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UNDERSTANDING CONSUMER CONFIDENCE EVOLUTION IN RESPONSE TO ADVERSE SHOCKS AND HOW MARKETING CONTRIBUTES TO BUSINESS SUCCESS IN ECONOMIC DOWNTURNS

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ABSTRACT

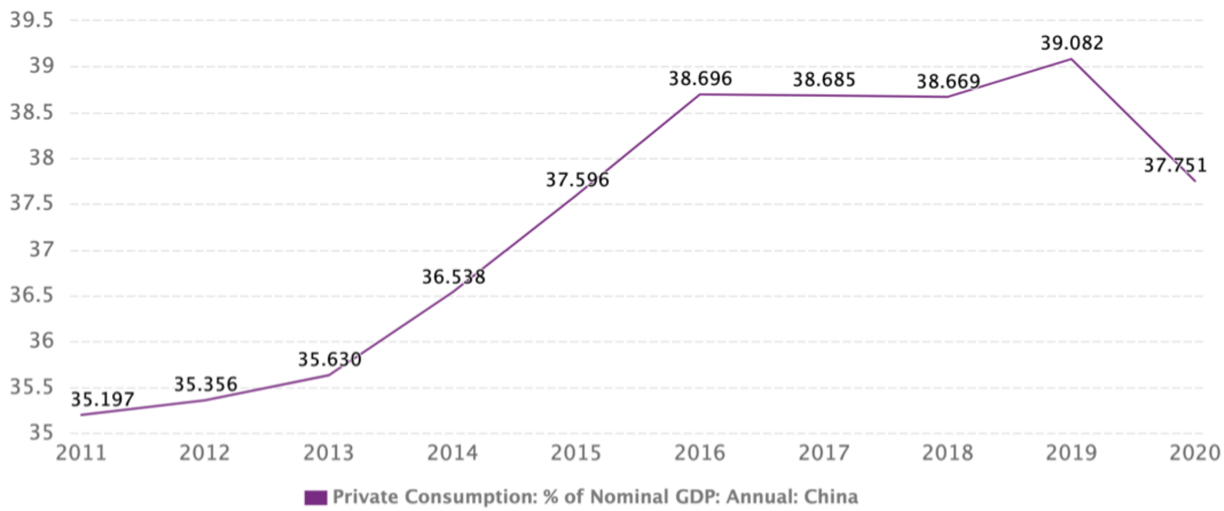
Purpose- Firstly, this paper examines how current measurements of consumer confidence might be used to forecast future household spending by using economic variable (i.e. unemployment rate, national adjusted income per capita) data in China, with the help of statistic tools (i.e. Python and Pandas) for the job of data cleaning and analyzing. Secondly, I will focus on the ways in which businesses alter their marketing mix in the face of economic hardship to survive by understanding the importance of utilizing effective marketing strategies during economic downturns.
Methodology- This paper examines the predictive performance of consumer confidence index on change in consumption growth by constructing three different OLS regression models and by integrating several existing proposals for effective marketing strategies for businesses in times of low consumer confidence to help business managers to make wise and effective response to economic downturns.
Findings- It is shown both 1 year lagged consumer confidence and 3 years lagged consumer confidence are good predictors for current change in consumption patterns, whereas 2 years lagged consumer confidence shows negative correlation with consumption change, and consumer confidence have their own predictive power regardless of the macroeconomic variables.
Conclusion- Therefore, this paper contributes to the existing literature by providing empirical findings that consumer confidence cannot always fulfill the role of anticipating consumption change and by further providing concrete policy recommendations for consumer confidence' revival during recessions in an effort to fill the gap.

Keywords: Consumer confidence, marketing, consumption, consumer behavior, forecasting.
JEL Codes: B16, B22, E21, E27, M21, M31

1. INTRODUCTION

Consumption makes up the majority of GDP in virtually every economies and is thus crucial to comprehending the dynamics of economic activity. The private consumption in China is increasing in recent decade as it plays an important role in Chinese economy (Figure 1). However, information about the economy's true state is released with a significant delay. For this reason, timely data, such as consumer confidence indices, can serve as useful predictive signals of long term economic development. The Survey Research Center (SRC) at the University of Michigan in the United States developed the index of consumer sentiment in the 1940s to empirically quantify the confidence of consumers. Consumer confidence indexes were later introduced by the Conference Board of Canada in 1967. Both indices have proven to be remarkably beneficial due to wealth of data provided by end users. In the middle of the twentieth century, consumer confidence index became a standard economic measure due to the strong correlation between consumer confidence and household spending. Consumers may be less likely to spend money if they are experiencing the effects of a tight financial situation or have pessimistic expectations about their future family's financial state. This follows the Precautionary Savings Theory, which theorizes that when income is uncertain, people will accumulate more assets. Accordingly, we should see more current spending in comparison to future spending when consumer confidence is strong, since the former predicts the latter. As a result, the traditional life-cycle or permanent-income theories of consumption are not contradicted by the concurrent association between consumer confidence and private consumption. Neither does it automatically simplify the task of predicting future spending patterns. From the perspective of an economic prognosticator, it is of importance to determine whether consumer confidence has any independent predictive power for future changes in household expenditure, and how business can adopt effective marketing strategies to survive during the economic downturns.

Figure 1: China's Private Consumption: % of GDP, 2011-2020



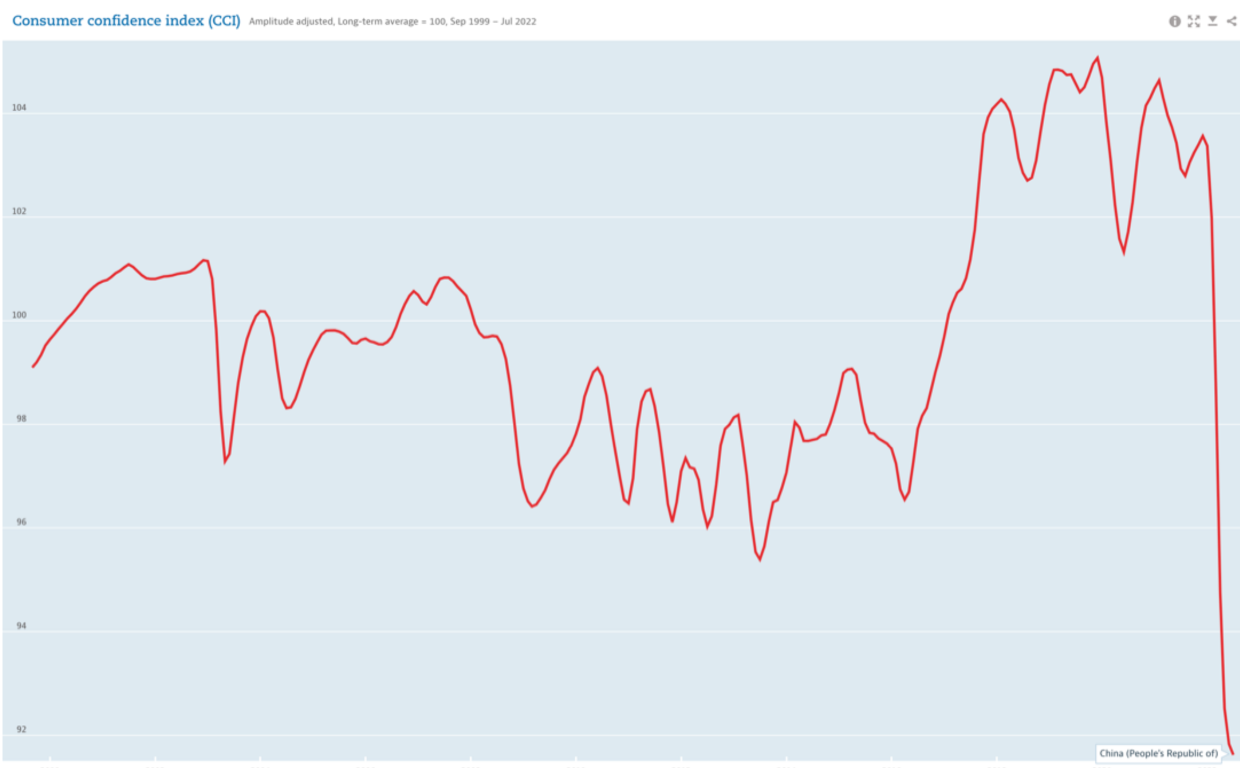
Source: CEIC Data (2018), an ISI Emerging Markets Group Company. www.ceicdata.com/en/indicator/china/private-consumption--of-nominal-gdp

