

**Taiwanese College Students' Change of Consumer Behaviors During
the Pandemic**

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Abstract

Due to the pandemic, the lockdown and stay home orders were quickly implemented around the world. Meanwhile, people had to adjust their daily life patterns and change their shopping and spending habits in order to cope with the new normal. The purpose of this study was to explore Taiwanese college students' change of consumer behavior during the pandemic. A total of 428 valid data were collected, and one-way ANOVA and t-test were used to analyze. The findings showed that most of the college students were able to balance their income and expenditures during the pandemic, due to the decrease of their spending on the unnecessary goods. Female college students have bought more items online than the male college students during the pandemic, such as cosmetics, clothing, and other accessories. Moreover, regardless to social classes and genders, convenience, price and discount were the main factors for college students to purchase online. In conclusion, the price is always the first consideration for college students when buying. This study provided useful information for retailers and marketers to implement appropriate strategies targeted on college students.

Keywords : College students, Change of consumer behaviors, Pandemic Era

摘要

在疫情大流行期間造成的社交距離管制導致人們的消費行為出現了重大的改變。消費者改變了自己的消費行為模式以應對世界的新常態，而這樣的行為模式改變更加速了消費者擁抱數位、健康、永續等趨勢。本研究目的是探討台灣大學生在疫情期間的消費行為模式之變化。在此研究中，消費行為之改變分為四個部分：在疫情期間的財務狀況、在疫情期間不同層面的消費行為之改變、在疫情期間購物模式的改變以及在疫情期間的衝動性消費行為。在問卷調查中，共收集 428 份有效問卷做分析。分析方式如下：利用 ANOVA 去分析來自不同社會階層家庭的大學生和疫情之下消費行為改變是否有所異同，而獨立樣本 t 檢定則用來分析不同性別的大學生在疫情之下消費行為模式的不同改變。研究結果顯示，大多數的大學生的經濟狀況在疫情之下並無太大的影響，其中的主要原因是他們減少了不必要的支出並更多的關注在基本需求上。然而不同性別的大學生在疫情期間的消費模式有所異同，根據數據指出女性大學生在疫情之下較男性在網路購物上花費更多在不同的商品上，主要差異為美妝用品、衣著及其他配件。另外，大學生在考慮網路購物上購買商品的因素和不同變項並無太大差異，大部分的大學生關注的購買因素為網購所帶來的便利性、以及商品的價格和折扣。總體來說，來自不同社會階層或是性別，價格是大學生決定購買的優先考量。

關鍵字：大學生、消費模式的改變、疫情

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INTRODUCTION

Background

The pandemic has led to the unprecedented crisis, it almost covered most of the dimensions. Due to the risk of infected by the virus, the governments were forced to declare the lockdown and stay-home orders. Most of the factories and supply chain have encountered the shortage of labors, which also caused the high percentage of unemployment. Meanwhile, most of people were struggled with the limited supply and their high demand. According to the law of supply and demand, prices are determined by the relation between supply and demand.¹ If demand exceeds supply, prices will rise. Because of the pandemic, people need to face with the spike of prices in the market, and try to balance their income and expenditure.

In order to control the virus's spread, the government announced stricter regulations on large-scale gatherings. People were unable to go outside as frequently as before due to the new rules. Many stores and businesses have suffered significant revenue losses. Because businesses are unable to balance revenue and expenditure, they are forced to close their doors during the recession. As a result of the widespread phenomenon, a large number of physical stores were forced to close.

These orders have drastically altered people's lifestyles; students are required to complete online courses at home, and businesses are being asked to distribute their employees to work isolated at home. As a result, the new normal has become an unavoidable change in the world. Not only has the pandemic caused economic disasters around the world, but it has also threatened people's mental health. Most importantly, during times of crisis, people's purchasing habits have shifted

¹ David Gale, "The Law of Supply and Demand," 3 (1955), <https://www.jstor.org/stable/24490348>.

dramatically. Because of the series of changes, people's consumer behaviors have been forced to change in many aspects.

According to the reports from Mckinsey company, though the world has begun to recovery and the reopening of economies from the pandemic crisis, there is no doubt that the period of lockdown has had a profound impact on people' lives. Before the pandemic, consumers usually have their own buying habits and usually don't change it easily.² However, the COVID-19 crisis has rapidly and massively changed their buying behaviors. Many researchers have divided the changes in different categories. The first change of consumer behavior is that the customers' spending behavior is back to basics and value.³ People have reduced spending in general, and they have reduced to buy the unnecessary goods during the pandemic. The change of behavior has showed their concerns about the economy.

Moreover, the loyal of the brand has become the secondary consideration to customers during the pandemic.⁴ As the economy has been greatly impacted by the pandemic, people felt insecure about the uncertainty of their financial status. As the price has become the initial factors to the customers, they have tried new brands as well as new places to shop.⁵ Beside price, convenience and availability are also the dominant factors which impacted the consumers' decisions about the location to buy.

Thirdly, the rise of the homebody economy has also become one of the major changes during the pandemic.⁶ Due to the pandemic, the stay-home orders and

² Tamara Charm, Ravi Dhar, and Stacey Haas, "Understanding and Shaping Consumer Behavior in the Next Normal," Mckinsey & Company, 2020 accessed July, <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/understanding-and-shaping-consumer-behavior-in-the-next-normal>.

³ Tamara Charm et al., "Consumer Sentiment and Behavior Continue to Reflect the Uncertainty of the Covid-19 Crisis," Mckinsey & Company, 2020, accessed October, 2020.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

lockdowns forced a massive percentage of the population to stay home much often than before. Hence, people not only need to work and learn from home, they have to solve any demand at home. Whether shopping, exercising, eating, or even entertainment, which led to the rapidly growth of homebody economy.

Fourthly, as the rapid growth of homebody economy, the e-commerce also developing drastically during the pandemic period.⁷ Since people need to stay home to keep away from the risk of the virus, they were forced to change their shopping mode to cope with the uncertainty world. The online shopping has become the alternative shopping mode around the world. And the online has covered widely type of categories, such as medicine, groceries, household supplies, and personal-care products. Even discretionary categories such as skin care and makeup, and other accessories show expected customer growth contrast with before the pandemic.

To deal with the drastically change of consumer behaviors, the companies have evolved their marketing strategies in order to follow the customers' new shopping mode. The center of new market strategies is to highlight the importance of decision-makers to concentrate on the customers.⁸ By perceiving on the customers' need, their new shopping habits, the companies can adjust their commodities. Therefore, through strengthen the customer shopping experiences and marketing communications.⁹ These marketing strategies will be best positioned to flourish in the next normal.

Furthermore, different group of consumers have different preference on the buying decisions. During the pandemic, the consumers also changed differently on

⁷ Tamara Charm et al., "The Great Consumer Shift: Ten Charts That Show How Us Shopping Behavior Is Changing," Mckinsey & Company, 2020, accessed August, <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/the-great-consumer-shift-ten-charts-that-show-how-us-shopping-behavior-is-changing>.

⁸ James M.Crick and DaveCrick, "Coopetition and Covid-19: Collaborative Business-to-Business Marketing Strategies in a Pandemic Crisis," 88 (July 2020), <https://dx.doi.org/https://doi.org/10.1016/j.indmarman.2020.05.016>.

⁹ Tamara Charm, Ravi Dhar, and Haas

their shopping behaviors. Consumers with different income, age, gender and other variables were influenced by the pandemic in verified ways.

However, most of the study population in related research did not target on the college students from different social class, or only focus on Taiwanese college students in the change of their consumer behaviors during the pandemic. In this study, I would like to focus on the specific group and explore how the pandemic impacted their consumer behaviors.

Motivation

Since the early 2019, our lives have been changed drastically by the pandemic. The global economy has become worse than usual, the cut off of the supply chains has risen the crisis of global economy. Among the changes of many dimensions during the pandemic, people's change of consumer behavior has caught many experts' eyes. The change of consumer behavior has extended to many different ways. Such as the marketing strategies, government policies, the change of shopping modes are correlated. However, most of the literature reviews were mentioned about the general change of consumer behaviors in many areas except for Taiwan. There is no related study which specifically targeted on Taiwanese college students' change of consumer behaviors during the pandemic.

College students as a special consumer group, they not only have great consumer spending power, their consumer attitudes are always being ahead of the times. College students also have great knowledge about the technology and advanced technical skills in the digital world, which have contributed to the economy of online purchasing a lot. Most importantly, most of the college students have not fulfilled the financial independence and mainly rely on their parents' financial support. Due to the

pandemic, the household income has declined in average, which might impact the college students' financial status at the same time. As a group with strong purchasing power in Taiwan, their consumer behaviors are the decisive factors to the marketers. The investigation of college students' consumer behaviors during the times of crisis will reflect their reactions towards similar situations, while it can be a good data for the marketers to make the fitted strategies.

Research Purpose

The purpose of this study is to investigate Taiwanese college students' change of consumer behaviors during the pandemic.

Research Questions

1. What were the disparities in the changes of consumer behavior among Taiwanese college students from various socioeconomic classes during the pandemic?
2. What were the changes of Taiwanese college students' consumer behavior during the pandemic?

Contribution

The study's findings not only concentrated on how college students' consumer behavior changed during the pandemic but also aimed to analyze the relationships between that change and the various social classes they came from. The results of this study may be useful to marketers in helping them choose the best marketing approaches for college students from various social classes. It explains how the pandemic has influenced and shifted their purchasing behavior, and it can benefit people in getting ready to handle the new normal when dealing with future crises.

Limits

The limits of the study might be the problem of observing the consumer behavior of college students from different forms of universities in person. First of all, social distance is the major concerns during the pandemic, to observe college students' consumer behavior is quite risky. Also, the interview is not a good approach as well, since the study population come from different forms of universities and come from different areas, it is not easy to find the students who are willing to accept the interview who are also meet the population requirements. Therefore, online survey is the ideal way to collect the college students' opinions and the change of their consumer behavior.

Delimits

The delimits of the study is that study population is focus on Taiwanese college students who come from different areas in Taiwan, it is hard to reach every spots of the universities and interview the students in person. From literature reviews, the seldom researchers have focused on Taiwan, especially the universities from different areas. The way to get the data is through online survey, in survey study, the questions cannot compose of over 40 questions. Because too much questions could influence people's willingness to fill in the questionnaire. On the other hand, the survey study is not able to get the detailed answers like the interview study.

LITERATURE REVIEW

The research purpose and research questions were followed by the literature review. It provided an overview of the related consumer behavior research and theories that corresponded with the study. Furthermore, the following section has provided an overview of how various factors affect consumer behavior during the pandemic. The key concepts and theories will be introduced in this literature review as a medium for analyzing the research as well as exploring the gaps in the research and determining the reasons for these behavioral changes in consumer decision-making processes during times of crisis.

Consumer Behavior

Definition of Consumer Behavior

There are many marketer experts has given different explanations of “consumer behavior.” In early times, the scholars perceive consumer behavior as how the consumers decide to buy the products. Nowadays, the contemporary explanations have broader interpretation of consumer behavior.

The most common definition of consumer behavior is the actions and decision processes of people who purchase goods and services for personal consumption.¹⁰ According to the book “Consumer Behavior” written by Frank R. Kardes, which has mentioned about the concept of consumer behavior.¹¹ Consumer behavior also involved all consumer activities associated with the purchase, use, and disposal of goods and services, including the consumers’ emotional, psychological condition that

¹⁰ Frank R. Kardes, Maria L. Cronley, and Thomas W. Cline, *Consumer Behavior* (South-Western, Cengage Learnin, 2008).

