan Province. Through comprehensive and systematic research, it provides targeted and operational suggestions for stimulating residents' consumption potential and promoting consumption upgrading, thereby providing a strong reference basis for the government to formulate relevant policies and enterprises to carry out business activities.

Specifically, this study will be carried out from the following aspects: First, a comprehensive analysis of the current consumption behavior of urban residents in Henan Province will be conducted, including the characteristics of consumption structure, consumption mode, consumption habits, etc., to deeply understand the expenditure situation of residents in different consumption fields and the changing trend of consumption behavior; The second is to deeply explore various factors influencing the consumption behavior of urban residents in Henan Province. It covers economic factors (such as income level, price level, employment status, etc.), social factors (such as population structure, social security system, consumption culture, etc.),

psychological factors (such as consumption concepts, consumption expectations, risk preferences, etc.) and technical factors (such as the development of Internet technology, the popularization of mobile payment, etc.) Accurately grasp the mechanism and degree of influence of each factor on residents' consumption behavior; Thirdly, based on the research results and in combination with the current economic development situation and policy orientation, practical and feasible suggestions are put forward from the three levels of the government, enterprises and consumers to promote the prosperity and development of the urban residents' consumer market in Henan and drive the high-quality growth of Henan's economy.

Research Methods

This study comprehensively employs a variety of research methods to ensure the scientific nature, comprehensiveness and depth of the research. The specific methods are as follows:

Literature research method:

By extensively reviewing relevant domestic and international literature and materials, including academic journal articles, dissertations, government statistical reports, industry research reports, etc.

Questionnaire survey method:

Design a scientific and reasonable questionnaire, select urban residents from different cities, regions, income levels and age groups in Henan Province as the survey subjects, and conduct random sampling surveys. Empirical analysis method: By applying econometric methods and statistical analysis software, empirical analysis is conducted on the data obtained from the questionnaire survey (Gao & Wang, 2020).

Research Content.

This study focuses on the influencing factors of consumption behavior of urban residents in Henan Province, aiming to comprehensively analyze the characteristics, influencing factors and internal mechanisms of consumption behavior of residents in this region, and provide scientific basis and policy suggestions for promoting consumption of urban residents in Henan and driving economic development. The specific research contents are as follows:

Analysis of the Current Consumption Behavior of Urban Residents in Henan Province: By collecting and analyzing the statistical yearbook of Henan Province, statistical data released by government departments, and related research reports, we can gain a deep understanding of the consumption scale, structure, and patterns of urban residents in Henan. From the perspective of time series, analyze the changing trends of consumption behavior in different periods, such as how the consumption structure transforms from traditional subsistence consumption to development and enjoyment consumption with economic development and the improvement of residents' income levels; From the spatial dimension, compare the differences in residents' consumption behaviors among different cities and explore the influence of factors such as the level of economic development and regional culture on consumption behaviors.

Analysis of Influencing Factors of Consumption Behavior of Urban Residents in Henan Province: By comprehensively applying theories from multiple disciplines such as economics, sociology, and psychology, a comprehensive framework for analyzing influencing factors is constructed to deeply analyze the factors influencing the consumption behavior of urban residents in Henan Province from multiple levels. In terms of economic factors, the focus is on studying the influence mechanisms of factors such as residents' income levels, income distribution gaps, price levels, and employment conditions on consumption behavior. For instance, by establishing econometric models, the quantitative relationship between income levels and consumption expenditures is analyzed to explore how the widening income distribution gap affects the consumption tendencies of different income groups. In terms of social factors, this paper explores the influence of factors such as changes in population structure (such as aging, the process of urbanization, etc.), the degree of improvement of the social security system, consumption culture and social customs on residents' consumption concepts and consumption behaviors. For instance, study the impact of an aging society on the consumption of elderly care services and medical care, and analyze how the improvement of the social security system can enhance residents' confidence in consumption (Wang & Zhu, 2022). In terms of psychological factors,

pay attention to the influence of factors such as consumers' consumption concepts, consumption expectations, and risk preferences on consumption decisions. For example, through questionnaires and interviews, understand how consumers' expectations of the future economic situation affect their current consumption behavior, and analyze the impact of consumers' risk preferences on investment consumption and savings behavior. In terms of technical factors, study the transformative effects of the development of Internet technology and the popularization of mobile payment on consumption patterns and channels. For example, analyze how the rise of e-commerce platforms has changed residents' shopping habits and how the convenience of mobile payment has promoted the growth of consumption.

Innovation Points.

This study has certain innovations in terms of research perspective, data application and research conclusions, as follows: ii. Theoretical Basis and Literature Review.

SECTION 1. THEORETICAL BASIS AND RESEARCH REVIEW

1.1. THEORETICAL BASIS OF CONSUMPTION BEHAVIOR

Consumer behavior theory, as an important field of economic research, has undergone a long period of development and evolution.

Many scholars have conducted in-depth analyses of consumer behavior from different perspectives, forming a series of theories with significant influence. These theories provide a solid foundation for us to understand the decision-making process and behavioral motives of consumers, and also lay the theoretical cornerstone for the subsequent research on the consumption behavior of urban residents in Henan Province. This section will elaborate in detail on four classic theories of consumption behavior: Keynes' absolute income Hypothesis, Dusen-Bailey's relative income hypothesis, Friedman's persistent income hypothesis, and Modigliani's life cycle hypothesis.

Keynes' Absolute Income Hypothesis.

In his book "The General Theory of Employment, Interest and Money" published in 1936, Keynes proposed the absolute income hypothesis, which was pioneering in the development of consumption theory and became an important starting point for modern consumption theory research (Keynes, 1999). Keynes believed that in the short term, consumers' consumption decisions mainly relied on the current absolute income level, and there was a stable functional relationship between consumption and income. He pointed out that as income increases, consumption will also increase accordingly, but the growth rate of consumption is lower than that of income, that is, the marginal propensity to consume (MPC) is decreasing. This law is called the "law of diminishing marginal propensity to Consume", which reflects the behavioral characteristic that when consumers' income increases, the proportion spent on consumption gradually decreases while the proportion spent on savings gradually increases.

The core idea of Keynes' absolute income hypothesis can be expressed through the following formula: $C = \alpha + \beta Y$, where C represents current consumption and α

is spontaneous consumption, that is, when income is zero, the consumption carried out by consumers to maintain basic living needs.

Keynes' Absolute Income Hypothesis Formula: $C = \alpha + \beta Y (0 < \beta < 1)$

Key Components:

C: Total consumption.

Y: Current disposable income (short-term focus).

α : Autonomous consumption (consumption when income is zero, e.g., borrowing or using savings).

β : Marginal Propensity to Consume (MPC), the fraction of additional income spent (e.g., if $\beta=0.8$, 80% of extra income is consumed).

In the research on the consumption behavior of urban residents in Henan Province, Keynes' absolute income hypothesis has a certain explanatory power. From the perspective of the relationship between income level and consumption expenditure, as the income of urban residents in Henan Province continues to increase, their consumption expenditure also shows a growth trend. According to the data from the Statistical Yearbook of Henan Province, in recent years, the per capita disposable income of urban residents in Henan has continued to rise, while at the same time, per capita consumption expenditure has also been steadily increasing (Fig 1).



Figure 1. Core data sources such as GDP and consumption scale

Source: The People's Government of Henan Province. Statistical Bulletin on the National Economic and Social Development of Henan Province in 2024. (Zhengzhou, 2024).

Dussen-Bailey's Relative Income Hypothesis.

In his book "The Theory of Income, Savings and Consumer Behavior" published in 1949, DussenBailey proposed the relative income hypothesis, which revised and expanded Keynes' absolute income hypothesis, providing a new perspective for the study of consumer behavior from both social and psychological levels. Dussenbailey believes that consumers' consumption expenditure is not only determined by the current absolute income level, but also significantly influenced by the relative income level.

Friedman's Persistent Income Hypothesis.

Friedman proposed the persistent income hypothesis in 1956. This hypothesis has had a profound impact on the development of consumption theory and provided an important theoretical framework for explaining consumers' long-term consumption behavior. Friedman believed that consumers' consumption expenditure is not determined by their current temporary income, but by their persistent income level (Friedman, 2001). Persistent income refers to the average income that consumers can steadily obtain and expect over a long period of time. It reflects consumers' long-term economic situation and income capacity. In contrast, there is temporary income, which refers to the income that consumers obtain in a short period of time and is uncertain and accidental, such as bonuses and windfall gains. Friedman's Permanent Income Hypothesis Formulas:

$$C_p = K(i, w, u) \times Y_p$$

$$Y = Y_p + Y_t \text{ and } C = C_p + C_t$$

Key Components:

Y_p : Permanent income (long-term average expected income).

Y_t : Transitory income (temporary/unexpected income, e.g., bonuses).

C_p : Permanent consumption (stable spending based on Y_p)

C_t : Transitory consumption (spiking or dropping with K : Fraction of Y_p consumed, influenced by:

i : Interest rates (higher rates may reduce borrowing for consumption).

w : Wealth (e.g., assets or savings). u : Uncertainty (e.g., job security).

Modigliani Life Cycle Hypothesis.

The life cycle hypothesis proposed by Modigliani provides a comprehensive and in-depth perspective for studying consumers' consumption behavior, emphasizing the reasonable planning of income and consumption by consumers throughout the entire life cycle (Modigliani & Brumberg, 1954). This hypothesis holds that rational consumers will arrange their lifetime consumption based on the labor income and property income they obtain throughout their lives to achieve maximum utility, and they hope that their consumption at various periods of their lives can remain stable, so that their lifetime consumption expenditure is equal to the sum of the labor income and property income they obtain throughout their lives.

1.2. REVIEW OF DOMESTIC AND FOREIGN LITERATURE

Current Research Status Abroad.

Research on residents' consumption behavior abroad started earlier and the theoretical system is relatively mature. The early research mainly focused on the construction of the theory of consumer behavior. In 1936, Keynes proposed the absolute income hypothesis, arguing that in the short term, consumption is a function of income and the marginal propensity to consume decreases. This theory laid the foundation for the study of consumer behavior and triggered in-depth discussions among many scholars. In 1949, Dusenberry proposed the relative income hypothesis, emphasizing that consumers' consumption behavior is not only influenced by their own income but also by the consumption behavior and past consumption habits of the people around them, that is, there are demonstration effects and ratchet effects (Dusenberry, 2005). This hypothesis expands the research perspective of consumption behavior from the social and psychological levels, making people's understanding of consumption behavior more comprehensive. Friedman proposed the persistent income hypothesis in 1956, arguing that consumers' consumption expenditure mainly depends on persistent income rather than temporary income. This theory provides an important theoretical framework for explaining consumers' long-term consumption behavior.

Modigliani proposed the life cycle hypothesis in 1954, advocating that consumers would arrange their consumption based on their lifetime income and property to achieve maximum utility, and emphasizing the consumption characteristics and savings behaviors of consumers at different stages of the life cycle.

With the deepening of research, attention has begun to be paid to various factors influencing residents' consumption behavior.

In terms of economic factors, income level has always been regarded as a key factor influencing consumption. Many studies have verified the positive correlation between income and consumption through empirical analysis. Through the analysis of residents' consumption data, it is found that an increase in residents' income will significantly promote the growth of consumption expenditure. The price level also has an important influence on consumer behavior.

