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Article

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Global Business & Finance Review (GBFR)

Provided in Cooperation with: People & Global Business Association (P&GBA), Seoul

Suggested Citation: Choi, Jeong-gil; Zhang, Yi-Wei; Xu, Shi-Nyu (2023) : Detecting turning points and phases of expansions and recessions of the restaurant industry: Subject to Korean restaurant industry business and its growth cycles, Global Business & Finance Review (GBFR), ISSN 2384-1648, People & Global Business Association (P&GBA), Seoul, Vol. 28, Iss. 7, pp. 46-58, https://doi.org/10.17549/gbfr.2023.28.7.46

This Version is available at: https://hdl.handle.net/10419/305937

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GLOBAL BUSINESS & FINANCE REVIEW, Volume. 28 Issue. 7 (DECEMBER 2023), 46-58 pISSN 1088-6931 / eISSN 2384-1648 | Https://doi.org/10.17549/gbfr.2023.28.7.46 © 2023 People and Global Business Association

GLOBAL BUSINESS & FINANCE REVIEW

www.gbfrjournal.org

Detecting Turning Points and Phases of Expansions and Recessions of the Restaurant Industry: Subject to Korean Restaurant Industry Business and its Growth Cycles

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ABSTRACT

Purpose: The purpose of this study is to detect turning points and phases of expansions and recessions of the Korean restaurant industry.

Design/methodology/approach: This study investigated long-term economic trends in the restaurant industry cycle and growth cycle by utilizing yearly data spanning over fifty years covering year 1970 through year 2021. The rules developed by Niemira and Klein (1994) and additional criteria used in the studies of Choi (1999) and Choi (2010) were employed to determine industry cycles.

Findings: This study established a restaurant industry growth cycle model and defined turning points and phases of expansions and recessions of the industry and growth cycles during the period 1970-2021. Detailed findings are reported in the article.

Research limitations/implications: The results of this study provide a grasp information for policy makers, investors, and industry people both in its practical and academic fields. However, since economic recessions may have a stronger impact on firms and individuals than economic expansions (Yost, Ridderstaat & Kizildag, 2020), follow-up research is required to focus more on recessions in order to get more information.

Originality/value: This is the first attempt to examine the long-term cyclical characteristics of the Korean restaurant industry as comprehensively as possible using data covering over 50 years, which marks the contribution of this article.

Keywords: Restaurant industry, Business cycle, Forecasting, Turning points

I. Introduction

Businesses in every industry need accurate forecasts to overcome the negative impact of large economic fluctuations and deal with the uncertainties brought about by them (Chambers et al., 1971; Choi et al., 2022). However, different industries respond differently to business cycle fluctuations (O'Neill, 2021). Some industries are more sensitive to economic fluctuations than others. According to Berman and Pfleeger (1997), industries that gain less during an economic expansion are likely to suffer less negative impact during a recession. While those industries that affect by recessions earlier and faster are also likely to recover more quickly from it. Many studies have shown that macroeconomic conditions do significantly affect restaurant performance (Jung & Jang, 2020).

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Received: Nov. 20, 2023; Revised: Dec. 4, 2023; Accepted: Dec. 11, 2023

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Compared with other economic sectors, the restaurant industry is more susceptible to changes in the external environment and economic situations (Enz, 2009; Lee & Ha, 2012; Jung & Jang, 2020). With the economic downturn, consumers have less disposable income and tend to significantly reduce their spending on dining out. At this point, restaurant revenues will decrease as consumer demand decreases (Lee & Ha, 2012). Since late 2019, COVID-19 has led to a worldwide economic downturn. Service industries that require face-to-face service, such as the restaurant industry, have been the hardest hit by the outbreak. The present COVID-19 pandemic's effects on the global economy have refocused academic circles' emphasis on business cycles. The epidemic caused serious losses in the restaurant industry. Many restaurant managers face huge losses or even close down due to lack of awareness of the importance of the industry business cycle and strategic thinking during economic recessions. Although economic forecasting during such an unusual crisis is a very complex and difficult task (Ferrara & Sheng, 2022), however, such a situation makes more and more practitioners and researchers realize the necessity of reducing future uncertainty through prediction.