¹¹ Ibid.

prompt them to make the behavioral reactions.¹² The consumers are not only referring to individual buyers; it can be organizational consumers as well.¹³ The individual buyers they purchase only to satisfy their own needs, but the organizational consumers are usually get their own profit by purchase for produce the goods or services for other consumers.

Theory of Consumer Buying Behavior

According to Martin Fishbein and Icek Ajzen's Theory of Reasoned Action, rational decision-making is the chief element of what drives consumers to make purchases.¹⁴ The decision making is determined by the consumer's attitude and subjective norms. On the other hand, this theory was used to predict consumer's behavior based on their attitudes, norms and intentions.¹⁵ Consumers don't just take their own attitudes to make the buying decisions, and others people's ideas would take as part of the consideration when making the buying decisions. Hence, as long as the seller convince the consumers to believe that the decision can bring positive result, they will more willing to take the buying actions.

According to Engel Kollat Blackwell Model, this model is developed from the theory of reasoned action.¹⁶ The concept of the theory has sorted the consumer's buying behaviors into four stages: information input, information processing, decision process, and variables influencing the decision process.¹⁷ The first stage is input,

¹² Ibid.

¹³ Ibid.

¹⁴ Thomas Madden, Pam Ellen, and Icek Ajzen, "A Comparison of the Theory of Planned Behavior and the Theory of Reasoned Action," *Personality and Social Psychology Bulletin* 18 (02/01 1992), <https://dx.doi.org/10.1177/0146167292181001>.

¹⁵ David Trafimow, "The Theory of Reasoned Action," (August 2009), <https://dx.doi.org/10.1177/0959354309336319>.

¹⁶ Ibid.

¹⁷ Jisana T. K., "Consumer Behavior Models: An Overview," 1, no. 5 (May 2014).

which is seen as the most vital part to impact the consumers' decision making.¹⁸ Because the consumers can use the information which they received from "information input" in the market to compare with their personal experiences. Hence, the first stage will direct to influence the second stage, which is processing information.¹⁹ When the consumers start to process the information, they start with the decision process.²⁰ The decision process is depends on the consumer' buying intention and attitude. The thoughts about the consumers' personal experiences and their expectation of the products are all critical for them to make the decisions at the end.

The Factors of Decision Making Process

There are two important factors which may influence consumers' buying decisions. According to Hoyer & Macinnis, they believe that consumer behaviors are very subjective and will not make the buying decisions for no reasons.²¹ Since decision making process is subjective, there must be having both external and internal influences that affect consumer's decision making.²² Based on the external and internal factors, consumers will cultivate their own shopping habits and specific shopping modes.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Wayne D. Hoyer, Deborah J. MacInnis, and Rik Pieters, *Consumer Behavior* (South-Western College, 2012).

²² Ibid.

Internal and External Factors of Decision Making

According to Kotler, consumer behavior is the outcome of interactions among cultural factors, social factors, personal factors and psychological factors.²³ Firstly, cultural factors are related to consumer values and behavior. This factor was composed of norms, traditions, religion, and others.²⁴ Hence, cultural factors have taken a crucial part of consumer buying behaviors. Consumers' values, attitudes, beliefs and opinions are all shaped by their culture.²⁵ That is, this factor also forms consumers' attitude to make the specific buying decisions.

Secondly, Social factors shape consumer's buying decision by the environmental circumstances.²⁶ Personal factors consist of consumers' age, stage of their life, work, financial status.²⁷ Moreover, personal factors also relate to the consumers' personality and their lifestyle. The psychological factors consist of the consumers' buying motivations, their perception of the goods or services, the emotions when making the buying decision, and memory about the buying process.²⁸ The markets always observe the different group of consumers' needs and make specific marketing strategies to target on the certain customers. If the marketers want to put the eyes on the college students, they need to make sure that the price of the commodities are affordable for the college students. Since college students have not fulfilled financial independent yet, cost performance ratio is the critical factor for college students to consider when making the buying decisions.

²³ M. Joseph Sirgy, "A Conceptualization of the Consumer Behavior Discipline," *Journal of the Academy of Marketing Science* 13, no. 1 (1985/01/01 1985), accessed 2022/11/09, <https://dx.doi.org/10.1177/009207038501300109>.

²⁴ Ibid.

²⁵ Tahmid Nayeem, "Cultural Influences on Consumer Behaviour," 7 (August 2012), <https://dx.doi.org/10.5539/ijbm.v7n21p78>

²⁶ Metta Padmalia Finolda, "The Analysis of Consumers' Purchasing Factors on Boga Service Start-Up," 8, no. 1 (March 2019), <https://dx.doi.org/https://doi.org/10.37715/jee.v8i1.1114>.

²⁷ Ibid.

²⁸ Ibid.

Change of Consumer Behavior Under the Pandemic

Change of Consumer Behaviors

Due to the pandemic, the world has changed by many dimensions. The new purchasing behavior has started to operate in our lives. The quarantines period, the lockdown policies have restricted people's activities. Because of the regulations, many offline shops were forced to closed and lost huge amount of profits. Many supply chains are facing with potential risks, bankrupts and other uncertainties. People start to cultivate new buying habit; thus the marketing strategies has changed to meet the new trend.

There are four different aspects of consumer behaviors have changed during the pandemic. According to Global Consumer Insight Survey in 2020, the first change of the consumer is that people start to use more comparison sites to look for fairly price goods.²⁹ Due to the financial issue came up with the pandemic, the price has become the initial factors to consider when making the buying decisions.

According to Maslow's theory of The Hierarchy of Needs, human demands are ranked in order of greatest to greatest urgency, starting with physiological needs which are the most urgent and ending with self-actualization which are the least urgent.³⁰ Take college students as example, under the normal circumstances without crisis and disaster happened, they will make the buying decisions that out of the necessities which is belong to self-actualization level. When Covid-19 spreads, most of them will reduce the unnecessary needs, and turn to the basic needs.

²⁹ PwC, "Consumers Respond to Waves of Disruption," last modified June, 2022, <https://www.pwc.com/gx/en/industries/consumer-markets/consumer-insights-survey.html>.

³⁰ Rafae Ahmad, Robin Jonsson, and Yuki Tsuchida, "Covid-19's Effect on Consumer Decision-Making in Millennials," (05-24 2021), <https://hj.diva-portal.org/smash/get/diva2:1561838/FULLTEXT01.pdf>.

As people start to compare the price of the commodities, the locations where consumers choose to buy have changed at the same time. Moreover, because of the concern of health issue, online shopping has become the new trend of shopping mode.³¹ Online shopping not only provides convenience, but it also reduces people's fear of the pandemic. Based on these new consumer behaviors, many merchants have decided to open online stores while permanently closing physical stores. Not only they can save the cost in the business, but meet the consumers' need in the market.

The Impulsive Buying Behavior

Impulse buying is impacted not simply by internal psychological factors but also by external, market-related stimulation.³² According to Rook in 1987, Impulsive consumption is defined by sudden, intense urges that drive people to make rash decisions about their purchases without much thought.³³ Furthermore, psychological of panic buying during the moment of crisis could change people's buying behavior. According to Wilkens and Dholakia, a perception of scarcity is strongly linked with panic buying behavior and hoarding behaviors increase if the scarcity develops for the immediate necessities.³⁴ The feeling of insecurity which can also stimulate people's purchasing power. The marketing would take use of crisis and produce related products in order to attract people's attention, they use consumer psychology to make huge profit by implying people the scarcity of the products may hard to get. For instance, at the beginning of the pandemic, the masks, hand sanitizer and rubbing

³¹ PwC

³² Gopalkrishnan Iyer et al., "Impulse Buying: A Meta-Analytic Review," *Journal of the Academy of Marketing Science* 48 (07/09 2019), <https://dx.doi.org/10.1007/s11747-019-00670-w>.

³³ Dennis W. Rook, "The Buying Impulse " 14, no. 2 (September 1987), <https://dx.doi.org/https://doi.org/10.1086/209105>.

³⁴ a S.M. Yasir Arafat et al., "Psychological Underpinning of Panic Buying During Pandemic (Covid-19)," 289 (May 6 2020), <https://dx.doi.org/10.1016/j.psychres.2020.113061>.

alcohol are seen as scarce goods. These products have suddenly become the essentials goods in our daily life. Due to concerns about health and safety and the scarcity of commodities, people began purchasing items irrationally, resulting in the phenomenon of impulsive and panic buying.

According to Frieda Mendelsohn, the quantity demanded is greater than the quantity supplied at the given price is called “excess demand”, which will eventually lead to shortage.³⁵ The shortage of the epidemic prevention products, that will eventually cause panic buying behavior. The pandemic has caused people’s psychological problems, about the fear of not able to attain the enough supplements or other fears of other factors might lead to the impulsive buying behaviors. Hence, the consumers need to make sure they have adequate goods which can let them to survive in the times of crisis.

Consumer Behavior of College Students

Hierarchy of Education in Taiwan

Social stratification not only reflect on the society, but also rooted in the educational system in Taiwan. Social stratification refers to a more persistent hierarchical state formed by different roles and positions of a social system.³⁶ Due to their different privileges, prestige, influence, and power. Social stratification exists not only in traditional societies but also is an inevitable phenomenon in modern societies. In other words, social stratification is a form of hierarchy differentiation, and the criteria used to differentiate social stratification vary over time and place.

³⁵ N Gregory Mankiw, *Principles of Economics* (Cengage Learning, 2020).

³⁶ Alan C. Kerckhoff, "Education and Social Stratification Processes in Comparative Perspective," 74, no. *Current of Thought: Sociology of Education at the Dawn of the 21st Century* (2001), <https://www.jstor.org/stable/2673250>.

In many countries, universities are seen as one of hierarchy type. The ranking of the universities represents social inequality which may also leads to the class duplication. The universities college students entered usually depends on the student's backgrounds. If parents with high income and good social status, there's more possible that their children will enter the top universities. In Taiwan, in order to increase people's educational level, the government has education from elite type to universal access type. Though we can see the success of the expansion of higher education in recent years, which also caused the educational stratification and reproduction of class.³⁷ According to the related research, there are evidence showed that students from higher average household income family, they have higher chance of entering the national universities. On the contrary, the students from low income family are more possible to join private universities. The expansion of higher education has led to the differentiation of college levels, with children of the advantaged class attending highly selective public universities with ample teaching resources.³⁸ The children of middle and lower-class families are more likely to attend private or technical universities with higher tuition fees and fewer teaching resources. This is the common process of the expansion of higher education in Taiwan, children from middle and lower class are more likely to enter private or technical universities with higher tuition fees and fewer teaching resources.

Nowadays, the labor market is full of bachelor's degrees, it is relatively difficult for employers to identify the ability of human resources. Due to the expansion of higher education employers generally use the reputation of the school as the basis for

³⁷ P. Bourdieu and J.-C. Passeron, "The Education System as an Environment of Reproduction of Social Inequality " 19 (June 2016), <https://dx.doi.org/https://doi.org/10.15421/171638>.

