

E-FOOD COMMERCE, NUTRITION ECONOMICS AND CONSUMER BEHAVIOUR: BEFORE AND AFTER COVID-19

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ABSTRACT: *Consumer behaviors and purchases are complex concepts and strongly influenced by personal, psychological, sociocultural and environmental factors. This paper proposed an innovative comprehensive consumer behavior framework for use as a logical tool that assists in planning for local and national food programs aimed at complex socioeconomic, environmental and public health problems such as COVID-19. The progress of the Internet of things and the social media reported here provides a platform for accelerated actions that could have major positive implications for public health nutrition in the post COVID-19 world.*

KEYWORDS: e-food commerce, consumer behavior, nutrition economics, public health nutrition, digital food systems, COVID-19

INTRODUCTION

People consume food through a series of food choice processes determined by multiple factors such as individual (taste, perceived value, health, etc.) environmental (food supply, marketing, branding, technology, etc.), structural (access to grocery stores, transportation and neighborhood, policies, etc.) and economic factors (prices, promotion, income, markets, etc.) (Kumar et al., 2019; Lo et al., 2009).

In short, consumer food behaviors are multifaceted in different economic systems and policy environments (Hamadeh, 2020; Lo et al., 2009). After COVID-19 global pandemic, opportunities for further synergy between nutrition, health, psychology and economics disciplines were established (Hamadeh, 2020). For instance, public health nutrition studies that consider individual and societal behaviors in the whole food chain showed the importance of consumer psychology and characteristics in defining buyers' decisions making. Besides, nutrition economics studies highlighted how the consumer behavior consequences of nutrition policies employed by governments affect the food systems from production to consumption and the food markets work and fail (Hamadeh, 2017). Particularly and in response to COVID-19 confinement measurements, consumers and food providers adapted their behaviors to a new contextual reality such as the food e-commerce and digital services (Hamadeh, 2020)

The objective of this short communication is to focus on food and beverages (FB) consumption as part of nutrition, economic and the complex problem of their nexus. In

particular, to explore the complex interplay between all determinants of consumer behavior and their influence on the ways in which individuals perceive and consume food before and after COVID-19.

NUTRITION ECONOMICS

There is a close bidirectional relationship between nutrition and economics disciplines. Nutrition is a crucial factor to improve public health and economic development, and economic conditions (income, prices, etc.) are leading determinants of nutrition patterns, food choices and consumer behaviors. Therefore, nutrition and economic both influence directly or indirectly the human wellbeing (Lo et al., 2009).

Presently, economics is barely integrated with nutrition science although “nutrition economics” can enable greater understanding of the interplay between economic systems, nutritional status and consumer behaviors, and how fluctuations in the former affect the latter (Hamadeh, 2020; Lo et al., 2009). Therefore, nutrition economics will be significant not only for the public health nutritionists, policymakers, and health care experts and providers, but also for the consumers in their food consumption and lifestyle patterns (Hamadeh, 2017; Lenoir-Wijnkoop et al., 2011).

UNDERSTANDING THE DRIVERS OF CONSUMER BEHAVIOR

Consumer behavior determinants

The increase in food consumption and following fashionable regimens has been one of the most impressive sociocultural changes in the pre-COVID 19 world (DeKervenoael et al., 2020; Vredeveld & Coulter, 2018). Indeed, food consumption behaviors are complex where numerous factors, characteristics and specificities influence the consumer in his buying decision (Ramya & Ali, 2016).

A purchasing decision is the result of several forces including sociocultural, economic, personal and psychological forces. It is highly likely that each of these forces exert different impacts at different moments in different contexts (Gordon, 2006). Thus, there is an increasing acknowledgment that neuropsychology helps for understanding consumer behavior and how the brain creates, stores (memory), recalls and relates to food marketing celebrity endorsements, branding, and FB communication in everyday life (Gordon, 2006; Hamadeh & Estepan, 2018).