Existing forecasting research is mainly concentrated on the performance of specific types of restaurants such as one single restaurant or full-service restaurant, and rarely studies the overall restaurant industry's performance in a certain country. Furthermore, studies related to the restaurant industry business cycle mainly analyze the restaurant industry in the United States (Choi et al., 2022), and there have been very few studies on the Korean restaurant industry. Since different countries have different macroeconomic environments and business policies (Choi et al., 2022), and the only few studies on the Korean restaurant industry cycle were basically created ten years ago (Choi, 2007; Choi, 2010; Hong, 2011), it is difficult to obtain relevant information on changes in the business cycle of the Korean restaurant industry in the past decade. Therefore, it is necessary to re-measure the business cycle and growth cycle in different economic environments and periods. More

specifically, in the case of South Korea's restaurant industry, there is a dearth of studies examining the cyclical behavior relevant to the restaurant industry and there is a noticeable lack of restaurant industry cycle measuring long-term cyclical fluctuations in Korea. Therefore, it is necessary to develop a business cycle model suitable for the Korean restaurant industry and predict the trends of the Korean restaurant industry, thereby contributing to the literature on restaurant industry forecasting.

It is crucial to find answers for the following questions for restaurant business investors and operators in order to create efficient restaurant operating strategies and make wise investment decisions: What were the peak and trough economic performance of the Korean restaurant industry in the past 50 years? How do we define the expansion or contraction phases of the restaurant industry cycle? When were the periods of expansion or contraction of the restaurant industry in the past 50 years? What is the average duration of the restaurant industry cycle? What is the average duration of a restaurant industry cycle expansion or contraction? When have there been booms or busts in the restaurant industry over the past few decades? By answering these questions, this study can provide restaurant practitioners with a comprehensive perspective on how to gain a competitive advantage in an unstable economic environment.

The purpose of this study is, therefore, to establish a restaurant industry cycle that covers a wide range of activities in South Korea's restaurant industry; to establish a restaurant industry growth cycle model that can represent the changes and scope of South Korea's restaurant industry growth; to propose a chronology of the Korean restaurant industry by detecting turning points and phases of expansions and recessions of the industry cycle and growth cycle during the period 1970-2021. This study highlights the significance of the business cycle and growth cycle in predicting industry trends and provides insights into potential strategies for decision-makers in the restaurant sector. Moreover, this is the first attempt to examine the long-term cyclical characteristics of the Korean restaurant industry as comprehensively as possible using data covering over 50 years, which marks the contribution of this article.

II. Literature Review

A. Business Cycle

As the economy has been increasingly exhibiting signs of upswing and downturn in economic activity, the need for predicting the cyclical behavior has assumed significance (Mohanty, Singh & Jain,2003). Especially in the restaurant industry, which plays a crucial role in the global economy, but its performance is susceptible to fluctuations in macroeconomic conditions. Regular fluctuations in economic expansion and contraction led to the emergence of various concepts for measuring business cycles.

The National Bureau of Economic Research (hereafter NBER) has published research to define the U.S. business cycle since the 19th century. The most important work on business cycles was done by Burns and Mitchell (1946), and numerous scholars and practitioners have built their analyses of business cycles on their previous research. According to Cerra, Fatás & Saxena (2023), the characteristic of the business cycle is that the economic aggregate of a market economy fluctuates, and there is a linkage between many economic activities, which lasts for more than one year. In the same way, Bavaria (2023) characterized the business cycle that "Business cycles are defined as fluctuations in the Aggregate Economic Activity (AEA). The problem with the business cycle phenomenon is that it is an unobserved macroeconomic variable. There is no well-defined, widely accepted macroeconomic time series with the help of which the state of the aggregate economy can be gauged.". According to the NBER, business cycle identification is divided into two stages: finding periodic peaks and troughs in the observed economic variables, and then determining whether these changes are

sufficiently universal in all observational series (Koshy & Shanmugam, 2023). NBER identifies business cycles based on (absolute) reduction or change in production levels. This method is called a classic example of the business cycle. The classical cycle is characterized by alternating periods of economic growth (expansion) and economic downturns (contraction or recession). The classical cycle consists of four phases: expansion, peak, contraction, and trough. During the expansion phase, economic activity increases, characterized by rising output, employment, and consumption. Business and consumer confidence are usually high, and investments are made to capitalize on favorable economic conditions. The peak represents the highest point of economic activity in the cycle. It marks the end of the expansion phase. In the contraction phase, economic activity slows down, leading to reduced output, employment, and spending. Business and consumer confidence decline, and investment and consumption decrease. The trough represents the lowest point of the cycle, where economic activity bottoms out. In classic cycles, the recession is usually shorter than the expansion due to growth effects (Tkacova & Gavurova, 2023).