Studies show that rising prices will reduce the actual purchasing power of residents, thereby suppressing consumption. Interest rates, as an important factor influencing residents' savings and consumption decisions, have also received extensive attention.

Changes in interest rates will affect residents' savings returns and borrowing costs, and thereby influence consumption behavior. Higher interest rates will encourage residents to save and reduce consumption. Lower interest rates, on the other hand, will stimulate residents to borrow and consume, increasing their consumption expenditure.

Domestic Research Status.

The research on residents' consumption behavior in China has gradually deepened with the development of the economy. The early research mainly focused on the introduction and presentation of foreign consumption theories. With the changes in the domestic economic environment and the accumulation of data, scholars began to conduct empirical research in combination with the actual situation in China.

On the one hand, the existing research needs to be improved in terms of the timeliness and comprehensiveness of the data. Some of the data used in the research are rather outdated and cannot accurately reflect the latest changes in current residents'

consumption behavior. Meanwhile, the coverage of the data may not be extensive enough to comprehensively cover the consumption situations of residents in different regions and among different income groups. On the other hand, in terms of research methods, although empirical studies are gradually increasing, the innovation and diversity of research methods still need to be strengthened. Some studies have certain limitations in model construction and variable selection, which may affect the accuracy and reliability of the research results. Furthermore, the research on the deep-seated psychological and social factors behind consumption behavior is not in-depth enough. It is necessary to further strengthen interdisciplinary research, comprehensively apply theories and methods from multiple disciplines such as economics, sociology, and psychology, and deeply analyze the internal mechanisms of residents' consumption behavior.

SECTION 2. ANALYSIS OF THE CURRENT SITUATION OF CONSUMPTION BEHAVIOR OF URBAN RESIDENTS IN HENAN PROVINCE

2.1. CONSUMPTION SCALE AND GROWTH TREND

Overall Consumption scale.

Henan Province, as a populous and economically significant province, has a huge scale of urban residents' consumption and holds an important position in the national consumer market. In recent years, with the continuous economic growth of Henan Province and the steady increase in residents' income levels, the consumption scale of urban residents has shown a trend of continuous expansion.

According to the information released by the People's Government of Henan Province, the total retail sales of consumer goods in the province will reach 2,759.669 billion yuan in 2024. By urban and rural areas, the retail sales of consumer goods in urban areas will be 2,293.731 billion yuan, increasing by 6.0% year-on-year. However, at present, there is no public information directly providing the average annual growth rate of the total retail sales of consumer goods by urban residents in Henan Province during the period from 2015 to 2024, as well as the subsequent data related to the total retail sales of consumer goods by urban residents in Henan Province being 1,299.488 billion yuan in 2015.

Make certain analysis and speculation based on the existing relevant data. It is known that the total retail sales of consumer goods in Henan Province was 1,574.043 billion yuan in 2015 and 2,759.669 billion yuan in 2024. The average annual growth rate of the total retail sales of consumer goods in the province during the period from 2015 to 2024 can be calculated by the formula to be approximately 6.12%. In 2024, the retail sales of consumer goods in urban areas of the province reached 2,293.731 billion yuan, while those in rural areas were 465.938 billion yuan. The proportion of retail sales of consumer goods in urban areas in the total retail sales of consumer goods in the province was approximately 83.12%.

Urban-Rural Consumption Ratio (2024)

$$\text{Formula : Urban Proportion} = \left(\frac{\text{Urban Retail Sales}}{\text{Total Retail Sales}} \right) \times 100\%$$

Given:

Total retail sales in 2024: 2,759.6692,759.669 billion yuan

Urban proportion: 83.12%83.12%

The growth rate is higher than the national average, highlighting the strong vitality of the urban consumption market in Henan Province (Chen et al., 2023). This growth trend not only reflects the rapid development of the urban economy in Henan Province, but also demonstrates the gradual improvement of residents' consumption capacity. Nationwide, Henan Province ranks relatively high in terms of total retail sales of consumer goods. It has remained around the fifth place in the country for many years and is an important supporting force in China's consumer market.

From the perspective of consumption structure, the consumption of urban residents in Henan Province covers multiple fields, including food, clothing, housing, transportation and communication, education, culture and entertainment, medical care and health, etc. Among these consumption sectors, the consumption of food, tobacco and alcohol has always accounted for a large proportion. (Fig. 2)

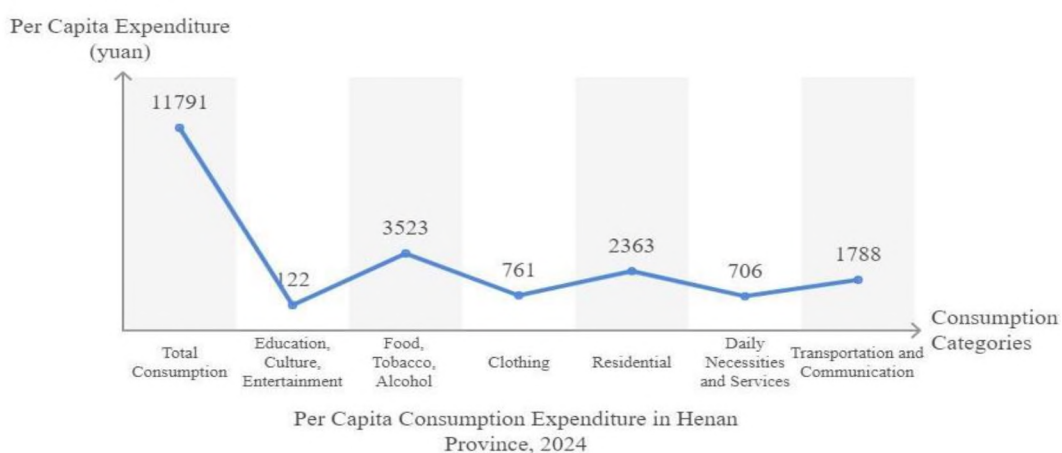


Figure 2. National Consumption Data Comparison

Source: National Bureau of Statistics China Statistical Yearbook 2023. Beijing: China Statistics Press, 2023.

This change in consumption structure indicates that the consumption demands of urban residents in Henan Province are shifting from basic living needs to higher-level demands, and the trend of consumption upgrade is obvious.

In the segmented areas of the consumer market, urban residents in Henan Province also show a considerable scale in the consumption of some key goods and services. In terms of car consumption, with the improvement of residents' living standards and the development of the automotive industry, the number of cars owned by urban residents in Henan Province has continued to increase. In 2024, the number of private cars per 100 households in Henan Province will be 27.1¹. Specifically, the number of household cars in each major city of Henan Province is as follows (Fig. 3).



Figure 3. International Perspective on the Upgrading of Consumption Structure

Source: World Bank. *China Economic Update: Consumer Market Trends*. (Washington, 2023)

The prosperity of the automotive consumption market not only drives the development of related industries such as automotive sales and maintenance, but also promotes the growth of consumption fields such as transportation and communication.

In the real estate market, despite the continuous strengthening of real estate market regulation policies in recent years, the housing demand of urban residents in Henan Province remains strong. In 2024, the sales area of commercial housing in Henan Province was 62.028 million square meters, a decrease of 7.6249 million square meters compared with 2023, representing a year-on-year decline of 11%. Among them,

the sales area of ready-to-move-in commercial housing was 11.925 million square meters, an increase of 2.0382 million square meters compared with 2023. Housing consumption, as an important component of residents' consumption, plays a significant role in driving economic growth and promoting the development of related industries. In the field of service consumption, the consumption scale of tourism, cultural entertainment, catering and other aspects by urban residents in Henan Province has also been continuously expanding. (Fig. 4) With the acceleration of people's life pace and the transformation of consumption concepts, residents' demands for leisure, entertainment and tourism are increasing day by day.

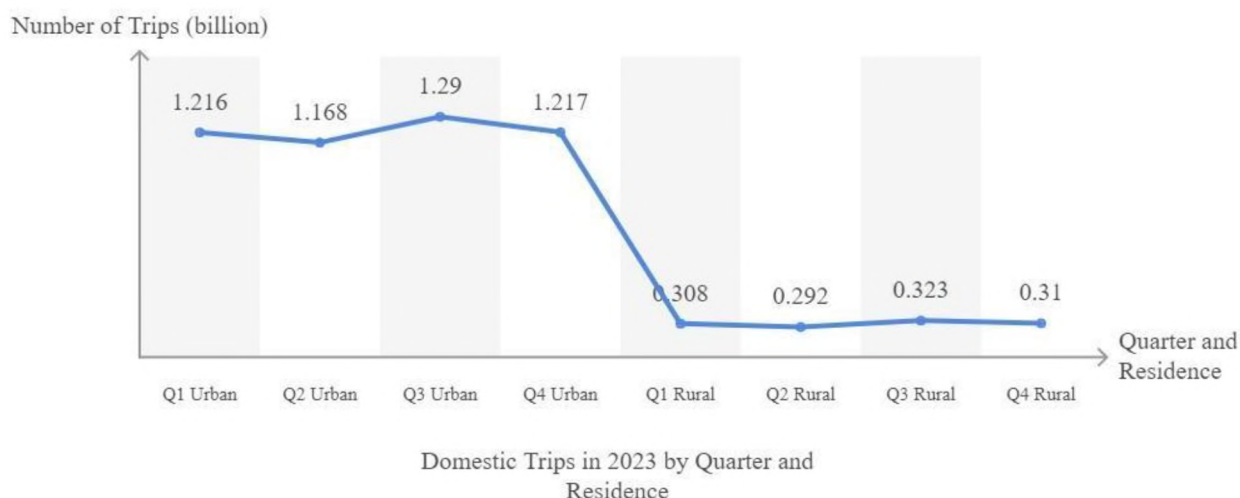


Figure 4. National Consumption Data Comparison

Source: National Bureau of Statistics China Statistical Yearbook 2023. Beijing: China Statistics Press, 2023.

The total expenditure of domestic tourists on travel was 4.91 trillion yuan, an increase of 2.87 trillion yuan compared with the previous year, representing a year-on-year growth of 140.3%. Among them, the travel expenditure of urban residents was 4.18 trillion yuan, increasing by 147.5% year-on-year. Rural residents spent 0.74 trillion yuan on travel, an increase of 106.4% year-on-year.

In 2024, the total retail sales of consumer goods in the province reached 2,759.669 billion yuan, increasing by 6.1% year-on-year. Among them, the retail sales

of consumer goods by units above the designated size reached 723.387 billion yuan, increasing by 8.0%.

In December, the total retail sales of consumer goods in the province reached 260.647 billion yuan, increasing by 6.5% year-on-year. Among them, the retail sales of consumer goods by units above the designated size reached 74.226 billion yuan, increasing by 8.6%.

By the location of business units, in 2024, the retail sales of consumer goods in urban areas of the province reached 676.866 billion yuan, increasing by 7.7% year-on-year. Retail sales of consumer goods in rural areas reached 46.521 billion yuan, increasing by 11.4%. In December, the retail sales of consumer goods in urban areas of the province reached 69.218 billion yuan, increasing by 8.6% year-on-year. Retail sales of consumer goods in rural areas reached 5.008 billion yuan, increasing by 9.1%.

