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SARs on China's traveling and the effects afterwards

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SARs on China's traveling and the effects afterwards

Abstract

This paper is conducted to emphasize how SARs affected China traveling in the past starting from the epidemiology of the disease and later to how globalization plays its role in contributing. Thereafter, the highlighted will be on the travelling aspects of China including the fact that the travel activities within the country had been affected to the further consequences when the psychologically of microeconomic units (in this case: consumer behaviours) had changed, plus how WHO reacted to the disease. After having discussed the small economics unit, this will lead to further findings on the macroeconomic level where the traveling had affected the bigger business units until the savings behaviours of domestic residents. Lastly, we would make the analysis and comment on what happened together with some lessons that should be learned from this outbreak.

Epidemiology

“Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV)” by the Centers for Disease Control and Prevention. The symptoms begin with the fever that the temperature of an individual is greater than 38°C sometimes associated with chills or headache, general feeling of discomfort, even bodyache. Some people would face mild respiratory symptoms, some have diarrhea and after 2 to 7 days, they may develop dry-nonproductive coughs or face a short of breath. This disease would have an association with low levels of oxygen in the blood where most patients develop pneumonia. SARS is mainly transmitted by close person-to-person contact through their respiratory droplets produced by coughing or sneezing, so-called airborne transmission. Alternatively, the spreading could happen when an individual touches the surface that is contaminated by the virus, and they then touch their mouth, nose or eyes.

The first case of SARS is said to have likely emerged in the late of 2002 in China as possibly from the workers who interacted with wild animals in Guangdong's market. The origin of SARS could be said that it is a zoonotic disease, yet still no clear evidence of occurrences. On

the 31st of January 2003, there existed the superspreading case in the city of Guangzhou, the spreader was transferred among 3 hospitals and infected about 200 other people. The investigation of the spreading of SCoV beyond China started on February 21, 2003. The small group of people eventually carried the infection throughout the country by the particular group that contacted those who were infected staying in Metropole Hotel, Hong Kong. They had carried the disease to Singapore, Vietnam, Canada, Ireland and the USA. Thereafter, the infection escalated in those countries except Ireland.

The outbreak of SARS led to the losses in various directions: The Chinese politics and tradition, the economics matters and the public health systems (ncbi). For the Chinese responses, due to the hierarchy of the government systems, SARS revealed that it became a weakness as they are too slow in controlling the disease. For the economics aspect, SARS had a negative impact on medical expenses, travel and related services, consumer confidence, and investment including FDI. Lastly, the Public Health systems exposed the need for more investment in public health infrastructure reacting to the future outbreaks, due to the lack potential of hospital setting at that time. What will be raised in this paper would be one of the economic impact, the international travelling between countries which focuses on some particular countries that are being affected significantly.

There were many measures of the protection and prevention of SARS. As mentioned that the paper will focus on the travelling aspect, one significant prevention of the virus spreading is to have the travel precautions. According to WHO, it is said that “ Travelling can increase risks to personal health and wellbeing, and these risks should be understood when planning travel, particularly to unfamiliar, distant or remote areas. Taking appropriate precautions before beginning a trip can reduce these risks and ensure a plan is in place in the event that you are injured or suffer from another health condition when away from home.” At the time of the SARS outbreak, there existed guidance on travelling which requires those who were to travel, see the healthcare provider before leaving the country. After returning from SARS related countries, a person needs to be quarantined and monitored for 10 days. The regulation of travelling might lead to the tough decision of an individual to travel abroad importantly to those countries with SARS virus. Remarkably, the quantitative data on travelling in some particular countries would be reflected as the lower amount, in this case, of the travelling or tourism which is in the subset of GDP data on IMF.