B. Growth Cycle

On the other hand, the growth cycle is another way to consider whether the fall in the series originated as a deviation from its long-term trend (Ahmad et al., 2022). The growth cycle examines the sustained increase in the overall output and productive capacity of an economy over an extended period. The growth cycle encompasses various factors that contribute to long-term economic growth, such as technological advancements, investments in capital and infrastructure, productivity gains, innovation, and institutional changes. It typically spans several years or decades. The classical cycle is employed to analyze short-tomedium-term fluctuations in economic activity, while the growth cycle is used to understand long-term trends and patterns of economic growth. When growth rates change from expansion to contraction or from contraction to expansion, they are known as turning points. In recent years, greater emphasis has been given to forecasting the turning points in the growth cycle (Kulendran & Wong, 2011; Niemira & Klein, 1994; Eskandari & Foumani, 2016). One advantage of using the growth cycle is that expansion and contraction of the business cycle are of approximately the same duration (Škare & Stjepanović, 2016). Ruiz & Martín (2022) noted that the growth cycle is more likely to represent the current phase of economic activity than the classical business cycle. For example, a decline in restaurant revenue growth from 10% to 5% does not mean that restaurant performance is declining. However, if the growth rate falls from -10% to -5%, even if the overall growth rate rises, it is in the phase of activity decline.

The choice of the cycle to use depends on the specific analysis or research objective, whether it is focused on understanding short-term business fluctuations or long-term economic development. This study attempts to investigate long-term economic trends in the restaurant industry cycle and growth cycle by utilizing yearly data spanning over fifty years. Therefore, this study focuses mainly on explaining the result of the growth cycle to highlight the significance of the growth cycle in predicting industry trends.

C. The Restaurant Industry Cycle

Many studies measure a country or region's overall economic cycle through GDP or other economic indexes. These cyclical patterns are also seen in the majority of industries, even if cycles have become an essential component of our understanding of overall economic activity (Botha & Saayman, 2022). Studies that create business cycles for a particular industry are relatively few, nevertheless. This is due to the fact that the nation's total economy is more significant than the state of each given industry, especially for large country (Sheng et al., 2023). However, developing industry-specific business cycles is important to industry practitioners and stakeholders because industry business cycles provide a more nuanced perspective. In recent decades, the rapid development of the hospitality industry has attracted the attention of many researchers (Li et al., 2017). As one of the most important research areas in the academic field of the hospitality industry, research on the restaurant industry has grown significantly in the past few decades (DiPietro, 2017; Rodríguez-López et al., 2020). However, research on the business cycle of the hotel industry, especially of the restaurant industry, is very limited.

Several prior studies have examined tourism and hospitality industry cycles. Most of these studies focus on the tourism industry, particularly on the tourism demand cycles. Using quarterly data on domestic and inbound overnight stays in Italian hotels between 1985 and 2004, Guizzardi and Mazzocchi (2010) provided a strategy for simulating the impact of the economic cycle on tourism demand, as the tourism cycle is largely affected by the overall economic cycle's lag effect Impact. Their results confirmed that there is a certain lag effect in the response of tourism demand to the economic cycle. Smeral (2012) used annual data on tourism imports from the United States, Canada, Australia, Japan and 15 EU countries to study the impact of income and prices on tourism demand in different business cycles. The results showed that, at least for the EU-15 and Japan, the elasticity of tourism import demand relative to GDP differs depending on the stage of the business cycle. Kulendran and Wong (2009) used a single-input leading indicator model to predict Hong Kong's inbound tourism demand growth rates, directional changes, and turning points in Hong Kong's inbound tourism demand growth cycle. In follow-up research, they used logistic regression and probabilistic regression models to predict the turning point in Hong Kong's inbound tourism growth cycle (Kulendran & Wong, 2011). In similar research, Wan and Song (2018) used quarterly data from 1996 to 2017 to predict the turning point of Hong Kong's tourism demand growth cycle. They estimated a logistic model of tourism demand in Hong Kong and then generated

short- and long-term tourism growth forecasts through leading indicators. In a recent study, Botha and Saayman (2022) used a Markov switching model with independent variables to predict tourism demand cycles for five destinations (Australia, Canada, South Africa, Sweden, and the United States). Furthermore, they considered whether the asymmetric behavior of the tourism cycle itself or the inclusion of explanatory variables that change within the tourism cycle can improve the accuracy of tourism demand forecasts. The findings suggest that cyclical attributes play a role in tourism demand forecasting and that this cyclicality is more prevalent in developing destinations than in developed destinations. Furthermore, they found that different factors may drive tourism demand cycles in different destinations.

