

Economic Analysis of China's Misery Index Using the Hanke Indicator

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Abstract:

This study aimed to target the misery index in China using the Hank scale during the period from 1990 to 2022. The economic analysis of the components of this index, represented by "inflation rate, unemployment rate, interest rate, and per capita GDP growth rate," was conducted to verify the following hypothesis: "The misery index reflects the continuous evolution of the Chinese economy over the years," depending on the analytical approach. One of the most important findings of the study is that the economic misery index in China during the period from 1990 to 2022 recorded its highest value in 1994 at 31.5%, due to the inflationary pressures, and its lowest value reached -2.9% due to a decrease in the inflation rate, unemployment rate, and interest rate, as well as an increase in the per capita GDP growth rate. The period from 2009 to 2022 witnessed fluctuations in the economic misery index between increase and decrease, as the Chinese economy was affected by the global economic crisis, in addition to the coronavirus and its repercussions on the global economy.

Keywords: *Economic misery, Hanke Index, China.*

التحليل الاقتصادي لمؤشر البؤس في الصين باستخدام مقياس هانكي (HMI)

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الملخص

استهدفت هذه الدراسة مؤشر البؤس في الصين باستخدام مقياس هانك خلال الفترة 1990-2022، حيث تم التحليل الاقتصادي لمكونات هذا المؤشر والمتمثلة في "معدل التضخم، معدل البطالة، سعر الفائدة، معدل نمو نصيب الفرد من الناتج المحلي" للتحقق من صحة الفرضية التالية "مؤشر البؤس هو انعكاس لتطور المستمر للاقتصاد الصيني على مر السنين"، اعتماداً على المنهج التحليلي. ومن أهم ما توصلت إليه الدراسة أن مؤشر البؤس الاقتصادي في الصين خلال الفترة من عام 1990 إلى عام 2022 سجل

أعلى قيمة له في عام 1994 بلغ 31.5% ويعود اسباب هذا الارتفاع إلى معدل الضغوط التضخمية، وأدنى قيمة له بلغت -2.9% بسبب انخفاض معدل التضخم، وانخفاض معدل البطالة وسعر الفائدة وارتفاع معدل نمو نصيب الفرد من الناتج المحلي الإجمالي. وشهدت الفترة من عام 2009 إلى عام 2022 تذبذب في مؤشر البؤس الاقتصادي بين الارتفاع والانخفاض حيث تأثر الاقتصاد الصيني بالأزمة الاقتصادية العالمية، بالإضافة إلى فيروس كورونا وتداعياته على الاقتصاد العالمي.

الكلمات المفتاحية: البؤس الاقتصادي، مقياس هانكي، الصين.

1. INTRODUCTION

Maintaining a high growth rate for economic growth along with reducing inflation and unemployment rates are among the most important goals that all countries worldwide seek to achieve, as well as seeking economic policies that would raise the desired level of economic growth. Some studies such as (Ayyoub, Malik, Chaudhry, 2011, 64) suggest that the increase in the growth rate is partially due to the decrease in the inflation rate, while others (Tatoglu, 2011, 113) suggest that it is partially due to an increase in the inflation rate. Additionally, some studies such as (Chang-Shuai, Zi-Juan, 2012, 6) support that the increase in the growth rate is partially due to the decrease in unemployment rates. The issues of inflation, unemployment, and the deterioration of the economic growth rate are among the most significant economic problems faced by most countries worldwide over the past three decades. The continuous increases in both the inflation and unemployment rates have led to a continuous deterioration in the economic growth rate in most countries during the third millennium, thus negatively impacting the economic poverty index as well.

The economic misery index is considered a very important indicator in determining the general features of any country's economy. It constitutes a problem that no country is free from, whether developed or developing, but developing countries suffer severely from economic misery, as it constitutes a much greater source of concern than developed countries, which led researchers to Develop programs and plans to combat or reduce this indicator. The economic misery index is an indicator used to determine the extent of bad or good performance of the economy and the extent of the economic well-being of the country's citizens. It is calculated simply by adding the unemployment rate and the inflation rate together. It has recently expanded to include other variables such as the interest rate and the growth rate of the gross domestic product, The increase in this indicator indicates a decline in economic activity and a decrease in consumption, leading to an increase in the economic and social burdens on the state.

2. RESEARCH PROBLEM

The problem of economic misery varies from one society to another and from time to time depending on the differences in economic, political and social conditions. China's ability to reduce rates of inflation, unemployment, and interest rates on lending, and increase the per capita GDP is a result of the strength of the Chinese economy, which was reflected in historical periods included in the study of the Misery Index in the Chinese economy. Hence, this study attempts to reveal the reality of economic misery in China.