Though SARS was not considered as the massive severity outbreak, it still reflects some negative aspects through short term economic shocks partly from the flaws of better air travel and globalization. The virus is considered as pandemic as it was spreading in many countries all over the world which is more severe than epidemic. By the time of SARS occurrences, air travel and globalization became the tools that ease the way of interconnectivity. People who travel abroad became the spreader of the disease and therefore causing the international anxiety of travelling. Even though travel utilities and technology at the time of SARs is not as great as today's world, it is still in the satisfactory level enough for going abroad. As the transmission of the disease was eased by those moving abroad, SARS has led to the infection in other 5 countries within a day and to more than 30 countries in six-months period.

Globalization and Interconnectivity

Globalization demonstrates the movement of merchandise, thoughts, values, and individuals around the globe. The term was first utilized in the mid 1950s to perceive the expanding relationship of economies and societies among countries. Globalization has existed for quite a long time by the evolvement of trade patterns, including the slave trade, colonization, and evacuation. As globalization can be defined as multinational corporations across borders leading to the integration of both economics and politics, many benefits can be expanded to several countries; nevertheless, the negative effects might occur due to the global integration and interdependence.

Global mobility can be identified as a transportation across countries including modern aircraft, cruise ships, trains, and other types of transport which allow people to journey quickly and at a cheaper price. The Boeing 787, for example, have generated new routes with "long haul" distances and larger passenger load. High-speed trains, road networks, and other programs including buses and bikes are convenient for individuals to journey or explore the world, leading to the increasing interconnection between each country with less time to travelling. Ease of travel, moreover, has additionally helped to beat the barriers of concern, frustration, and expense. For instance, global banking systems access to cash at nearly any place within the world. International firms, which give flights, local transportation, and accommodation and food industry, allowed for "one-stop shopping" for travel booking. Hand-held devices have-

additionally modified the character of journey in terms of what tourists do and the way they engage with a destination, for instance, choose a eating place, guide a big town, or translate other languages. Thus, there are less unknown places in the world due to the interconnection.

As globalization occurs to the real world, how individuals work with their immediate surroundings - individuals, communities, and shared cultural codes - is influenced by the spread of social media. People's social connections not only expose them to digital influences, but also keep them in touch with friends or family living in other parts of the world and provide another, more personal "path" to other cultures. There are some unique combinations of these cultural, social and personal drivers that can be categorized into four factors which are culturally aware, culturally curious, culturally immersive, and culturally fluid.

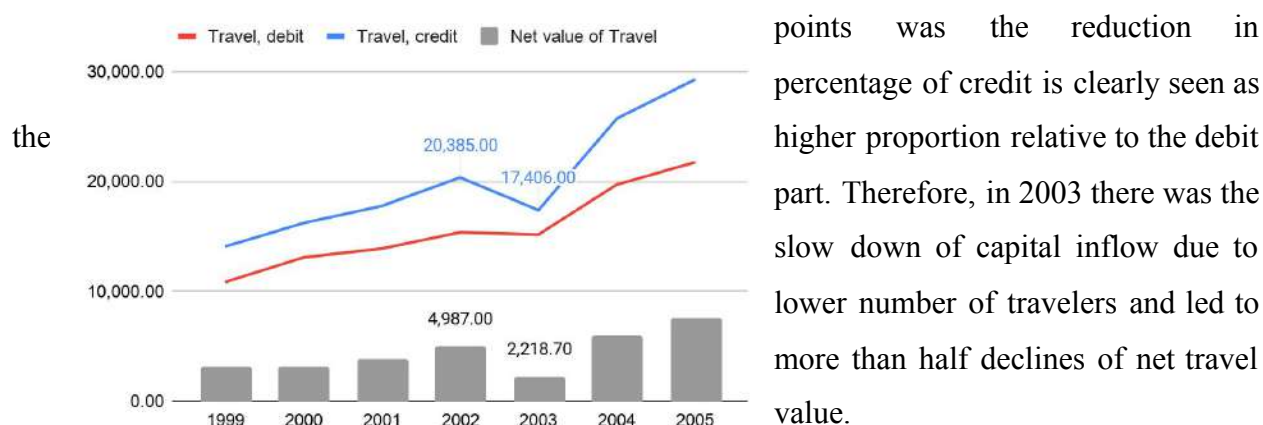
In further details, this report will come up with 3 main qualitative measures to emphasize the effect on travel in China, Mainland. Firstly, the value of travel under balance of payments as given data by IMF which represent the money inflows from the international travellers coming to the countries and the money outflows from its residents who are travelling abroad, where credit and debit implies inflow and outflow respectively. Secondly, the Number of arrivals of international tourism, which is the basic measure, determines the effect on travelling. Lastly, the International tourism, value of receipts and expenditures for travel items where both are the value of goods and services that are purchased and provided to the travellers. The receipts represent the international inbound visitors (travellers coming in to the country) and the expenditures represents the international outbound visitors going to other countries (residents in the country travelling abroad).