By consumption type, in 2024, the province's catering revenue reached 47.431 billion yuan, increasing by 8.0% year-on-year. Retail sales of commodities reached 675.956 billion yuan, increasing by 8.0%. In December, the catering revenue of the whole province was 5.118 billion yuan, increasing by 8.2% year-on-year. Retail sales of commodities reached 69.108 billion yuan, increasing by 8.6%. (Fig. 5)

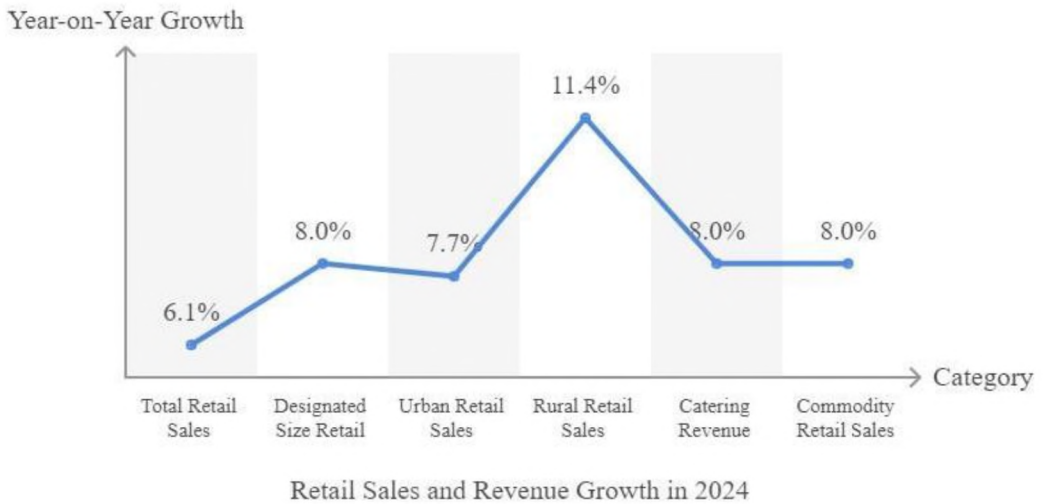


Figure 5. National Consumption Data Comparison

Source: National Bureau of Statistics China Statistical Yearbook 2023. Beijing: China Statistics Press, 2023.

Overall, the consumption scale of urban residents in Henan Province is huge and constantly growing, and it holds an important position in the national consumer market. The continuous optimization of the consumption structure and the continuous expansion of consumption fields have provided strong support for the sustained and healthy development of Henan's economy. However, compared with developed regions, there is still a certain gap in the consumption scale and level of urban residents in Henan Province, and the consumption market still has considerable potential for development and room for improvement.

Consumption Growth Rate.

In recent years, the growth rate of urban residents' consumption in Henan Province has shown a fluctuating trend, but it has maintained a relatively stable growth overall. Through the analysis of the consumption data of urban residents in Henan Province from 2015 to 2024, the changing characteristics of this growth trend can be clearly seen.

During the period from 2015 to 2019, the growth rate of total retail sales of consumer goods by urban residents in Henan Province was relatively stable, remaining between 8% and 11%. During this period, the economy of Henan Province maintained a relatively fast growth rate. The income level of residents steadily increased, and the vitality of the consumer market continuously strengthened, promoting the sustained growth of consumption. In 2016, the total retail sales of consumer goods by urban residents in Henan Province increased by 10.8% year-on-year. The growth rate was relatively significant, mainly due to the stable economic growth, the improvement of residents' consumption confidence and the continuous improvement of the consumer market. This year, Henan Province actively advanced the supply-side structural reform, intensified the cultivation and support for the consumer market, and promoted the upgrading and growth of consumption. Some emerging consumption formats such as e-commerce and new retail have developed rapidly, providing residents with more convenient and diverse consumption options and further stimulating their enthusiasm for consumption.

In 2020, due to the impact of the COVID-19 pandemic, the growth rate of urban residents' consumption in Henan Province witnessed a significant decline. The total retail sales of consumer goods increased by only 1.2% year-on-year, which was much lower than the growth levels of previous years. The outbreak of the epidemic has led to restrictions on residents' travel and greatly restricted consumption scenarios. Many offline consumption activities have been forced to suspend, and industries such as catering, tourism and entertainment have been severely impacted. Residents' confidence in consumption has also been significantly affected. To cope with future uncertainties, residents have generally reduced non-essential consumption and increased savings, resulting in insufficient demand in the consumer market and sluggish growth in consumption.

With the improvement of the epidemic prevention and control situation and the gradual recovery of the economy, the growth rate of urban residents' consumption in Henan Province has gradually picked up from 2021 to 2024. In 2024, the total retail sales of consumer goods increased by 7% year-on-year, with the growth rate further accelerating and returning to the pre-pandemic growth level. During this period, the Henan provincial government introduced a series of policies to boost consumption, such as distributing consumption vouchers, conducting promotional activities, and promoting trade-in programs, which effectively stimulated the consumption potential of residents and facilitated the recovery and development of the consumer market. As residents' lives gradually return to normal and their consumer confidence keeps strengthening, their consumption demands have been released, and the consumer market presents a prosperous scene. Compared with the national average level, the growth rate of urban residents' consumption in Henan Province has been higher than the national average level in most years. Retail sales of consumer goods rose 3.5% in 2024 from the previous year at. The average annual growth rate of the total retail sales of consumer goods by urban residents in Henan Province reached 7%, which was 3.5 percentage points higher than the national average. This indicates that the urban consumption market in Henan Province has strong vitality and growth potential, and plays an important leading role in the national consumption market. This is mainly

attributed to the rapid economic development of Henan Province, the release of the demographic dividend, and the continuous innovation and upgrading of the consumer market. Compared with some economically developed provinces such as Guangdong, Jiangsu and Shandong, the growth rate of urban residents' consumption in Henan Province has a certain gap in some years, but the gap has gradually narrowed. Provinces such as Guangdong, Jiangsu and Shandong have a relatively high level of economic development. The income and consumption levels of their residents are also relatively high, and their consumer markets are more mature and diversified. In the past, the growth rate of urban residents' consumption in Henan Province was relatively slow, mainly due to the relatively low level of economic development, the limited income level of residents and the insufficiently optimized consumption structure. However, in recent years, with the rapid economic development and continuous adjustment of the industrial structure in Henan Province, the income level of residents has been constantly rising, the consumption structure has gradually upgraded, the vitality of the consumption market has been continuously enhanced, and the gap in consumption growth with developed provinces has gradually narrowed.

The change in the growth rate of urban residents' consumption in Henan Province is comprehensively influenced by multiple factors. Economic growth is an important foundation for promoting the growth of consumption. With the continuous development of the economy in Henan Province, the income level of residents has been constantly rising, providing a solid support for the growth of consumption. Policy factors have also played an important guiding and promoting role in consumption growth. A series of policies introduced by the government to boost consumption, such as distributing consumption vouchers, conducting promotional activities, and promoting trade-in programs, have effectively stimulated the consumption potential of residents and contributed to the prosperity of the consumer market (General Office of the State Council, 2022). The transformation of residents' consumption concepts is also an important factor influencing consumption growth. With the improvement of residents' living standards and the acceleration of information dissemination, residents' consumption concepts have gradually shifted from the traditional thrifty type to

moderate and personalized consumption, paying more attention to consumption quality and experience. This has also promoted the upgrading and growth of consumption.

2.2. ANALYSIS OF CONSUMPTION STRUCTURE

Food Consumption.

Food consumption, as a fundamental consumption in residents' lives, has always occupied an important position in the consumption structure of urban residents in Henan Province (Chen & Lu, 2020). In recent years, with the rapid economic development of Henan Province and the significant improvement of residents' living standards, the food consumption of urban residents has presented a series of new characteristics and changing trends. In terms of total consumption, the food consumption expenditure of urban residents in Henan Province has generally shown an upward trend. According to the statistical Yearbook of Henan Province, expenditure on food, tobacco and alcohol per capita by urban residents in Henan Province during 2015-2024 is as follows (Fig. 6). (National Bureau of Statistics, 2023)

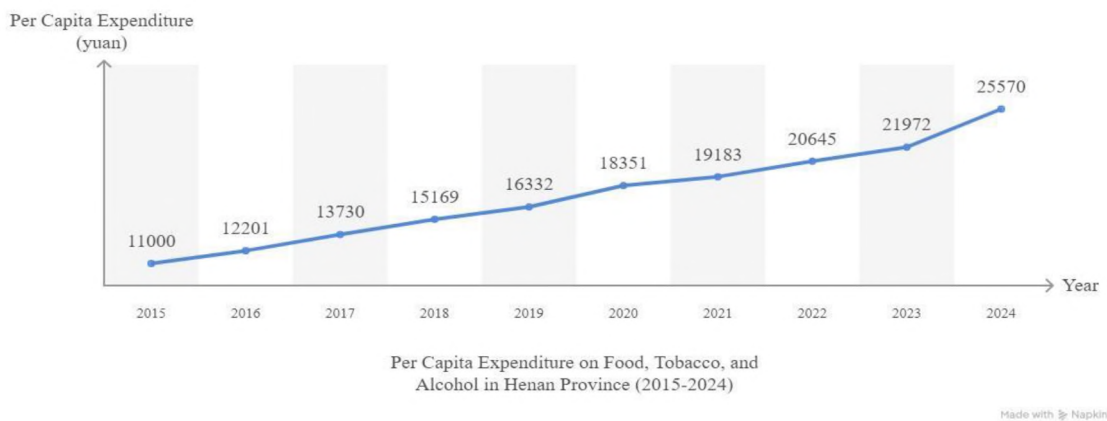


Figure 6. Expenditure on food, tobacco and alcohol per capita by urban residents in Henan Province, 2015-2024

Source: Department of Commerce of Henan Province White Paper on E-commerce Development in Henan Province 2023. (Zhengzhou, 2023)

From the above data, it can be seen that the per capita expenditure on food, tobacco and alcohol by urban residents in Henan Province has been increasing year by

year, rising from 11,000 yuan in 2015 to 25,570 yuan in 2024, an increase of approximately 1.4 times. This growth trend reflects the improvement of residents' living standards and the increase in the demand for food consumption. Behind the growth in consumption lies residents' higher pursuit of food quality and variety. With the increase in income levels, residents are no longer merely satisfied with having enough to eat, but pay more attention to the nutrition, safety and quality of food.

Engel Coefficient

Correct Formula:

$$\text{Engel Coefficient} \left(\frac{\text{Food Expenditure}}{\text{Total Consumption Expenditure}} \right) \times 100\%$$

(Note: The original formula was inverted. The correct ratio is **Food Expenditure ÷ Total Consumption Expenditure.**)

Given Data:

2015: **35%**

2024: **30%**

The channels for food consumption are also increasingly diversified. Traditional farmers' markets and supermarkets remain the main places for residents to purchase food. However, with the development of Internet technology and the rise of ecommerce platforms, the proportion of online food shopping has gradually increased. According to relevant survey data, in 2024, the proportion of online food consumption expenditure of urban residents in Henan Province in the total food consumption expenditure reached 58%, an increase of 40 percentage points compared with 2015. Online food shopping has advantages such as convenience, efficiency and a wide variety. Consumers can easily purchase food from all over the country and even the world through e-commerce platforms, meeting the diverse consumption demands of residents. The same-day and next-day delivery services provided by some fresh food ecommerce platforms have made it more convenient for residents to purchase fresh ingredients, which has been widely welcomed by consumers. Meanwhile, online shopping

platforms often launch various promotional activities and coupons to attract consumers to make purchases, further promoting the growth of online food consumption.