3. RESEARCH HYPOTHESIS

The Research aims to test the following hypothesis:
"The China Misery Index is a reflection of the continuous development of the Chinese economy over the years."

4. RESEARCH IMPORTANCE

The importance of the Research stems from giving a comprehensive idea of the most important factors that lead to economic misery and the extent of China's ability to develop policies to solve them.

5. RESEARCH OBJECTIVES

The research aims to analyze the economic misery index in China during the period (1990-2022) in order to reach the reality of this problem and its causes, as the problem of economic misery is a reflection of the economic and social conditions of countries and determine the extent of bad or good macroeconomic performance.

6. RESEARCH METHODOLOGY

The research combines the methodologies of deduction and induction, as the researcher relies in his theoretical framework on the conclusions used in previous studies. The study also follows the analytical approach by estimating the economic misery index in China using the Hanke Indicator during the period 1990-2022.

7. THE LITERATURE REVIEW

The researcher reviewed a group of previous studies that specialized in studying the misery index in general, although studies that dealt with the development of this index are more rare. Below is a group of the most important studies repeatedly mentioned in the literature in this field that dealt with the topic of economic misery:

(Wang, N., Haroon Shah, M., Ali, K., Abbas, S., Ullah, S.,2019) This study empirically analyzes the impact of financial structure and poverty index on economic growth in Pakistan. The autoregressive distributed lag (ARDL) approach was employed to analyze the data, using time series data from 1989 to 2017. Gross Domestic Product (GDP) was used as the dependent variable, financial development index and poverty index as explanatory variables, and remittances, real interest rates, and trade openness as control variables. The empirical results indicate a long-term relationship between the variables included

in the model, poverty index, interest rates, trade openness, and remittances as the key variables influencing GDP in the long run. The government needs appropriate reforms in the financial and external sectors to achieve the desired level of economic growth in Pakistan.

The study (Al-Sharaa, Hajar, 2022) focused on calculating the misery index for the Iraqi economy for the period (1990-2018), as the problem of the study highlights that economic misery is increasing in breadth and intensity in Iraq due to the economic conditions to which the country is exposed, which was reflected in the time period included in the index study. Misery in the Iraqi economy. One of the most important findings of the study is that the Iraqi economy went through two important stages during the study period extending from 1990 to 2018 in measuring the economic misery index, as it witnessed fluctuation in these stages between rise and fall due to the economic conditions that the Iraqi economy went through, including siege and war. The State must reduce the causes of this problem by creating a clearly defined economic vision for the development of Iraq's economy for the well-being of all members of Iraqi society and the improvement of their quality of life.

Study (lopez,2022) This study aimed to analyze the relationship between tourist departures from Mexico and a modified misery index to measure the effect of the loss of well-being, measured in terms of this index, on the number of outbound tourists. The results indicate that increases in the misery index have negative effects on the number of outbound tourists. Conversely, there is no statistically significant effect of tourist departures on the misery index. The results also suggest that the depreciation of the national currency exerts a positive effect on the misery index. Finally, based on the historical decomposition analysis, it was verified that the misery index was not closely related to outbound tourism during the first COVID-19 wave.

Study (DAS, BROWN , MCFARLANE, 2023) examined the relationship between economic misery and remittances in Jamaica from 1985 to 2019. To measure economic misery, we use the Okun and Hanke misery indices. The study concluded at two key findings after applying vector error correction modelling, Granger causality testing, and controlling for potentially confounding factors. First, we find cointegration between remittances and our measures of economic misery. Second, there is bidirectional Granger causality between remittances and economic misery. One implication of our finding is that Jamaican policymakers could reduce economic misery through policies to increase remittance flows, such as providing more incentives for migrants to remit.

Based on the brief presentation of previous studies, it is clear that there are some aspects in which this study agrees and differs from previous studies, perhaps the most important of which are:

- A. The current study is similar to the study (Al-Sharaa, Hajar, 2022) in estimating the economic misery index using the Hankey index to judge the level of well-being within a society.

B. The current study differs from previous studies in that it deals with the development of the misery index in China and the components of this index, which are (inflation rate, unemployment rate, nominal interest rate, growth rate of per capita GDP).

8. RESEARCH DIVISIONS

Bottom of Form

To address the raised issue, we divided the research paper into two sections with a focus on the interconnection and sequence between the sections, as follows:

- The first section: The theoretical framework of the study.
- The second section: Economic analysis of China's misery index using the Hanke index.
- Conclusion:

-Results

-Recommendations

The First Section: The theoretical framework of the study.

