

## Consumer's purchase intention and consumption of convenience food: the role of socio-demographic and economic determinants

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### Abstract

The research aimed to examine the relationship between marital status, gender, age, employment status, meal patterns, family income, food price, food availability and purchase intention and consumption of convenience food. The confirmatory factor analysis and structural equation modelling were adopted to analyse the data obtained from 501 consumers. The confirmatory factor analysis indicates the good internal consistency and reliability of scale items as well as confirmed the convergent and discriminant validity of the constructs. The fit indices demonstrated adequate fit of measurement and structural models. The path analysis of the structural model highlights the positive relationship between marital status, employment status, meal patterns, family income, food price, food availability and purchase intention and consumption of convenience food. The gender and age of consumers were not linked with the purchase intention of convenience food. The path analysis of the structural model also revealed that marital status was the most important determinant, followed by food price, meal pattern, family income, employment status and food availability influencing purchase intention and consumption of convenience food.

## 1. Introduction

Hectic lifestyles in the working population, urbanization, disposable incomes, diminishing trend of cooking skills and motivation, the rapid expansion of convenience food retail chains, significant improvements in food processing and packaging technologies and significant change in food-related lifestyles have increased the demand and consumption of convenience food in developed and emerging economies. The global European and American convenience food markets are anticipated to grow at a cumulative annual growth rate (CAGR) of 4.5%, 4.2% and 4.5% respectively during 2020-2025. The convenience food market in the Asia Pacific region is expected to grow at a CAGR of 8.79% during 2020-2025. The Indian convenience food market generated a revenue of USD 261 million in 2017. It is expected to grow at a CAGR of 16.24% during 2019-2024 and reach a revenue of INR 68.47 Bn in 2024 (Research and Market, 2020). The key market players of convenience food in India are Nestle, ITC, MTR, Capital Foods, CG Food, Haldiram, Bambino, GITS, Kohinoor,

42 Kitchens of India, Maiyas and Vshodaya (Business Wire, 2020).

The socio-demographic characteristics of consumers such as marital status, age, gender, educational level, household composition, employment status, meal patterns and attitude have a significant role in convenience food choice (Krige *et al.*, 2012; Manish and Kaur, 2016; Raj and Mishra, 2020; Romiro *et al.*, 2020; Konttinen *et al.*, 2021). Generally, males consume more convenience foods as compared to females. Female consumers are more concerned about quality, safety and healthiness during the process of shopping and consumption of convenience food (Kubberod *et al.*, 2002; Wah, 2016; Manippa *et al.*, 2017; Bärebring *et al.*, 2020; Spinelli *et al.*, 2020; Koch *et al.*, 2021). Married consumers where both husband and wife are engaged in full-time employment seek quick meal solutions to maximize leisure time, which in turn drives them to convenience food choices (Buckley *et al.*, 2007; Zahari *et al.*, 2014; Rathee *et al.*, 2018; Yamini, 2019). While full time employed females spend less time on meal

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planning, grocery shopping, cooking, eating and cleanup as compared to non-employed women, which motivates them to purchase and consume more convenient food (Devine *et al.*, 2009; Gupta and Singh, 2016).

Family income, disposable income, food price and food availability are the major economic drivers influencing purchase decisions and consumption of convenience food. The changing lifestyle, dual-income, availability of products choice and entry of multinational companies into food sectors are important factors influencing convenience food choice in emerging economies. Family income is one of the important determinants which influence convenience food choices. Due to the increase in disposable income, consumers are inclined to purchase convenience food. Generally, lower-income consumers purchase less healthy food products as compared to higher-income consumers indicating the influence of family income on food intake quality (French *et al.*, 2019; Ali and Ali, 2020). Low-income consumers are generally motivated by economic factors, whereas high-income consumers are governed by convenience during the process of purchasing and consumption of convenience food (Ares *et al.*, 2017; French *et al.*, 2019; Palmer *et al.*, 2020). Food price is another important determinant that drives consumers towards the purchase and consumption of convenience food. The competitive price and promotional offer are important components of pricing strategy to motivate consumers toward shopping and consumption of convenience food (Share and Stewart-Knox, 2012; Pula *et al.*, 2014; Deliens *et al.*, 2016; Ali and Ali, 2020). Generally, low-income consumers are more concerned about food prices as compared with higher-income consumers (Steenhuis *et al.*, 2011; Daniel, 2020; Chen and Antonelli, 2020). The availability of a wide variety of convenience food at inconvenient places is also an important driver influencing choice (Wang and Hazen, 2016; Guiné *et al.*, 2020; Testa *et al.*, 2021; Wongprawmas *et al.*, 2021).