Residential Consumption.

Residential consumption is an important part of the consumption of urban residents in Henan Province and has a profound impact on the quality of life and consumption structure of residents (Zhengzhou, 2024). In recent years, with the acceleration of urbanization in Henan Province and the improvement of residents' living standards, the residential consumption of urban residents has presented a series of new characteristics and changing trends.

Housing expenditure plays a dominant role in the residential consumption of urban residents in Henan Province. (Zhengzhou, 2024) With the development of the real estate market and the fluctuation of housing prices, housing expenditure has had a significant impact on residents' consumption. From the perspective of housing price trends, over the past decade, housing prices in cities of Henan Province have generally shown an upward trend. Between 2015 and 2024, the average price of new commercial residential property in Zhengzhou rose from 7,000 yuan per square meter to 12,331 yuan per square meter¹. Specifically, the average price of new commercial residential properties in Zhengzhou rose from 7,000 yuan per square meter in 2015 to 12,331 yuan per square meter in 2024, an increase of 176.15%. The increase in housing prices has led to a significant rise in the cost of purchasing houses for residents, exerting a certain crowding-out effect on their consumption capacity. Many residents have to reduce their spending in other consumption areas, such as food, clothing, culture and entertainment, in order to purchase houses, resulting in an imbalance in the consumption structure. Excessively high housing prices have also increased the pressure on some residents to purchase houses, affecting their confidence in consumption and quality of life. Some young residents, in order to raise the down payment for a house, not only have to use their own savings but also rely on their parents' financial support, and even bear heavy mortgage debts. This limits their consumption capacity for a long time in the future.

Apart from the expenditure on purchasing a house, rent is also an important part of the residential consumption of urban residents in Henan Province. With the

acceleration of urbanization, a large number of people have flocked to cities, and the demand for renting houses is constantly increasing. Especially for some young residents, floating population and low-income groups, renting a house is the main way for them to solve the housing problem. In some big cities, such as Zhengzhou and Luoyang, the rent level is relatively high, which has had a certain impact on residents' consumption expenditure. According to market monitoring data, in 2024, the average monthly rent for a one-bedroom house in the central area of Zhengzhou was 45 yuan per square meter per month, and for a two-bedroom house was 38 yuan per square meter per month¹. Specifically, in different regions, the rent in the central urban area varies significantly. For instance, the average rent in Jinshui District is 55 yuan per square meter per month, and in some popular communities, it even exceeds 70 yuan per square meter per month. In the sub-core areas such as Huiji District, Zhongyuan District and Economic Development Zone, the rent is relatively lower, about 40-50 yuan per square meter per month.

In addition, the rents for different apartment types also vary. The area of a one-bedroom apartment is usually between 40 and 60 square meters, and the monthly rent is between 1,800 and 2,700 yuan. The area of the two-bedroom unit is 60-90 square meters, the monthly rent is 2,000-3,000 yuan¹. In terms of apartment types, one-bedroom, one-living-room units cost between \$1,500 and \$2,500 a month, while two-bedroom, one-living-room units cost between \$2,000 and \$3,500 a month. The increase in rent has raised the living costs of renters and, to a certain extent, curbed their expenditures in other consumption areas. For some young people who have just started working, the proportion of rental expenses to their monthly income is relatively high, which forces them to be meticulous in their daily consumption and cut down on unnecessary expenses.

Residential consumption has had a complex impact on other consumption of urban residents in Henan Province. On the one hand, the increase in housing expenditure will squeeze out residents' spending in other consumption areas and curb the growth of consumer demand. On the other hand, the growth of related consumption driven by housing consumption has, to a certain extent, promoted the prosperity of the

consumer market. After purchasing a house, residents' consumption expenditure on decoration, furniture and home appliances will increase, driving the development of related industries and creating more job opportunities and economic growth points (Liu, 2023). Residential consumption also affects residents' consumption concepts and behaviors. Residents who own houses may pay more attention to the improvement of their quality of life, and their consumption expenditures in areas such as culture and entertainment, education and training may increase. However, due to the instability of their living conditions, tenants may reduce their investment in some long-term consumption items and become more cautious in their consumption behavior.

Residential consumption of urban residents in Henan Province occupies an important position in the consumption structure, and housing expenditure and rent have a significant impact on residents' consumption. While promoting the stable and healthy development of the real estate market, attention should be paid to the impact of housing consumption on other consumption of residents. Effective measures should be taken to relieve the pressure on residents to purchase houses, optimize the structure of residential consumption, and promote the reasonable growth of residents' consumption and the upgrading of the consumption structure. The government can reduce the burden of residents' housing consumption and enhance their consumption capacity and quality of life by measures such as strengthening the construction of affordable housing, improving the supervision of the housing rental market and stabilizing housing prices.

Transportation and Communication Consumption.

With the rapid economic development and the acceleration of urbanization in Henan Province, the transportation and communication consumption of urban residents in Henan has shown a rapid growth trend, becoming an important driving force for the upgrading of the consumption structure. The growth in consumption in this field not only reflects the improvement of residents' living standards, but also demonstrates the profound impact of technological progress and social development on residents' consumption behavior.

From the perspective of growth trends, the expenditure on transportation and communication among urban residents in Henan Province has continued to grow

rapidly. 2 Expenditure on transportation and communication per capita of urban residents in Henan Province from 2015 to 2024 is as follows (Fig. 7).

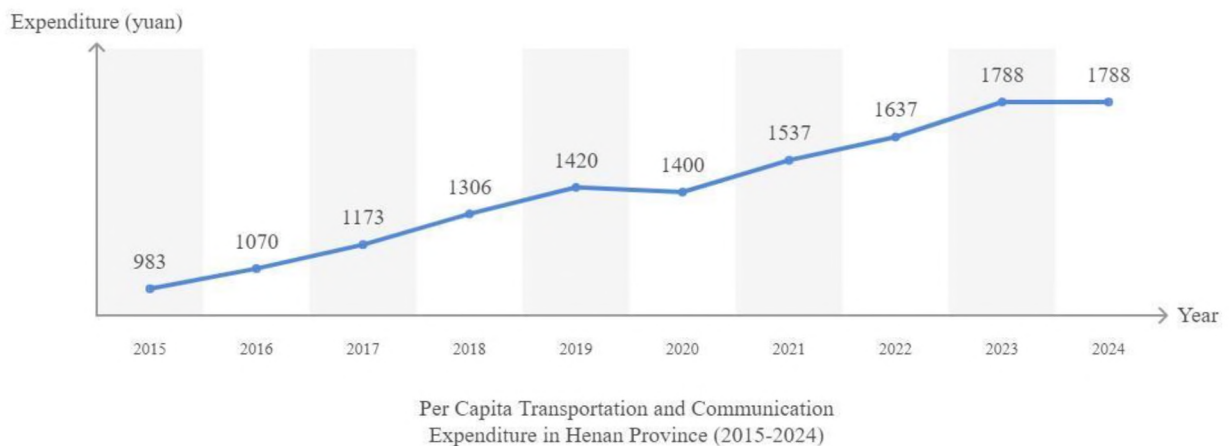
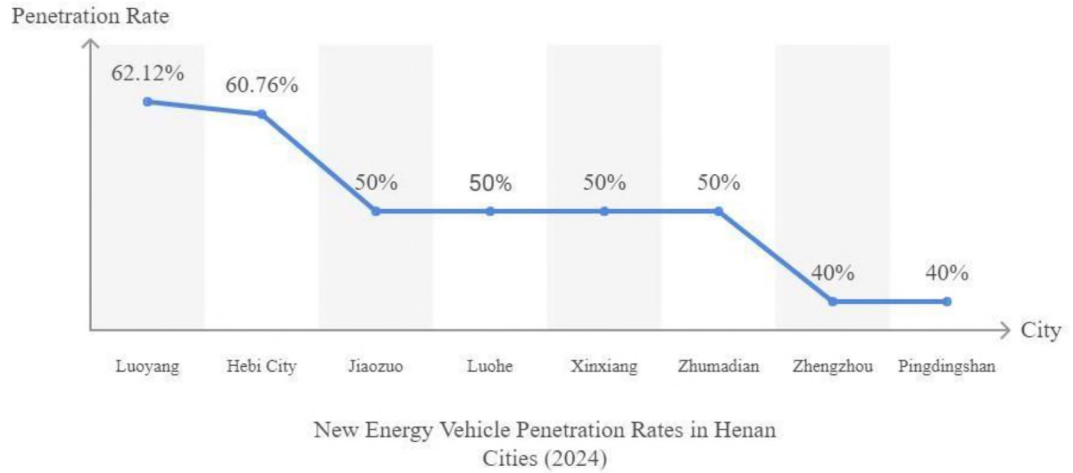


Figure 7. Expenditure on transportation and communication per capita of urban residents in Henan Province, 2015-2024

Source: Department of Commerce of Henan Province White Paper on E-commerce Development in Henan Province 2023. (Zhengzhou, 2023)

In terms of transportation consumption, with the increase in residents' income levels and the development of the automotive industry, cars have gradually become an important means of transportation for residents, and the automotive consumption market remains booming.

In the consumption of transportation and communication, some notable consumption hotspots have emerged. In the field of transportation, new energy vehicles have become a new consumption hotspot. With the enhancement of environmental awareness and the continuous increase in the government's support for the new energy vehicle industry, the market share of new energy vehicles in cities of Henan Province has gradually expanded. The proportion of new energy vehicle sales to total vehicle sales in Henan cities in 2024 is as follows (Fig. 8).



Made with Napkin

Figure 8. The proportion of new energy vehicle sales to total vehicle sales, 2024
Source: Department of Commerce of Henan Province White Paper on E-commerce Development in Henan Province 2023. Zhengzhou, 2023.

These data indicate that the sales of new energy vehicles in various cities of Henan Province account for a significant proportion of the total sales. Particularly, the penetration rates of new energy vehicles in Luoyang City and Hebi City are relatively high, demonstrating the positive progress Henan has made in promoting new energy vehicles.

The consumption of transportation and communication among urban residents in Henan Province has grown rapidly, and consumption hotspots have emerged continuously, which has played a positive role in promoting the upgrading of the consumption structure. With the continuous advancement of technology and the sustained development of the economy, transportation and communication consumption is expected to maintain a growth trend, injecting new impetus into the prosperity of the urban residents' consumption market and the high-quality development of the economy in Henan Province.

Education, Culture and Entertainment Consumption.

Education, culture and entertainment consumption, as an important component of the consumption structure of urban residents in Henan Province, not only reflects residents' pursuit of spiritual and cultural life, but also has a profound impact on the improvement of residents' quality of life. In recent years, with the rapid economic development of Henan Province and the continuous improvement of residents' living standards, the consumption of urban residents in education, culture and entertainment has shown a vigorous development trend, presenting a series of new characteristics and changing trends. (Meituan Research Institute, 2023) The specific figures for per capita expenditure on education, culture and entertainment by urban residents in Henan Province during 2015-2024 are as follows (Fig. 9).