1. The concept of the economic misery index.

The economic misery index is one of the most important early attempts to develop a comprehensive index that includes a set of indicators to track the overall economic conditions. Arthur Okun defined it as the sum of the average unemployment rate and the annual inflation rate for a specific country's economy (Chamberlin, Yueh, 2006, 314).

The economic misery index is one of the most important early attempts to develop a comprehensive index that includes a set of indicators to track the overall economic conditions. Harvard Economist Robert Barro created what he dubbed the "Barro Misery Index" (BMI), in 1999 The BMI takes the sum of the inflation and unemployment rates and adds to that the interest rate, plus (minus) the shortfall (surplus) between the actual and trend rate of GDP growth. Arthur Okun defined it as the sum of the average unemployment rate and the annual inflation rate for a specific country's economy (Barro, 1999). If this index increases, both consumers, companies, and investors become less confident in the future and delay making spending decisions, and also helps determine the economic performance of the average citizen (Kolaneci, et al ,2016,10).

In the late 2000s, Johns Hopkins economist Steve Hanke built upon Barro's misery index and began applying it to countries beyond the United States. His modified misery index is the sum of the interest, inflation, and unemployment rates, minus the year-over-year percent change in per-capita GDP growth (Hanke, 2011).

2. Explanation of each measurement variable Economic misery.

2.1. Inflation%: Inflation negatively affects economic growth in the medium and long term, and the magnitude of this effect was much greater in the case of industrialized countries compared to developing countries. The monetary supporters of this opinion have relied on the fact that inflation negatively affects economic growth through many shortcomings related to reducing production, which can be stated as follows:

- A. Inflation causes an increase in both production costs and risk, which negatively affects investment.
- B. Inflation creates uncertainty about future revenues and thus negatively affects investment.
- C. Inflation reduces the real value of financial assets and encourages people to save in non-productive assets such as precious metals or real estate, thus lowering the growth rate.
- D. Inflation is likely to reduce the efficiency of the financial system, and many governments resort, through common monetary policy tools, to tighten credit extended by financial institutions.
- E. Inflation negatively affects capital flows in anticipation of a decline in the value of the national currency (Chamoun, 2017,18).

2.2. Unemployment%: There is no doubt that unemployment is a problem facing developed and developing countries alike, as it represents a major challenge and imbalance in the labor market for countries of the world, including China. Unemployment rates have increased after the global economic crisis, as unemployment rates have risen even in developed countries, which indicates inefficiency. In the use of the workforce as well as the available resources, aiming to achieve full employment represents one of the basic economic goals of any government in any country. There are many studies that confirm the existence of a relationship between the economic growth rate and the unemployment rate. The study of the relationship between economic growth and the unemployment rate received attention from Arthur Okun in 1962, who explained that there is an inverse relationship between the growth rate in the gross domestic product and the change in the rate of unemployment (Al-Shennawi,2018,14).

2.3.The nominal interest rate%: is the price determined by the monetary authority represented by the central bank. Perhaps the distinction between the real and nominal interest rates is of great importance because it is one of the factors influencing the decisions of creditors and debtors is the real return on investment and lending and the real cost of borrowing for debtors (Bourqaba,2013,187).

There is a difference between interest rates according to their maturity dates. There are interest rates for bonds with various maturities, and there are interest rates for treasury bonds (90 days) and one-year and 30-year treasury bonds. The structure of interest rates indicates the maturity dates of these bonds with different terms (European Parliament,1999,10). There are loans for overnight financing that have a maturity of one day. There are also some rare bonds with a maturity exceeding 90 days, while there are treasury bonds with a maturity of 90 days. 9-month commercial papers, 30-year government bonds, and so on. The lender who wants to lend money for a period of time ranging between one day and 30 years must be able to find bonds that allow him to work according to this period (Mayer, et al.,2002,129).

2.4. Per capita GDP%: This means the average per capita share of GDP, after dividing the real gross domestic product by the number of population (Acocella, 2002, 196). The greater the increase in the per capita income rate, the greater the rate of economic growth. For the country, the average per capita GDP or gross domestic product has an inverse relationship with economic misery, and a high per capita GDP leads to economic growth, and this in turn has a positive effect on reducing the country's economic misery index.

3. Indicators measuring the economic misery index:

The indicators measuring the economic misery index have varied according to the diversity of definitions, as Okun's definition is used to calculate the misery index (Ali, et al, 2014, 6):

$$\text{OMI} = \text{Inf} + \text{Un} \quad (1).$$

OMI as it refers to the Okun misery index.

INF: Inflation Rate%.

UN : Unemployment rate%.