What happened in China, Mainland

Value of Travel under Balance of Payments

China Mainland, as the originate of the outbreaks, became one of the countries that had been suffering from the world travelling guide and the anxiety of travellers. Since WHO had issued guidance on the international travellers to postpone all flights to their destination unless it was essential, the number of travelling can be expected to go down. Initially the travelling in to China was an upward trend along with the outbound travel where those coming in were always having higher value. For the year of SARs what happened in China mainland was the plunge-

down for 55.51% of net travel value surpluses or from 4,987.00 to 2,218.70 Million of U.S. dollars in the previous year as shown by the grey bar graph. The significant one that makes net value of travel drop down was from the reduction in the credit part where this credit means the money or capital inflow to the country by travellers. The reason for more than fifty-percentage



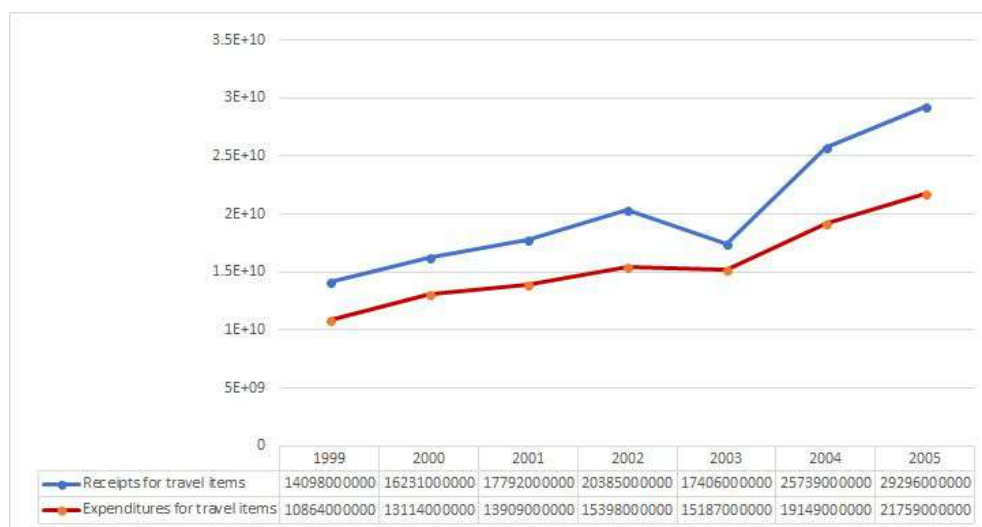
Source: IMF data on Balance of Payments, Unit: Million of U.S. Dollars

Tourists receipt and expenditures for travel items

With exact information from the travel value under Balance of Payments, World Bank has provided an alternative definition of international tourism which can elaborate more on the economics' unit activities where both the receipts and expenditures for travel items of inbound and outbound were decreasing dramatically. In this area we propose the differ intuition of interpreting the data from two sources, while BOP is broadly about the money inflow and outflow, World Bank is providing in-details of how people activities are incorporated with the in- and outflow. World Bank's definition of the receipts is "International tourism receipts for travel items are expenditures by international inbound visitors in the reporting economy. The goods and services are purchased by, or on behalf of, the traveler or provided, without a quid pro quo, for the traveler to use or give away. These receipts should include any other prepayment made for goods or services received in the destination country. They also may include receipts from same-day visitors, except in cases where these are so important as to justify a separate classification. Excluded is the international carriage of travelers, which is covered in passenger travel items. (World Bank, 2020)" and for the expenditures is "International tourism expenditures are expenditures of international outbound visitors in other countries. The goods