The consumer confidence index's most valuable characteristic is that it serves as the first piece of publicly available data on consumer behavior, making it an essential instrument for understanding the factors that ultimately determine the level of real consumption. For this reason, it is used by most economic agents in their predictions (i.e. the stock market responds swiftly to the official launch of the consumer confidence index because it reveals future consumption and growth). Understanding the factors that influence this index could also help us draw more accurate conclusions about its relevance to household spending. Noticeably, the consumer confidence index has become increasingly vital in recent years, despite the fact that its major determinants remain unclear. The widespread agreement about the index's ability to explain variance in real consumption trends validates this finding. There is a rising number of scholars demonstrated that real consumption estimations are strengthened by the use of the consumer confidence index. This finding appears to hold true for numerous nations around the world, including the USA (Desroches & Gosselin, 2002), the EU (Demirel & Artan, 2017), Turkey (Karasoy Can & Yüncüler, 2018), Belgium (Beltran Lopez & Durré, 2003), Brazil (Ghosh, 2020), Nigeria (Oduh et al., 2015), South Africa (Khumalo, 2014), and Croatia (Kuzmanović & Sanfey, 2012).

Between 2000 and 2022, the complexity of commercial markets increased. The correlation between consumer confidence index and private consumption can be affected by a number of external factors, including financial instability and stock market volatility (Figure 2). The housing bubble in the United States, which exploded in 2008 due to the subprime mortgage crisis. Global economic instability was exacerbated by a decline in US dwelling-related assets. Canadians life was transformed because of the country's close ties to the United States. Meanwhile, the stock market's dismal view is a fundamental result of the economic recession. As a result, the correlation between consumer confidence index and household spending may weaken as the stockholders, which are the consumers, takes on greater risk. However, there is debate about whether or not consumer confidence actually helps anticipate future consumption expenditures. In reality, it has been shown through out-of-sample forecasting exercises (e.g. Bram & Ludvigson (1998); Ludvigson (2004)) and Croushore (2005) that confidence does not add statistically significant information to that included in other macroeconomic and financial variables. The majority of these investigations rely on information collected in the United States.

According to Ferrell & Hartline, "if businesses want to succeed, they need to create a plan or road map" to get there (2002)". The ever-evolving situation serves as the starting point for any effective marketing plan. Finding the optimal marketing mix is crucial for any successful company. It is widely known that the four components of a successful marketing strategy are the ”4Ps” (Product, Price, Place, and Promotion) (Wang, 2006). According to Nilson (1995), market leaders and challenger brands are treated differently when it comes to developing a strategy in a dynamic market. While market leaders must move with the flow and gradually adjust to the new circumstances, innovative challengers might use the situation to their advantage by rapidly adapting to new circumstances. The market is volatile, and in times of crisis or other environmental shifts, businesses need to adjust their strategy and marketing mix to maintain or increase their market share. Kieth Roberts (2003) presented research showing that businesses that maintain or raise their marketing spending during a recession perform much better than those who cut costs, both during and after the recession.

Figure 2: China’s Consumer confidence index, 2000-2022



Source: OECD(2023). Business tendency ad consumer opinion survey. Main economic indicators database. www.oecd-ilibrary.org/economics/data/main-economic-indicators/business-tendency-and-consumer-opinion-surveys_data-00041-en

Given that the marketing mix, or 4Ps, is the medium through which businesses implement and adapt to their strategies. Companies must consider marketing strategies prior to and during a recession if they are to become resistant to external shocks or emerge from it successfully. Numerous studies have examined the relationship between marketing techniques and economic downturn, but they all take a slightly different approach. Latham and Braun (2009) state that despite the extensive literature on recessions, only a handful of studies have explored the problem of how to assist businesses during a crisis. Based on the past studies, the performance of firms in dealing with the business risks and challenges posed by the Covid-19 crisis is highly correlated with the degree to which these firms have implemented successful marketing techniques and strategies (Fuciu, 2020). The profitability and survival of businesses during the epidemic hinges on their ability to make successful marketing decisions. Managers need understanding about marketing practices that will enable them to succeed throughout and after the Covid- 19 pandemic, when the market will be extremely unstable.

Therefore, I have a dual objective. Firstly, I will examine how current measurements of consumer confidence might be used to forecast future household spending by using economic variable (i.e. unemployment rate, national adjusted income per capita) data in China, with the help of statistic tools (i.e. Python and Pandas) for the job of data cleaning and analyzing.

Secondly,I will be on the ways in which businesses alter their marketing mix in the face of economic hardship to survive by understanding the importance of utilizing effective marketing strategies during economic downturns. I will arrang this report in six sections, I will discuss relevant literature in Section 2, and the description for the data used in the investigation will be introduced in Section 3. I will include the method of the research in Section, which contains both theoretical and empirical approaches, and I will share the empirical findings in Section 4. Lastly, I will draw conclusion based on the results in Section 4 and evaluated the limitations and suggestions for future economic scholars in Section5.

2. LITERATURE REVIEW

2.1. Usefulness of CCI in Consumption Context

Several literatures has proved that by utilizing consumer confidence index, and it is possible to forecast private consumption within an economy. A research done by Li (2016) shows that at the national scale, the consumer confidence indexes are capable of predicting total consumption to a considerable degree. For most spending categories, such as durables, non-durable products, and services, the incremental predictive power of consumer confidence indexes is positive. At the provincial level, the lagged confidence indexes effectively explain the spending in most provinces' various consumption categories. However, for national-level data, the introduction of other control variables in the model diminishes the incremental predictive ability. Another investigation done by Kłopocka (2016) suggests that some consumer confidence indices (subjective indicators) appear to have predictive power exceeding macroeconomic variables (objective indicators) and are valuable for assessing and anticipating domestic saving and borrowing activities. In the case of South Africa (Khumalo, 2014), Ng-Perron tests are used to determine the relationship between consumer confidence and consumer expenditure. The outcomes of the regression indicate that consumer confidence and economic expansion have a positive effect on consumer consumption, and as a consequence, aggregate expenditure will increase when consumer confidence in the economy is prominent. The overall findings of the research demonstrate that both the private and public sectors have a significant impact on total consumption. This implies that policymakers should examine the welfare effect of consumer optimism and can utilize consumer confidence in the future to estimate persona spending behaviours. Similarly, in Italy, the least financially liberalized country and one where collateralization of housing stays very tough, represents the only country in which recent housing price surges have been strongly correlated with the rising the consumer confidence in the nation (AL-EYD et al., 2009). Likewise, Bruno (2012) finds an asymmetric threshold effect in the context of durables, which allows one to foresee a dramatic drop in this category of consumption provided that confidence is below a particular threshold. The empirical evidence reveal that the consumer confidence index has a high level of explanatory power for both durable and non-durable goods, but is of little relevance for semi-durable goods. When confidence is examined in lagged conditions, it becomes evident that services have boosted. Anticipating entire consumption directly is one area where confidence becomes effective. According to Ghosh's research, the Brazilian CCI is a prominent measure of household consumption spending. Along with other macroeconomic factors, they have uncovered a long-term strong link. Consumers effectively utilize the data at their reach to change their prior assumptions. They draw the central conclusion that, in addition to other macroeconomic indicators often used to forecast consumption behavior, consumer confidence might be a significant explanatory component of expenditures of Brazilian consumers. It has been shown in their paper that CCI is more reliable as a predictor of future price movements during economic downturns. Their research also provides support for the idea that consumers' reactions to various equilibrium situations are asymmetrical through the use of the asymmetric error correction model. Moreover, their findings are consistent with those of Bovi (2009), who investigates the concept of psychological bias related to individual consumption. Finally, Kuzmanovi and Sanfey (2012) draw the conclusion that the index of Croatian consumer confidence is explanatory of retail turnover, which is highly correlated with GDP activities and domestic imports.