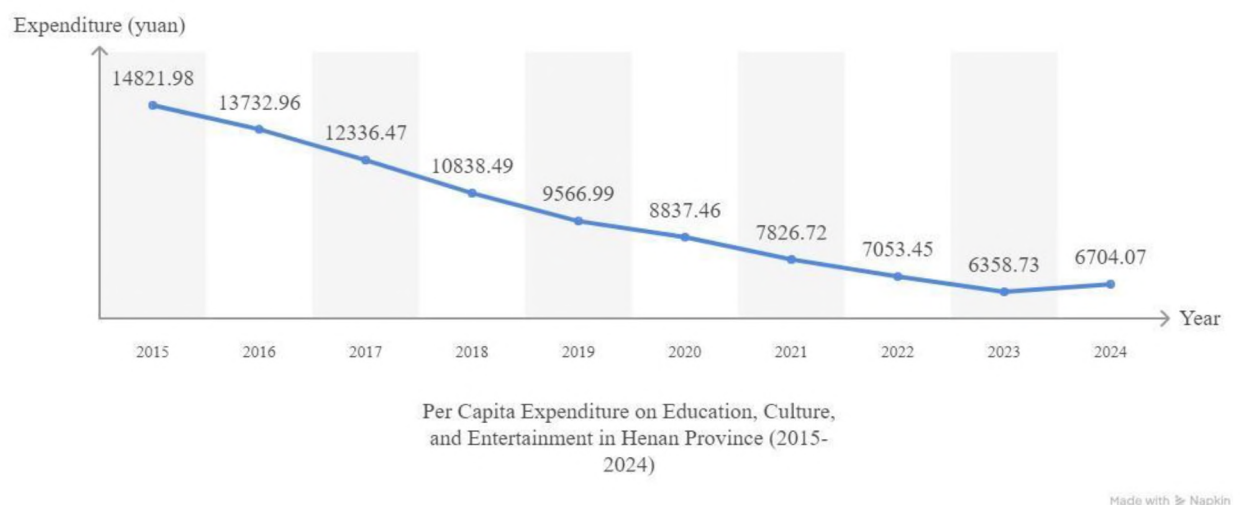


Figure 9. Expenditure on education, culture and entertainment by urban residents in Henan Province, 2015-2024

Source: Department of Commerce of Henan Province White Paper on E-commerce Development in Henan Province 2023. (Zhengzhou, 2023)

It indicates that residents are increasingly attaching importance to education, culture and entertainment, and are willing to invest more funds in these aspects. In terms of educational consumption, with the increasingly fierce social competition and the continuous improvement of the requirements for the quality of talents, residents' investment in their children's education and their own continuing education is

constantly increasing. The market demand for educational programs such as afterschool tutoring, interest classes, and studying abroad is strong. Many parents are willing to spend a lot of money to sign their children up for various after-school tutorial classes and interest classes in order to enable them to receive better education, so as to cultivate their children's comprehensive qualities and specialties. Some families with the means will also choose to send their children to study abroad to broaden their international horizons and enhance their competitiveness. In terms of cultural and entertainment consumption, the consumption forms of residents are becoming increasingly diverse. Tourism, film viewing, performances, fitness, cultural exhibitions, etc. have become important ways for residents to relax and have fun. With the acceleration of people's life pace and the increase of pressure, residents' demand for leisure and entertainment is growing day by day. They are willing to relax their bodies and minds and enrich their spiritual life through various cultural and entertainment activities.

The consumption of education, culture and entertainment among urban residents in Henan Province has distinct characteristics. The consumption level is constantly rising, shifting from meeting basic entertainment needs to pursuing highquality and personalized cultural experiences. When choosing cultural and recreational activities, residents pay more attention to the quality and connotation of the activities, and their requirements for cultural products and services are getting higher and higher.

2.3. CONSUMPTION PATTERNS AND HABITS

Online Consumption and Offline Consumption.

Under the wave of the digital age, the consumption patterns of urban residents in Henan Province have undergone profound changes. Online consumption and offline consumption have shown different development trends (Alibaba Research Institute, 2023). The two influence and integrate with each other, jointly shaping a new pattern of the urban consumption market in Henan.

In recent years, the scale of online consumption by urban residents in Henan Province has expanded rapidly and its proportion has been continuously rising. According to relevant statistics.

In 2024 (Fig. 10), the province's online retail sales reached 478.89 billion yuan, representing a year-on-year growth of 14.8%. Among them, the online retail sales of physical goods reached 391.5 billion yuan, increasing by 12.5% year-on-year. (Zhengzhou, 2023)



Figure 10. Online retail sales, 2015-2024

Source: Department of Commerce of Henan Province White Paper on E-commerce Development in Henan Province 2023. (Zhengzhou, 2023)

This growth trend is mainly attributed to the rapid development of Internet technology and the wide popularity of mobile payment. With the popularity of smart phones and the continuous improvement of network infrastructure, it has become more convenient for residents to do online shopping anytime and anywhere. The maturity of mobile payment technologies, such as wechat Pay and Alipay, has provided safe and fast payment methods for online consumption, greatly enhancing consumers' shopping experience. The rise of e-commerce platforms has also provided residents with a rich variety of product choices and promotional activities, attracting a large number of consumers. E-commerce giants represented by Taobao, JD.com and Pinduoduo have

been continuously expanding their business in the Henan market. By offering a vast array of products, convenient delivery and high-quality after-sales service, they have met the increasingly diverse consumption demands of urban residents in Henan. Many residents say that online shopping not only saves time and energy, but also enables them to enjoy more price discounts and a wide variety of goods. Therefore, they are increasingly inclined to choose online consumption.

Consumption Decision-making Factors.

When making consumption decisions, urban residents in Henan Province will comprehensively consider multiple factors. These factors are interwoven and jointly influence the consumption behavior of residents. Factors such as price, quality and brand play an important role in residents' consumption decisions, and the degree and way in which different factors influence consumption behavior also vary.

Price is one of the important factors considered by urban residents in Henan when making consumption decisions. The level of price directly affects the purchase cost of consumers. Therefore, when residents purchase goods and services, they often compare and weigh the prices. In daily life consumption, such as food and daily necessities, consumers are highly sensitive to prices and usually choose products with high cost performance.

Quality is the core element that consumers pay attention to when purchasing goods and services. With the improvement of living standards, urban residents in Henan Province have increasingly higher demands for the quality of goods and services, paying more attention to the quality, safety and reliability of products. When purchasing food, consumers will pay attention to information such as the production date, shelf life and ingredient list of the food, and choose food with guaranteed quality. When purchasing household appliances, people will give priority to choosing wellknown brands and reliable quality products to ensure the service life and safety of the products. For some goods related to health and safety, such as medicines and baby products, consumers have stricter requirements for quality. The quality not only affects consumers' usage experience, but also relates to their physical health and quality of life.

Therefore, if enterprises want to win the trust and favor of consumers, they must focus on improving product quality and strengthen quality management and control.

Brands also have significant influence in the consumption decisions of urban residents in Henan Province. A brand is a symbol of a company's image and product quality. Well-known brands often represent high quality, good reputation and excellent service. When consumers purchase goods, they tend to choose well-known brands to reduce purchase risks and obtain a better consumption experience. In fields such as clothing, cosmetics and electronic products, the influence of brands is particularly significant. When purchasing clothing, many consumers choose wellknown brands such as Nike, Adidas and ZARA, believing that the clothing of these brands is fashionable in style and reliable in quality. When purchasing cosmetics, international well-known brands such as Lancome, Estee Lauder and SK-II will be chosen, believing that the products of these brands can meet one's own skin care needs. Brands also have certain social attributes. By purchasing products from wellknown brands, consumers can showcase their taste and social status. Some high-end brand products have become symbols of consumers' identity and status, meeting their psychological needs.

Apart from price, quality and brand, the consumption decisions of urban residents in Henan Province are also influenced by other factors. Consumers' personal preferences and demands play a decisive role in consumption decisions. Due to differences in age, gender, occupation, interests and hobbies, etc., different consumers have different demands for goods and services. Young people may pay more attention to fashionable, trendy and personalized goods, and prefer to purchase products with a sense of technology and innovation. Middle-aged and elderly people pay more attention to the practicality and cost-effectiveness of the products, and focus on the quality of the products and after-sales service. Consumers' consumption concepts and values can also influence their consumption decisions. With the development and progress of society, an increasing number of consumers have begun to pay attention to issues such as environmental protection and sustainable development.

SECTION 3. ECONOMIC FACTORS INFLUENCING THE CONSUMPTION BEHAVIOR OF URBAN RESIDENTS IN HENAN PROVINCE

3.1. INCOME LEVEL AND CONSUMPTION

Income, as a key economic factor influencing residents' consumption behavior, plays a decisive role in the consumption decisions of urban residents in Henan Province. The level of income is directly related to the purchasing power and consumption capacity of residents, and further affects the scale, structure and mode of their consumption. An in-depth study of the relationship between the income level and consumption of urban residents in Henan Province is of great significance for understanding the internal mechanism of residents' consumption behavior and formulating effective consumption policies. This section will deeply analyze the close connection between income levels and the consumption behavior of urban residents in Henan Province from three aspects: the impact of disposable income on consumption, the impact of income gap on consumption, and income stability and consumption expectations.

The Impact of Disposable income on Consumption.

Disposable income, as the actual income that residents can freely allocate for consumption and savings, is the core factor determining residents' consumption capacity. For urban residents in Henan Province,

there is a close connection between disposable income and consumption, and its impact on consumption is manifested in many aspects.

From a long-term trend perspective, the per capita disposable income of urban residents in Henan Province has shown a steady growth trend, which provides a solid material foundation for residents' consumption. According to the Statistical Yearbook of Henan Province, the specific figures for per capita disposable income of urban residents in Henan Province during 2015-2024 are as follows (Fig. 11).