³⁸ Yi-Chun Chang and Thung-Hong Lin, "How Does the Expansion of Higher Education Reproduce Class Inequality? The Case of Taiwan," 15 (December 2015), <https://dx.doi.org/10.3966/168020042015121502003>.

judging people's ability.³⁹ Graduates from high quality and reputable schools have more job opportunities and higher salaries, especially in a labor market with high unemployment rates. The diplomas from elite schools are more likely to have more competitiveness than other diplomas. Additionally, students from lower-class or middle-class backgrounds are more likely to enroll in private or technical colleges, where tuition is substantially greater than at public universities. In most cases, students are unable to pay their tuition and must either seek for a student loan or get a part-time work to cover the cost. Under these conditions, there is a low likelihood that students from the middle or lower classes will enroll in graduate programs.

The Status Attainment Model

The concept of social stratification was first promoted by Kerckhoff.⁴⁰ The model of educational stratification was that sons will inherit the social class from their father. After the rise of women consciousness, the model has been changed as well. The model of social stratification has included parent socioeconomic status, not only be exclusive for men anymore. The Status Attainment Model assumed that parents' occupation, educational level and income is influential to their children.⁴¹ The children's educational level and their future career can be preceded by their parents' socioeconomic status. The Status Attainment Model has three sections, the first section focus on the relation between social status and educational attainment.⁴² Education is one of the most influential factors on social stratification. The degree that young people have taken from educational institutions will continue to impact their

³⁹ Ibid.

⁴⁰ Alan C. Kerckhoff, "Institutional Arrangements and Stratification Processes in Industrial Societies," 21 (1995), <https://www.jstor.org/stable/2083414>.

⁴¹ Ibid.

⁴² Ibid.

lives after graduating from school. The position in their career is also correlated to their educational achievement. The second section focus on the relation between educational attainment and the first job that children got after graduating from the school.

As a result, the educational institution is referred to as a "sorting machine," because it assigns its members to various classes based on their educational achievements. These theories assume that as the proportion of the labor force with postsecondary education increases, the relationship between socioeconomic background and education will weaken. The original goal was to broaden the scope of education, but social stratification has been ingrained in education for several decades.

Socioeconomic Status

SES has been widely used in many fields, including psychology, economics, and sociology. SES has an impact on many aspects of society, including human physical and mental health. SES analysis may also reveal inequities in health distribution, resource distribution, and quality of life. SES has been a widely used tool all over the world, including in Taiwan.

In addition to financial resources, socioeconomic status (SES) also takes into account one's degree of education, financial security, and self-perceived social standing and class. In the United States, determining a person's social class is based on their occupation, income, and degree of education; the results are determined after the three variables have been computed. According to Hollingshed in 1958, the socioeconomic status is based on the weighting of educational level and occupation. It

also has been used in Taiwan for educational research in the past.⁴³ However, the measurement was built for over fifty years, which is not suitable for Taiwan's society today. Treiman's international prestige scale (SIOPS) and Goldthorpe's class categories (EGP) have been commonly used in the past.⁴⁴ It developed a set of international standard occupational prestige scales based on the International Standard Classification of Occupations (ISCO).⁴⁵ This New Socio-Economic Status Scale can be used not only for cross-national comparative studies, but also for national studies on education and social stratification in Taiwan.

However, this new scale was primarily adapted from a foreign classification framework, and in addition to being overly complex, it failed to take into account some specialized vocations that are unique to Taiwan. As a result, Taiwanese academics have developed a new one based on the New Socio-Economic Status Scale. The new SES scale may be a suitable tool to accurately assess the social class of college students based on their Taiwanese family origins.

Consumer Behavior of College Students

Generation Z, in broad terms, refers to the emerging generation born between 1995 and 2010, aged 9 to 24 years old.⁴⁶ As group of generation z, college students are particularly unique market consumers. College students are also known as the mobile generation, which referred to as being more interested in technology than previous generations.⁴⁷ They prefer to use smart devices like mobile phones and

⁴³ Harry B.G.Ganzeboom, Paul M.De Graaf, and Donald J.Treiman, "A Standard International Socio-Economic Index of Occupational Status," 21, no. 1 (March 1992), [https://doi.org/10.1016/0049-089X\(92\)90017-B](https://doi.org/10.1016/0049-089X(92)90017-B).

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Mirna Leko Šimić and Ana %J Ekonomski vjesnik Pap, "Generation Z Buying Behavior Change in the Covid-19 Pandemic Context," 34, no. 3 (2021).

⁴⁷ Mustafa Özkan, "Generation Z - the Global Market's New Consumers- and Their Consumption

tablets to actually live out their social lives. People now perceive time and space differently because of the way they consume things. Internet shopping has become generation z's preferred method of shopping, and it is currently displacing shopping malls and physical stores all over the world.⁴⁸ On the other hand, consumer behavior among college students has grown to be one of the key factors that determines whether or not marketers will adjust their marketing methods.

Despite the fact that the vast majority of college students have received financial assistance from their parents. They continue to be one of the most rapidly growing consumer markets. Part-time jobs are popular among college students who want to supplement their income and cover all of their monthly expenses. However, most of them do not need to shoulder a significant burden in raising a family at their age. Instead, these young adults have more freedom than high school students and do not have as many responsibilities as full-time workers. In some ways, college students have more freedom than others to purchase items without regard for cost.

Furthermore, the quality of consumption among university students is improving, with the proportion of their consumption used to meet basic survival needs has decreased significantly. These young adults are easily swayed by fashion trends, easily impacted by their peers. That is, they may make a purchase decision based on emotion rather than logic. Aside from that, college students are the most capable of utilizing new technology.⁴⁹ E-commerce has taken off in this era of technology, and in recent years, college students' online shopping has reached unprecedented levels. These characteristics explained why they have such great purchasing power.

Habits: Generation Z Consumption Scale," *European Journal of Multidisciplinary Studies* 5 (05/19 2017), <https://dx.doi.org/10.26417/ejms.v5i1.p150-157>.

⁴⁸ Ibid.

⁴⁹ Constantinos-VasiliosPriporas, NikolaosStylos, and Anestis K.Fotiadis, "Generation Z Consumers' Expectations of Interactions in Smart Retailing: A Future Agenda," 77 (December 2017), <https://dx.doi.org/https://doi.org/10.1016/j.chb.2017.01.058>.

Change of College Students' Financial Status

Because of the pandemic, most prices have risen significantly more than usual. The lockdown has resulted in a high rate of unemployment. The family was almost entirely affected by the economic crisis. We can predict that college students who rely on their parents' financial support will see a decrease in their financial situation. Furthermore, the increase in unemployment has reduced the opportunity for college students to work part-time. With these circumstances, college students' standard of living has deteriorated.

There are various kinds of college students. One advantage is that they have their parents' financial support, which allows them to spend more money on products other than necessities. The other type of college student is one who must work part-time to cover their living expenses. The standard of living for college students may differ depending on their financial situation. Their spending habits may have shifted slightly since the pandemic began to spread around the world. The COVID-19 pandemic has created two economic situations: those who were able to deal with the pandemic's side effects and those who struggled to make ends meet.⁵⁰ As a result of the COVID-19 epidemic, people who were able to deal with the pandemic's side effects and those who were struggling to make ends meet are in two different economic situations. The emerging pandemic phenomenon demonstrates that college students from various socioeconomic backgrounds will exhibit two distinct purchasing patterns. One group of students will spend less on unnecessary purchases while still attempting to meet the bare minimum. The alternative is that students who are not severely affected by the pandemic will continue to behave normally when making purchases.

⁵⁰ Catherine Tymkiw, "How Covid-19 Changed Our Saving and Spending Habits," 2021, accessed September 28, <https://www.investopedia.com/how-covid-19-changed-our-saving-and-spending-habits-5184327>.

Change of College Students' Consumer Behavior

Prior to the pandemic, college students were defined as a group prone to impulsive purchasing. It is not difficult to attract college students' attention and make the purchasing decision as long as the price is reasonable. According to Maslow's hierarchy of needs, the pandemic has brought this group back to basic needs.⁵¹ In order to deal with the economic crisis, college students have reduced their purchasing habits. During this time, they also reduced their purchases of unnecessary goods. Most college students have reduced their purchasing frequency compared to before the pandemic era began. During the pandemic, most college students focused their purchasing on basic necessities, such as food. Furthermore, the shopping habits of college students have shifted as a result of the pandemic. According to the study, college students have increased their use of online shopping as a result of the pandemic.⁵² Prior to the pandemic, college students were the age group that did the most online shopping. The pandemic has even increased college students' online shopping habits.

Consumer's Reaction During Times of Crisis

The pandemic has changed college students' purchasing habits, which has also affected where they want to purchase goods. Even though it is the safest and most practical method of shopping, online shopping has emerged as a new trend in the global economy. Due to the lockdowns, many individuals will opt to purchase products for the prevention of epidemics in order to replenish these necessary supplies at home or as presents for their loved ones. These kinds of actions have prompted

⁵¹ Joseph E. Gawel, "Herzber Herzberg's Theor S Theory of Motiv Y of Motivation and Maslow' Ation and Maslow's Hierarchy of Needs " 5 (1996), <https://dx.doi.org/> <https://doi.org/10.7275/31qy-ea53>.

⁵² S.M. Yasir Arafat et al.

irrational or panicky purchasing. When making purchases, college students frequently imitate the fashion or their friends. The herd effect can be used in marketing strategies to entice the younger generations to acquire as many products as possible. In order to meet people's needs in the post-epidemic era, many offline stores have converted to online stores.

METHODOLOGY

Research Design

This study was designed as a quantitative survey. The goal of the survey was to look at how Taiwanese college students' purchasing habits changed during the pandemic. There were four sections to the questions. The first section looked at college students' financial situations during the pandemic. The second section was about how consumer behavior changed during the pandemic. Such as a decrease in unnecessary spending or an increase in online shopping during the pandemic. Such as a decrease in unnecessary spending or an increase in online shopping during the pandemic. The third component was to observe changes in college students' spending habits, such as the increased use of food delivery during the pandemic. The final section of the survey focused on impulsive purchasing during the pandemic. These four indicators can be interpreted as changes in consumer behavior during the pandemic. Following the collection of data, various variables such as social class and gender were used to analyze the differences in consumer behavior during the pandemic.

Sources of Data

The questionnaire was created using an online Google form. A distributed online questionnaire can reach potential respondents quickly and without regard to time or location. Furthermore, the online survey makes it simple to edit and code the data. The questionnaires were distributed via various social media platforms, including Facebook, Instagram, and Line. The most efficient way to distribute the questionnaire was to send private messages to friends and classmates, who helped me share the survey with potential respondents.

Instrumentation and Data Collection

First and foremost, some of the questions in this questionnaire were created based on a review of the literature. There were several sections to the questionnaire. The first section discussed demographic variables such as gender, age, residence, monthly income and income sources, school location, and respondents' social class. Additionally, the four survey sections were created using the Likert scale. The first portion discussed how the epidemic had an impact on people's financial situation. This section was separated into a few questions: Has the respondents' average monthly income fallen since the pandemic began? Has the respondents' monthly spending dropped compared to before the pandemic? Do you find it more difficult than before the pandemic to manage your income and expenses? Have you spent less money than you did before the pandemic? Through these inquiries, it is possible to look at how their financial situation has changed, and a Likert scale was used to assess how much the epidemic has affected them.

The second section discussed how consumer behavior changed as a result of the pandemic. The major goal of this section was to determine whether college students have increased their expenditure on certain commodities while simultaneously decreasing their spending on other items. The third section discussed how consumer purchasing patterns have changed, such as the rise of internet shopping and the decline of in-person shopping. In addition, the rise in home cooking and the use of food delivery services were both explored in this section.