The use of consumer sentiment is well-known in most countries across the globe, as it is considered as a similar measure to consumer confidence index. The ability of lagged consumer sentiment to explain recent shifts in household expenditure has been verified in the past (D. CARROLL et al., 1994). While following periods' expenditure will still be lower than they would have been without the disruption, the consumption growth rate will be higher as the importance of additional deposit declines due to the expanding stock of assets. Therefore, current economic uncertainty will have a negative effect on consumption growth whereas lagged uncertainty would have a positive effect.

Although numerous studies verified the explanatory power of consumer confidence in predicting future consumption, there are plenty of research suggests that it is not effective to use consumer confidence for forecasting private consumption all the time, but do in exceptional periods. According to work by Desroches and Gosselin (2002), confidence indices don't tell us much about what Americans will spend as a whole in the future. During times of high volatility, their study reveals, changes in consumers' levels of confidence have a notable impact on their purchasing behavior. Notably, these findings are robust after accounting for discretionary income, which may indicate that confidence provides additional information under challenging conditions. Their study has demonstrated the usefulness of these indices by highlighting the extreme fluctuations that are recorded during exceptional periods. It is during situations of considerable uncertainty that confidence indices are most likely to effect expenditure. Stephane and Pedro's (2011) findings further demonstrate that the consumer confidence index is a robust predictor of spending under certain conditions. In example, their out-sample data demonstrates that consumer confidence adds explanatory weight to private consumption when household survey variables undergo substantial swings, suggesting that confidence indicators may gain in predictive ability at such periods. Similarly, Kuzmanovi and Sanfey (2015) begin by investigating the short-term forecasting ability of confidence indexes during the past two decades. The results reveal substantial variation in the primacy of confidence across nations and time periods. During times of financial hardship particularly in countries that had more severe downturns, like Italy and Portugal, consumer confidence indexes have a stronger predictive power. In addition, the sub-index measuring expectations for one's own financial situation turns out to be even more predictive than the customers' overall confidence in France. Moreover, they provide evidence that unexpected changes in customer confidence are a separate cause of business cycle oscillations. Results from Oduh's research (2012) indicate a positive correlation between consumer confidence and budgeted household expenditures. While changes in the price of food tend to catch the attention of consumers more than those of durable goods, both present and foreseeable income have a positive effect on spending behaviors; nevertheless, as consumers look farther into the medium and long term, the impact of income on anticipated expenditures weakens. If consumers' income is unpredictable for an extended period of time, they will likely cut spending rather than increase it. This means that the short run marginal propensity to consume (MPC) is significantly higher than the long run MPC, which is both unexpected and descriptive. And this is induced by increase in pessimism towards future. It is worth pinpointing that the explanatory power of lagged consumer confidence indexes on future expansion of total consumer spending was demonstrated in a 2018 study by Karasoy Can and Yüncüler. As soon as other financial and economic factors that are thought to affect consumption growth are incorporated into the models, the models' predictive power either falls or disappears altogether. Even when additional indicators are taken into account, CNBC-e's ability to predict increase in overall consumption and CBRT's and propensity to Consume Index (PCI)'s predictive ability in the growth of nondurable consumption remain unchanged. Consequently, consumer confidence might offer useful insights into how to increase consumption, however this will rely on the precise meaning assigned to the term 'consumer sentiment'. The effect of consumer attitude on foreseeable total growth momentum was not supported by their findings, which were contrary to the predictions of the permanent income hypothesis and the precautionary savings incentive. For goods that won't last forever, which are the nondurables, the evidence is weak.

Nonetheless, few past scholars states that consumer confidence index do not have any explanatory power to explain future consumer expenditure significantly based on their empirical findings. Adopting the most up-to-date data, Croushore (2005) conclude that consumer confidence indexes are substantial in some specifications, but that there is no indication that using these indexes significantly improves projections in any specification. These findings imply that consumer confidence indices can be disregarded by economists when attempting to predict consumer expenditure. However, the results are inconclusive because they are dependent on the accuracy of the prediction model. They have only used models that have already been employed by past researchers in their practice exercises. Better predictive methods, if they can be found, might be able to demonstrate that consumer confidence indices do, in fact, have marginally considerable explanatory power. In addition, consumer confidence indexes may potentially serve a useful use in anticipation. Monthly releases of the indexes provide data that can be used to forecast quarterly consumption patterns. Although, in order to put this theory to the test, they will need to utilize distinct tools and frameworks. Surprisingly, there are two studies demonstrated that consumer sentiment failed to forecast consumer spending patterns both in the short run and long run (Haniff & Masih, 2016; Cotsomitis & Kwan, 2006). According to Haniff and Masih's research, consumer sentiment's usefulness in predicting short-run private consumption is predicated on the fact that it can reveal information not found in other financial and economic factors. Based on their paper's ECM-ARDL findings, real purchasing power of consumer is a key factor in real household consumption, consumer sentiment and the index of real stock. Additionally, there is no correlation between consumer sentiment in long run or short run real consumer consumption. These results may indicate that the information obtained from consumer sentiment is already captured by other financial and economic elements. Since the index of consumer sentiment does not appear to add anything to the scenario, it cannot be relied on to forecast private consumption in the foreseeable future. Likewise, Cotsomitis and Kwan found that the in-sample incremental predictive power of CCI and ESI varies significantly across the European nations they surveyed. In addition, the findings of their out-of-sample experiments suggests that these confidence indices offers minimal information regarding the future route of consumer expenditure. Their paper serves as a cautionary tale to European politicians and economic analysts who rely on the Consumer Confidence Index and the Economic Sentiment Index to anticipate rising consumer expenditure in the EU region.