Today, social media (SM) platforms are establishing a new concept of interactive communication where consumer can connect easily with and other consumers before making any decision or purchasing (Conger & Singg, 2009). Such unique vital connectedness is increasing the normative development of para-social relationships (PSRs)

with influencers/bloggers who often serve as “persuasive teachers” and, in a way, “virtual friends” especially among the young consumers (Conger & Singg, 2009; Hamadeh, 2020). Therefore, the evolution of Internet of things (IoT) and SM use is an important communication concept to investigate in food consumerism research (Conger & Singg, 2009; Luo et al., 2020). Although, many efforts are done to study the IoT and SM evolution (Figure 1) but few explained by “how” and “how much” they are used to modify old and/or to develop new food behaviors. Constant connectivity to Internet and SM platforms contributes to (mis)information overload, which may lead to alternate the sociocultural and psychological dimensions of the consumer behavior (Conger & Singg, 2009). Figure 1 shows a side-by-side comparison of the Visual Capitalist infographics that combine the globe online activity and what an internet minute looks like (Visual Capitalist, 2019 & 2020). Not surprisingly, the internet is extremely dynamic and its landscape looks different from 2018 to 2020. Although the e-commerce was a booming industry before COVID-19, but after the pandemic a broad digitalization of the FB world rises to prominence (Data Reportal, 2020).