The fourth part was about the frequency of impulsive buying behavior, and impulse buying tendency. This part was to explore the relations between people's mindset and the influence of the pandemic. After testing the reliability of the design

of the questionnaire, it was posted on many platforms to collect the data. There were 428 respondents have received in total.

Data Analysis

The tool for data analysis was SPSS, and the data came from the online survey which was designed to explore the change of Taiwanese college students' consumer behavior. The questionnaire was delivered from Google form and posted on many platforms. Among the responses, some respondents' answers are not valid. The invalid data were excluded from the data collection, and the rest of the valid data were used for data analysis. Therefore, only 428 responses were used for data analysis.

The following data analysis included independent sample t-test and one-way ANOVA. The analysis was used to test the research questions on how college students changed differently on their consumer behaviors. Their financial status, change of the consumer behavior, change of shopping mode and the mindset of impulsive buying behavior during the pandemic.

The sections of 5 point Likert scale were used independent t-test and one-way ANOVA to analyze the data. T-test and one-way ANOVA were used to test the comparison of multiple attribute variables, such as gender, grade, residence, monthly income, social classes and so on.

Other than that, the analysis of multiple choices section was operated by crosstabs. From this analysis, the results can examine the respondents' preference for online shopping and the priority factors they have considered when making buying decisions.

The Reliability Analysis

In this questionnaire, there are three constructs in total. The financial status under the pandemic, change of consumer behavior under the pandemic and Impulsive buying behavior under the pandemic were included.

$(ba1+ba2+ba3+ba4+ba5+ba7+ba8)/7$ represent financial status under the pandemic ($a=0.721$).

$(ca1+ca2+ca3+ca4+ca5+ca6+ca7+ca8+ca9+ca10+ca11+ca12+ca13+ca14+ca15)/15$ represent change of consumer behavior under the pandemic ($a=0.786$).

$(fa1+fa2+fa3+fa4)/4$ represent impulsive buying behavior under the pandemic ($a=0.872$). The value of Cronbach α are all above 0.7. Thus, the reliability is reliable.

The Reliability Analysis

Constructs	Cronbach's Alpha	Item
Financial Status under the pandemic	0.721>0.7	7
Chang of consumer behavior under the pandemic	0.786>0.7	15
Impulsive buying behavior under the pandemic	0.872>0.7	4

DATA ANALYSIS

Introduction of the Data

The questionnaire was designed to investigate Taiwanese college students' changes in consumer behavior as a result of the pandemic. Taiwanese college students from various social classes comprised the study population.

The survey was distributed to Taiwanese college students from July 1st to September 14th, 2022. The questionnaire was distributed through Facebook clubs run by Taiwanese college students. The primary goal of these clubs is to assist one another in completing the research survey and attempting to obtain a sufficient sample size for college students. Aside from that, the questionnaire was being circulated among friends on Line and Instagram. By asking friends to distribute the questionnaire, more college students from various universities were contacted. The final sample size was 428, and SPSS was used to analyze the data.

College Students' Profile of the Data

The collected data not only included basic demographic variables, but also investigated the respondents' attitude towards the changes of their consumer behavior during the pandemic, and so on. This data was main to analyzed what have changed the college students the most during the pandemic. The detailed statistics were shown in **Table 1**.

The majority of respondents were female, according to the basic demographic variables. Females accounted for 78.8% of the total. Furthermore, senior and junior students were the majority of respondents. The majority of the students came from southern and northern universities. And students from the south outnumbered those from the north. Furthermore, 65.5% of college students attended private universities.

Lastly, as for the social classes, most of the people belonged to upper-middle class, middle class and working class. Each group has fairly covered 30% of the respondents. (See the whole information on **APPENDIX B 1**)

Table 1 Demographic Information

Attribute	Demographic	Number	Percentage
Gender	Female	335	78.8%
	Male	90	21.2%
Grade	First year	19	4.5%
	Second year	25	5.9%
	Third year	213	50.1%
	Fourth year	136	32%
	Others	32	7.5%
	Location of the school	North	118
Central		45	10.6%
South		252	59.2%
East		9	2.1%
Offshore		2	0.5%
Social Class	Upper Class	135	37.3%
	Middle Class	107	29.6%
	Lower Class	120	33.1%

Since this study has two research questions, the following data are divided into few blocks. Furthermore, the interference variables including gender, institution of the school, monthly income and expense, social class are used to analyze Taiwanese college students' change of consumer behavior under the pandemic. Based on the research purpose of this study, the author set up four research questions based on the three indicators. The two questions were as follow:

1. What were the disparities in the changes of consumer behavior among Taiwanese college students from various socioeconomic classes during the pandemic?
2. What were the changes of Taiwanese college students' consumer behavior during the pandemic?

Factor Analysis

After collecting questionnaires and discarding useless ones, the total number of questionnaire was 428. Data was analyzed and processed with SPSS. There were two steps in data analysis: first, narrowing down the attitudinal questions into fewer factors with factor analysis, and then using the factor scores for further analysis.

There were three attitudinal scales narrowed down by factor analysis, the first section was about the financial status during the pandemic. The sample size was 428. As its KMO⁵³ was .839 and the Bartlett' test of sphericity was .000. The second section was about the change of consumer behavior in many life aspects during the pandemic. The sample size was 428. As its KMO was .804 and the Bartlett' test of sphericity was .000. The third part was about the impulsive buying behavior during the pandemic. The sample size was 428. As its KMO⁵⁴ was .825 and the Bartlett' test of sphericity was .000, all of the sample above were adequate for factor analysis.

According to Wu, “factor analysis aims to find the structure from the data and try to explain the group of variables which have connection via few factors. As such, factors can cover most of the original information from variables.”⁵⁵ Hence, factor analysis can be appropriate on examining collected data. Furthermore, after the factors are identified, they should be named.

⁵³ KMO (Kaiser-Meyer-Olkin) is a statistic ,which locates between 0 to 1, and with the number gets bigger, the common factors between variables increase. Here is the rule: $0.9 \leq \text{KMO}$ (marvelous) $0.8 \leq \text{KMO} \leq 0.9$ (meritorious) $0.7 \leq \text{KMO} \leq 0.8$ (middling) $0.6 \leq \text{KMO} \leq 0.7$ (mediocre) $0.5 \leq \text{KMO} \leq 0.6$ (miserable)

⁵⁴ KMO (Kaiser-Meyer-Olkin) is a statistic ,which locates between 0 to 1, and with the number gets bigger, the common factors between variables increase. Here is the rule: $0.9 \leq \text{KMO}$ (marvelous) $0.8 \leq \text{KMO} \leq 0.9$ (meritorious) $0.7 \leq \text{KMO} \leq 0.8$ (middling) $0.6 \leq \text{KMO} \leq 0.7$ (mediocre) $0.5 \leq \text{KMO} \leq 0.6$ (miserable)

⁵⁵ Ming-long Wu, *Spss Wen Juan Tong Ji Fen Xi Shi Wu Cao Zuo Yu Ying Yong*, 2 ed. (Taipei: Wu-Nan Book Inc., 2009).

Four factors, produced with factor analysis on the collected data, represented that there were four aspects in this data (see **Table 2**). Due to the convenience of understanding and clarifying, four factors were named by inferring to each of the questions with factor loading greater than 0.4.

Table 2 Factor Analysis of Taiwanese College Students' Change of Consumer Behavior

Factors	Code	Questions	Factor loadings
1. <i>Impact of Financial Status</i>	<i>Decrease of disposable income</i>	ba4 Have your disposable income has decreased due to the outbreak?	.837
	<i>Decrease of personal assets</i>	ba3 Have your personal assets (savings) decreased due to the outbreak?	.816
	<i>Decrease of monthly income</i>	ba2 Have your monthly income decreased due to the pandemic?	.728
	<i>Monthly overdraft</i>	ba8 Have the pandemic caused your monthly overdraft to become more frequent?	.720
	<i>No difference of financial status</i>	ba6 Your financial status have no difference during the pandemic compare with before the pandemic?	-.656
	<i>Increase of monthly expense</i>	ba1 Have your average monthly spending increased due to the pandemic?	.614
2. <i>Change of Consumer Behavior</i>	<i>Decrease of dining outside</i>	ca11 Have you decreased the frequency to dining outside during the pandemic?	.699
	<i>Decrease of the spending on entertainment</i>	ca8 Have you decreased the spending on entertainment during the pandemic?	.628
	<i>Decrease of purchase in physical stores</i>	ca2 Have you decreased the frequency to purchase in physical stores during the pandemic?	.615
	<i>Decrease of unnecessary spending</i>	ca4 Have you decreased the unnecessary spending during the pandemic?	.600
	<i>Increase of cooking at home</i>	ca13 Have you increased the frequency of cooking at home during the pandemic?	.577
	<i>Change of spending priority</i>	ca10 Have you changed your spending priority during the pandemic?	.550
	<i>Keep a budget during the pandemic</i>	ca14 Have you tried hard to keep a budget during the pandemic?	.549
	<i>Decrease of spending on clothing</i>	ca5 Have you decreased the spending on clothing during the pandemic?	.525
	<i>Location preference for purchases</i>	ca1 Do you prefer to purchase in the neighborhood during the pandemic?	.497
	<i>Decrease of spending on commuting</i>	ca7 Have you decreased the spending on commuting during pandemic?	.402
	<i>Increase of ordering food delivery</i>	ca12 Have you increased the frequency of ordering food delivery at home during the pandemic?	.401
	<i>Increase of using e-payment</i>	ca15 Have you increased the frequency of using e-payment during the pandemic?	.442
	<i>Increase of spending on daily necessities</i>	ca3 Have you increased the spending on the daily necessities during the pandemic?	.435
3. <i>Change of the Shopping Mode</i>	<i>Increase of using food delivery</i>	ca12 Have you increased the frequency of using food delivery at home during the pandemic?	.578
	<i>Increase of using e-payment</i>	ca15 Have you increased the frequency of using e-payment during the pandemic?	.488
	<i>Increase of spending on daily necessities</i>	ca3 Have you increased the spending on the daily necessities during the pandemic?	.466
	<i>Increase of online shopping</i>	ca9 Have you increased the frequency of online shopping	.444
4. <i>Impulsive Buying Behavior</i>	<i>Ways of escaping the reality</i>	fa4 During the pandemic, did purchasing goods let you get sense of security, comfort and temporary escape?	.887
	<i>Act of impulsive buying</i>	fa3 Do you have impulsive buying behavior during the pandemic?	.856
	<i>Shopping and mindset</i>	fa1 Do you use shopping to soothe your mind during the pandemic?	.833
	<i>Freedom and buying intention</i>	fa2 Do you feel constrained due to the pandemic, and want to spend a lot of money after the pandemic ended?	.825

The first factor included 7 questions with factor loadings greater than 0.6. Among them, there were 5 questions with positive factor loadings: *Decrease of disposable income, Decrease of personal assets, Decrease of monthly income, Monthly overdraft, and Increase of monthly expense.*

Their context suggested that the factor showed respondent' positive attitude towards the change of financial status under the pandemic. This inference corresponded to the opposite context of the other 2 questions with negative factor loadings: *No difference of financial status.* Thus, the meaning of the first factor could be understood as respondents' agreement on the change of financial status under the pandemic. For the convenience of further analysis, the first factor was hereby named as *Impact of Financial Status.*

The second factor included 13 questions with factor loadings greater than 0.4. Among them, all of 13 questions were with positive factor loadings: *Decrease of dining outside, Decrease of the spending on entertainment, Decrease of purchase in physical stores, Decrease of unnecessary spending, Increase of cooking at home, Change of spending priority, Keep a budget during the pandemic, Decrease of spending on clothing, Location preference for purchases, Decrease of spending on commuting, Increase of ordering food delivery, Increase of using e-payment, and Increase of spending on daily necessities.*

Those questions showed that respondents agreed with the change of consumer behaviors in their lives during the pandemic. Hence, the meaning of second factor could be perceived as respondents' attitude of the change of consumer behaviors in life aspects during the pandemic. For the convenience of further analysis, the second factor was named as *Change of Consumer Behavior.*

The third factor covered 4 questions with factor loadings greater than 0.4. Furthermore, all questions with positive factor loadings: *Increase of ordering food delivery, Increase of using e-payment, Increase of spending on daily necessities, and Increase of online shopping*. Their context indicated that the factor showed respondents agreed with their changes in the ways of spending. Therefore, the factor was named as *Change of Shopping Mode*.