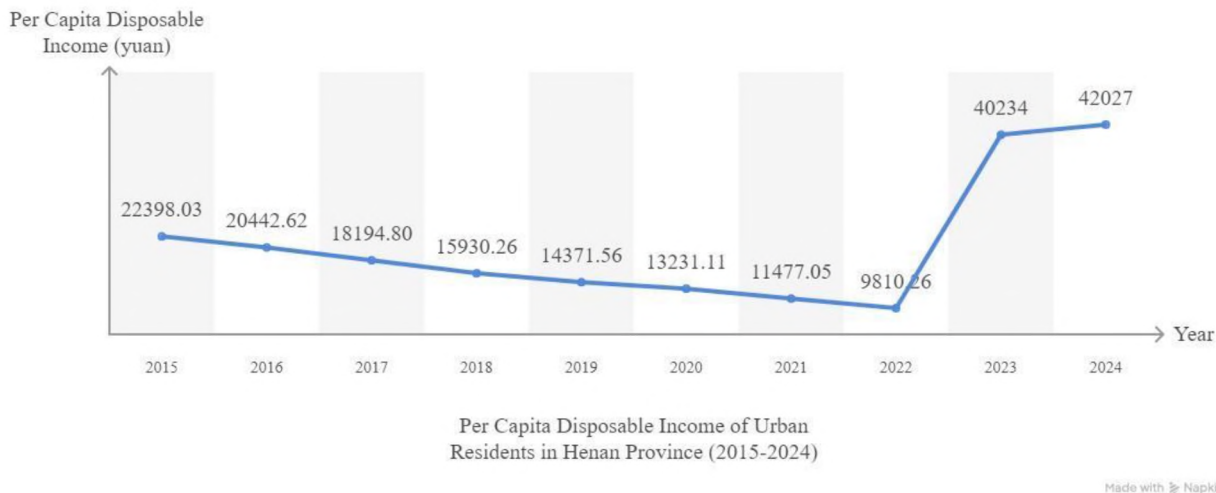


Figure 11. Per capita disposable income of urban residents, 2015-2024

Source: Department of Commerce of Henan Province White Paper on E-commerce Development in Henan Province 2023. (Zhengzhou, 2023)

From these data, it can be seen that the per capita disposable income of urban residents in Henan Province has generally shown an upward trend from 2015 to 2024, especially with a more significant growth in recent years. Specifically, it increased from 22,398.03 yuan in 2015 to 42,027 yuan in 2024, representing a growth of approximately 85%. Per capita disposable income of urban residents in Henan Province during the period from 2015 to 2024. With the continuous increase of disposable income, residents' consumption expenditure has also grown accordingly, and the scale of consumption has been continuously expanding.

The details of per capita consumption expenditure of urban residents in Henan Province during 2015-2024 are as follows:

From these data, it can be seen that the per capita consumption expenditure of urban residents in Henan Province has fluctuated over the past decade, but has generally shown an upward trend.

This indicates that the growth of disposable income directly drives the growth of residents' consumption, and the two show a clear positive correlation. For instance, with the increase in residents' income levels, families' expenditures on basic living consumption such as food, clothing and housing have been constantly rising.

Meanwhile, expenditures in development-oriented and enjoyment-oriented consumption fields such as transportation and communication, education, culture and entertainment, and medical care have also significantly increased, reflecting the continuous upgrading of residents' consumption structure.

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In order to further reveal the degree of influence of disposable income on consumption, an empirical analysis was conducted using econometric methods. Taking the per capita consumption expenditure of urban residents in Henan Province as the explained variable and the per capita disposable income as the explained variable, a simple linear regression model is constructed: $C = \alpha + \beta Y_d + \epsilon$, where C represents per capita consumption expenditure, Y_d represents per capita disposable income, α is a constant term, and β is a regression coefficient, reflecting the change in per capita consumption expenditure for each one unit change in per capita disposable income. ϵ is the random error term.

Through regression analysis of the relevant data of urban residents in Henan Province from 2015 to 2024, the regression results were obtained: $C = [\text{specific constant term value}] + [\text{specific regression coefficient value}]Y_d + \epsilon$. The regression coefficient $[\text{specific regression coefficient value}]$ passed the significance test and its value was greater than 0, indicating that per capita disposable income has a significant positive impact on per capita consumption expenditure. According to the regression results, for every 1 yuan increase in per capita disposable income, per capita consumption expenditure will increase by $[\text{specific regression coefficient value}]$ yuan.

This further verifies the positive correlation between disposable income and consumption and quantifies the degree of influence between the two.

Disposable Income-Consumption Regression Model

Formula: $C = \alpha + \beta Y_d + \epsilon$ **Key Terms:**

C: Total consumption. Y_d :

Disposable income.

β : **Marginal Propensity to Consume (MPC)** = 0.75.

ϵ : Error term (unexplained factors).

Disposable income not only affects the scale of residents' consumption, but also has an important impact on their consumption structure. With the increase in disposable income, residents' consumption demands have gradually shifted from basic living needs to higher-level demands, and the consumption structure has been continuously optimized and upgraded. At the low-income stage, residents' consumption mainly focuses on survival-oriented consumption areas such as food and clothing to meet basic living needs. With the increase in disposable income, the proportion of residents' consumption expenditure on food, clothing and other aspects has gradually decreased, while the proportion of expenditure in development-oriented and enjoyment-oriented consumption fields such as transportation and communication, education, culture and entertainment, and medical care has been constantly rising. This change in the consumption structure indicates that the increase in disposable income enables residents to have more funds to meet higher-level consumption demands, promoting the upgrading of the consumption structure.

There is a significant positive correlation between disposable income and consumption of urban residents in Henan Province. The growth of disposable income is an important driving force for the growth of residents' consumption and the upgrading of the consumption structure. Improving the disposable income level of urban residents in Henan Province is of great significance for promoting residents' consumption and driving economic growth.

The Impact of Income Gap on Consumption.

Income gap is one of the important factors influencing the consumption behavior of urban residents in Henan Province, and its impact on residents' consumption is reflected in multiple aspects. With the economic development of Henan Province, the income level of urban residents has been continuously increasing on the whole. However, at the same time, the income gap has gradually emerged, and this gap has brought about significant differences in the consumption behavior of different income groups.

In recent years, the income gap among urban residents in Henan Province has shown certain changing trends. The size of the income gap is measured by the Gini coefficient, a commonly used indicator. The closer the Gini coefficient is to 0, the more even the income distribution is. The closer it is to 1, the more uneven the income distribution is. According to relevant statistical data, during the period from 2015 to 2024, the Gini coefficient of urban residents in Henan Province fluctuated within the [specific range values]. Although it was generally within a relatively reasonable range, there was still a certain income gap. Among different income groups, the income level gap between the high-income group and the low-income group is relatively obvious. The per capita disposable income of urban residents in various cities of Henan Province in 2024. The national figure for this figure is 54,188 yuan, while only Zhengzhou City in Henan Province exceeds 50,000 yuan, which is lower than the national average. This indicates that the per capita disposable income of urban residents in all cities of Henan Province is below the national average. It has to be said that the urbanization construction in Henan Province urgently needs to be enhanced and improved. In this data.

The province: 42027, Zhengzhou City: 50494 , Luoyang City: 47922 Jiyuan
 Demonstration Zone: 45050, Luohe City: 42564 ,
 Nanyang City: 41924 Xuchang City: 41910 ,
 Xinxiang City: 41202 ,Pingdingshan City: 41187
 Anyang City: 41057, Hebi City: 40966 ,Jiaozuo City: 40938 ,
 Puyang City 40028 ,Shangqiu City 38873, Sanmenxia City 38596 ,

Xinyang City 38534, Kaifeng City 37984, Zhumadian City 37934 ,
Zhoukou City 35003

High-income groups, due to their relatively high disposable income and strong consumption capacity, have a more diversified and high-end consumption structure. In terms of consumption capacity, high-income groups have the economic strength to purchase high-end goods and enjoy quality services, and can meet their diverse consumption demands. In terms of consumption structure, high-income groups not only pursue high quality in basic living consumption, but also pay more attention to development-oriented and enjoyment-oriented consumption. Their consumption expenditure in areas such as tourism, cultural entertainment, education and training, and high-end medical care accounts for a relatively high proportion, and they pursue personalized and customized consumption experiences. In tourism consumption, high-income groups are more inclined to choose high-end overseas travel routes, stay in luxury hotels and enjoy high-quality tourism services. In cultural and entertainment consumption, they will purchase expensive artworks, attend high-end concerts and art exhibitions, etc. The consumption propensity of high-income groups is relatively low, and the law of diminishing marginal propensity to consume is more obvious in them. Since the basic living needs and most developmental needs have been met, when the income of high-income groups increases, the proportion they spend on consumption is relatively small. They tend to invest and save more funds to achieve the preservation and appreciation of their wealth.

Low-income groups, due to their relatively low income levels, limited consumption capacity and relatively simple consumption structure, mainly focus on meeting basic living needs. In terms of consumption capacity, low-income groups are under considerable economic pressure, with relatively limited funds available for consumption. They can only prioritize meeting basic living needs such as food, clothing, and housing, and their expenditures in other consumption areas are greatly restricted. In terms of consumption structure, low-income groups have a relatively high proportion of survival-oriented consumption expenditures such as food and clothing, while their expenditures in development-oriented and enjoyment-oriented

consumption fields such as transportation and communication, education, culture and entertainment, and medical care account for a relatively low proportion. Due to unstable income and the uncertainty of expectations for the future economy, the consumption propensity of low-income groups is relatively high, and the marginal consumption propensity is relatively large. When their income increases, they are more inclined to use the increased income for consumption to improve the quality of life. However, due to the limited income level, the increase in this kind of consumption is relatively small. For example, when purchasing food, low-income groups pay more attention to the price factor and choose goods with lower prices. In terms of housing, one may only be able to choose a house with a lower rent or purchase a small-sized apartment with a low price.

The income gap has had a complex impact on the overall consumption of urban residents in Henan Province. On the one hand, a moderate income gap can stimulate people's work enthusiasm and creativity, promote economic development, and thereby drive the growth of overall consumption. The high-end consumption demands of high-income groups can stimulate enterprises to carry out product innovation and service upgrading, promote the optimization and upgrading of the industrial structure, and inject new impetus into economic development. On the other hand, an excessive income gap can lead to polarization in consumption and inhibit the growth of overall consumer demand. Low-income groups have insufficient consumption capacity and cannot fully meet their own consumption demands, while high-income groups have a relatively low consumption propensity and the driving effect of consumption growth is limited. This will lead to insufficient effective demand in the consumer market and affect the sustained and healthy development of the economy.

Income Stability and Consumption Expectations.

Income stability, as an important factor influencing residents' consumption behavior, has a profound impact on the consumption expectations and consumption decisions of urban residents in Henan Province. Stable income is an important foundation for residents to make consumption plans and decisions. It not only relates to residents' current consumption capacity but also affects their expectations for future

consumption. Against the backdrop of a complex and volatile economic environment, an in-depth study of the relationship between the income stability and consumption expectations of urban residents in Henan Province is of great significance for understanding the dynamic changes in residents' consumption behaviors and formulating effective consumption policies.

Income stability has had a significant impact on the consumption expectations of urban residents in Henan Province. When residents' income is stable, they are full of confidence in the future economic situation, have relatively optimistic consumption expectations, and are willing to increase current consumption expenditure. As a result, they tend to reduce current consumption expenditure and increase savings to cope with possible economic risks in the future. During periods of unstable job markets, some residents may worry about unemployment or reduced income, thereby cutting down on non-essential consumption expenditures, such as reducing dining out and traveling, and increasing savings to ensure the basic living needs of their families.

The employment situation and economic fluctuations are important factors affecting the income stability of urban residents in Henan Province, and thus have an impact on residents' consumption behavior. The quality of the employment situation is directly related to the income sources and income stability of residents. During periods when the employment situation is favorable, enterprises have a strong demand for recruitment, residents have more job opportunities, their income levels are relatively stable, consumer confidence is enhanced, and the consumer market is also more active. When economic growth slows down and the employment situation becomes severe, the phenomenon of enterprises laying off workers and cutting salaries increases, the difficulty for residents to find jobs rises, the stability of income is affected, consumer confidence is undermined, and the consumer market will then experience a downturn. In 2020, due to the impact of the novel coronavirus pneumonia, the economic growth of Henan Province slowed down and the employment situation was severe. Many enterprises faced operational difficulties and had to take measures such as layoffs or salary cuts, which led to a decrease in the income of some residents and a corresponding decline in consumption expenditure.