Socio-demographics and economic trends in emerging economies such as India are showing a major change in recent years. These include a significant increase in youth entrepreneurs, young professionals and in-service personnel residing in cities. Due to time scarcity, busy work schedule, competitive environment, lack of cooking skills and motivation and dynamic lifestyle, increase a significant proportion of monthly income is on convenience food. The confluence of these factors significantly increased the demand and consumption of convenience food. Numerous studies in the recent past have been carried out to examine the role of a wide range of factors on convenience food choice, most of which focused on markets in developed and

industrialized countries (Buckley *et al.*, 2007; Steenhuis *et al.*, 2011; Share and Stewart-Knox, 2012; Pula *et al.*, 2014; Wang and Hazen, 2016; Aschemann Witzel *et al.*, 2017; French *et al.*, 2019; Guiné *et al.*, 2020; Chen and Antonelli, 2020; Romeiro *et al.*, 2020; Spinelli *et al.*, 2020; Testa *et al.*, 2021; Wongprawmas *et al.*, 2021). Due to vast diversity in socio-demographic, tradition, culture, meal patterns, food habits, social structure, economic condition, religious beliefs and ethical values, consumers in emerging economies such as India, may not respond to similar patterns as reported in western countries. Therefore, it is important as well as timely to carry out such research. Considering impressive market growth and the economic importance of convenience food in India, the main objective of the study was to assess the relationship between marital status, gender, age, employment status, meal pattern, family income, food price and food availability on purchase intention and consumption of convenience food.

## 2. Materials and methods

### 2.1 Development of conceptual model and hypotheses

Marital status (Buckley *et al.*, 2007; Yamini, 2019), age (Siegrist *et al.*, 2008; Kontinen *et al.*, 2021), gender (Olsen *et al.*, 2012; Manippa *et al.*, 2017; Raj and Mishra, 2020), education (Olsen *et al.*, 2012; Contini *et al.*, 2018), employment status (Devine *et al.*, 2009; Gupta and Singh, 2016) and meal patterns (Savoca *et al.*, 2011) are the important socio-demographic factors which drive consumers towards purchase and consumption of convenience food. Hallstrom *et al.* (2011) reported that socio-demographic factors such as family structure, education, social circle and environment, occupation and peers influence convenience food consumption. Raj and Mishra (2020) observed the significant relationship between socio-demographic determinants and food choice.

Family income (Daniels and Glorieux, 2015; French *et al.*, 2019; Testa *et al.*, 2021), household food expenditure (Upadhyay and Pathania, 2013; Daniel and Glorieux, 2015), promotional offer (Aschemann-Witzel *et al.*, 2017), food price (Steenhuis *et al.*, 2011; Maulida *et al.*, 2016; Guiné *et al.*, 2020; Wongprawmas *et al.*, 2021) and food availability (Wang and Hazen, 2016; Guiné *et al.*, 2020; Wongprawmas *et al.*, 2021) are the important economic drivers influencing purchaser intention and consumption of convenience food. Januszewska *et al.* (2011) revealed that sensory appeal was the key determinant in Romania and Hungary, whereas convenience, health and food price were the important determinants in Belgium in relation to purchasing intention and consumption of convenience food. Aschemann-Witzel *et al.* (2017) revealed that high

income and single household consumers were less inclined toward reduced price offers than lower-income consumers for purchasing and consuming convenience foods.

Socio-demographic determinants such as marital status, gender, age, employment status and meal patterns as well as economic determinants such as family income, food price and availability of convenience food, appear to be important in the aforementioned literature review and are included in the conceptual model to examine their roles on purchase intention and consumption of convenience food (Figure 1). In light of the aforementioned comprehensive literature review regarding the role of socio-demographic and economic determinants on purchase intention and consumption of convenience food, the following hypotheses are proposed. Each hypothesis is postulated to have a positive relationship between marital status, gender, age, employment status, meal patterns, family income, food price and food availability with purchase intention of convenience food. Further, purchase intention is postulated to have positive relationships with the consumption of convenience food.

**H1:** Marital status of the consumer is positively related to the purchase intention of convenience food.

**H2:** Gender of the consumer is positively related to purchase intention of convenience food.

**H3:** The age of the consumer is positively related to the purchase intention of convenience food.

**H4:** The employment status of the consumer is positively related to the purchase intention of convenience food.

**H5:** The meal pattern of the consumer is positively related to the purchase intention of convenience food.

**H6:** High family income of the consumer is positively related to the purchase intention of convenience food.

**H7:** Competitive price of convenience food is positively related to the purchase intention of convenience food.

**H8:** Easy availability of convenience food is positively related to purchase intention of convenience food.

**H9:** Purchase intention of convenience food is positively related to consumption of convenience food.

## 2.2 Development and pretesting of the questionnaire

The development of a questionnaire is crucial for the research study because oversight may lead to a collection of irrelevant and inaccurate data. The process of developing a questionnaire involves the determination of research goals, formulating questions and reviewing the questionnaire to align with research goals (Pope *et al.*, 2005; Phellas *et al.*, 2012). The questionnaire was

developed based on the previous studies carried out concerning marital status, gender, age, employment status, meal patterns, family income, food price and food availability on convenience food choices as well as suggestions obtained from consumers that comprising of students, in-service personnel, food and nutrition experts and food technologists. The comprehensive literature reviews (Table 1) and feedback from consumers provided guidelines to develop a questionnaire to examine the role of marital status, gender, age, employment status, meal pattern, family income, food price and food availability on purchase intention and consumption of convenience food.