But at the same time, the Okun index (OMI) is considered a flawed measure of misery because it does not take into account economic growth data or per capita GDP growth data.

But according to Robert Barrow's definition, he was calculated using the following equation (Lechman, 2009, 9).

$$\text{BMI} = \text{Inf} + \text{Un} + i - \text{GDP} \quad (2).$$

BMI as it refers to the Barrow misery index.

i: Nominal Interest rate%.

GDP: Gross Domestic Product growth rate%.

Also, through what Steve Hank knew, he calculated it through the following equation (Okonji, Clement, 2019, 76).

$$\text{HMI} = \text{Inf} + \text{Un} + i - \text{GDPPercapita} \quad (3).$$

HMI as it refers to the Hanke misery index.

GDPPercapita: Growth rate of per capita GDP.

4. Historical trends in the economic misery index:

4.1. The misery index and the growth rate of per capita GDP have an inverse relationship: historically, when the economy is doing well and people's incomes are improving, the misery index tends to be low, and when the economy is bad, the misery index tends to be high. This is because when the economy grows, companies hire more workers, the unemployment rate is lower and thus the standard of living of citizens improves. Additionally, when the economy is growing, prices tend to be stable or even decline, keeping inflation in check.

4.2. The 1970s were a period of high misery: The 1970s were a period of high inflation and high unemployment, resulting in a high misery index. This was due, in part, to the oil crisis, which caused oil prices to rise. As a result, the cost of producing goods increased, and companies had to raise prices to maintain their profit margins. In addition, the Vietnam War caused government spending to increase, leading to inflation.

4.3. The 1980s were a period of low misery: The 1980s were a period of economic growth and low inflation, which led to a low misery index. This was due, in part, to the policies of President Ronald Reagan, who implemented supply-side

economics. This included lower taxes and reduced government regulations, which encouraged companies to invest and grow. In addition, the Federal Reserve raised interest rates to combat inflation, which helped keep prices stable.

4.4. The 2008 financial crisis led to a period of high misery: The 2008 financial crisis was a period of economic turmoil, which led to a high misery index. The crisis was caused, in part, by the housing bubble, which burst, causing housing prices to fall. This led to the subprime mortgage crisis, causing many major banks to default. In addition, the crisis led to a recession, causing corporate layoffs, which led to a rise in the unemployment rate.

The misery index and GDP per capita growth rate have a complex relationship, as both factors influence each other. Understanding historical trends in the Misery Index and GDP per capita growth can help policymakers make informed decisions about the economy.

The Second Section: Economic analysis of China's misery index using the Hanke index.

Calculating the economic misery index according to Hank (HMI) In the Chinese economy during the period 1990-2022. The Hank index in China was calculated by combining the inflation rate, unemployment rate, and nominal interest rate, from which the per capita GDP growth rate was derived, as explained in the first Section and As indicated in table number (1)

**Table No. (1) Shows
the Evolution of the Economic Misery Index for China
during the period (1990-2022)**

Year	(1)Inf%	(2)Un%	(3)i%	(4)GDPC%	(5)HMI=1+2+3-4
1990	3	1.6	6.5	2.4	8.7
1991	3.5	2.4	5.3	7.8	3.4
1992	6.3	2.4	6.7	12.8	2.6
1993	14.6	2.7	10.9	12.6	15.6
1994	24.2	2.9	16.2	11.8	31.5
1995	16.7	3	15.3	9.8	25.2
1996	8.3	3.1	11.7	8.8	14.3
1997	2.7	3.2	9.6	8.1	7.4
1998	-0.77	3.2	6.6	6.8	2.2
1999	-0.41	3.3	6.8	6.7	2.9
2000	0.26	3.1	3.9	7.6	-0.34
2001	0.72	3.6	4.4	7.6	1.12
2002	-0.77	4	3.9	8.4	-1.27
2003	1.16	4.3	3.8	9.4	-0.14
2004	3.88	4.2	2.6	9.5	1.2
2005	1.82	4.2	3.4	10.7	-1.28
2006	1.46	4.1	3.6	12.1	-2.9
2007	4.75	4	4.5	13.6	-0.35
2008	5.86	4.2	3.6	9.1	4.6

2009	-0.7	4.3	4.8	8.9	-0.5
2010	3.31	2.9	2.3	10.1	-1.6
2011	5.41	4.1	4	9	4.5
2012	2.62	4.1	6.2	7.1	5.8
2013	2.63	4.1	6.4	7.1	6
2014	2	4.1	6.5	6.8	5.8
2015	3.87	4.13	8.3	6.4	9.9
2016	4.07	4.15	7	6.2	9
2017	4.27	4.17	4.4	6.3	6.5
2018	2.1	4.9	2.9	6.3	3.6
2019	2.9	5.2	5.9	5.6	8.4
2020	2.4	5.6	6.2	2	12.2
2021	1	5.1	0.8	8.4	-1.5
2022	2	5.3	4.1	3	8.1
Average	4.1	3.8	6.03	8.1	5.8
Minimum	-0.77	1.6	0.80	2	-2.9
Maximum	24.2	5.6	16.2	13.6	31.5

Source: The researcher prepared it using World Bank data.