and services are purchased by, or on behalf of, the traveler or provided, without a quid pro quo, for the traveler to use or give away. These may include expenditures by residents traveling abroad as same-day visitors, except in cases where these are so important as to justify a separate classification. Excluded is the international carriage of travelers, which is covered in passenger travel items.(World Bank, 2020)” The fear of the virus plus world measures had affected not only the inbound traveling (receipts) but the outbound traveling (expenditures) from Chinese residents which is also being reduced in number.

The figure illustrates the values of the tourist receipts represented by blue line and the tourists expenditures which is the red line both in current USD at 1/11/2020. The higher amount of receipts since 1999 indicates that China had always received the surplus in net value of tourists, which means the inbound coming tends to always have higher spending than its residents going outbound. Both measures were in an upward sloping of the graph with the stable growth, however when the time China had been hit by the outbreaks, the remarkably went down in the inbound area and together with slightly dropped in the outbound travellers. The implication is that the number of tourists visiting China were dramatically dropped as clearly depicted by the kinked-blue line, where the reduction was in line with the measures that postponing all non essential flight to the severe outbreak countries including China. In the views of those who were already in the country, they tend to slow down their travel habits shown by the flattened-red curve. Thus, in 2003 with the higher magnitude reduction of the receipts and the almost zero-percent change in the expenditures, the narrower surplus gap occurred in accordance with the aspect of Balance of Payments: Travel Values even though they have the differences in how data collection is conducted.



Source: World Bank, World Tourism Organization, Yearbook of Tourism Statistics, Compendium of Tourism Statistics and data files. Unit: current USD (01/11/2020)

Number of Tourists arrivals

In the details of the value of traveling prior to this part, there exists the findings that the number of international tourists arrivals is reduced in China for the year of 2003, plus the world level reduction in tourist numbers accordingly (World Bank, 2020). From the collected data, the actual number of tourists in the world level has exhibited an increasing trend until 2002, with the average growth of 3.89% per year, using 1996 as base year. This number dropped down in 2003, which is the year that SARs has fully hit the travelling, with the reduction of 1.33% globally. However, in China there reflected the higher magnitude of changes, using the same base year with the world level, number of tourists arriving gradually increased with 8.34% average annual growth rate per year until 2002 and the fall in 2003 was significantly plunged down by 10.42% YoY. (Appendix 1)

With the three measures, SARs had clearly yielded a negative aspect to the travelling of China. The rest will elaborate more on the factors and some key reasons affecting both the value of travel and the number of tourists. Consequently, in the short-run, it changed how consumers spend and live the new-normal life at that time. We propose the certain research that measures that SARs affected traveling and had a contribution to the domestic economies including our analysis, for instance; mainly the attitudes toward traveling, the reduction in consumption of consumers, the negative return from stocks market especially in particular airlines companies and the new attitudes toward hygenity.

Factors, Key Reasons and Further Effects to Chinese Economies

Factors depressing the travel activities

The international outbreak, which spread to 30 countries, occurred when a sick medical doctor with the respiratory symptoms who had treated patients in Guangzhou City spent a single night in a hotel in Hongkong. He transmitted SARS to at least 16 other guests who stayed on the same hotel floor. They carried the virus with them as they entered local hospitals or travelled on to other countries which are Singapore, Canada, and Vietnam. In that time, the potential risk of imported cases is the city around the world which had an international airport.

On 2 April 2003 (by the time SARS had spread to 21 countries and Taiwan), the WHO issued an advisory which recommended that all but emergency travel to areas of local

transmission be postponed. Therefore, there is a significant decrease in travelling. In addition, there is research that we study (Zhang Wen and Gu Huimin, 2005) pointing out that impacts on tourist consumption are mainly affected by the psychology of domestic people. The consumer behavior, which impacted travelling, had significantly changed and without prudence, people tried to decrease their consumption and increased their savings, consumption of tourism also decreased.