There are also some studies that construct hotel industry cycles for certain regions or specific hotel types. In an early study, Choi et al. (1999) developed a business cycle for the US hotel industry. The results show that from 1966 to 1993, the U.S. hotel industry exhibited three cycles, with the average duration of hotel industry cycles being 7.3 years. On the basis of this study, Choi (2003) developed an economic indicator system in subsequent research to predict the turning point of the U.S. hotel industry cycle. Using the National Bureau of Economic Research's turning point criteria and the statistical correlation method, they identified 12 leading indicators, 10 concurrent indicators, and 10 lagging indicators, and summarized them into the Leading, Coincident, and Lagging Composite Index that can predict turning points. Lee and Ha (2012) used Pearson correlation analysis and 5-year moving average method to determine the relationship between full-service restaurant sales and key economic indicators. Additionally, they investigated whether business cycles exist in the full-service restaurant industry and whether such cyclical movements are associated with periods of economic recession. Results from this study showed that full-service restaurants follow an almost every-decade business cycle pattern, while the gross domestic product (GDP) is the key economic driver with the most significant impact on full-service

restaurant sales. O'Neill (2021) examined the American economic cycle in order to pinpoint and analyze factors that may have predictive power on accommodation demand trends in the United States. They evaluated the predictive power of 15 economic indicators on accommodation demand trends and discovered that quarterly GDPI was commonly the strongest predictor of accommodation demand. Some recent studies have looked at differences in casino hospitality business cycles across regions. Sheng et al. (2023) used a Markov switching model (MSM) to formulate the casino hospitality business cycles in Las Vegas and Macao, and decomposed the casino hospitality business cycles into high-growth states (HGS) and low-growth states (LGS). Their results show that the HGS in Macau is slightly higher than that in Las Vegas, while the LGS is significantly lower than that in Las Vegas. The hotel business cycles in Las Vegas appear to be stronger than in Macau, although both hotel industry cycles are expected to be asymmetric. In addition, they also considered the impact of various factors, including external business cycles and supply-side factors, on the local hotel industry cycle, and gave different policy recommendations based on the differences between Las Vegas and Macau. In another study, Sheng et al. (2023) used the same methods to measure the gaming hospitality cycles in Las Vegas and Macau. In this paper, they devote a lot of space to illustrating the differences in the economic structures of Las Vegas and Macau and the driving forces behind the gaming hospitality cycle of Las Vegas and Macau.

However, only few studies focused on the restaurant industry. Choi (2007) constructed a business cycle model and a growth cycle model for the U.S. restaurant industry. The findings indicated that the U.S. restaurant industry experienced three cycles between 1970 and 1998. The average duration of a restaurant industry cycle is 8 years on a peak-to-peak basis and 6.5 years on a trough-to-trough basis. In addition, the study found that the expansion phase of the restaurant industry cycle tends to be longer than the contraction phase, and the average duration of expansion and contraction in the growth cycle tends

to be relatively consistent. Based on existing literature, Choi (2010) used data from 1970 to 2007 to establish a model of the Korean restaurant industry cycle and growth cycle, then established a composite index of leading, coincident, and lagging indicators that can predict the restaurant industry cycle. Research results showed that from 1970 to 2007, the Korean restaurant industry experienced 4 cycles, with an average time of about 7 years. The restaurant industry reached its highest peaks in 1973, 1979, 1997, 2000 and 2004, and its lowest troughs in 1970, 1975, 1981, 1998, 2001 and 2005. The growth cycle of the restaurant industry fluctuates more frequently than the restaurant industry cycle, and the expansion and contraction periods are relatively symmetrical. This is consistent with Choi's (2007) analysis of the U.S. restaurant industry cycle. Hong (2011) compared the differences in business cycle changes and growth models of the restaurant industry in South Korea and Japan, then analyzed the business environment factors that most significantly affect the industry cycle. In their research, there were significant differences in the restaurant industry between Korea and Japan, with some years when Korea experienced peaks and Japan experienced troughs. This reflects the need to validate and measure industry cycles in different countries. Although economic indicators that can predict turning points are also considered in these studies, in order to better understand and illustrate the restaurant industry cycle in more detail, the analysis and research on this part will be carried out in subsequent studies.