The Table Number (1) Refers to the Following:

1. Inflation Rate(Inf):

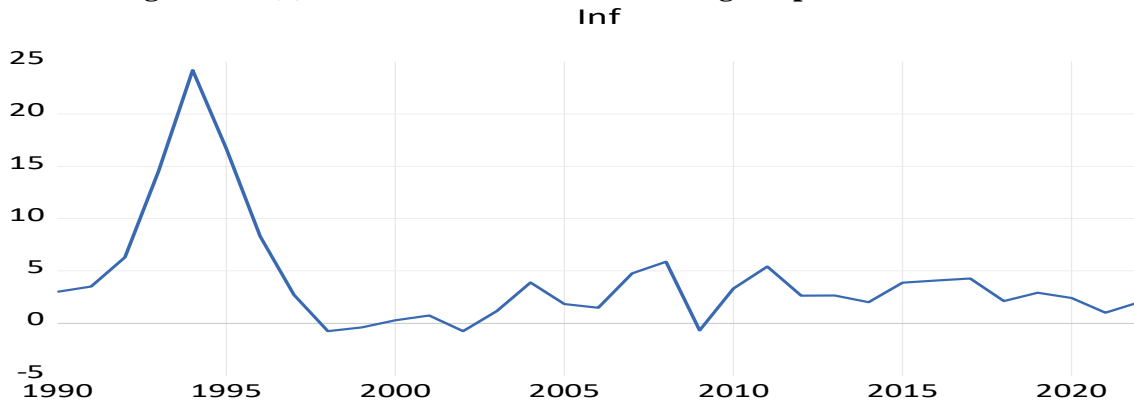
It is evident from Table 1 and Figure 1 the evolution of the inflation rate in the prices paid by consumers in China during the period 1990-2022, and the maximum inflation rate in China reached about 24% in 1994. The Chinese attribute the primary cause of inflation pressure to the rapid opening-up measures and economic reforms, which led to a wave of disturbances and the famous Tiananmen Square protests, causing an increase in inflation rates, widespread corruption, and heightened expectations of political and economic change, contributing to increased public anger and protests. This prompted the Chinese government to control the high inflation rates resulting from the hoarding policy followed by the monopolizers of scarce goods in order to raise their prices and thus reap more profits.

In the mid-1990s, the Chinese economy was somewhat exposed to the Asian crisis, but internal factors such as massive annual growth of over 10 percent had a negative impact. Despite the economic turmoil and the fear of significant inflation, the government at that time resorted to raising interest rates and reevaluating investment projects. This naturally led to a decline in the economic growth rate, but inflation decreased from 17 percent in 1995 to 8 percent in 1996.

The inflation remains one of the major challenges threatening the Chinese economy, and the World Bank data indicates that the inflation rates in China, based on the Consumer Price Index, which is the primary indicator of inflation in China, jumped from 4.8% in 2007 to 5.9% in 2008. Then it decreased in 2009 to a rate of -0.7% due to the repercussions of the global financial crisis, then it returned to rise to 3.3% and 5.5% in 2010 and 2011 respectively, as shown in figure (1).

In 2022, the Consumer Price Index in China, a key measure of inflation, rose by 2 percent on an annual basis compared to the government target of around 3 percent. China has relaxed its strict measures to prevent the spread of the known COVID-19 virus, known as zero COVID, lifted lockdowns, and suspended regular testing.

Figure No. (1): Inflation rate in China during the period 1990-2022:



Source: Prepared by the researcher using the Eviews12 program and data from Table (1).