The last factor contained four questions with the factor loadings greater than 0.4. And all of the factor loadings were positive: *Ways of escaping the reality, Act of impulsive buying, Shopping and mindset, and Freedom and buying intention*. Those questions showed that respondents agreed that they have impulsive buying behavior under the pandemic. Thus, for the convenience of further analysis, this factor was hereby named as *Impulsive Buying Behavior*.

Finally, after 25 questions were classified into 4 factors, the factor scores of each factor could be examined simultaneously. In addition, utilizing factor scores could figure out respondents' attitudes on six factors easily, such as "extremely disagree", "disagree", "neutral", "agree", or "extremely agree".

Hence, factor scores were narrowed down to a smaller range from 1 to 5 with a formula.

1. Impact of Financial Status:

$$\text{Finan1} = (0.836837195810038 * \text{ba4} + 0.816134144259299 * \text{ba3} + 0.727909746985507 * \text{ba2} + 0.719861680275531 * \text{ba8} + 0.656137438215354 * (6 - \text{ba6}) + 0.614304456398218 * \text{ba1}) / 4.371184662$$

2. Change of Consumer Behavior:

$$\text{Change1} = (0.699017276212494 * \text{ca11} + 0.627759149361449 * \text{ca8} + 0.61483134340326 * \text{ca2} + 0.600237825638342 * \text{ca4} + 0.57746787149342 * \text{ca13} + 0.54976520860085 * \text{ca10} + 0.54891185995098 * \text{ca14} + 0.524931344751389 * \text{ca5} + 0.496797055967307 * \text{ca1} + 0.402402772231311 * \text{ca7} + 0.400998354985065 * \text{ca12} + 0.442067678578649 * \text{ca15} + 0.434520426149403 * \text{ca3}) / 6.920$$

3. Change of Shopping Mode:

$$\text{Change2} = (0.578363061111388 * \text{ca12} + 0.487514473197753 * \text{ca15} + 0.465516952855491 * \text{ca3} + 0.444406970022866 * \text{ca9}) / 1.976$$

4. Impulsive Buying Behavior:

$$\text{Impul1} = (0.886795496438079 * \text{fa4} + 0.856383637135701 * \text{fa3} + 0.832838069503071 * \text{fa1} + 0.825428373998117 * \text{fa2}) / 3.401$$

Research Question 1

College students came from a wide range of socioeconomic backgrounds, and their spending habits varied depending on their family's financial situation. On the other hand, social class was almost certain to have an impact on people's purchasing decisions.⁵⁶ Social classes not only shaped our lifestyle, but shaped the consumers' buying decisions. As a result, social status and spending habits were strongly linked.⁵⁷ It played a crucial role in both the market and society. The analysis of college students' social classes and the changes in their consumer behaviors during the pandemic explained how social class influenced college students' consumer behaviors in various ways.

Therefore, the research question is: What were the disparities in the changes of consumer behavior among Taiwanese college students from various socioeconomic classes during the pandemic?

Social Class and Change of Financial Status

During the pandemic, one of the significant changes is people's financial issues. The inflationary spike impacted the consumers lives without any doubt. However, did Taiwanese college students from different social classes impacted differently by the economic crisis?

The average mean score of each social group towards the (Impact of Financial Status) was two, which showed that most of the college students considered their financial status did not being impacted by the pandemic. That is, the social class have no different impacted the college students' financial status.

⁵⁶ Sharon Shavitt, Duo Jiang, and Hyewon Cho, "Stratification and Segmentation: Social Class in Consumer Behavior," 26 (October 2016), <https://www.jstor.org/stable/10.2307/26618176>.

⁵⁷ Ibid.

A one-way ANOVA was performed to compare the effect of social class on (Impact of Financial Status), and it revealed that there was no statistically significant difference in mean (Impact of Financial Status) scores between students from upper class, middle class, lower class (2.7786, 2.8593, 2.8791, respectively; $F(2, 354) = .643, p = .526$). Since its p value was over than .05, there were no differences between college students from various social classes of the change of their financial status during the pandemic. (See **APPENDIX B 2**)

Change of Consumer Behavior

During the pandemic, people's lifestyle has been considerably adjusted not just on the economic aspects, but in many extents. The shopping modes, the frequency to go shopping or even the commodities they select are no more same as usual. However, did the majority of Taiwanese college students from different social class have significant differences between these changes of consumer behaviors?

The average mean score showed that each social group towards the (Change of Consumer Behavior) was three, which showed that most of the college students considered their consumer behaviors have not really changed during the pandemic.

However, a one-way ANOVA was performed to compare the effect of social class on (Change of Consumer Behavior), it revealed that there was a statistically significant difference in mean (Change of Consumer Behavior) score between at least two different subgroups ($F(2, 349) = 3.220, p = .041$).

Tukey's HSD Test for multiple comparisons found that the mean (Change of Consumer Behavior) score for respondents from working class (3.4403) is significantly lower than that of respondents from upper class (3.6028), $p = .051$, 95% C.I. = [-.3254, .0006].

The p value was equivalent as 0.05, which means the college students from upper class have more agreed about the change of consumer behaviors than college students from lower class. (See **APPENDIX B 3**)

Change of Shopping Mode

The pandemic not only changed people's consumer behavior, which also changed the payment methods. For instance, the rise with respect to using e-payment or the growth of online shopping. Yet, did the Taiwanese college students from various social class have significant differences among the changes of payment methods?

The average mean score of each social group towards the (Change of Shopping Mode) was three, which showed that most of the college students considered their shopping mode did not change by the pandemic. That is, the social class have no different impact in the college students' change of shopping mode during the pandemic.

A one-way ANOVA was performed to compare the effect of social class on (Change of Shopping Mode), and it revealed that there was no statistically significant difference in mean (Change of Shopping Mode) scores between students from upper class, middle class, lower class (3.5153, 3.4928, 3.3527, respectively; $F(2, 357) = 1.759, p = .174$). Since the its p value was over than .05, which indicated that there were no differences between college students from various social classes of the change of shopping mode during the pandemic. (See **APPENDIX B 4**)

Impulsive Buying Behavior

During the pandemic, the lockdowns, restrictions has driven people to decrease outdoor activities due to the concerns of infection. Therefore, there are some effects would follow behind these rules. Such as impulsive buying behavior after the restrictions declared. However, did the Taiwanese college students from different social class have significant differences between the impulsive buying behaviors?

The average mean score showed that college students from middle class and lower class towards the (Impulsive Buying Behavior) was two. It showed that these two groups of college students did not agreed with the impulsive buying behaviors during the pandemic. However, the mean score of college students from upper class showed three, which means they have more impulsive buying behaviors than the college students from middle class and lower class during the pandemic.

After running one-way ANOVA, the result showed that there was a statistically significant difference in mean (Impulsive Buying Behavior) score between at least two different subgroups ($F(2, 353) = 3.268, p = .039$). Tukey's HSD Test for multiple comparisons found that the mean (Impulsive Buying Behavior) score for respondents from working class (2.7283) is significantly lower than that of respondents from upper class (3.0029), $p = .040$, 95% C.I. = [-.5399, -.0094]. Since the p value was lower than 0.05, it showed that college students from upper class have more impulsive buying behaviors than the college students from lower class during the pandemic.

(See **APPENDIX B 5**)

Social Class and Choices of Online Shopping

According to the frequency distribution of multiple choices in the items of online shopping. The highest percentage of items in online purchases that Taiwanese college students purchased the most during the pandemic were: food and daily necessities, clothing, cosmetics, streaming services (ex: Netflix), epidemic prevention products, and health supplements.

After operating the crosstabs to examine the differences between college students from various social classes. It is revealed that each class has a slightly different preference for the items for online shopping. The first and second options for online shopping that college students from different social class chose was the same. No matter the social classes, the college students always prefer to buy daily necessities and clothing as their first and second choice of online shopping. However, when it comes to the third option for online shopping, the college students from middle class has different preference from the college students from upper class and lower class.

As for the third preference item, the college students from upper class and lower class have bought the streaming services as their third highest preference item for online shopping during the pandemic. Yet, the epidemic prevention products have been the third highest preference for college students from middle class. (See **APPENDIX B 6** below)

Social Class and Factors of Online Shopping

As for the key circumstances that affected the decisions of college students' online purchasing. The factors they cared the most about were: convenience, time saving, discount, price, and delivery speed. After operating the crosstabs to examine the multiple choices of the factors in online purchasing, there were no differences

among college students from various social classes. Most students have similar concerns when they make buying decisions. The major factors which college students considered were convenience, price, time-saving, as well as the discount of the commodities. (See **APPENDIX B 7** below)

Research Question 2

Due to the pandemic, the consumers' spending behaviors have been forced to change in many aspects. From the change of preference, change of shopping mode, change of their value, which all have significant changes. Similarly, college students as consumers who also take an important role in the market. College students as the special consumers who have contributed great purchasing power. Even though most of the college students have not fulfilled the financial independence. Most of the college students need to rely on parents' financial support even during the pandemic. In order to examine college students' change of consumer behavior would be a critical data for the marketer to make the fitted marketing strategies.

Therefore, the second research question is: What were the changes of Taiwanese college students' consumer behavior during the pandemic?

The Main Changes of Consumer Behavior

During the pandemic, there were some significant changes of Taiwanese college students' consumer behaviors during the pandemic. The first change was the change of preference for purchasing locations. Around 70% of college students have preference to purchase in neighborhood more often than before the pandemic. And 60% of college students have decreased the frequency to purchase in physical stores during the pandemic.

The second change of spending priority, over 53% of college students have increased the expense of daily necessities. On the other hand, 69% of college students have decreased the unnecessary expense. It has revealed that college students have adjusted the items to purchase during the pandemic. As for the change of specific expenses, over 50% of college students have decreased the frequency in buying clothing, the expense of commuting has also decreased.

The third difference is the change of consumption channel. Almost 60% of college students has increased the frequency of online shopping. With the increase of online shopping, over 48 % of college students also increased the frequency of using e-payment during the pandemic.