2.2. Marketing Strategies in Era of Low Consumer Confidence

The importance of economics concepts to marketing strategies during economic downturns, when the consumer confidence index is low, is illustrated by Marks et al (2012) and Ou et al (2013). Mark's group's research report emphasizes the utility of macroeconomic and industry-specific data in formulating a marketing plan for a period of recession. Moreover, given the diversity of industries, it can be crucial for marketers to have an in-depth knowledge of their own sector's facts and present outlook while debating the course of their campaign. Meanwhile, the results of Ou's research suggest that varying levels of consumer confidence moderate the positive benefits of customer equity drivers on loyalty intentions. Customers with lower consumer confidence tend to place a higher premium on value equity in all sectors, giving credibility to the anecdotal belief that these customers are more wary and sensitive than their more confident counterparts during economic downturns. The effects of customer equity drivers are moderated by consumer confidence more in non-contractual than in contractual contexts. In contractual contexts, customers may have varying levels of confidence since it is more challenging for them to adjust their behavior in accordance with their desires. Whether an organization operates in a contractual or non-contractual scenario has an impact on how loyalty initiatives are adapted. In addition, they observe that contractual firms are more abnormal than non-contractual firms, while finding a trend that value equity is helpful for boosting customer loyalty for clients with weaker consumer confidence across service industries. In light of these findings, it is clear that contractual firms need to exercise greater caution than non-contractual enterprises when employing value equity as a technique to enhance poor consumer confidence and customer loyalty.

Surprisingly, numerous studies demonstrated that recession is considered as an great opportunity for marketing and hence leading to potential growth of firms, which contradicts the traditional view of cutting down marketing cost during periods of downturn. There is a great chance to boost retention during a downturn by gradually honing company's multi-channel communication strategies. Companies can methodically learn which value-based offerings appeal most with specific clients by adopting a real-time marketing strategy (Ginn et al., 2010). Srinivasan's research in 2002 confirms claims from the business press about corporations such as Microsoft, BMW and Dell using economic downturns to their advantage through strategic advertising campaigns. The results of their study imply that there are also short-term benefits of utilizing effective marketing strategies. They conclude that proactive marketing has both a direct and indirect impact on company success. Therefore, it is a positive sign that their research shows companies can reap returns on marketing expenditures made during a recession even before it's finished. Their findings also imply that not all businesses take preventative measures during economic downturns. During a downturn, companies are more likely to increase their marketing efforts if they have a strong emphasis on marketing, an entrepreneurial culture, flexible resources, and the freedom to reallocate them. Their findings suggest that proactive marketing helps to moderate the impact of its organizational forebears and offers a substantial rationale for performance in a down economy. Research conducted in 2014 by Akyüz and Ercilasun reaches the same conclusion. Companies shouldn't ignore the benefits a down economy might provide. Maintaining a vigorous marketing campaign during a crisis may help a company stand out from the competition, who are likely to cut back on their own marketing campaign as a result of the economic climate. Since most businesses are cutting back on advertising strategies, this can be the ideal time to get the firm's name out there. As a result, even in a recession, a company that invests heavily in advertising has a better chance of increasing its market share, maintaining its brand's visibility, and expanding its customer base. Businesses who put money into advertising during a downturn will see a rise in sales both while the economy is in a downturn and after it has recovered. Notta (2014) also utilized simple linear regression analysis to discover the connections between the dependent variables and the independent factors in his investigation of the effects of marketing strategy variations on firm performance. Her findings demonstrate the effectiveness of advertising techniques of Greek dairy companies prior to and throughout the economic crisis. While costly television ads reduce the profits of successful corporations in the years leading up to a crisis, the lower costs of magazine advertisements can boost those profits once the crisis has hit. According to Malley et al (2011) 's research, spending money on marketing during tough economic times increases long-term profitability, customer loyalty, and shareholder value. It seems that companies that cut costs lose ground to their competition. Proactively responding companies, on the other hand, get the most advantages, especially if their rivals do not retaliate due to defensive cost-cutting. Preparing for and responding effectively to such challenging situations is not only possible, but also vital. During a downturn, stepping up marketing activity could prove especially rewarding.

There is, however, a single research that argues that, depending on the specifics of the firm’s circumstances, a downturn can either be a fantastic opportunity or a disaster. The emergence of new consumers necessitates the development of alternative approaches for customer segmentation, as well as the development of products and marketing tactics that are specifically targeted to the needs of these groups. Remember that every recession hits different sectors of the economy and business in distinct ways. Consequently, recessions may produce severe obstacles for some businesses or industries while providing advantages to others. As a result, entrepreneurs need to keep a careful eye on the markets, assess whether or not the recession poses a threat to their company and their industry, and then swiftly adjust their plans accordingly. When considering whether or not to take proactive measures in this unpredictable market, businesses must take into account not just the external environment, such as competition and evolving consumption pattern, but also their internal environment, including their resources, cultures, etc (Civi, 2013).

A plethora of studies shows that businesses may thrive even during economic downturns, provided they employ the right marketing techniques. Whether or not a company is prosperous in all times depends largely on marketing methods with respect to its main industry. However, macroeconomic factors do not diminish the performance of marketing programs. Growth of the sales team and promotion are two examples of marketing activities that are beneficial at any point in the business cycle, although cautious expansion is more relevant to the growth phase. It is possible for a company to survive a downturn with consistent marketing efforts. Pearce and Michael (1997) offers multiple suggestions to startup businesses: First of all, preventing a loss in revenue during a downturn requires first guaranteeing continued marketing efforts for the core business. Second, grow with prudence and an eye on marketing efficiency throughout the peak season. In a nutshell, a company’s pre-recession status matters because it boosts the firm’s resilience against the forces of disaster. Similarly, Grundey (2009) claims that a firm can lessen its vulnerability to brand risk by diversifying the strategies it employs to establish and promote its brand, and it can decrease the likelihood that its consumers will leave for a competitor by acquiring more of their personal data and utilizing it to effective use. The paper’s mini-cases of Nike, Nokia, Kellogg’s, Chrysler, and the global hotel network show that there are a variety of techniques that can be used to establish and sustain brands in order to compete successfully on a global scale. These strategies include: mean- ing management; brand extension; glocalization; global brand consistency; brand awareness; brand investment maintenance; and meeting customers’ needs. Several viable marketing tactics are presented by Ang (2020) in his research. To improve productivity by capitalizing on resource-saving tools like public relations and social media and to recognize a more value-conscious customer, businesses must be more focused, identify target segments more precisely, cut non-essential costs by pruning marginal product lines and channels, and greater spread of information of the goods to decrease the perceived financial risk of consumers. Asian enterprises that want to succeed need to look beyond their own region and into less conventional markets. They must to take their marketing and commercial dealings with customers and clients more seriously and develop some professionalism. They should take advantage of consumers’ desire to buy regional products by fostering the growth of local businesses. When it comes to marketing strategy, Asian companies should think in the long-term. Successful Asian companies will be the ones who find and capitalize on market chances throughout the region’s current period of uncertainty. Lastly, Oana (2018) discovered that a company’s resources and long-term goals need to be considered when developing a communication strategy, which in turn requires a clear understanding of the company’s image in the eyes of its target audience. Further, the marketing communication experts’ awareness of the way in which consumers perceive external stimuli, specifically of the influential aspects that determine the appearance of overt behavior, is of greatest importance in choosing the proper communication skills according to the features of the target users.

Following the breakout of COVID-19, the companies that put the most resources into marketing programs had the best chance of becoming victorious. As a result of the COVID-19 crisis, there have been substantial shifts in customers’ expectations and buying patterns, making it more more crucial for a business to constantly experiment with new marketing techniques. As shown in Figure 3, the marketing tactics that businesses should adopt to survive and flourish both before and after the pandemic were listed (Nikbin et al., 2021). Polat and Nergis’s 2011 research also gives a specific example of a marketing strategy that might be employed during a downturn, suggesting that businesses should think creatively about how they can reach out to customers. The growing awareness among consumers about the significance of reducing their products’ negative effects on the environment (Neff, 2019) has led to an increase in the importance consumers place on a company’s commitment to its social responsibilities and the degree to which it demonstrates this commitment when purchasing goods (Quelch & Jocz, 2009). The term ”social responsibility,” ”social media,” and ”green marketing” all rise to prominence, but in ways that differ from past research.