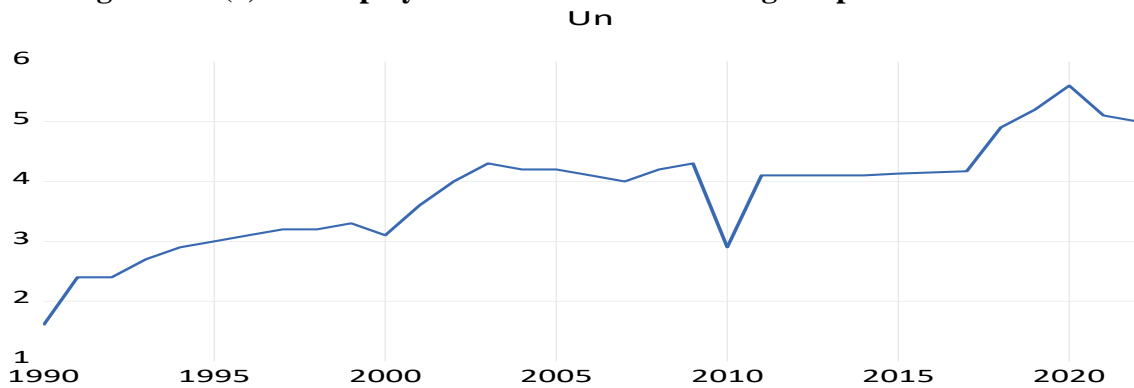
2. Unemployment Rate(UN):

It is clear from Table (1) and Figure (2) the evolution of the unemployment rate in China during the period 1990-2022, and the average unemployment rate during that period was about 3.8%. The unemployment rate was about 1.6% in 1990, then rose to about 4.2% in 1991, and increased to 7.2% in 1994. During the period from 1995 to 2001, the unemployment rate increased slightly, not exceeding 4%, where it reached 3% in 1995 until it reached 8.3% in 2001. The period since 1995 was characterized by a slowdown in the growth of the number of jobs offered by the village's municipal institutions, leading to a decrease in the employment rate, in addition to a reduction in the state-owned companies from 118,000 companies in 1995 to 50,000 companies in 2000 (Ben Atallah, 2020).

Since 2002, the unemployment rate has been on the rise, exceeding 3%, reaching 4% in 2002. In 2020, the unemployment rate in China reached 5.6%, which can be attributed to the impact of the outbreak of coronavirus in 2019 on Chinese economy, as it was the first epicenter of the infection. However, the Chinese job market remained generally stable in 2021, with the urban unemployment rate in China reaching 1.5%, marking a decrease of 5.0% from the previous year. China was able to create 69.12 million job opportunities in urban areas during this year, an increase of 830,000 compared to the previous year - 2020 - according to Ning Jizhe, the head of the National Bureau of Statistics of China.

In 2022, the unemployment rate rose to approximately 5.3%, and this can be attributed to the decrease in domestic demand for cars as well as the tension in the relationship with the United States of America (Cowen, 2022).

Figure No. (2): Unemployment rate in China during the period 1990-2022:

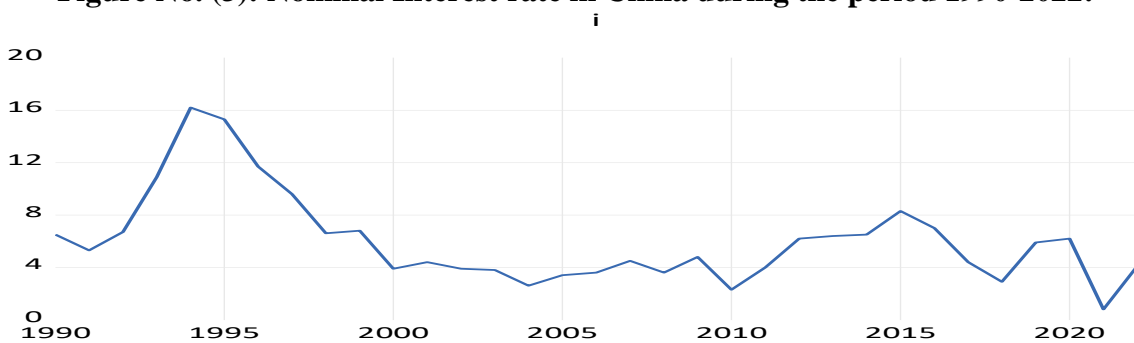


Source: Prepared by the researcher using the Eviews12 program and data from Table (1).

3. Nominal Interest rate%:

The interest rate in China was the highest at a rate of 16.2% in 1994, while the lowest rate was 0.80% in the year 2021 as shown in Figure (3). Average interest rate during the study period was about 6.03%. The period from 1993 to 1997 witnessed an increase in the nominal interest rate to reduce cash flows and decrease the inflation resulting from the continuous increase in the money supply from 77.79% to 100.02% between 1990 and 1993 due to the increase in the money supply to cover the budget deficit. It decreased to 96.5% in 1994 and gradually increased from 99.02% to 153.6% from 1995 to 2003, then fluctuated from 149.79% to 202.1% between 2004 and 2015, reaching a peak of 207% in 2016 (Azzou, 2022, 65). The period from 2012 to 2016 witnessed an increase in the nominal interest rate, followed by a decrease in 2017 and 2018 to about 4.4% and 2.9% respectively, followed by fluctuations between an increase to about 5.9% and 6.2% during the years 2019, 2020, and a decrease in 2021, 2022.