Lastly, college students' eating habits have been impacted by the pandemic as well. 76% of college students have decreased the frequency of dining outside during the pandemic. And 49% of college students have increased the frequency of using food delivery during the pandemic. Around 58% of college students have increased the frequency of cooking at home. (See **APPENDIX B 8**)

Online Shopping Options and Factors

From the result showed on the Table below, the first priority of the items that Taiwanese college students chose was food. There were 78.2% of college students selected that food is their first option for online purchasing during the pandemic. Also, there were 26% of college students chose clothing as their secondary choice for online purchasing during the pandemic. (See **Table 3** below)

As for the first buying factor that 48.2% of college students chose was price. The price of the products was the most common factor which impact their choice. The

second buying factor which college students chose were price and quality. There were 30% of college students chose these two factors equally, which means price is always the initial factor to influence their buying behavior. (See **Table 4** below)

Table 3 Priority for Online shopping Items

Frequency Table of First Priority of Items							
Items	Food	Clothing	Rent	Commuting Fee	Learning Materials	Entertainment	Total
N	333	28	31	7	11	16	426
Percent	78.2%	6.6%	7.3%	1.6%	2.6%	3.8%	100%

Frequency Table of Second Priority of Items							
Items	Food	Clothing	Rent	Commuting Fee	Learning Materials	Entertainment	Total
N	74	111	61	64	66	51	427
Percent	17.3%	26.0%	14.3%	15.0%	15.5%	11.9%	100%

Table 4 Priority for Online Buying Factors

Frequency Table of First Buying Factor								
Items	Price	Durability	Sustainability	Quality	Discount	Brand Trust	Local Products	Total
N	206	30	23	103	33	28	4	427
Percent	48.2%	7.0%	5.4%	24.1%	7.7%	6.6%	0.9%	100%

Frequency Table of Second Buying Factor								
Items	Price	Durability	Sustainability	Quality	Discount	Brand Trust	Local Products	Total
N	128	60	29	130	49	29	2	427
Percent	30.0%	14.1%	6.8%	30.4%	11.5%	6.8%	0.5%	100%

Genders and Change of Consumer Behavior

Financial Status

After operating the sample t-test, it found that the male and female did not have significant differences in the change of the financial status during the pandemic. The average mean score of the genders towards the impact of financial status was two. That is, both female college students and male college students did not think their financial status has been impacted by the pandemic.

An independent-samples t-test indicated that there was no significant effect for gender, $t(416) = .504$, $p = .614$, despite that male ($M = 2.8919$, $SD = .75129$) showed higher support level than female ($M = 2.8466$, $SD = .75535$). The t value for these two means was .504, and its p was .614, which was higher than 0.05. Hence, female and male college students have no significant differences in the change of financial status during the pandemic. (See **APPENDIX C 1** and **APPENDIX C 2**)

Change of Consumer Behavior

According to the Wharton School of Business, female and male consumers have different shopping style.⁵⁸ The average mean score of gender towards the change of consumer behaviors during the pandemic was 3. However, female college students showed slightly higher score than male college students. It indicated that female college students were more agreed with the change of consumer behaviors during the pandemic than male college students.

⁵⁸ Knowledge at Wharton Staff, "Men Buy, Women Shop': The Sexes Have Different Priorities When Walking Down the Aisles," 2007, accessed November, <https://knowledge.wharton.upenn.edu/article/men-buy-women-shop-the-sexes-have-different-priorities-when-walking-down-the-aisles/>.

An independent-samples t-test compared the means of male's and female's level of support to (Change of Consumer Behavior) confirmed this general observation. The difference between the mean of the 84 males' support level to (Change of Consumer Behavior) ($M = 3.4155$, $SD = .56555$) and that of the 327 female ($M = 3.5744$, $SD = .52016$) was significant, $t(409) = -2.453$, $p = .015$. The t value for these two means was -2.453 , and its p was $.015$, which was less than 0.05 . Hence, female and male have significant differences in the change of consumer behaviors during the pandemic. (See **APPENDIX C 3** and **APPENDIX C 4**)

Change of Shopping Mode

After using independent-samples t-test to analyze the data, the result showed that female and male college students have different change of shopping mode during the pandemic. The average mean score towards genders and the change of shopping mode was three. Moreover, female college students have higher mean score than male. It has revealed that female college students were more agreed with the change of shopping mode during the pandemic than male college students.

An independent-samples t-test compared the means of male's and female's level of support to (Change of Shopping Mode) confirmed this general observation. The difference between the mean of the 88 males' support level to (Change of Shopping Mode) ($M = 3.2588$, $SD = .71829$) and that of the 334 female ($M = 3.4935$, $SD = .71804$) was significant, $t(420) = -2.728$, $p = .007$.

Since the t value for these two means was -2.728 , and its p was $.007$, which was less than 0.05 . Hence, female and male have significant differences in the change of the way to spend during the pandemic. (See **APPENDIX C 5** and **APPENDIX C 6**)

Impulsive Buying Behavior

Impulsive buying behavior always reflects on the times of crisis, such as typhoon, earthquake or other crisis happened. The average mean score of gender towards impulsive buying behavior during the pandemic was two. It showed that both female and male students were disagreed with having the impulsive buying behaviors during the pandemic.

After running an independent-samples t-test, it reported that there was no significant effect for gender, $t(415) = -1.201$, $p = .231$, despite that male ($M = 2.7464$, $SD = .94704$) showed lower support level than female ($M = 2.8778$, $SD = .90194$). The t value for these two means was -1.201 , and its p was $.231$, which was higher than 0.05 . Hence, female and male have no significant differences in the impulsive buying behaviors during the pandemic. (See **APPENDIX C 7** and **APPENDIX C 8**)

Preference of Online Purchasing Items

After using gender as the variable to analyze the crosstabs, there were some differences between females and males. The female college students have different preference of online shopping items. There were 62.3% of female college students chose food for online shopping during the pandemic. There were 60.5% of female students bought clothing during the pandemic. There were 40.7% of female college students bought cosmetics products for online shopping during the pandemic. There were 40.4% of female students bought epidemic prevention products during the pandemic. Last, there were 39.5% of female college students bought streaming service during the pandemic.

As for male college students, there were 65.6% of male students bought food for online purchasing during the pandemic. There were 37.8% of male students bought

clothing during the pandemic. There were 32.2% of male college students bought streaming service during the pandemic. There were 30% of male students bought electronics products during the pandemic. Last, there were 26.7% of male students bought epidemic prevention products during the pandemic.

The differences between female college students and male college students were in cosmetics, clothing, epidemic prevention products, and electronic products. First of all, 40.7% of female college students bought cosmetics products online, but there were only 5.6% of male college students who bought these items online during the pandemic. Secondly, 60.5% of female college students bought clothing online, but there were only 37.8% of male college students who bought clothing during the pandemic. Thirdly, there were 40.4% of female college students who bought epidemic prevention products online, but there were only 26.7% of male college students who bought these items.

On the opposite, the only item that male college students bought more than female college students online during the pandemic was the electronic products. There were 30% of male students bought electronic products online, but there were only 14.4% of female college students bought this items online during the pandemic.

As for the buying factors showed on Table, there's no significant differences between female and male college students, the convenience, time saving, discount and price are the main factors which influence their buying decisions. (See **Table 5** and **Table 6** below)

Table 5 Crosstabs of Gender and Online Shopping Options

Items	Female		Male		Total	
	N	Percent	N	Percent	N	Percent
Food	208	62.3%	59	65.6%	267	63%
Health Supplements °	75	22.5%	10	11.1%	85	20%
Cosmetics	136	40.7%	5	5.6%	141	33.3%
Clothing	202	60.5%	34	37.8%	236	55.7%
Online Learning	42	12.6%	16	17.8%	58	13.7%
Electronic product	48	14.4%	27	30.0%	75	17.7%
Streaming Service	132	39.5%	29	32.2%	161	38%
Household Appliances	16	4.8%	14	15.6%	30	7.1%
Fitness Equipment	19	5.7%	4	4.4%	23	5.4%
Epidemic Prevention Products	135	40.4%	24	26.7%	159	37.5%
Others	39	11.7%	4	4.4%	43	10.1%
Total	334	78.8%	90	21.2%	424	100%

Table 6 Crosstabs of Gender and Online Shopping Factors

Factors affecting online purchase	Gender				Total	
	Female		Male		N	Percent
	N	Percent	N	Percent		
Convenience	293	87.5%	73	81.1%	366	86.1%
Time Saving	227	67.8%	59	65.6%	286	67.3%
Quantity of the Products	42	12.5%	11	12.2%	53	12.5%
Discount	212	63.3%	45	50%	257	60.5%
Security Concerns	93	27.8%	25	27.8%	118	27.8%
Price	191	57%	38	42.2%	229	53.9%
Quality	67	20%	26	28.9%	93	21.9%
Delivery Speed	107	31.9%	26	28.9%	133	31.3%
Service	39	11.6%	7	7.8%	46	10.8%
Others	11	3.35	1	1.1%	12	2.8%
Total	335	78.8%	90	21.2%	425	100%

Data Summary

From the results of data analysis, three major findings of the research problem are summarized as follows:

Finding 1: Relations of Social Classes and Change of Consumer Behaviors

The Taiwanese college students from different social class had no statistically significant difference on their financial status during the pandemic. There's no difference of their change of shopping mode as well. However, there are some differences between the college students from upper class and lower class in the change of consumer behaviors. The data showed that the students from upper class were more agreed with the change of consumer behaviors. Moreover, the data also indicated that the college students from upper class had more intentions to have impulsive buying behaviors during the pandemic.

As for the online shopping preference section, it showed that most of the college students' first and second preference of online shopping were focused on the daily necessities and clothing. The only differences among the college students were the third preference of online shopping. The college students from upper class and lower class have chosen streaming service as their third preference of online shopping. However, the college students from middle class have chosen the epidemic protection products as their third preference of online shopping during the pandemic. Lastly, most of the college students take convenience, time-saving, price and discount as their major concerns of online shopping.

Finding 2: General Change of Consumer Behaviors during the Pandemic

Most of the college students considered that their financial status had no change during the pandemic. However, there were three main transitions during the pandemic. Firstly, college students' preference for the purchasing locations. Over 70% of college students have preference to purchase in neighborhood more often than before the pandemic. Meanwhile, 60% of college students have decreased the frequency to purchase in physical stores during the pandemic.

The second change is college students' spending priority. Above 50% of college students have increased the expense of daily necessities and decreased the unnecessary expense simultaneously. It has revealed that college students have adjusted the items to purchase during the pandemic.

The third difference is the change of consumption channel. Nearly 60% of college students has increased the frequency of online shopping. With the increase of online shopping, over 48 % of college students also increased the frequency of using e-payment during the pandemic.

Lastly, college students' eating habits have been impacted by the pandemic as well. Above 70% of college students have decreased the frequency of dining outside during the pandemic. As regard to the decrease of dining outside, over 50 % of the college students have increased the frequency of using food delivery and increased the frequency of cooking at home during the pandemic.

Finding 3: Relations of Gender and Change of Consumer Behaviors

Female and male college students have no difference of the financial status under the pandemic. However, they have different attitude towards the change of consumer behaviors and change of the spending and payment method during the pandemic. Female college students were more agreed with the changes in their consumer behaviors than male college students.

As for the items of online shopping during the pandemic, the differences between female college students and male college students were in cosmetics, clothing, epidemic prevention products, and electronic products. Female college students covered higher percentage on buying cosmetics products, clothing, epidemic prevention products online during the pandemic. Electronic products were the items that male college students bought online.