The microeconomics units responses

From the research, the researchers were analysing a survey that was conducted on the first weekend after the travel ban and the title of the affected area was lifted in Beijing. Questionnaires were distributed randomly at 10 popular places in Beijing. The result showed that people thought that travelling in China will be unsafe which significantly affected the number of tourists in China. Moreover, people preferred suburbs or areas within short distance for leisure travel after SARS since they tried to avoid public transportation means. People also tend to prefer staying in high quality star hotels due to the greater concern of hygienity. Moreover, they preferred separated dining while travelling with a tour group. As a result, it can be concluded that due to the outbreak of SARS, many of the tourists were unwilling to have close contacts and changed their behavior on travelling. The outbreak raised the public awareness and concern on hygiene and safety as people showed greater concern to safety and hygiene of tourist attractions, public entertainment places, transportation means, hotel and daily necessities.

The details on the survey can be elaborated as the following information: Firstly, the survey was conducted in the very first week after WHO had lifted up the traveling ban. Also the survey was distributed to 10 places in Beijing, most of the places are the tourist attractive areas. Moreover, it is yet distributed to the other parts of China(outside Beijing) and to the overseas. Secondly, there was a depiction in the research that the questionnaires issued were being returned by 92.1% of the total distributed, and only 81.65% was valid. Thirdly, the researchers went on analysing the data and summarizing the responses of the survey then came up with 5 main points of finding.

The main findings are 1) The impact of SARs on people's work and life was severe during the crisis and it became weakening when the disease came to be controlled. The people said that they had cancelled their traveling plans with the mean score of 3.78 out of 5.00 (1 it totally not agree and 5 is the totally agree) this was from 2 reasons: the lack of travel motivation

both internal and external, and the travel bans. Even the leisure tourism which is considered as highly substitute activity, it has a massive crisis sensitivity, then the traveling being depressed. 2) SARs had affected the people's attitude towards work and way of life, but the prolonged impact was uncertainty. People tend to change their idea of traveling from the traditional vacation(at that time) to eco-tourism and doing outdoor activities instead with the mean score of 3.86, the travelling within cities or crowded areas became less important as many of them want the fresh air after long-period quarantined, this can be implied the acceleration of natural development-trend. They also raise concerns about joining a tour group only after SARs outbreak and even want to travel with relatives or family members instead. However, people still had the idea of joining a tour group in the longer run which says that SARs do not have much prolonged effect on the people's perception of the group traveling. They also raised concerns on the shorter period of the leisure travel activities and refused to consume wild related animals. 3) The outbreak of SARs mainly raised public hygiene and safety into an important position. This point highlighted the highest score which is 3.88 over 5.00, they exhibit high concerns on the public entertainment places, the transportation, the hotel and the daily necessities. The higher rate on hotels at that time will reflect the hygiene of the particular hotel. 4) The overseas respondents were very small and the researchers went on the ANOVA test instead. The results of ANOVA are the same with the chinese respondents; however, the significant level of testing is not high enough and the researchers said that further studies and more attention is needed for this aspect. 5) There was a different impact from different demographic areas. If in terms of the gender, females tend to be more concerned about how to eat and what to eat also the tourist destination, they will me more highly avoid SARs-infected areas. For the term age groups, younger people want to go out more than the elders. Also the most critical is the middle age group, they will be concerned more on how they would travel. Lastly, the more ages the more thinking towards hygienity.

Now the small economic units have some immediate response to the SARs virus and now we want to walk through the bigger pictures that contain the small economic units. The idea is on the business and how they are affected after the traveling aspects of people have changed as well as their saving habits.