Figure No. (3): Nominal Interest rate in China during the period 1990-2022:



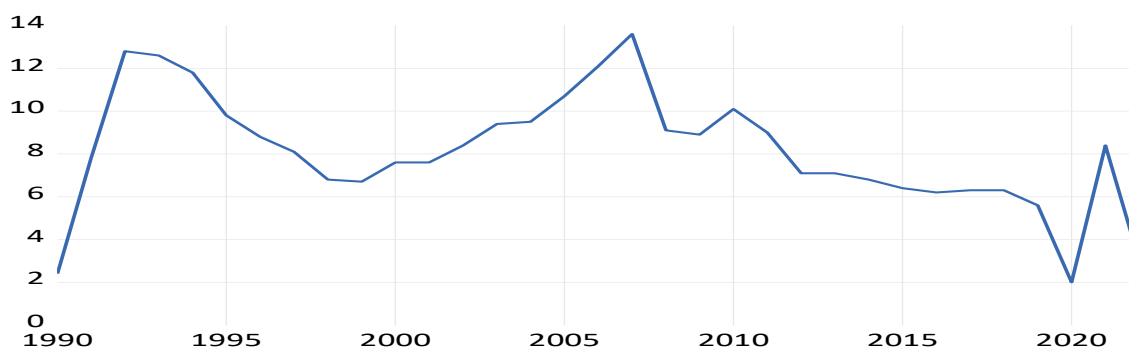
Source: Prepared by the researcher using the Eviews12 program and data from Table (1).

4. Growth rate of per capita GDP%:

The growth rate of per capita GDP in China recorded its highest percentage at 13.6% in 2007 due to the Chinese economy's ability to achieve the highest economic growth rate in the country's history, reaching about 14.2%, which had a positive impact on the improvement of the per capita GDP. The lowest percentage was 2% in 2020 due to the economic contraction resulting from the spread of the coronavirus, and the average growth rate of per capita GDP from 1990 to 2022 was about 8.1%, as shown in Table (1) and Figure (4).

The period from 2008 to 2020 witnessed fluctuations in the per capita GDP growth rate, as the overall GDP growth rate in China was affected by the global economic crisis, in addition to the coronavirus and its repercussions on the global economy. Despite this, the Chinese economy was able to achieve economic recovery in 2021, with the per capita GDP growth rate improving to about 8.4%, and the standard of living of the Chinese people in 2021 increased, with per capita disposable income reaching 35,128 yuan, an increase of 8.4% annually in nominal value (<https://www.alarabiya.net>). China has been able to lead the world in both economic development and pandemic control, according to the National Bureau of Statistics, which warned at the same time of the triple pressure represented by demand contraction, supply shocks, and weak expectations amid an increasingly complex external environment.

Figure No. (4): Growth rate of per capita GDP% in China during the period 1990-2022:
GDPG



Source: Prepared by the researcher using the Eviews12 program and data from Table (1).

5. Hanke misery index(HMI):

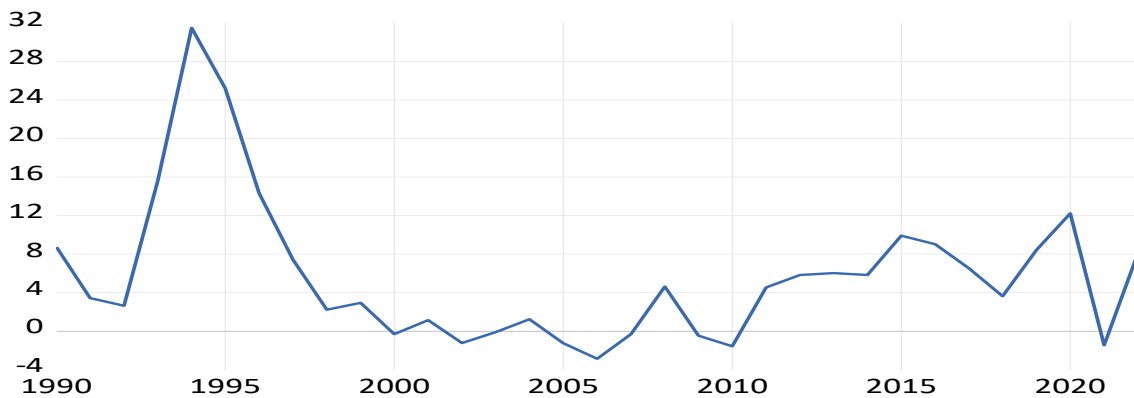
The table number (1) and figure number (5) show that the economic misery index in China recorded its highest value during the study period in 1994, reaching 31.5%. Despite the increase in the per capita GDP growth rate, this rise in the misery index is attributed to the inflationary pressures and the tightening monetary measures by the Chinese central bank through raising interest rates. In 2006, the economic misery index recorded its lowest value of -2.9% due to the decrease in the inflation rate, as well as the decline in the unemployment rate and interest rate, and the increase in the per capita GDP growth rate due to the improvement in the economic situation, especially since China's accession to the World Trade Organization in 2001. However, this index rose again in 2008 to reach 4.6% due to the increase in the inflation rate.