Furthermore, there's no significant differences between female and male college students within the factors of online shopping, convenience, time saving, discount and price are the main factors which influence their buying decisions.

CONCLUSION

This study's findings have filled a gap in previous research that other researchers had identified. This study attempted to determine the extent of the COVID-19 pandemic's impact on college students from various socioeconomic backgrounds and other variables, as well as a further analysis of the causal factors to these behavioral transformations. According to the findings, in the case of Taiwanese college students, changes in requirements and behavioral shifts were the factors that led to changes in consumer behavior during the pandemic. Furthermore, the change in consumer behaviors of college students varied according to their gender, socioeconomic status, and so on.

Discussion

Discussion 1: Feeling No Change of Financial Status

After running SPSS, the results showed that there was no statistically significant difference in financial status between Taiwanese college students from different social classes during the pandemic. They have a similar reaction to the change in their financial situation during the pandemic. Furthermore, there appear to be no differences in the shopping modes of college students from various social classes. However, there were some differences in the change of consumer behaviors among college students from the lower and upper classes during the pandemic. Furthermore, upper class college students were found to have more and impulsive behavior than working class college students.

According to Chikhi, K, Consumers must prioritize basic necessities while saving money to deal with potentially risky situations.⁵⁹ In addition, consumers began to emphasize the quality of the food they ate and purchased more health supplements in comparison to the period prior to the pandemic. Moreover, the consumption objectives that consumers choose are related to their cultural background and other factors. According to Jimin Xiong, the expenditure difference on housing or daily products was not significant among the groups having differences in socioeconomic factors.⁶⁰ In order to keep the basic living standards, the young generation have reduced the expense on goods, wearing, recreation and so on during the times of crisis.⁶¹ Since this group are still not have financial independent, most of the youngsters need to rely on parents' financial supports or even the part-time jobs.

College students from various social classes had turned to buy the cheaper goods than usual, despite they can afford it. The high-quality goods have no more the first concern factor that consumers would consider. Since the general consumers have the related worries of the economic condition during the pandemic, college students from various social classes were shown that there were no distinct changes in their financial status.

Discussion 2: Marketing Strategies and the Shifts of Consumer Behaviors

After analyzing college students' attitude towards the change of their consumer behaviors during the pandemic. The results indicated that most of the college students' financial status has not furiously impacted by the pandemic.

⁵⁹ Glykeria Theodoridou et al., "The Impact of the Economic Crisis on Greek Consumer Behaviour Towards Food Consumption," 10 (06/01 2019), <https://dx.doi.org/10.18461/ijfsd.v10i3.20>.

⁶⁰ Jimin Xiong et al., "Change of Consumption Behaviours in the Pandemic of Covid-19: Examining Residents' Consumption Expenditure and Driving Determinants," (Aug 2021), <https://dx.doi.org/10.3390/ijerph18179209>.

⁶¹ Ibid.

However, college students have switched their preference of the locations to purchase. During the pandemic, they prefer to purchase the commodities in the neighborhood. Other than that, college students' also changed their spending priority. They have decreased the unnecessities, and increase the spending on the basic needs, such as daily products during the pandemic. Maslow's theory of The Hierarchy of Needs states that when people are faced with a crisis, they would prioritize the necessities of security.⁶² People's needs will shift from basic fulfillment to higher-level fulfillment once the crisis has passed.

Moreover, the college students have changed their eating habits during this period of time. They increased the frequency of using food delivery at home or even cook more often at home during the times of crisis. The marketplace has created a new shopping mode due to the pandemic, and the consumers have changed their consumer behavior as the markets strategies changed. As the authors mentioned in the data from the Household Pulse Survey, this research proved the second finding. According to Thesia I. Garner, Adam Safir and Jake Schild, it examined the dimensions with respect to pandemic-related behavioral transformations in 2020.⁶³

The phenomenon of protective consumer behavior has change people's life in order to avoid the infection of the diseases. The protective consumer behaviors included the increase the online shopping more than shopping in physical stores or avoid to eat at restaurants.

⁶² Rafae Ahmad, Robin Jonsson, and Tsuchida.

⁶³ Thesia I. Garner, Adam Safir, and Jake Schild, "Changes in Consumer Behaviors and Financial Well-Being During the Coronavirus Pandemic: Results from the U.S. Household Pulse Survey," (DECEMBER 2020), <https://www.bls.gov/opub/mlr/2020/article/changes-in-consumer-behaviors-and-financial-well-being-during-the-coronavirus-pandemic.htm>.

Discussion 3: Genders and Different Needs During the Pandemic

Based on the finding 3, female and male college students have different attitude towards the change of consumer behaviors and change of the spending and payment method during the pandemic.

Moreover, the multiple choices section also showed the distinct differences between female college students and male college students. The major differences were in cosmetics, clothing, epidemic prevention products, and electronic products. Female college students covered higher percentage on buying cosmetics products, clothing, epidemic prevention products online during the pandemic. Electronic products were the items that male college students bought online. According to Diamond, rationality drives the physiological demands and safety needs, which are satisfied with useful clothing and accessories.⁶⁴ Consumer motivations become emotionally driven beyond the boundaries of basic and safety needs, in which they seek social acceptance or esteem through their clothing.

According to Jimin Xiong's study, gender has greatly affected the spending on goods for wearing.⁶⁵ In contrast to men, women tend to buy more goods for wearing such as clothes, shoes, clothing accessories, and housing clean products. Mainly on behalf of the young individuals are the active consumers of goods for wearing, shoes, and make-up during the pandemic. Due to their greater social interactions. This research has proved gender is a crucial factor which could determine different change of consumer behavior during the pandemic.

⁶⁴ Rafae Ahmad, Robin Jonsson, and Tsuchida.

⁶⁵ Jimin Xiong et al.

Conclusion

According to the data presented above, college students from various social classes were unaffected by changes in their financial situation. Regardless of which class college students are from, they have turned to purchasing cheaper goods than usual, despite the fact that they can afford it. To deal with the cost increase, the price is still the most important factor that they will consider. College students from the working class agreed with the change in spending behavior more than college students from the upper class. At the same time, college students from the upper class agreed with impulsive purchasing behavior more than college students from the working class.

Aside from that, gender has been the most influential factor in changing consumer behavior. Female college students were more likely than male college students to agree with the shift in consumer behavior and payment method. In addition, female college students purchased more online shopping commodities than male students, including clothing, cosmetics, and any related accessories.

To summarize, financial status and purchasing habits of college students from various socioeconomic backgrounds change similarly. The most important factor influencing college students' changing consumer behavior is gender.

Suggestion

Due to the pandemic, people's consumer behaviors have been drastically changed by the marketing strategies and the condition of the infection rate. Many researchers have done the related study to observe the changes among different nations and numerous variables.

Nonetheless, the majority of the research relied on survey data. Many detailed

data points have not been highlighted; researchers can only derive general conclusions from the entire data populations. Furthermore, this study only focused on the general change in consumer behaviors during the pandemic, and the study population was also limited. In the future, the researchers may combine an interview study and a survey study to analyze this topic. It can not only obtain public opinions through survey research, but it can also analyze the explicit details of interviews based on people's ideas.

APPENDIX A

台灣大學生在疫情之下的消費行為改變之問卷調查

親愛的先生/小姐：

這是一份學術研究問卷，主要目的是探討「台灣大學生在疫情之下的消費行為之改變」。在此希望能耽誤您幾分鐘的時間，依您的真實感受填寫問卷，懇請您提供寶貴意見。

本問卷採不記名方式作答，您的回答僅供學術研究使用，絕不對外公開，請放心填寫。感謝您在百忙之中抽空填答此問卷，您的協助將使本研究更具貢獻，在此獻上最誠摯的謝意。

敬祝 事事順心、健康愉快！

文藻外語大學國際事務系

第一部分：基本資訊

1. 性別： <input type="checkbox"/> 男 <input type="checkbox"/> 女
2. 您就讀的年級： <input type="checkbox"/> 大一 <input type="checkbox"/> 大二 <input type="checkbox"/> 大三 <input type="checkbox"/> 大四 <input type="checkbox"/> 其他
3. 您目前就讀大學地區： <input type="checkbox"/> 北部 <input type="checkbox"/> 中部 <input type="checkbox"/> 南部 <input type="checkbox"/> 東部 <input type="checkbox"/> 離島
4. 您目前就讀的大學學制： <input type="checkbox"/> 公立一般大學 <input type="checkbox"/> 公立科技大學 <input type="checkbox"/> 私立一般大學 <input type="checkbox"/> 私立科技大學 <input type="checkbox"/> 軍警大學
5. 您每月平均收入： <input type="checkbox"/> 6000元以下 <input type="checkbox"/> 6000元~10000元 <input type="checkbox"/> 11000元~20000元 <input type="checkbox"/> 20001元~30000元 <input type="checkbox"/> 30001元~40000元 <input type="checkbox"/> 40001元~50000元 <input type="checkbox"/> 50001元~60000元 <input type="checkbox"/> 60001元~70000元 <input type="checkbox"/> 70001元以上
6. 您每月平均花費： <input type="checkbox"/> 6000元以下 <input type="checkbox"/> 6000元~10000元 <input type="checkbox"/> 10001元~20000元 <input type="checkbox"/> 20001元~30000元 <input type="checkbox"/> 30001元~40000元 <input type="checkbox"/> 40001元~50000元 <input type="checkbox"/> 50001元~60000元 <input type="checkbox"/> 60001~70000元 <input type="checkbox"/> 70001以上
7. 您家中主要經濟支柱來自於： <input type="checkbox"/> 父親 <input type="checkbox"/> 母親 <input type="checkbox"/> 其他
8. (承上題)您家中的經濟支柱教育程度： <input type="checkbox"/> 國小以下 <input type="checkbox"/> 國小 <input type="checkbox"/> 國中

高中/職 大學/專科 碩士 博士

9. (承上題)您家中的經濟支柱目前的職業:

民意代表、行政主管、企業主管、經理人員及主管級公務人員

專業人員(如工程師、醫師、教師、律師、護士、記者)

技術員及助理專業人員(如工程技術員、代書、藥劑生、推銷保險)

事務工作人員(如秘書、文書、櫃檯、接待、倉儲管理及一般公務員)

服務工作人員及售貨員(如廚師、理容、服務生、保姆、警察保全、售貨)

農、林、漁、牧工作人員

技術工(如泥水匠、麵包師傅、裁縫、板金、修理電器)

機械設備操作工及裝配工(含司機)

非技術工及體力工(如工友、門房、洗菜、簡單裝配、體力工)

軍人 家管 退休 失業 其他

10.您的家庭年收入:

50 萬以下 51-100 萬 101-200 萬 201-300 萬 301 萬以上

第二部分:疫情期間大學生的經濟狀況:

		非常不同意	不同意	普通	同意	非常同意
1.	您的月均花費因疫情而增加	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	您的月收入因疫情而有所減少	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	您的個人資產(儲蓄金)因疫情而有所減少	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	您的可支配收入因為疫情而有所減少	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	您現在的(食、衣、住、行)等生活品質因疫情變得更差	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	您認為自己的財務狀況和疫情前毫無變化	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	您能夠在疫情期間將花費和收入間達到平衡	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	疫情導致您每個月的透支情形變得更加頻繁	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

第三部分:疫情期間大學生消費層面之改變

		非常不同意	不同意	普通	同意	非常同意
1.	在疫情期間您會選擇就近購買商品	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	在疫情期間您會減少去實體商店購買的頻率	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	在疫情期間您增加了生活必須品(食品、日用品)的花費	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	在疫情期間您減少了非必要性的花費(如看電影等娛樂)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	在疫情期間您減少了在衣著治裝上的花費	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	在疫情期間您增加了在租金上的花費	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	在疫情期間您減少了在通勤上的花費	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	在疫情期間您減少了在娛樂上的花費	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	在疫情期間您增加了上網購物的頻率	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	在疫情期間您購買商品的順位有所改變	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	疫情期間您減少在外就餐的次數	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	疫情期間您增加在家點外賣的次數	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	疫情期間您增加在家開伙的頻率	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	疫情期間您會在購物時做更多節制	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	疫情期間您增加了使用電子支付的頻率	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

第四部分：疫情期間大學生消費重點之改變

1. 在疫情期間, 請問您在下列的商品類別中, 主要的花費前三名是甚麼呢? 請在第一優先、第二優先、第三優先等三個欄中, 分別勾選一個項目, 請不要重複喔!