III. Methodology

A. Data Collection

The restaurant industry cycle shows 'periodic fluctuations in the total output of all commercial activities across the restaurant industry'. The total sales of the restaurant industry over a given period represent the market value of all final goods and services produced in the restaurant industry during that period (Choi, 1999). Therefore, in this study, total sales were used to represent the overall business activities of the restaurant industry, and raw data on total sales of the restaurant industry were derived from KOSIS (Korean Statistical Information Service).

In many previous studies, business cycles are generally constructed using monthly or quarterly data for a specific time period rather than annual data, due to using short-term data could improve the accuracy of the analysis. However, since South Korea lacks a dedicated statistical agency in the restaurant industry, it is difficult to obtain short-term data on official total sales accumulated over decades. Although using annual data to formulate business cycles may not be as accurate as using monthly or quarterly data, however, considering that this study mainly focuses on long-term fluctuations and turning points in the restaurant industry, and the availability of data, this study still uses annual data to construct the restaurant industry cycle. Therefore, this study is based on the data from the KOSIS, and investigates the total annual sales of the restaurant industry from 1970 to 2021 as raw data.

The KOSIS reports restaurant industry sales in nominal terms (current Korean won). In order to track the real changes in industry cycles, this study converts the nominal data series into real data series (constant Korean won) and uses actual data to construct the business cycle.

B. Measuring the Restaurant Industry Business Cycle

According to the U.S. Department of Commerce, economic fluctuations should last for at least 15 months to be considered a business cycle, and any significant rise or fall in the cycle should last at least 5 months (Karsten, 1990). Niemira and Klein (1994) pointed out that choosing a time should meet the following criteria.

· The period should be a minimum of 15 months

from peak to peak or from trough to trough

- If the peak or slot area is flat, select the latest value as the turning point.
- If the effects of striking activity or other special factors are excessive and completely reversible, they are usually ignored.

This study follows this rule for measuring restaurant industry cycles. However, this study uses annual data rather than monthly or quarterly series and therefore has the limitation of a lower level of accuracy. In the studies of Choi (1999) and Choi (2010), additional criteria were developed to minimize the loss of accuracy when using annual data to determine industry cycles. Therefore, this study refers to their criteria to reduce limitations when determining the cycle selection criteria. The specific cycle selection criteria are as follows:

- Since this study uses an annual data series, the cycle should be at least two years (24 months, 15 months according to U.S. Department of Commerce) and should be measured as peak-to-peak or trough to trough.
- The contraction or extension period must be at least one year (6 months for the NBER rule).
- The annual growth change must be greater than the mean absolute deviation (MAD) of the restaurant growth cycle.
- If the period criteria above are not met, the period date pair will be canceled.

C. Measuring the Restaurant Industry Growth Cycle

The restaurant industry cycle is reformed based on year-over-year growth rates. The post-reform cycle is called the restaurant industry growth cycle. The rules discussed above also apply to this cycle. However, there are additional rules for defining turning points. The growth cycle is a distinct deviation around the rate of change from the trend. Therefore, in order to be considered a cycle, the rate of acceleration and deceleration of growth must be at least above the mean absolute deviation of growth. The change in the growth rate of the restaurant industry growth cycle is symmetric percentage change (SPC).

IV. Results

A. The Restaurant Industry Business Cycle

The first purpose of this study is to measure the restaurant industry cycle. In order to determine the range of the Korean restaurant industry cycle, this study uses the total restaurant industry sales from the KOSIS as the basic time series data. Through quantitative data and visual charts, the total sales of the restaurant industry from 1970 to 2021 (51 years) were calculated. This study converts the nominal data series (current Korean won) into the real data series (constant Korean won). Then converts the time series represented by total sales into absolute values by reflecting the consumer price index (CPI), in order to track real changes within the industry cycle.