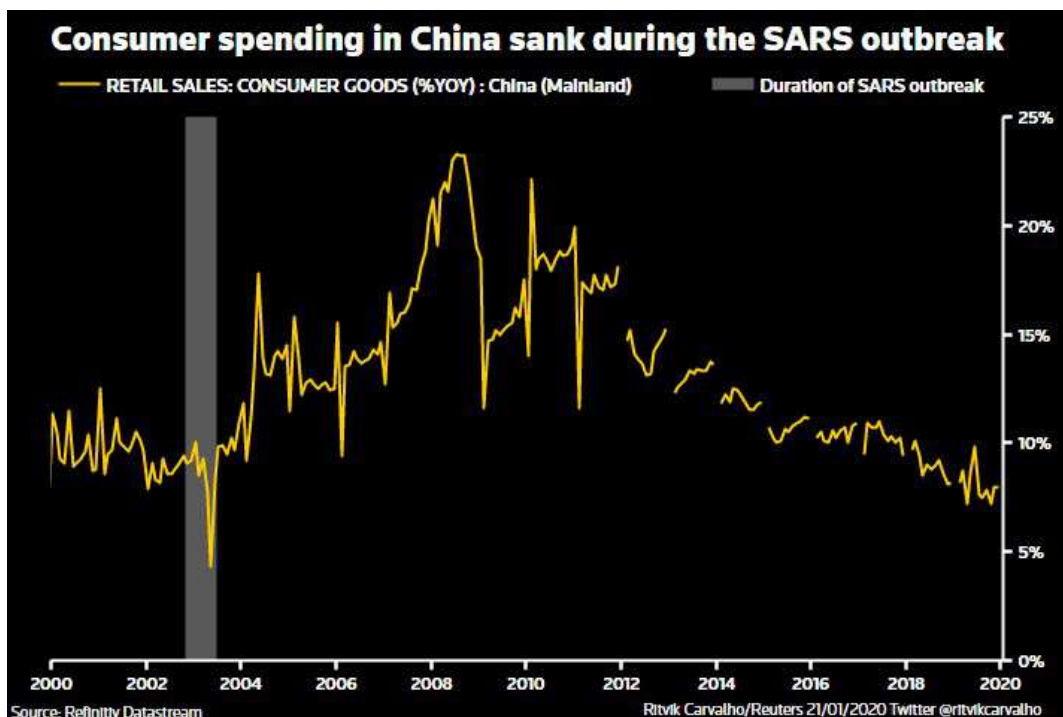
Macro-level effects

What will be discussed in this are the impact on the Chinese economies in 4 areas: first is the businesses which include travelling aspects in which is directly affected by the shocks, second is the shock to the retails sector where people went out less and will spend less , third is the saving behaviour since the SARs had happened and fourth is the quarterly GDP falls in China within the first quarter of 2003.

There was a study on the stock market indexes around the world (Srinivas Nippani & Kenneth M. Washer ,2004) stated that when the SARs occurred, the stock index in many countries went down but not significantly. However, in China as the outbreak originated, the stock market in both HangSend and the Shanghai Composite index plunged down. Since both indices have many of Chinese companies listed and at that time the consumer behaviour became more of an anxiety, the spending was slowing down which mainly on the travel basis. We proposed an example case of particular stock that is directly affected by the traveling which is Cathay Pacific Airways Public Company Limited, it is in the transportation sector which needed the tourists or the domestic travel to generate the revenue. At that time, the company stock price has been depressed by the force of low traveling and staying at a low level for a certain interval. Together with the whole market dropping down, it implies that not only the airways company is being hit by the shock, but also the other sectors that are also affected negatively but not directly. Due to the consumer behaviour changed, the next direct one was the hotel sector and the indirect are the retails and the entertainment and finally banking sector that is being suffered as well. The mechanism behind the stock market dropped was that the investment portfolio flow in China, at that time if the severity of SARs was massive, many sectors would suffer from the lockdown and travel banned. Then they will receive the lower amount of revenue and eventually lead to the negative profit or the losses that the firm faces. The loss will be generated into two ideas: first one is the losses will depress the equity of the firm where the equity part is considered as an ownership part where it is the shareholders wealth, when it is reduced it means those shareholders do not want to hold the shares and sell out. Or the second part which is the consequences in terms of bigger picture, when the firm faces losses means the cost reduction is needed therefore the layoff needs to occur and finally the spending of people will be depressed evenmore making the economic multiplier become reduced and the final destination is private savings,which goes to investment, when it is going down the investment will lower. So, the

losses of the firm will create the money outflow of the equity market or even bond market into the money market which is the cash or actual savings in the banks or by individuals themselves.