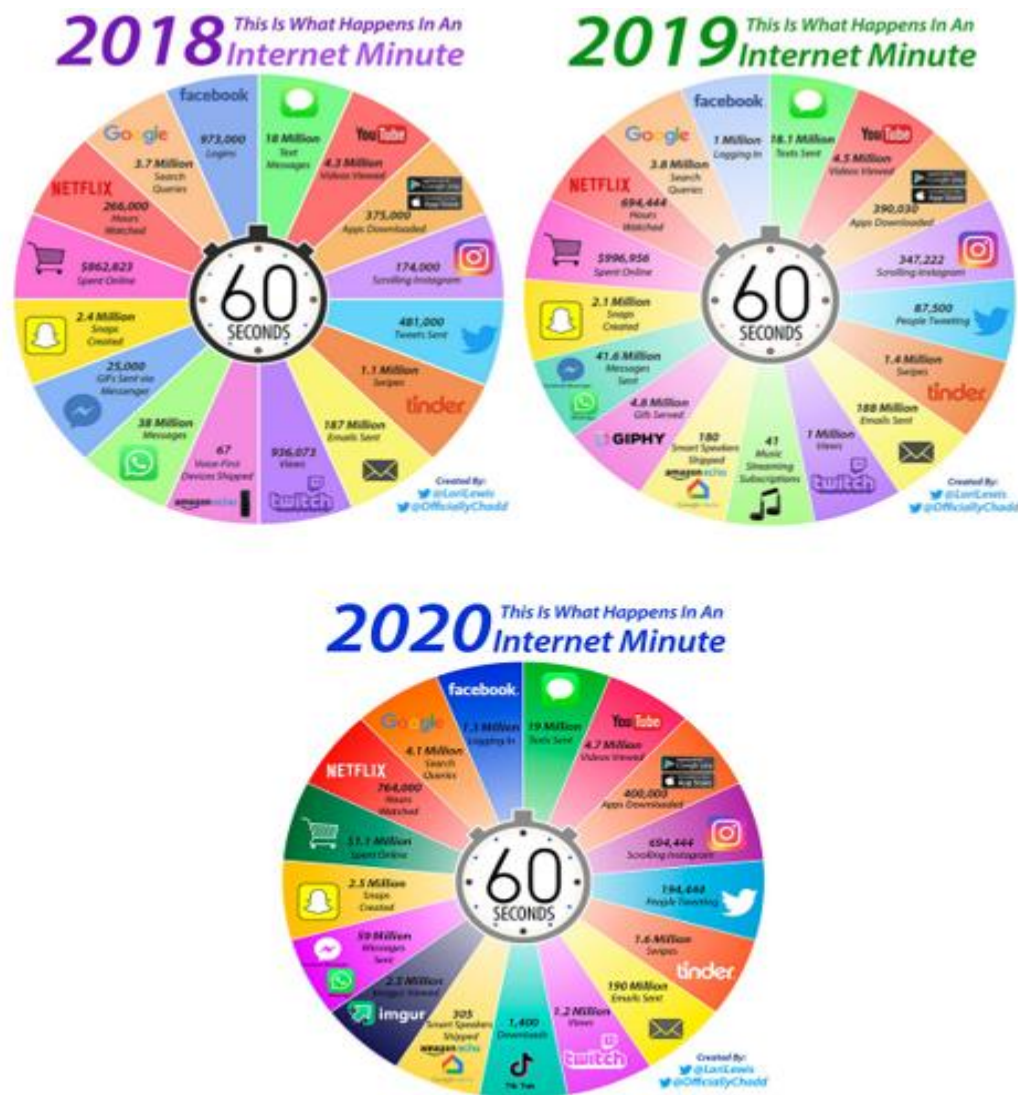


Figure 1. What happens every minute on the Internet in 2018, 2019 and 2020 (Adapted from Visual Capitalist)

Several studies using different approaches (systems approach, social marketing techniques, social enterprises, etc.) and frameworks, and conducted across a variety of disciplines denoted the need for a trans-disciplinary approach instead of multi-disciplinary approach to make significant advances to address FB issues and consumer dietary behaviors (Arens & Weigold, 2017; Jisana, 2014; Parkinson et al., 2017; Ramya & Ali, 2016) specifically in emergency settings such as COVID-19 (Hamadeh, 2020). Notwithstanding, there is no one correct framework of thinking about consumer behavior, there are many but each model highlights different part of the topic (Jisana, 2014).

Taken together, it appears important to define carefully the new area of public health nutrition, nutrition psychology and nutrition economics, especially after COVID-19, as the disciplines are keen to understanding and characterizing health and economic outcomes in nutrition for the benefit of individuals and societies (Hamadeh, 2020).

Focus of new consumer behavior model development

Against the global and prolonged lockdown due to the COVID-19, it is not surprising economic matters have been the focus of a plethora of studies seeking rectification strategies with diagrams showing the pandemic effect on all living sectors including food and nutrition economics (Hamadeh, 2020; Naja & Hamadeh, 2020). Given the dramatic changes in food systems and markets that have taken place after the COVID-19 outbreak, it is important to highlight new food consumerism factors in order to develop a new theoretical framework. For instance, a new profile of consumers emerged demanding food locally produced, boosting immunity, and easily ordered/delivered (e-commerce) (Hamadeh, 2020). This new reality has significantly influenced local and global consumer culture and consumption practices, which raises new practices including; 1) effective “customer journey design (CJD)” in today’s digitally enriched markets and food systems; 2) integrated data-driven approach for a groundbreaking theoretical development in a given situation (Hamadeh, 2020; Kuchler et al., 2018; Kuehnl et al., 2019; Varadarajan, 2019).

Therefore, this study draws from the current body of literature and accumulated knowledge on costumer behavior, and is inspired by different approaches to chart forward a comprehensive consumer behavior model (figure 2) in order to develop solutions to adapt in any normal or emergency situations such as the global lockdown due to COVID-19. The proposed model uses the concept of inputs (stimuli)- outputs (response to stimuli) factors explaining consumer’s decision-making behavior. It provides an overview of how several stimuli (marketing, economic, technology, politics, etc.) are changed into responses (product/ brand choice, purchase amount, etc.). First, the consumer characteristics and psychology influence his perceptions and reactions to any stimuli, and then the buying decision process itself will affect the consumer behavior. Intensity of each stimulus has changed during the COVID-19 pandemic providing new forces and events in the consumer’s environment (Hamadeh, 2020). For instance, the technological (e-commerce, CJD, etc.), economical (availability, prices, etc.) and communication (IoT, MS, etc.) stimuli are extremely influencing the FB consumerism practices nowadays.