Figure 3: Marketing Strategies during Covid-19 and Recessions

Source: Asia-Pacific Journal of Business Administration, https://www.emerald.com/insight/publication/issn/1757-4323

However, adjusting business's marketing approach is just as crucial as putting in place the right marketing strategies during a recession to ensure continued success. In order to fulfill the demands of the market and win the loyalty of their customers, businesses must revise the components of their marketing mix in response to the dramatic shifts in the market condition (Alina & Lelia, 2012). Because of its low barrier to entry and high return on investment, pricing is the element that can be altered with the greatest frequency and least amount of hassle (Ferrell & Hartline, 2002). The companies in the study are aware of this since they have all adjusted their prices in some way. Additionally, in their work, Ang et al. (2000) detail two distinct approaches to pricing during economic downturns. The first involves charging market rates for goods of a better quality in order to sustain that high standard. By offering low pricing on daily necessities, the company may maintain or expand its market share with the support of the second method. One thing to keep in mind about advertising during a recession is that firm shouldn't reduce its advertising budget (Koksal & Ozgul's, 2007). Both Real and Carrefour want to increase their usage of offline commercials as a means of enhancing their two-way communication with consumers. Commercials displayed in-store and customer loyalty programs are excellent strategies for maintaining and, ideally, deepening relationships with existing buyers (Nistorescu et al., 2009).

It is undeniable that social media contributes to marketing largely during recession and maintain businesses' success (Kaur, 2020). Maintaining and expanding brand recognition and customer interactions are two areas that can greatly benefit from the use of social media (Morrissey, 2008). Strategically expanding various forms of advertising could unlock enormous long-term possibilities for businesses (Malley et al., 2011). Interactive marketers continue to employ some type of social media, and other businesses plan to spend more in social media (Owyang et al., 2009). As a result, social media provides many relative advantages, such as efficiency, its low cost, and longevity. Businesses of all sizes can benefit more from social media than from traditional advertising methods. It's the most efficient means of communicating with clients around the world and gathering their thoughts. Organizations of all size, from startups to multinationals, can benefit from advertising their goods online at the lowest price possible, or even for free, as a means of surviving in the market until the economy recovers (Kirtis & Karahanb, 2011). According to Suharto (2021)'s research, e-commerce customer satisfaction, e-commerce customer loyalty, and e-commerce customer satisfaction all have significant effects on each other. Posting content that can intrigue consumers' interest on Instagram is the single most important indicator of the personalization dimension's value in developing social media marketing. Therefore, businesses in the e-commerce sector can encourage consumer to recommend their Instagram accounts to others by posting engaging con- tent that is both informative and entertaining. Indirectly, this can raise consumer confidence and increase the reach of information. By keeping and improving the consistency between product descriptions and actual conditions, businesses in the e-commerce industry can win back the trust of their customers. E-commerce businesses can rely on the support of brand-loyal customers to help ensure the market's continued growth and success. This is due to the fact that consumers are more likely to shop online during recessions and make repeat purchases there if they have a positive experience. In Liang (2022)'s study, it is demonstrated that using the celebrity impact, which adopts an influencer marketing technique, will be advantageous for persuading consumers to purchase, and it will assist businesses in generating profits during a recession. The appeal of information relates to consumers' psychological states and buying intention, according to their findings on recommendation credibility. Based on their study, celebrities' consistency with a good increases the credibility of their product suggestions. Additionally, they found a positive correlation between a recommender's credibility and the recommendation's. The influencer marketing sector must explore how to pick the proper influencer. The influencers they chose must have particular traits: their personal experience demonstrates they are trustworthy, and their charisma attracts followers who trust their product recommendations . In term of their empirical contributions to the field of marketing, their findings strongly indicate that marketing teams must never ignore the importance of social media to brand-consumer relationships. Marketing staff should thoroughly develop and manage social media product information. High source trustworthiness improves consumers' purchasing moods and buying intention, according to their research. A company's partnership with a famous person boosts sales, brand exposure, and product awareness. Their research suggests that corporations should strongly consider working with beautiful celebrities for marketing. To choose the ideal celebrity partners, a marketing department must guarantee that the celebrities "fit" the recommended product. It is necessary to find a reliable partner as consumers' psychological states and buying intentions depend on recommendation trustworthiness.

2.3. Suggestions for Marketing in the Future

Marketers of the future will prioritize sustainability and the digital world (Danciu, 2013). To a greater extent than in the past, global environmental conditions will be influenced by transformations. In the future, international and regional factors will both be increasingly significant in marketing. Using inventory sharing and regional or global mapping, consumers are able to not only locate nearby deals, but also view detailed information about those deals in real time, shop for discounts based on their own tastes, and receive personalized recommendations. By 2020, consumers are expected to have an average of seven Internet-connected devices, and other predictions put that number as high as 50 billion (Mengerink, 2011; Goodson, 2012). Without a digital marketing plan, firms risk losing a big portion of their target audience and consequently, a lot of sales. Convergence is necessary if the organization is to maintain profitability and success in an era of decreased spending, cost cutting, and a search for bigger, more long-lasting influence. Social marketing's ultimate goal is to encourage consumption change that is better for the environment and the economy. This could serve as an incentive for lowering expenditure and strengthening sustainable development. However, the pricing system is insufficient to balance the needs of the economy with those of the environment and sustainability. That's why sustainable consumption studies need a bigger role in future marketing. Every company that wants to prosper in the coming decades must master the skill of marketing in order to successfully bring together seemingly different needs and meet them with appropriate solutions. Marketers for these companies need to focus on both revenue maximization and environmental sustainability (Nassar, 2012). Successful firms understand that brand maintenance, customer experience enhancement, and competitive differentiation are the keys to long-term marketing success. Multi-dimensional marketing–scientific, psychological, social, spiritual, and durable–must be tried by enterprises in the coming decades (Kjaer, 2012). In order to effectively communicate with their customers, businesses need to concentrate on social media. It is crucial for the organization to obtain a digital power. Enterprises need to increase production of environmentally friendly products and services until they account for the bulk of sales. Finally, organizations should assess their current pricing structure and consider how they can make sustainable solutions cost about the same.

3. DATA AND METHODOLOGY

3.1. Data

In order to fully investigate the effect of external shocks on consumer confidence and consumption growth, the data span the period 2006Q1 - 2020Q4. Change in household consumption is the dependent variable, whereas the lagged household consumption change, consumer confidence index, change in unemployment rate and change in national adjusted income per capita are the dependent variables for the investigation. Due to the scarcity of housing price data in China, this element is not included in this study. For data such as household consumption, consumer confidence index are downloaded from OECD Data (https: / / data. oecd. org/) , while unemployment rate and national adjusted income per capita are accessed to general public on World Bank Catalog https: / / datacatalog. worldbank. org/ home. I will use both monthly data and yearly data, which all being transformed to monthly data for the purpose of easiness of making comparisons. Table 1 presents the summary statistics of change in consumption and the independent variables, whereas Figure 4 displays the correlation matrix between these variables.