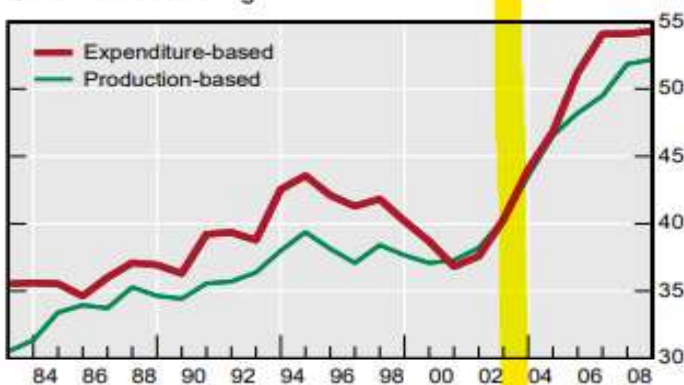
The retail sector also suffered from the outbreak which we can see in the graph (Refinitiv, 2020) that the retail sales growth of consumer goods dramatically decreased from the average growth year-on-year of 10% to the 4.3% growth. The key reason was from the lack of



economic activities outside, since people tend to be feared and not going outside as much as the period without SARs. Also there were behavioural changes, the spending tended to be less and went to the saving purpose instead(looking third point). In this case we can raise up the implication of this diagram, what is seen was the positive growth of the retail sales in each period of time since 2000 until now. The discussion we would like to raise was in 2000 to 2003 where it was before SARs happened. With high-single digit to low-double digit growth of the retail sales, it reflected the great expansion of Chinese economy as a whole. The consumption channel is considered as a good proxy to explain how that economy performed, for China it was a remarkable one. Hence, the falling level to 4.3% indicates that even though the outbreak had negative effects on China, it however can not yet make China fall from an expansion phase of itself.

The third one is the higher rate of saving which is depicted below (BIS or Bank of International Settlement Working Paper No.312, 2010). It is clear that prior to 2002, the savings rate of Chinese people using an expenditure-based is gradually reduced. They started to reverse the trend in 2001, and the SARs went on to hit in 2003. What is implied is that SARs did not only

Gross national saving



make people have a higher saving rate, it partly accelerated the saving behaviour of the Chinese people and partly changed their behaviour since then. Moreover, that time the savings did not have much negative impact to the China GDP due to the fact that the growth of money creation and the output were at a better rate.

The last one or the fourth is the short-term GDP fall using quarterly data and the growth term. In 1Q2003, the GDP of China decreased by a very huge amount of dropped which is 15% (OECD, 2020) QoQ. It was from the business sector that can not earn high revenue as before, as people spend less, the consumption and travel went down thus GDP as a biggest economic picture eventually. What is clear was the shock happened in a very short-term period which is the only one quarter in that 2003 year, and it later went back up to the high growth rate of 10% right after at the second quarter of 2003 in the same year, and it continues to grow at the faster pace later on. In accordance with the first point in the research of micro level units, the researchers state that the effect on the travel is in a very short period of time, when everything went back to the greed level the shock is relieved so the GDP recovered fast.

We are done analysing the macro level unit that had been affected by SARs and by the smaller unit discussed above. Now we are moving to the lessons part of what could be a relative measure to compare the COVID-19 with SARs also what we learned from the SARs and how we developed to today's world.