Figure 1 shows the restaurant industry cycle as measured by real total restaurant industry sales (constant Korean won trends), indicating identified and dated restaurant industry cycle peaks and troughs. Table 1 presents the expansion and contraction duration and turning points of the Korean restaurant industry cycle. As shown in Figure 1 and Table 1, the restaurant industry cycle covers the fifty-one-year period (from 1970 to 2021). During this period the restaurant industry demonstrated seven cycles (peak to peak or trough to trough). The restaurant industry peaked in 1973, 1979, 1997, 2000, 2004, 2007, 2009, and 2019. The industry troughed in 1975, 1981, 1998, 2001, 2005, 2008, 2010, and 2020. The mean durations of the restaurant industry cycles are 6.57 years calculated by peak-to-peak (SD= 5.71), and 6.43 years calculated by trough-to-trough (SD= 5.38). In terms of peak to peak, the longest cycle was from 1979 to 1997, and in terms of trough to trough, it was from 1981 to 1998. The restaurant industry took

an average of 5.29 years for expansion periods and took an average of 1.25 years for contraction. As



Figure 1. Restaurant Industry Business Cycles (1970-2021)

Restaurant Industry Cycle Duration (Years)								
Peak	Trough	Peak to Peak	Trough to Trough	Expansion (T-P)	Contraction (P-T)			
	1970							
1973	1975				2			
1979	1981	6	6	4	2			
1997	1998	18	17	16	1			
2000	2001	3	3	2	1			
2004	2005	4	4	3	1			
2007	2008	3	3	2	1			
2009	2010	2	2	1	1			
2019	2020	10	10	9	1			
Mean		6.57	6.43	5.29	1.25			
Standard Deviation (SD)		5.71	5.38	5.41	0.46			

Table 1. Turning Points of Restaurant Industry Cycle

shown in Table 1, South Korea's restaurant industry experienced its longest expansion period (16 years) from 1981 to 1997. After that, the most recent longer expansion period lasted for 9 years from 2010 to 2019. In addition, as can be seen in Figure 1, the restaurant industry experienced great economic fluctuations from 1997 to 2010. It experienced a substantial growth between 2014 and 2019.

B. The Restaurant Industry Growth Cycle

The restaurant industry growth cycle, which represents changes in growth rates, is developed by standardizing the changes and measuring and determining the cycles. Compared to classical business cycles, growth cycles are more likely to represent the present stage of economic activity (Ruiz & Martín, 2022). Therefore, a more detailed explanation of the results of the growth cycle is necessary because more useful information is contained in the growth cycle. Figure 2 and Table 2 analyze the restaurant industry's growth cycle and turning points of the cycle.

As shown in Figure 2 and Table 2, from 1970 to 2021, the restaurant industry demonstrated eight growth cycles (peak to peak or trough to trough). The mean durations of the growth cycles are 5.25 years calculated by peak-to-peak (SD= 2.43), and 5.63 years calculated by trough-to-trough (SD= 3.38). In terms of peak to peak, the longest cycle was from 1977 to 1987, and in terms of trough to trough, it was from 1980 to 1991. The result shows that the restaurant industry experiences high growth (boom) on average every 5.25 years. The troughs of the growth cycle occurred in 1975, 1991, 1998, 2001, 2005, 2008, 2010, and 2020. While the peaks of the growth cycle occurred in 1973, 1977, 1987, 1993, 1999, 2002, 2007, 2009, and 2015. Compared with industry



Figure 2. Restaurant Industry Growth Cycles (1970-2021)

Restaurant Industry Growth Cycle Duration (Years)							
High (Peak)	Low (Trough)	High to High	Low to Low	Expansion (T-P)	Contraction (P-T)		
	1970						
1973	1975				2		
1977	1980	4	5	2	3		
1987	1991	10	11	7	4		
1993	1998	6	7	2	5		
1999	2001	6	3	1	2		
2002	2005	3	4	1	3		
2007	2008	5	3	2	1		
2009	2010	2	2	1	1		
2015	2020	6	10	5	5		
Mean		5.25	5.63	2.63	2.89		
Standard Deviation (SD)		2.43	3.38	2.20	1.54		

Table 2. Turning Points of Restaurant Industry Growth Cycle

business cycles, peaks and troughs occur more frequently in growth cycles than in industry business cycles.