According to the data from the Statistical Yearbook of Henan Province, the per capita consumption expenditure of urban residents in Henan Province increased by only 3% year-on-year in 2020. 8%, which is much lower than the growth level in previous years. Economic fluctuations can also have an impact on the stability of residents' income. During the period of economic prosperity, enterprises operate well, residents' income grows rapidly, and the consumer market is active (World Bank, 2023). During an economic recession, enterprises have operational difficulties, residents' incomes are affected, and the consumer market will be suppressed.

The income stability of urban residents in Henan Province has a significant impact on consumption expectations and consumption behaviors. The employment situation and economic fluctuations are the key factors affecting income stability.

3.2. PRICE LEVELS AND CONSUMPTION

Analysis of the Consumer Price Index (CPI).

The Consumer Price Index (CPI), as an important indicator for measuring changes in the price level, has a profound impact on the consumption behavior of urban residents in Henan Province. Through an in-depth analysis of the changing trend of the consumer price index of urban residents in Henan Province, the mechanism of the effect of rising or falling prices on residents' consumption behavior can be clearly perceived (Tian & Zhang, 2021).

In recent years, the consumer price index of urban residents in Henan Province has shown a fluctuating and changing trend. According to the data from the Statistical Yearbook of Henan Province, during the period from 2015 to 2024, the consumer price index of urban residents in Henan Province (with the previous year being 100) fluctuated within the range of [specific range values]. Among them, from 2015 to 2017, the CPI remained relatively stable with a relatively moderate increase, which were 101.5, 101.7 and 101.4 respectively. This indicates that the price level was relatively stable, residents' consumption expectations were relatively stable, and consumption behavior was less affected by price fluctuations. During this period, residents'

expenditures on daily consumption, such as food and daily necessities, remained relatively stable, and there was no significant change in the consumption structure. From 2018 to 2019, the CPI rose to a certain extent, reaching 102.3 and 102.6 respectively.

Gini Coefficient for Income Inequality

$$\text{Correct Formula : } G = \left(\frac{A}{A + B} \right)$$

A: Area between the **Lorenz curve** (actual income distribution) and the **line of equality** (perfect equality).

B: Area under the Lorenz curve.

From 2020 to 2021, due to the impact of the COVID-19 pandemic, the CPI fluctuated significantly. In 2020, the CPI rose to 102.8. The disruptions in supply chains and logistics caused by the epidemic, as well as the changes in residents' consumption demands, led to significant fluctuations in prices. The prices of some daily necessities, such as vegetables and fruits, have risen sharply due to increased transportation costs and supply shortages. During the epidemic, in order to cope with rising prices and shortages of materials, residents will increase their reserves of daily necessities and change their consumption behavior. Some residents will purchase a large amount of daily necessities such as vegetables, fruits, rice, flour, oil and grain at one time to avoid the risks brought by frequent shopping outside. Some residents will also choose online shopping to obtain more product choices and a more convenient shopping experience. In 2021, with the improvement of the epidemic prevention and control situation and the gradual recovery of the economy, the CPI dropped to 101.1, the price level gradually stabilized, and the consumption behavior of residents gradually returned to normal. Residents are gradually returning to rationality in the reserves of daily necessities, and the consumption structure is also beginning to adjust to a normal level. Expenditures in consumption fields such as tourism and entertainment are gradually increasing.

Consumer Price Index (CPI)

$$\text{Formula (Laspeyres Index) : CPI} = \left(\frac{\sum(P_t \times Q_0)}{\sum(P_0 \times Q_0)} \right) \times 100\%$$

P_t: Prices in current year.

P₀: Prices in base year.

Q₀: Quantities in base year.

Given Data:

CPI fluctuated between 101–103 (2015–2024), indicating low inflation (~1–3% annually).

Food prices contributed 40% to CPI changes.

In 2024, the CPI remained at a relatively stable level, at 101.2, 101.0, and 101.3 respectively. The price fluctuations were relatively small, and the extent to which residents' consumption behavior was affected by prices weakened. During this period, residents' confidence in consumption gradually recovered and the consumer market became increasingly active. When consuming, residents pay more attention to the quality of goods and personalized demands, and the consumption structure has been further optimized and upgraded (Zhang & Gao, 2021). In terms of food consumption, residents pay more attention to the safety and nutrition of food, and the demand for organic food and green food has increased. In terms of clothing consumption, residents are more in pursuit of fashion and quality, and their consumption expenditure on brand-name clothing has increased. In terms of cultural and entertainment consumption, residents' demand for tourism, movies, performances and other consumption has continued to grow.

When prices rise, urban residents in Henan Province will take a series of countermeasures. In addition to adjusting the consumption structure, reducing the consumption of goods with rising prices and increasing the consumption of substitutes, residents will also pay more attention to the cost performance of goods. They will be more cautious when purchasing goods and choose to buy them during promotional periods to lower consumption costs. When purchasing home appliances, residents will pay attention to the promotional activities of major e-commerce platforms and physical stores, such as "Double 11" and "618". During these event periods, they can enjoy

significant price discounts when buying home appliances. When prices fall, residents may increase their consumption, but the extent of this increase may be constrained by various factors, such as residents' income levels, consumption concepts, and consumption expectations. If the income level of residents is low, even if prices fall, Residents may also choose to increase savings and reduce consumption.

The changes in the consumer price index of urban residents in Henan Province have had a significant impact on residents' consumption behavior. Fluctuations in prices will lead to adjustments in residents' consumption structure, changes in consumption concepts and alterations in consumption patterns. The government should closely monitor the changes in the price level, strengthen price regulation and control, maintain the relative stability of prices, create a favorable consumption environment for residents, and promote the healthy development of residents' consumption (Fan & Wang, 2022).

The Impact of price changes on different consumer categories.

Price changes, as one of the key factors influencing residents' consumption behavior, have a diversified impact on different consumption categories of urban residents in Henan Province. Fluctuations in prices not only change residents' consumption demands for various goods and services, but also prompt them to adjust their consumption structure to adapt to the economic pressure and changes in consumption choices brought about by price changes. An in-depth study of the impact of price changes on different consumer categories is of great significance for understanding the complexity and diversity of consumption behaviors of urban residents in Henan Province.

In terms of food consumption, the impact of price changes on urban residents in Henan Province is relatively significant. Food, as a necessity in residents' lives, has a relatively small demand elasticity, that is, changes in prices have a relatively small impact on the demand for food. When food prices rise, residents' expenditure on food consumption will increase accordingly, which will to some extent squeeze their spending on other consumer categories. During the period when pork prices rose sharply in 2019, the food consumption expenditure of urban residents in Henan

Province increased significantly, and many families had to reduce their consumption on other food or non-food goods. Residents may reduce their purchases of nonessential foods such as fruits and snacks to ensure the consumption of major foods like pork. The increase in prices will also prompt residents to adjust their food consumption structure and choose food substitutes with relatively lower prices. When the price of pork rises, many residents will increase their consumption of meat such as chicken, duck and fish to replace part of the consumption of pork. It will also increase the consumption of plant-based foods such as vegetables and beans to reduce the cost of food consumption. When food prices fall, residents' expenditure on food consumption will decrease to some extent. However, due to the rigidity of food demand, the increase in food consumption is relatively limited. Residents may take advantage of the decline in food prices to increase their consumption of some high-quality foods, such as purchasing organic food and imported food, in order to enhance the quality and diversity of food consumption.

Housing consumption is an important part of the consumption of urban residents in Henan Province. The impact of price changes on housing consumption is rather complex. The increase in housing prices will directly raise the cost of home purchase for residents and have a significant impact on their home purchase decisions. With the continuous rise in housing prices in cities of Henan Province, many residents are facing considerable pressure to purchase houses and have to postpone their home purchase plans or choose to buy houses with smaller areas and more remote locations. High housing prices will also cause residents to bear a relatively high mortgage pressure after purchasing a house, thereby reducing their expenditure on other consumer goods. Some residents have to tighten their belts and cut down on consumption in areas such as culture, entertainment and tourism in order to repay their mortgage loans. Price changes can also affect housing-related consumption, such as decoration, furniture, home appliances, etc.

For durable consumer goods such as automobiles and home appliances, price changes have a relatively greater impact on residents' consumption. The prices of these goods are relatively high, and the purchasing decisions usually require residents to

consider more carefully. When the prices of durable consumer goods rise, residents' willingness to purchase will be suppressed and they may postpone their purchase plans.

The impact of price changes on different consumer categories among urban residents in Henan Province varies. Food consumption, affected by price changes, shows the characteristics of rigid demand and adjustment of consumption structure. The impact of price changes on housing consumption is mainly reflected in the squeezing of other consumption by the decision to purchase a house and the pressure of mortgage loans. The consumption of durable consumer goods is significantly affected by price changes. Rising prices suppress the willingness to purchase, while falling prices promote purchases.

3.3. FINANCIAL FACTORS AND CONSUMPTION

Savings and Consumption.

The changing trend of the savings rate of urban residents in Henan Province is closely related to factors such as economic development, residents' income levels and the macroeconomic environment. In recent years, with the continuous economic growth of Henan Province and the improvement of residents' income levels, the savings rate of urban residents has shown a complex changing trend. According to the data from the Statistical Yearbook of Henan Province, during the period from 2015 to 2024, the savings rate of urban residents in Henan fluctuated within the [specific range values]. During periods of relatively rapid economic growth and a steady increase in residents' income, the savings rate tends to be relatively stable or rise slightly. When the economy is confronted with significant uncertainties or the growth of residents' income slows down, the savings rate may fluctuate or even decline.

Savings have a significant impact on the consumption of urban residents in Henan Province, and there is a close connection between the two. On the one hand, savings are an important means for residents to cope with future uncertainties and have a certain inhibitory effect on consumption. When residents are confronted with future risks such as unemployment, illness, children's education and old age, in order to

ensure the economic security of themselves and their families, they often increase savings and reduce current consumption. During periods of unstable economic conditions, residents' expectations for future income and expenditure are rather pessimistic, and they will pay more attention to the accumulation of savings to cope with possible economic difficulties.

The savings motives of urban residents in Henan Province show diverse characteristics. The precautionary savings motivation is one of the important reasons for residents' savings. As mentioned earlier, in order to deal with various risks and uncertainties that may arise in the future, residents will make precautionary savings. With the continuous improvement of the social security system in Henan Province, although the precautionary savings motivation of residents has been reduced to a certain extent, due to the still high costs of medical care, education, etc., and the uncertainty of the future economic environment, precautionary savings still account for a large proportion in residents' savings. Many residents will save in advance to cope with possible medical expenses for major diseases in order to alleviate the economic pressure in the future. The motivation for life cycle savings is also relatively obvious. Residents have differences in savings motives and savings behaviors at different stages of the life cycle.