Lessons

From our research and what we have done reading, SARs is considered to be a non-massive severity level outbreak as it was effectively contained fast enough. We can develop today's world mainly on the effect on the people's attitudes toward traveling and living day to day basis during an outbreak. It is clear that we would be facing similar problems which are how people postpone the travels and the consumer's confidence effect in the short run. However, the Covid-19 today is still a massive one due to the poor containment act from the world level governments. So, the first lesson is that the outbreak can be severe or non severe due to how tensely the higher level reacted to it, but what can be certain is that people can live with the disease, not by having it, but can adapt to it socially and individually. They can even change their attitudes toward eating or going out habits, can even keep themselves away from the infected area same as they did in the past. The second lesson is that the newly outbreak is going to be relieved eventually, for the SARs case, it is understandable that it was a very short term negative shock, and the Chinese economy could be recovered. However, today's situation is the place where the outbreak hit when we have more severity of the virus and a high base of growth already unlike the Chinese growth that was at the base of an exponential. Yet we can still expect that the effect on the economy will decline sharply and will certainly might recover in a short period similar to post SARs period, but coming back to the pre-covid level would take time. As now we are not at that fast expansion level anymore like the past, the recovery will be gradually instead of sharply back. The last lesson is the consumer, any changes or shock to the economies is from consumer behaviours, they can determine and anticipate the economy. They can shape the economy as they have more power than the production side(in normal cases, not in some massive capitalist countries). The clear example is that when people have an attitude toward less consumption, the retail sales went down dramatically or when they do not want to travel, the airline stocks could be depressed.

P.S. As we focus on traveling with some economy, the idea of how SARs were mismanaged would not be included in this paper.

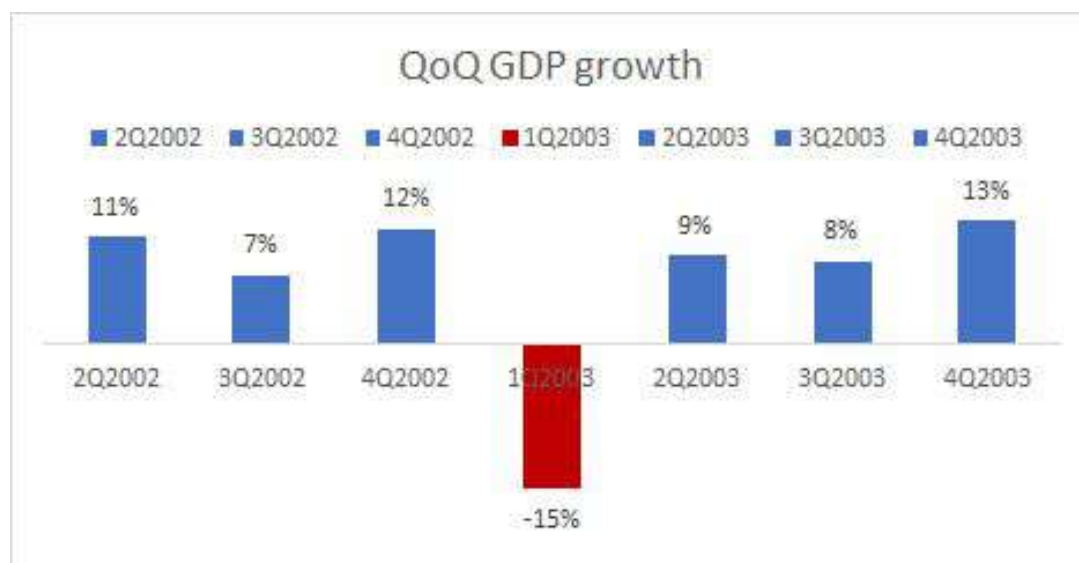
Thank you for your time

Appendices

1. Number of tourist arrival

No. of Tourists	1999	2000	2001	2002	2003	2004	2005
China	27047000	31229000	33167000	36803000	32970000	41761000	46809000
World	638602227	689646050	690513488	711141538	701698869	775453106	823378343

2. QoQ GDP growth of China



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