	第一優先	第二優先	第三優先
食物	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
購買衣著配飾	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
租金	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
通勤費)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
購買學習用品(文具、書籍教材等)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
娛樂活動(看電影、逛街等)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. 在疫情期間, 請問您在下列的購買商品考量因素中, 主要的考量的優先順位是甚麼呢? 請在第一順位、第二順位等兩個欄位中, 分別勾選一個項目, 請不要重複喔!

	考量第一順位	考量第二順位
價格	<input type="checkbox"/>	<input type="checkbox"/>
耐久性	<input type="checkbox"/>	<input type="checkbox"/>
永續價值	<input type="checkbox"/>	<input type="checkbox"/>
品質	<input type="checkbox"/>	<input type="checkbox"/>
優惠	<input type="checkbox"/>	<input type="checkbox"/>
品牌信任(只買認識和信任的品牌)	<input type="checkbox"/>	<input type="checkbox"/>
在地產品(傾向買國內的商品)	<input type="checkbox"/>	<input type="checkbox"/>

3. 疫情期間您上網購物的商品類型(可複選):

- 食物等日常用品 保健食品 美妝產品 衣著配飾
線上學習 電子產品 付費影音(如Netflix)
電器產品 健身產品 防疫產品(口罩、酒精等)
其他

4. 疫情期間您選擇上網購物的考量因素(可複選):

- 便利性 節省時間 商品數量 優惠折扣 安全考量
價格 品質 其他 送貨時間 賣家服務態度

第五部分：疫後補償性消費行為檢測

	非常不同意	不同意	普通	同意	非常同意
1. 在疫情期間產生的不安全感，您會透過購物來安撫心靈。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. 您會因為疫情而感到自由受限，因此想在解禁後花大錢。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. 您在疫情期間會有衝動型購物的行為	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. 您會在疫情期間透過購買以獲得安全感、舒適感和暫時的逃離感	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

問卷到此結束 再次感謝您的填答!

APPENDIX B

APPENDIX B 1 The Demographic Information

	Item	Number of People	Percentage
Gender	Female	335	78.8%
	Male	90	21.2%
Grade	First year	19	4.5%
	Second year	25	5.9%
	Third year	213	50.1%
	Fourth year	136	32%
	Others	32	7.5%
Location of the school	North	118	27.7%
	Central	45	10.6%
	South	252	59.2%
	East	9	2.1%
	Offshore	2	0.5%
Institution of the school	National university	97	22.8%
	National University of Science and Technology	45	10.6%
	Private University	149	34.8%
	Private University of Science and Technology	130	30.4%
Monthly Income	Below 6000NTD	149	34.8%
	6000-10000 NTD	130	30.4%
	11000-20000 NTD	96	22.4%
	21000-30000 NTD	36	8.4%
	31000-40000 NTD	8	1.9%
	41000-50000 NTD	3	0.7%
	51000-60000 NTD	3	0.7%
	61000-70000 NTD	2	0.5%
	Above 70000 NTD	1	0.2%
Monthly Expense	Below 6000NTD	173	40.4%
	6000-10000 NTD	178	41.6%
	11000-20000 NTD	60	14%
	21000-30000 NTD	12	2.8%

	31000-40000 NTD	1	0.2%
	41000-50000 NTD	1	0.2%
	51000-60000 NTD	1	0.2%
	61000-70000 NTD	1	0.2%
	Above 70000 NTD	1	0.2%
Family Income Source	Father	289	67.8%
	Mother	95	22.3%
	Both	27	6.3%
	Others	15	3.5%
Social Class	Upper-Class	135	37.3%
	Middle Class	107	29.6%
	Lower Class	120	33.1%
Annual Income	Below 500000 NTD	90	21.1%
	510000-1MillionNTD	182	42.7%
	1-2Million NTD	123	28.9%
	2-3Million NTD	18	4.2%
	Above 3Million NTD	13	3.1%

APPENDIX B 2

ANOVA

		Sum of	df	Mean	F	Sig.
		Square		Square		
Change of Financial Status	Between Groups	.718	2	.359	.643	.526
	Within Groups	197.661	354	.558		
	Total	198.379	356			

APPENDIX B 3

ANOVA

		Sum of	df	Mean	F	Sig.
		Square		Square		
Change of Consumer Behavior	Between Groups	1.924	2	.962	3.220	.041
	Within Groups	104.279	349	.299		

Groups		
Total	106.203	351

APPENDIX B 4

ANOVA						
		Sum of Square	df	Mean Square	F	Sig.
Change of Shopping Mode	Between Groups	1.893	2	.947	1.759	.174
	Within Groups	192.156	357	.538		
	Total	194.049	359			

APPENDIX B 5

ANOVA						
		Sum of Square	df	Mean Square	F	Sig.
Impulsive Buying Behavior	Between Groups	5.204	2	2.602	3.268	.039
	Within Groups	281.033	353	.796		
	Total	286.237	355			

APPENDIX B 6 Choices of Online Shopping During the Pandemic

Items		N	Social Class			Total
			Lower Class	Middle Class	Upper Class	
Food and Daily Necessities	N	76	62	81	219	
	Percentage	21.4%	17.5%	22.8%	61.7%	
Health Supplements	N	26	16	29	71	
	Percentage	7.3%	4.5%	8.2%	20%	
Cosmetics	N	42	29	46	117	
	Percentage	11.8%	8.2%	13%	33%	
Clothing	N	66	62	67	195	
	Percentage	18.6%	17.5%	18.9%	54.9%	
Online	N	12	11	25	48	

Learning	Percentage	3.4%	3.1%	7%	13.5%
Electronic Products	N	17	20	29	66
	Percentage	4.8%	5.6%	8.2%	18.6%
Stream Services	N	52	30	59	141
	Percentage	14.6%	8.5%	16.6%	39.7%
Household Appliances	N	5	9	15	29
	Percentage	1.4%	2.5%	4.2%	8.2%
Fitness Equipment	N	7	2	13	22
	Percentage	2%	0.6%	3.7%	6.2%
Epidemic Prevention Products	N	42	39	56	137
	Percentage	11.8%	11%	15.8%	38.6%
Others	N	13	11	15	39
	Percentage	3.7%	3.1%	4.2%	11%
Total	N	119	105	131	355
	Percentage	33.5%	29.6%	36.9%	100%

APPENDIX B 7 Factors of Online Shopping During the Pandemic

Factors		Social Class			Total
		Lower Class	Middle Class	Upper Class	
Convenience	N	102	88	117	307
	Percentage	28.7%	24.8%	33%	86.5%
Time-saving	N	82	68	92	242
	Percentage	23.1%	19.2%	25.9%	68.2%
Quantity	N	19	17	14	50
	Percentage	5.4%	4.8%	3.9%	14.1%
Discount	N	81	58	77	216
	Percentage	22.8%	16.3%	21.7%	60.8%
Security Concern	N	31	37	36	104
	Percentage	8.7%	10.4%	10.1%	29.3%
Price	N	80	55	71	206
	Percentage	22.5%	15.5%	20%	58%
Quality	N	29	22	31	82

	Percentage	8.2%	6.2%	8.7%	23.1%
Delivery	N	40	26	50	116
Speed	Percentage	11.3%	7.3%	14.1%	32.7%
Service	N	11	10	19	40
	Percentage	3.1%	2.8%	5.4%	11.3%
Others	N	4	3	4	11
	Percentage	1.1%	0.8%	1.1%	3.1%
Total	N	119	105	131	355
	Percentage	33.5%	29.6%	36.9%	100%

APPENDIX B 8 Significant Change of Consumer Behavior During the Pandemic

Change of Preference for Buying locations	Percentage
College students have preference to purchase in neighborhood during the pandemic.	70%
College students have decreased the frequency to purchase in physical stores.	60%
Change of Spending Priority	Percentage
College students have increased the expense on daily necessities during the pandemic.	53%
College students have decreased the unnecessary expense during the pandemic.	69%
Change of Specific Expense	Percentage
College students have decreased the expense on buying clothing during the pandemic.	50%
College students have decreased the expense on commuting during the pandemic.	50%
Change of Shopping Mode	Percentage
College students have increased the online shopping during the pandemic.	60%
College students have increased the use of e-payment during the pandemic.	48%
Change of Eating Habits	Percentage
College students have decreased the frequency to dining outside during the pandemic.	76%
College students have increased the frequency of using food delivery during the pandemic.	49%
College students have increased the frequency of cooking at home during the pandemic.	58%

APPENDIX C

APPENDIX C 1 Group Statistics of Financial Status

Gender	N	Mean	SD	Standard error of the mean
Male	90	2.8919	.75129	.07919
Female	328	2.8466	.75535	.04171

APPENDIX C 2 Gender and Independent Sample T-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Finan1	Equal variances assumed	.116	.733	.504	416	.614	.04529	.08978	-.13119	.22177
	Equal variances not assumed			.506	142.239	.614	.04529	.08950	-.13164	.22222

APPENDIX C 3 Group Statistics of Change of Consumer Behaviors

Gender	N	Mean	SD	Standard error of the mean
Male	84	3.4155	.56555	.06171
Female	327	3.5744	.52016	.02877

APPENDIX C 4 Gender and Independent T-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Change1	Equal variances assumed	3.132	.078	-2.453	409	.015	-.15894	.06479	-.28631	-.03157
	Equal variances not assumed			-2.335	121.531	.021	-.15894	.06808	-.29372	-.02416

APPENDIX C 5 Group Statistics of Change of Shopping Mode

Gender	N	Mean	SD	Standard error of the mean
Male	88	3.2588	.71829	.07657
Female	334	3.4935	.71804	.03929

APPENDIX C 6 Gender and Independent T-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Change2	Equal variances assumed	.003	.958	-2.728	420	.007	-.23473	.08604	-.40386	-.06559

Equal									
variances		-2.727	136.374	.007	-.23473	.08606	-.40491	-.06454	
not									
assumed									

APPENDIX C 7 Group Statistics of Impulsive Buying Behaviors

Gender	N	Mean	SD	Standard error of the mean
Male	88	2.7464	.94704	.10095
Female	329	2.8778	.90194	.04973

APPENDIX C 8 Gender and Independent T-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Impull1	Equal variances assumed	.203	.652	-1.201	415	.231	-.13137	.10940	-.34642	.08368
	Equal variances not assumed			-1.167	132.270	.245	-.13137	.11254	-.35397	.09123

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