The period from 2009 to 2021 witnessed fluctuations in the economic misery index between rise and fall due to the fluctuations in the per capita GDP growth rate, as the GDP growth rate in China was affected by the global economic crisis, in addition to the coronavirus and its repercussions on the global economy. However, the Chinese economy was able to achieve economic recovery in 2021, as the per capita GDP growth rate improved to about 8.4%, and the standard of

living of the Chinese people increased in 2021, which had a positive impact on reducing the misery index to -1.5%.

In 2022, the economic misery index rose to about 8.1% due to a decrease in the per capita GDP growth rate, as a result of the decline in the GDP growth rate to one of its worst levels in nearly half a century. The fourth quarter of 2022 was heavily affected by strict COVID-19 related restrictions and a slowdown in the real estate market, increasing pressure on policymakers to unveil further stimulus this year. However, for the whole of 2022, the GDP grew by 3%, significantly lagging behind the official target of about 5.5% and falling far behind the 8.4% growth in 2021. (<https://www.ajnet.me/>)

Figure No. (5): Hanke misery index(HMI) in China during the period 1990-2022:
HMI



Source: Prepared by the researcher using the Eviews12 program and data from Table (1).

CONCLUSION

RESULTS

This study aimed to target the misery index in China using the Hanke scale during the period 1990-2022. The reason for choosing this scale is that it takes into account the inflation rate, unemployment rate, nominal interest rate, and per capita GDP growth rate. The economic analysis of this index was conducted to verify the following hypothesis: "The misery index reflects the continuous development of the Chinese economy over the years, where a descriptive analytical approach was adopted." Among the most important findings of the study:

1. The economic misery index in China during the period from 1990 to 2022 recorded its highest value in 1994, reaching 31.5%. The reasons for this increase are attributed to the inflationary pressures and monetary tightening measures by the Chinese central bank through raising the interest rate.
2. The economic misery index recorded its lowest value in 2006, reaching -2.9% due to a decrease in the inflation rate, unemployment rate, and interest rate, as well as an increase in the per capita GDP growth rate due to the improvement in the economic situation, especially since China's accession to the World Trade Organization in 2001.
3. The Chinese economy managed to achieve economic recovery in 2021, as the per capita GDP growth rate improved to about 8.4%, and the standard of living

of the Chinese people increased in 2021, which had a positive impact on reducing the poverty index to -1.5%.

4. The economic misery index is expected to rise to about 8.1% in 2022 due to the decrease in the per capita GDP growth rate, as the activity in the fourth quarter of 2022 was affected by the slowdown in the real estate market, increasing pressure on policymakers to unveil further stimulus this year.

The study recommends the following:

1. The Chinese government will continue its economic role and continuous intervention in drawing up economic plans and policies, which will reflect positively on achieving economic development goals, reducing the rate of inflation and unemployment, achieving greater social justice, and reducing the economic and social gaps between different social classes.
2. Continued interest in investing in sustainable economic development and economic diversification by promoting innovation, developing and raising the level of individual income, and achieving economic, social and environmental progress that includes all segments of society.
3. Reducing interest will have a positive impact on the real estate and foreign trade sector and will encourage exports, through expanding lending to individuals who work in “flexible” jobs such as taxi drivers, electronic store owners, and truck drivers, as well as providing long-term, lower-interest loans to small companies.
4. Reducing interest rates alone will not solve the economic issues in China without a plan to address youth unemployment, achieve stability in the real estate market, and resolve high regional government debts, which will help build a consumer safety net to accelerate and initiate sustainable recovery.

FUTURE RESEARCH

The researcher suggests additional research areas that can be conducted in the future, such as:

- The Impact of Misery Index on the Difference in income distribution
- The Impact of Misery Index on Foreign Direct Investment.
- Measuring the Effect of the Misery Index on International Tourist Departures.

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