Figure 4: Correlation Matrix Heat Map

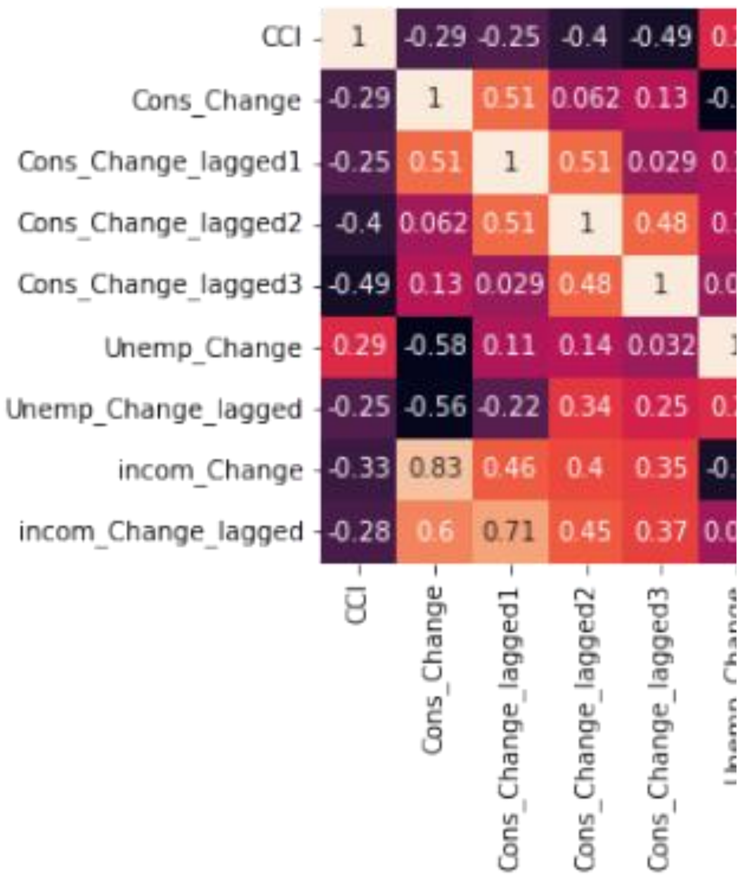


Table 1: Summary Statistics

	count	mean	std err	Min	Max
CCI	166.000	99.483	2.753	95.395	105.068
CCI_ lagged	166.000	99.459	2.728	95.395	105.068
Cons_ Change	166.000	0. 100	0.044	-0.011	0. 177
Unemp_ Change	166.000	0.009	0.039	-0.040	0. 106
Cons_ Change_ lagged1	166.000	0.111	0.032	0.064	0.177
Cons_ Change_ lagged2	166.000	0.115	0.032	0.064	0.177
Cons_ Change_ lagged3	166.000	0.116	0.032	0.065	0.177
Unemp_ Change_ lagged	166.000	0.001	0.029	-0.040	0.056
incom_ Change	166.000	0.073	0.026	0.017	0.140
incom_ Change_ lagged	166.000	0.081	0.024	0.057	0.140

3.2. Theoretical Framework of Consumer Spending

The conceptual model for the effect of consumer confidence on the future household consumption is motivated by work in the behavioral economics literature on modern theories of consumption(Ghosh, 2020). This section outlines this conceptual model to formalize the effect of consumer confidence on household spending patterns. To better focus on the impact of consumer confidence on future consumption, I simplified the model by abstracting away dynamic considerations, permanent income, real labor income, and consumption in the previous model.

Modigliani, Brumberg, and Friedman's Permanent Income Hypothesis (PIH) from the 1950s suggests that people concentrate their long-term utility. In this way, the PIH suggests that people spread out their spending across time rather than immediately responding to fluctuations in their income. In this view, consumers are less likely to adjust their spending when they believe that fluctuations in their income would be short-lived. According to the research done by Hall (1978) and Flavin (1981), the impact of shifts in confidence indicators on future consumption is small. Therefore, it is possible to explain, based on the pertinent information that is readily available to the customer, that the household spending decisions of the t-th period are already determined in the spending of the (t- 1)th period or in S_t . Therefore, (S_{t-1} - S_t) is a expression of spending behavior in the t-th period based on old information regarding the adjusted income in the (t- 1)th period.

As stated by the PIH, consumer spending is directly proportional to a person's permanent in- come. Respectively, it can be inferred that

$$S_t = Y_{a_t} \tag{1}$$

where S_t shows the household spending during t-th time period, and Y_{at} is the adjusted income of consumer. Consequently, there is a balance between consumption and adjusted income throughout all time periods. Income after adjustments is the present value of cash flow and possessions,

$$Y_{a_t} = r[P_t + \sum_{t=0}^{\infty} d^{i+1} Ex_t D_{t+i}] \tag{2}$$

where r denotes the adjusted interest rate after inflation, W_t indicates the actual value of possessions at the start of period t, d is the rate of interest after discount. Based on the nature of the data available to consumers at time t, Ex displays the expectation parameter and D_{t+i} represents the household disposable income.

The random wall behavior modified by Hall in 1978 states that consumers make their current purchasing decisions based on the predicted current value of the flow of future earnings rather than on their actual, immediate cash flow. In order to maximize their expected utility, consumers must take into account their inter-temporal budget constraint. The temporary utility function of this hypothetical buyer is supposed to be divided through all time periods, with segments depending on the products purchased during different time periods. Following equation demonstrates the temporary utility function of the consumer:

$$U(S) = E_t \sum_{t=0}^{\infty} (1+\zeta)^{t-1} U(S_t) \tag{3}$$

where S denotes the total spending of the representative consumer, E represents the expectations, which are based on the knowledge available during the timespan t, ζ represents the discount rate at the subjective level. Therefore, the third equation shows the discounted expected utility.

Furthermore, the equation (3) can be maximised subject to an inter-temporal budgetary restriction, and thus the first-ranking condition is presented as:

$$E_t U_m(S_{t+1})(1+\delta)/(1+\zeta) = U_m S_t \tag{4}$$

in this equation, U_m represents the marginal utility of consumer spending, which demonstrates the equation of Euler consumption. The marginal consumption utility for today is equal to the present value of the predicted marginal utility of spending for tomorrow, in accordance with the Euler consumption equation. Consequently, the current consumer spending is affected by past consumer's spending behavior. The real rate of interest, denoted by δ, is supposed to be equivalent to the discount factor, denoted by ζ , associated with the customer. When this marginal utility consumption function's dependent variables and independent variable is proved to be in a linear correlation, the Equation(4) can be reworked to:

$$E_t S_t = S_{t-1} \tag{5}$$

Equation (5) suggests that past consumer spending patterns are the most accurate indicators of present ones, and it can be further converted to:

$$S_t - S_{t-1} = \epsilon_t \tag{6}$$

Equation (6) is an demonstration of a regression of individual spending's growth, where ϵ denotes the forecast error term under rational circumstance and it has no connections to data that people at time t would normally be familiar with. This last equation demonstrates the only thing that can be used to estimate the difference between today's and yesterday's consumption is the forecast error epsilon.

3.3. Empirical Model of Consumption Change

This subsection introduces the baseline model of measuring change in consumer consumption using Ordinary Least Squares (OLS) methodology. I will examine the effect of consumer confidence with addition of other economic variables (i.e. Unemployment rate, National adjusted income per capita) on change in private expenditure.

The following equation can be used to estimate shifts in consumer spending by linearizing the consumption function I discussed above in terms of economic factors.

$$\Delta C_t = \alpha + \beta_1 \Delta C_{t-1} + \zeta_1 CCI_{t-1} + \eta_1 \Delta Unem_t + \lambda_1 \Delta Inc_{t-1} \tag{7}$$

whereby ΔC_t denotes the change in consumer consumption in the t-th time period, ΔC_{t-1} represents the lagged variable for consumption change in one year. It is well known that consumer confidence index plays an essential role in predicting consumer spending, therefore CCI_{t-1} denotes the consumer confidence index in the timespan t - 1. Economic indicators such as $\Delta Unem_t$ that demonstrate the change in unemployment in one year, ΔInc_{t-1} that shows the lagged variable for change in national adjusted income per capita in one year are included in this regression model.