Moreover, the growth cycle in the restaurant industry tends to be more relatively symmetrical than industry cycles. The average duration of expansions (T-P) and contractions (P-T) in the growth cycle has been 2.63 and 2.89 years. However, in the industry cycle, the average duration of expansions (T-P) has been 5.29 years, and the average duration of contractions (P-T) has been 1.25 years. On the other words, the variation in the duration of the expansion phase is much greater than that of the high-growth phase. This result is in line with other researchers' findings expressed in the previous literature, according to which growth cycles display better consistency than industry business cycles. As can be seen in Figure 2, the highest peak occurred in 1977, followed by 2015, while the lowest trough occurred in 1998. In addition, the growth of the restaurant industry experienced great fluctuations from 1998 to 2015.

V. Discussion and Conclusions

This study aims to propose a chronology of the Korean restaurant industry by examining the industry cycle and growth cycle over fifty years. This study used the total annual sales of the restaurant industry from 1970 to 2021 as original data to construct the business cycle and growth cycle of the Korean restaurant industry. Moreover, based on the cycle selection criteria determined and verified in prior research (Niemira & Klein, 1994; Choi, 1999; Choi, 2010) to identify expansionary and contractionary phases and turning points in cycles. The result of this study enables investors and policymakers to better forecast the future dynamics of the restaurant sector using the information provided by the analysis of the business cycle and growth cycle.

The results of the restaurant industry cycle show that the restaurant industry has seven cycles in 51 years. The average duration of the restaurant industry cycle is 6.57 years on a peak-to-peak basis and 6.25 years on a trough-trough basis. The average expansion period is 5.29 years and the average contraction period is 1.25 years. This result confirms evidence from previous studies. As in Škare & Stjepanović (2016), this study finds that in classic cycles, the recession is usually shorter than the expansion due to growth effects. In other words, the restaurant industry usually takes a long time to expand but declines very quickly after it reaches its peak. This requires restaurant managers to accurately predict the timing of the next recession and make strategic adjustments as quickly as possible. In addition, since the last peak was in 2019 and the last trough was in 2020, it can be predicted that the next peak may occur in 2025 and the next trough may occur in 2026. This result can provide a reference for restaurant investors in deciding when to enter the market and when to expand.

The results of the growth cycle of the restaurant industry provide more detailed information on the actual economic growth and dynamic changes in the restaurant market. The restaurant industry demonstrated eight growth cycles (peak to peak or trough to trough) from 1970 to 2021. The average duration of the restaurant industry growth cycle is approximately 5 years (5.25 years on a high-to-high basis and 5.63 years on a low-low basis). The average duration of expansion (T-P) and contraction (P-T) in the growth cycle is 2.63 years and 2.89 years respectively. These results confirm and extend evidence from previous studies (Choi, 2007; Choi, 2010; Hong, 2011) that compared with the restaurant industry cycle, the growth cycle is more relatively symmetrical. Compared with before 2000, the growth cycle from the 2000s to the 2010s lasted shorter and changed quickly. However, starting in 2010, the duration of the growth cycle became longer and the pace of change slowed down. 1977 was the high point with the fastest growth, followed by 2015, and 1998 was the low point with the slowest growth. Additionally, the restaurant industry experiences rapid growth (boom) on average every 5.25 years. Since the last high point was in 2015, the next high point should appear in 2020. However, in the measured growth cycle, 2020 was the low point. This may be due to the impact of the COVID-19 pandemic. Prior research shows that every event element in the macro business environment can be regarded as a factor that affects the turning point of the industry cycle

(Hong, 2011). Since the COVID-19 epidemic is a major event affecting the global economy, the impact of such major events on the turning point of the restaurant industry cycle should be considered in subsequent research.

In the future research agenda, it is desirable to explore economic indicators related to the business cycle of the restaurant industry and summarize them into comprehensive indicators that can predict the economic fluctuations of the restaurant industry, and thereby contribute to research related to the business cycle of the Korean restaurant industry. Moreover, since economic recessions may have a stronger impact on firms and individuals than economic expansions (Yost, Ridderstaat & Kizildag, 2020), follow-up research should focus on recessions and analyze the difference between recessions caused by different causes. This is because the duration of the recession may vary depending on the economic environment and its causes (Francis, Owang, & Soques, 2022). For example, Claessens, Avhan and Terrones (2009) found that financial shocks-related recessions last longer than other contraction shocks. Moreover, the expected duration of the recession may depend on the relative magnitude of the potential impact. Bordo and Helping (2011) found that the importance of global shocks has increased over time. In future research, it is necessary to distinguish between recessions caused by different causes and to make appropriate recommendations based on country and industry-specific circumstances.

Funding

This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2020S1A5A 2A01044622).

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