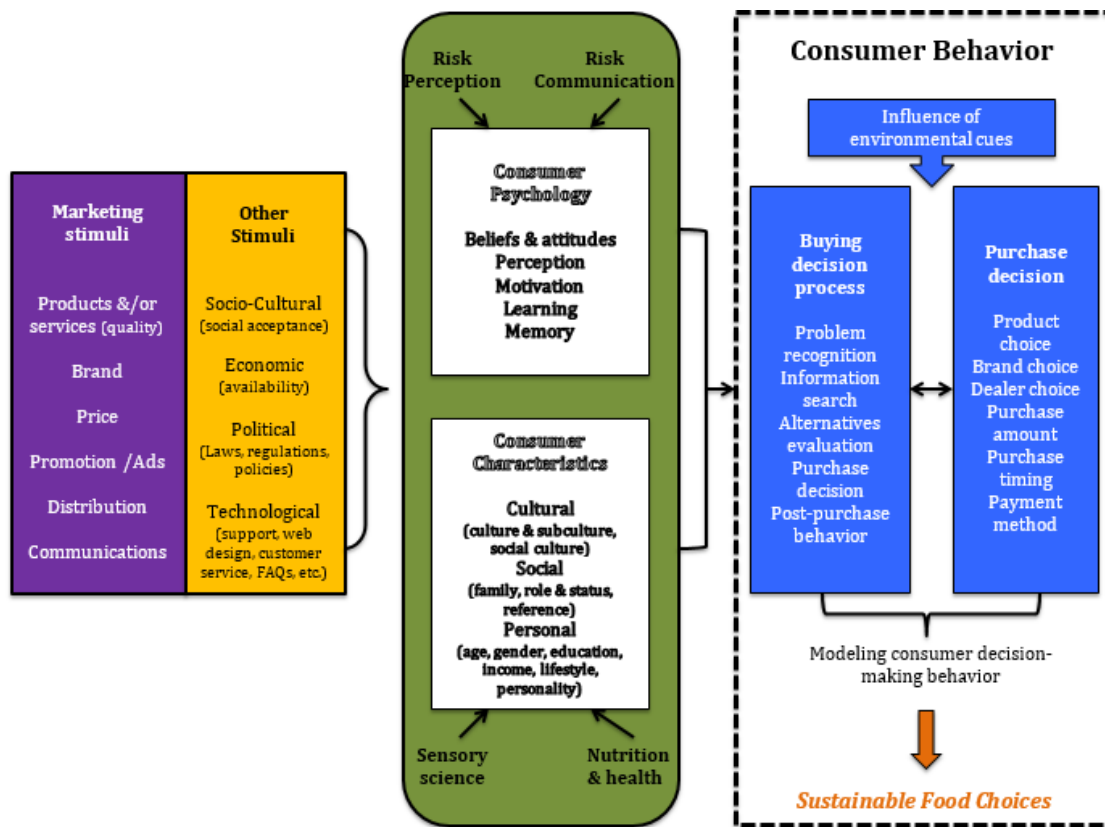


Figure 2. A consumer behavior model in nutrition economics and the post-COVID 19 world.

DISCUSSION

It has been observed from this short communication that an emergency setting such as COVID-19 has a huge effect on buying behavior of consumers worldwide. Nowadays, the “e” before food/beverages concepts such as commerce, marketing, services, etc. implies an infrastructure that must be embraced by food businesses that want to keep their competitiveness. Moreover, this study explored that there is a huge impact of new sophisticated technologies on nutrition economics and consumerism and have given the food chain stakeholders a new way of rethinking the practices “from farm to fork” on virtual greater impact (DeKervenoael et al., 2020; Hamadeh, 2020).

The complicated nature of nutrition economics strategies to scale and spread, coupled with the complex and various types of consumer dietary behavior is one of the major limitation to predict the rate of e-commerce scale and spread across different online users and/or FB

businesses. Moreover, it is easy to underestimate the time it takes to embed e-commerce innovations across the whole food chain in a sustainable way and likely to follow an uneven trajectory (Hemmings et al., 2020).

Future researches should consider all above findings and put to good use the proposed comprehensive framework for realizing more potential benefits to consumers and the wider FB and nutrition economics systems. Moreover, instead of conducting only researches more attention should be given to experiments to better establish connections and directionality between all aforementioned factors of the model.

CONCLUSION

Despite the complexity of the consumer behavior and decision-making, it appears that FB issues are uneven and highly affected by the digitalization of the food chain after COVID-19. The insights, tactics and implications previously covered in this study provide several innovative and fundamental considerations to help navigate the COVID-19 challenging global situation, and stipulate important changes in the FB policies journey.

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