The second regression model can also act as an tool to evaluate the change in consumer consumption spending by linearizing the function I mentioned in Section 3.2.

$$\Delta C_t = \alpha + \beta_2 \Delta C_{t-1} + V_2 \Delta C_{t-2} + \zeta_2 CCI_{t-1} + \eta_2 \Delta Unem_t + \lambda_2 \Delta Inc_{t-1} \quad (8)$$

here, ΔC_t denotes the change in consumer consumption in the t-th time period, ΔC_{t-1} represents the lagged variable for consumption change in one year, ΔC_{t-2} shows the lagged variable for consumption change in two years. Similarly, CCI_{t-1} denotes the consumer confidence index in the timespan t-1. Economic indicators such as $\Delta Unem_t$ that demonstrate the change in unemployment in one year, ΔInc_{t-1} that shows the lagged variable for change in national adjusted income per capita in one year are included in this regression model.

$$\Delta C_t = \alpha + \beta_3 \Delta C_{t-1} + V_3 \Delta C_{t-2} + u_3 \Delta C_{t-3} + \zeta_3 CCI_{t-1} + \eta_3 \Delta Unem_t + \lambda_3 \Delta Inc_{t-1} \quad (9)$$

In the last model, ΔC_t denotes the change in consumer consumption in the t-th time period, ΔC_{t-1} represents the lagged variable for consumption change in one year, ΔC_{t-2} shows the lagged variable for consumption change in two years, ΔC_{t-3} denotes the lagged variable for consumption change in three years. Likewise, CCI_{t-1} denotes the consumer confidence index in the timespan t-1. Economic indicators such as $\Delta Unem_t$ that demonstrate the change in unemployment in one year, ΔInc_{t-1} that shows the lagged variable for change in national adjusted income per capita in one year are included in this regression.

3.4. Robustness Check

Separating consumer confidence into a fundamentals-based component and a sentiment based component allows me to further investigate the premise that consumer confidence represents sentiment irrespective to economic fundamentals. The methodology I employ, which is comparable to that of Lemmon and Portniaguina (2006), is as follows: First, I will conduct a regression analysis of consumer confidence in relation to a number of current macroeconomic variables:

$$CCI = \delta_4 \Delta Unem_t + \epsilon_4 \Delta Inc_t \quad (10)$$

By establishing equation(10), I am able to capture the dependency of consumer confidence index on macroeconomic variables such as unemployment rate and national adjusted income per capita. In this equation, $\Delta Unem_t$ represents the change in unemployment rate in t-th time period, whereas ΔInc_t shows the change in income in the timespan t.

To continue, I use the residual in Equation (10) as a gauge of inappropriate optimism or pessimism in consumer confidence. Then, I investigate the predictive potential of this high consumer confidence for future spending:

$$\Delta C_t = \beta_5 \Delta C_{t-1} + CCI_{res} + \eta_5 \Delta Unem_t + \lambda_5 \Delta Inc_t \quad (11)$$

With the construction of equation(11), I take in consideration that part of consumer confidence index is not dependent on macroeconomic variables, which are the residuals of the regression. In this particular equation, ΔC_{t-1} denotes the consumption change in lagged one year, CCI_{res} shows the residuals of consumer confidence index, and the remaining variables kept the same meaning with that of equation(10).

4. FINDINGS

This section presents the results obtained from the aforementioned empirical specification. For the sake of brevity, I only report our results for the most crucial factors. The fundamental trend is that the consumer confidence index correlates strongly with the shift in consumption, however this relationship is not statistically significant in model 2

TABLE 4: Regression Results of Model 1, 2 and 3

Change in consumption	Model 1	Model 2	Model 3
Cons_Change_lagged1	0.3917***	0.5026***	0.6908***
Cons_Change_lagged2		-0 3548***	-0 4675***
Cons_Change_lagged3			0.2702***
CCI_lagged	0.0014*	1.598e-05	0.0012
Unemp_ Change	-0.7439***	-0.6848***	-0.7144
incom_ Change_ lagged	0.8054***	0.8683***	0.6615***
No Observations	166	166	166

Df Residuals	161	160	159
Adj. R2	0.764	0.805	0.821
Estimator	OLS	OLS	OLS

*p≤0.05, **p≤0.01, ***p≤0.001

Model 1 –The first regression model in table 4 incorporates variables such as the lagged value of consumer confidence index, change in unemployment rate, change in consumption for lagged in 1 year and the lagged value of income change. Among these elements, change in unemployment rate and change in consumption for lagged in 1 year and the lagged value of income are regarded as macroeconomic variables that affects consumer confidence. The assumption is that the lagged value of consumer confidence index will be positively correlated to change in private consumption, and other economic factors also contributes to change in consumption.

As the findings show, the data add credibility to the theoretical framework. Given the results in table 4, it can be deduced that one unit increase in the consumption change for 1 year lagged will lead to 39% upturn for change in consumption, with p-value statistically significant at 5%. Therefore, it verifies the initial assumption that made in previous paragraph and is in line with most literature findings presented in Section 2. Other factors that remain statistically significant includes the lagged change in income, with p-value reaching 0. 1% significance and shows positive coefficient in the regression, and it also demonstrates a positive relationship with the dependent variable (change in consumption). Lastly, the adjusted r-square value for model 1 is 0.76, which enhances that this model is suitable for the data obtained and the reliability of interpretation of the results will be strengthened.

Model 2 -The second regression model in table 4 includes one more variable – the lagged value of consumption change in 2 years. Based on the theory presented in Section 4. 1, consumers spending patterns nowadays depend on their consumption behavior in the past and they are the most effective indicators of present consumption. Therefore, I add this variable to test the second hypothesis – the lagged value of consumption change in 2 years also has positive relationship with consumption change.

The performance of the results presented in table 4 appears to disprove the initial assumption, where only the consumption change for 1 year lagged shows positive correlation with consumption change with p-value statistically significant to 0. 1%. The adjusted r-square value is boosted by 4% comparing to model 1, suggesting that this model is more capable of carrying out the experiments.

Model 3 - The third regression model adds another lagged variable for consumption change in three years, in order to test the conjecture of whether or not consumer's spending behaviors nowadays are still determined by their consumption change in the lagged 3 years time. I assumed that the lagged value of consumption change for three years will not have obvious positive relationship with current consumption change due to the fact that the development of the society transforms people's spending pattern at a vast pace.

However, the surprising findings demonstrates an opposite stand to the hypothesis. Based on the results in table 4, it can be inferred that one unit expansion of consumption change for lagged 3 years will raise the value of consumption change by 27% with p-value statistically significant to 0 . 1%, indicating that the consumption change for lagged 3 years still contributes to current consumption change, whereas the negative coefficient of lagged value for consumption change for two years reveals a negative correlation with consumption change. Finally, the adjusted r-square value escalates by 2% compared to model 2, suggesting that this model fits the data better than previous one, leading to higher reliability of results drawn.