SECTION 4. SOCIAL FACTORS INFLUENCING THE CONSUMPTION BEHAVIOR OF URBAN RESIDENTS IN HENAN PROVINCE

4.1. THE IMPACT OF AGE STRUCTURE ON CONSUMPTION

With the development of the economy and society, the age structure of urban residents in Henan Province is undergoing profound changes, presenting a unique trend of change, which has a multi-dimensional impact on the consumer market. According to the census data, the degree of urban population aging in Henan Province is gradually deepening, and the proportion of the elderly population is constantly rising. During the sixth national census in 2010, the proportion of people aged 60 and above in urban areas of Henan Province was 15.8%. By the seventh national census in 2020, this proportion had risen to 18.9%, and it is expected to further increase to 22.9% by 2030. Meanwhile, after experiencing fluctuations for a certain period, the proportion of the young population has shown a relatively stable trend, with the proportion of the population aged 15-34 remaining at around 30.62%.

Aging Rate:

$$\text{Formula : Aging Rate} \left(\frac{\text{Population aged 60+}}{\text{Total Urban Population}} \right) \times 100\%$$

(Note: The standard aging rate typically uses the total **population** (not just urban) as the denominator. The formula here may reflect a localized metric.)

Data:

2010: **15.8%**

2020: **18.9%**

2030 (Projected): **22.9%**

2. Urbanization Rate

$$\text{Formula : Urbanization Rate} = \left(\frac{\text{Urban Population}}{\text{Total Population}} \right) \times 100\%$$

Data:

2015: 50.5%

2024: 58.2%

The consumption behaviors of urban residents in Henan Province of different age groups show significant differences. The elderly group pays more attention to health and wellness, and their consumption expenditure in areas such as medical care and elderly care services accounts for a relatively high proportion.

As the backbone of society, the middle-aged group has relatively rational consumption behavior and pays attention to quality and cost performance. They bear considerable economic pressure in terms of housing, education, children's marriages, etc. Therefore, they will comprehensively consider multiple factors when making consumption decisions.

The younger generation is more energetic in consumption, pursuing fashionable, personalized and diversified consumption experiences. They are the main drivers of emerging consumption patterns and products, and have a high enthusiasm for consumption in areas such as electronic products, fashionable clothing, cultural and creative products, and social entertainment.

The change in age structure has a profound impact on the consumer market in Henan.

4.2. THE IMPACT OF FAMILY STRUCTURE ON CONSUMPTION

In recent years, the family structure of urban residents in Henan Province has undergone significant changes, showing a trend of miniaturization and diversification (Gan et al., 2022). With the acceleration of urbanization and the transformation of residents' lifestyles, the traditional large family model has gradually decreased, and the nuclear family (consisting of parents and unmarried children) has become the mainstream family structure. The changes in urban household size in Henan Province from 2015 to 2024 are as follows (Fig. 12).

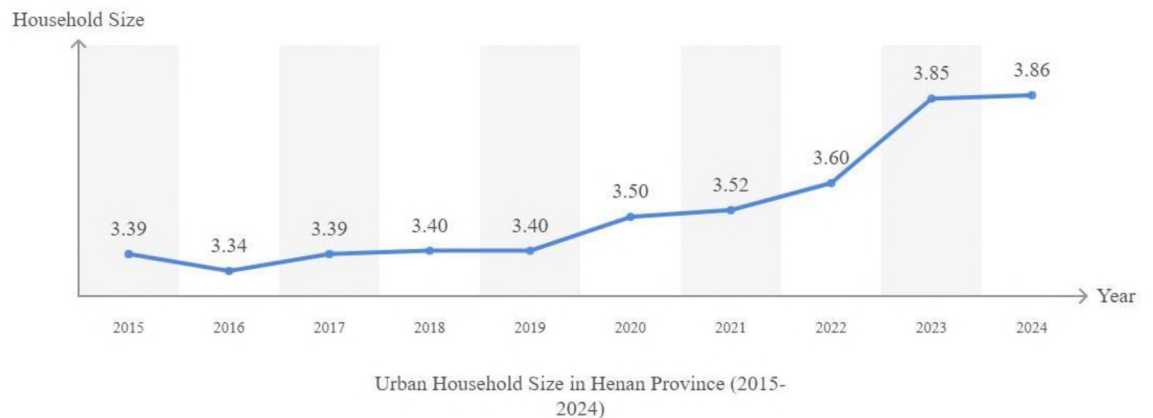


Figure 12. The changes in urban household size in Henan Province, 2015-2024

Source: Department of Commerce of Henan Province White Paper on E-commerce Development in Henan Province 2023. (Zhengzhou, 2023)

The reduction in family size reflects the trend of miniaturization in family structure. The diversification of family structures is becoming increasingly evident. Besides nuclear families, the number of special family structures such as single-parent families, DINK families, and empty-nest families is gradually increasing. These changes in family structures have had multiple impacts on residents' consumption behavior (Li & Zhao, 2022).

Regression Model for Consumption Factors Model:

$$C = \beta_0 + \beta_1 Y_d + \beta_2 P + \beta_3 S + \beta_4 A + \epsilon$$

Variables:

C: Total consumption.

Y_d : Disposable income.

P: Price level (CPI).

S: Social security index (e.g., coverage of pensions, healthcare).

A: Age structure index (e.g., dependency ratio: $\frac{\text{Population aged 60+}}{\text{Working-age population}}$)

ϵ : Error term (captures unobserved factors).

RESEARCH CONCLUSIONS AND PROSPECTS

Consumers' expectations for the future economic situation. Consumers' expectations of the future economic situation are like a barometer, accurately reflecting their judgment and confidence in the future economic development trend. And this expectation is like a lever, powerfully driving their current consumption behavior (Ma & Zhou, 2022).

When consumers hold optimistic expectations for the future economic situation, they tend to increase their current consumption expenditure with confidence. This optimistic expectation may stem from multiple aspects, such as the sustained economic growth, the stability of the job market, and the improvement of income levels. In the cities of Henan Province, with the rapid economic development, many residents are full of confidence in the future economic situation. They believe that their income will keep increasing along with economic growth and their employment will be more stable. Therefore, they will consume more actively. In the real estate market, some residents expect that the future economic situation will be good and their income will continue to increase, so they choose to purchase larger and higher-quality houses. They not only meet their current housing needs, but also regard purchasing a house as a long-term investment. In terms of car consumption, optimistic consumers may choose to purchase higher-end cars to enhance their quality of life. They believe that the future economic situation will be able to support them in bearing the costs of purchasing and using cars. In daily consumption, optimistic consumers will also pay more attention to the quality of life and increase their spending on high-quality food, fashionable clothing, cultural entertainment and other aspects. They will purchase organic food, imported food, choose clothing of well known brands, watch more movies, attend more concerts, etc.

On the contrary, when consumers are worried about the future economic situation, their consumption behavior will become more cautious and conservative. This concern may stem from factors such as economic uncertainty, increasing employment pressure and the slowdown of income growth. During periods of unstable economic conditions, such as the global financial crisis and economic recession, many consumers will have concerns about the future economic situation. In cities of Henan

Province, some residents are worried that the economic downturn will lead to a reduction in their income and even the risk of unemployment, so they will cut down on unnecessary consumption expenditures. In this case, consumers may postpone purchasing some large consumer goods, such as cars and household appliances. They will pay more attention to the cost performance of the products and choose those with more affordable prices. In terms of food consumption, consumers may reduce their purchase of high-end food and instead choose ordinary food with lower prices. When it comes to clothing consumption, consumers will reduce the frequency of purchasing new clothes and pay more attention to the practicality and durability of the garments. In terms of cultural and entertainment consumption, consumers will reduce the frequency of going out for entertainment and choose to engage in some low-cost entertainment activities at home, such as watching free online videos.

Consumers' expectations of the future economic situation will also affect their savings behavior. When consumers are optimistic about the future economic situation, their willingness to save may decrease because they believe that their future income can meet their living needs and there may be more investment opportunities. On the contrary, when consumers are worried about the future economic situation, they will increase their savings to cope with possible economic difficulties. During periods of economic instability, many consumers will deposit more funds in banks and reduce consumer spending to enhance their sense of economic security.

Research Deficiencies and Prospects. Although this study has achieved certain results in terms of the influencing factors of consumption behavior of urban residents in Henan Province, there are still some deficiencies that need to be further improved and refined in future research.

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APPENDIX

1. To calculate the year-on-year GDP growth rate

$$r = \left(\frac{GDP_{2024} - GDP_{2023}}{GDP_{2023}} \right) \times 100\%$$

2. Keynes' Absolute Income Hypothesis; Formula:

$$C = \alpha + \beta Y \quad (0 < \beta < 1)$$

C: Total consumption.

Y: Current disposable income (short-term focus). α : Autonomous consumption (consumption when income is zero, e.g., borrowing or using savings).

β : Marginal Propensity to Consume (MPC), the fraction of additional income spent (e.g., if $\beta=0.8$, 80% of extra income is consumed).

3. Friedman's Permanent Income Hypothesis Formulas:

$$C_p = K(i, w, u) \times Y_p$$

$$Y = Y_p + Y_t \text{ and } C = C_p + C_t$$

Key Components:

Y_p : Permanent income (long-term average expected income).

Y_t : Transitory income (temporary/unexpected income, e.g., bonuses).

C_p : Permanent consumption (stable spending based on Y_p)

C_t : Transitory consumption (spiking or dropping with)

K: Fraction of Y_p consumed, influenced by:

i: Interest rates (higher rates may reduce borrowing for consumption).

w: Wealth (e.g., assets or savings). u: Uncertainty (e.g., job security).

4. Urban-Rural Consumption Ratio (2024)

$$\text{Formula : Urban Proportion} = \left(\frac{\text{Urban Retail Sales}}{\text{Total Retail Sales}} \right) \times 100\%$$

5. Engel Coefficient

Correct Formula:

$$\text{Engel Coefficient} \left(\frac{\text{Food Expenditure}}{\text{Total Consumption Expenditure}} \right) \times 100\%$$

(Note: The original formula was inverted. The correct ratio is **Food Expenditure ÷ Total Consumption Expenditure**.)

6. Disposable Income-Consumption Regression Model

$$\text{Formula: } C = \alpha + \beta Y_d + \epsilon$$

Key Terms:

C: Total consumption. Y_d:

Disposable income.

β: Marginal Propensity to Consume (MPC) = 0.75.

ε: Error term (unexplained factors).

7. Gini Coefficient for Income Inequality

$$\text{Correct Formula : } G = \left(\frac{A}{A + B} \right)$$

A: Area between the **Lorenz curve** (actual income distribution) and the line of **equality** (perfect equality).

B: Area under the Lorenz curve.

8. Consumer Price Index (CPI)

$$\text{Formula (Laspeyres Index)} : \text{CPI} = \left(\frac{\sum(P_t \times Q_0)}{\sum(P_0 \times Q_0)} \right) \times 100\%$$

P_t : Prices in current year.

P_0 : Prices in base year.

Q_0 : Quantities in base year.

9. Regression Model for Consumption Factors

$$\text{Model: } C = \beta_0 + \beta_1 Y_d + \beta_2 P + \beta_3 S + \beta_4 A + \epsilon$$

Variables:

C : Total consumption.

Y_d : Disposable income.

P : Price level (CPI).

S : Social security index (e.g., coverage of pensions, healthcare).

A : Age structure index (e.g., dependency ratio: $\frac{\text{Population aged 60+}}{\text{Working-age population}}$)

ϵ : Error term (captures unobserved factors).