Table 5: Robustness Check Results of the Change in Unemployment Rate and Change in Income

	Coef	Std err	t	P>|t|
Intercept	101.3133	0.707	143.238	0.000
Unemp_ Change	11.7098	5.847	2.003	0.047
incom_ Change	-26.4648	8.838	-2.994	0.003
	No.Observations	**Df Residuals**	**Adj. R2**	**Estimator**
Model 1	166	163	0.119	OLS

Robustness model 1 - Table 5 displays the estimated outcomes for Equation (10). Both measures of confidence are statistically significantly predicted by the present unemployment rate and by the national adjusted income per capita. The adjusted r-square for the regression is around 12%, which means that only tenth of the variance in consumer confidence can be accounted for by underlying economic factors.

Table 6: Robustness Check Results of 1 Year Lagged in Consumption Change, the Lagged Residual of Consumer Confidence Index, the Change in Unemployment Rate and Change in Income

	Coef	Std err	t	P>|t|
Intercept	-0.0086	0.006	-1.410	0.161
Cons_Change_lagged1	0.4639	0.061	7.664	0.000
CCI_res_lagged	0.0012	0.001	2.017	0.045
Unemp_ Change	-0.4311	0.049	-8.726	0.000
incom_ Change	0.8377	0.084	10.003	0.000
	No.Observations	**Df Residuals**	**Adj. R2**	**Estimator**
Model 2	166	163	0.800	OLS

Robustness model 2 - Table 6 displays the predicted outcomes of Equation (11). All of the variables' estimated coefficients are statistically significant. Overall, I find evidence supporting the hypothesis and draw the conclusion that confidence measurements not only stand in for other basic factors that leads to business cycle variations, but also have predictive ability on their own.

5. CONCLUSION

Recent years' market fluctuations brought up the importance of understanding consumer confidence to make effective marketing strategies during times of high uncertainty. This study finds evidence that consumer confidence has predictive power for future consumption behavior, which is consistent with the results from a variety of past scholars in the field of consumer economics. However, there are few studies focusing on incorporating the use of consumer confidence index for implementing corresponding marketing mix for businesses' survival during recessions. I will examine the predictive performance of consumer confidence index on change in consumption growth by constructing three different regression models and integrated several studies' contribution to marketing strategies for business in era of low consumer confidence to help business managers to make wise and effective response to economic downturns. Variables such as consumer confidence index, lagged consumer confidence index, 1 year lagged change in consumption , 2 year lagged change in consumption, 3 year lagged change in consumption, change in unemployment rate, lagged changed in unemployment rate, change in income and lagged change in income are included in the regression models to explore the predictive power of consumer confidence on consumption change.

I included several hypotheses in the investigation: (1) 1 year lagged consumer confidence index will be positively correlated to change in private consumption, and other economic factors also contributes to change in consumption. (2) The lagged value of consumption change in 2 years also has positive relationship with consumption change. (3) The lagged value of consumption change for three years will not have obvious positive relationship with current consumption change. (4) Business cycle fluctuations can be explained by a variety of fundamental variables, but consumer confidence indicators also have their own predictive power. I tested the conjectures above using OECD and World Bank data.

Firstly, using Visual Studio Code, I combined and analyzed data from the two sources stated in the previous paragraph covering the time period 2006Q1 to 2020Q4. Due to the scarcity of monthly unemployment rate data in China, I uses the yearly data to make identical monthly data for unemployment rate instead given the assumption that the monthly unemployment rate will be kept the same through one year. Secondly, I built three different ordinary least square models to examine the relationship between consumer confidence index and change in consumption by adding one addition lagged control component in the next model. Thirdly, I perform a series of robustness tests to ensure the reliability of the main conclusions. For instance, I decompose consumer confidence into two components, one rooted in fundamentals and one reflecting consumer sentiment unrelated to fundamentals, to deal with the problem that consumer confidence index reflects knowledge that are already enclosed in economic fundamentals like unemployment rates and national adjusted income per capita. The findings, which imply that past confidence measures do in fact contain meaningful information for current consumption predictions, still hold after this robustness test. Finally, I uses the empirical findings to verify the assumptions and come up with conclusions.

Most of the initial hypothesis is proven to be correct based on the empirical findings presented in Section 6. In particular, results in table 4 supports the (1) hypothesis as the signs for both lagged consumer confidence index and 1 year lagged change in consumption are positive. However, (2) hypothesis contradicts with the results demonstrated in table 5, where there is a negative correlation between 2 year lagged change in consumption and consumption change. This results may be caused by a huge change in people's income or personal preferences of spending. Surprisingly, the results shown in table 6 disprove (3) hypothesis, where the sign of 3 year lagged change in consumption is positively correlated with consumption change and it could be the outcome of stable economy conditions with no significant change in three years lagged. Lastly, (4) hypothesis is verified in table 8, which is the robustness check results of the regression model.

In the literature review section, I combine the theories of numerous studies in order to help businesses to survive in periods of recession by utilizing effective marketing tools. In contrast to the common belief that businesses should reduce their marketing budgets during recessions, a large body of academic research has shown that this time of economic uncertainty can really be a golden opportunity for marketing, ultimately leading to prosperity. Nonetheless, it is worth to keep in mind that businesses should choose suitable marketing strategies that are specific to their market conditions wisely instead of adopting the general measures that most businesses does. Sustainable practices and digital innovation should be at the most crucial factors for future marketers to consider. Both global and local aspects will play an ever-increasing role in the future marketing landscape.

6. LIMITATIONS AND IMPLICATIONS

Although this study does make a contribution, it has some obvious problems, the most apparent being the very small size of the sample used. If a more trustworthy result is desired, the remaining 166 data selected between 2006Q1 and 2020Q4 for examination provided by the OECD and the World Bank are insufficient. Information on home prices, wealth, and interest rates in China is also unavailable, therefore these elements are left out of the analysis. In order to effectively represent the dependence of consumer confidence on macroeconomic variables, the literature gap of using additional economic variables with consumer confidence to explore their effects on consumption behavior still needed to be filled. As a result, I wish researchers in the future will make use of a wider range of economic indicators to investigate the impact of consumers' confidence on their spending habits in a longer time period.

In addition, this study excludes the potential predictive power of the consumer confidence index on the purchasing behavior of consumers in different economic downturns, which is a significant limitation as I only focus on general consumption patterns. For instance, the 2008 crisis was one of the worst economic downturns at the beginning of the 21st century, leading to the closure of countless businesses. Considering this, it would be intriguing to compare the 2008 crisis's predictive power to that of the recent COVID-19, in order to determine which event was more catastrophic and to evaluate whether or not the lagged consumer confidence is useful for predicting future consumption behavior. Therefore, I recommend future researchers to break down the large time frame and explore thoroughly into the various economic downturns to examine the impact of consumer confidence on consumption patterns.

7. SOCIAL PROBLEMS AND POLICY SUGGESTIONS

It is important for government to implement effective policy to alleviate the impact of unexpected shocks on consumer confidence. Policymakers in the major economies should work together to revive and maintain confidence levels, and changes in confidence indicators play a critical role in investors' risk assessments, so it's crucial to consider the many implications on this qualitative macroeconomic measurement. Volatility in the economic cycle, the corresponding movements in employment and unemployment levels and corporate investment intentions are among the most prominent factors that have the ability to produce noticeable changes in consumer confidence (5 Factors That Impact Business and Consumer Confidence, 2016). For example, to boost worker skills during COVID-19 without raising the risk of viral spread, governments should be able to make supply-side policy adjustments, such as offering free remote training. Further, in order to motivate businesses to hire more people, the government could subsidize those companies who made the fewest redundant staffing decisions. As a result, employees will feel more secure in their employment and continue to be productive despite the harsh economic climate, leading to sustained economic growth and high levels of consumer confidence.

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