Pre-testing the questionnaire is an important step to ensure its accuracy and reliability (Hunt *et al.*, 1982; Grimm, 2010). Prior to the main study to collect data concerning marital status, gender, age, employment status, meal patterns, family income, food price and food availability influencing purchase intention and consumption of convenience food, the questionnaire was pre-tested at the Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad, India. The designed questionnaire was pre-tested with thirty participants comprising university students and staff, professionals from the corporate sector and food and nutritional experts. The participants were asked to identify the potential problems of the questionnaire. After completing the questionnaire, the participants were requested to provide their feedback regarding the design, structure and interpretation of the questionnaire. The feedback obtained from participants was included in the final questionnaire to ensure accuracy and precision in data collection (Januszewska *et al.*, 2011; Wang *et al.*, 2015; Singh and Kathuria, 2016; Konuk, 2019; Hena *et al.*, 2021a, 2021b).

The questionnaire was divided into eleven sections. The structure of the questionnaire was based on a conceptual model relating marital status, gender, age, employment status, meal patterns, family income, food price and food availability with purchase intention and consumption of convenience food (Figure 1). Section one of the questionnaires was designed to collect general information about consumers such as gender, age, marital status, educational qualification, occupation, type of family, food habits, food preferences, frequency of consumption of convenience food and religious/ethnic background. The second section of the questionnaire was constructed to collect information regarding various aspects of marital status influencing purchase intention of convenience food. The third, fourth, fifth and sixth sections of the questionnaire were designed to collect information regarding the various aspects of gender, age, employment status and meal patterns respectively, which

Table 1. Constructs of the questionnaire and their sources

Constructs	Source
General information	Geeroms <i>et al.</i> (2008); Januszewska <i>et al.</i> (2011); Hena <i>et al.</i> (2021a, 2021b)
Marital status	Buckley <i>et al.</i> (2007); Yamini (2019); Konttinen <i>et al.</i> (2021)
Gender	Olsen <i>et al.</i> (2012); Manippa <i>et al.</i> (2017); Bärebring <i>et al.</i> (2020)
Age	Siegrist <i>et al.</i> (2008); Konttinen <i>et al.</i> (2021)
Employment status	Devine <i>et al.</i> (2009); Yamini, 2019; Dhir <i>et al.</i> (2020)
Meal patterns	Savoca <i>et al.</i> (2011)
Family income	Daniels and Glorieux, 2015; French <i>et al.</i> (2019); Testa <i>et al.</i> (2021)
Price	Steenhuis <i>et al.</i> (2011); Maulida <i>et al.</i> (2016; Guiné <i>et al.</i> (2020)
Availability	Wang and Hazen (2016); Guiné <i>et al.</i> (2020)
Purchase intention	O'Connor <i>et al.</i> (2017); Ting <i>et al.</i> (2017); Wongprawmas <i>et al.</i> (2021); Hena <i>et al.</i> (2021a, 2021b)
Consumption	Osman <i>et al.</i> (2014); Ting <i>et al.</i> (2017); Guiné <i>et al.</i> (2020); Hena <i>et al.</i> (2021a, 2021b)

influence the purchase intention of convenience food. The seventh, eighth and ninth sections of the questionnaire were planned to collect information regarding various aspects of family income, food price and food availability which influence purchase intention of convenience food. The tenth and eleventh sections of the questionnaire were designed to collect information about purchase intention and consumption of convenience food.

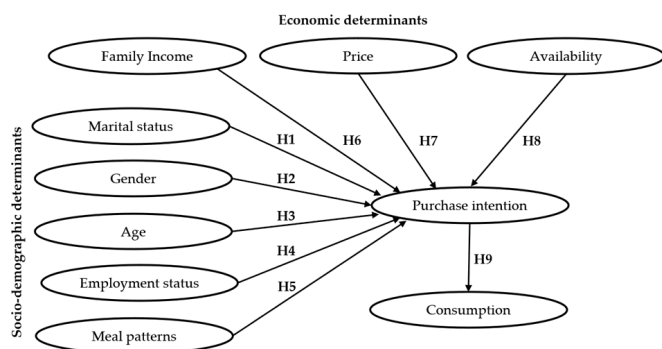


Figure 1. Conceptual model

### 2.3 Participants

The participants of the study comprised students, teaching and non-teaching staff of colleges and universities and professionals from corporate sectors. The participants comprised 41.3% males and 58.7% females. The age of the participants ranged from 18 to 65 years. The participants consisted of 48.9% single and 51.1% married of which 65.9% were employed and 34.1% were unemployed. The participant's educational qualification ranged from high school to doctoral, with high school (0.40%), senior secondary school (7.0%), diploma (1.4%), undergraduate (33.9%), master (34.5%) and doctoral (22.8%). The annual family income of the participants ranged from INR 50,000 to INR 3,00,0000 (US \$ 700 to 40,000).

### 2.4 Sampling method and sample size

The non-probability purposive sampling method was adopted for the recruitment of the participants because researchers were targeting a specific group of participants as they are the major consumers of

convenience food (Tan *et al.*, 2014; Singh and Kathuria, 2016; Konuk, 2019; Hena *et al.*, 2021a, 2021b). The present study comprised 550 participants across four major cities of North India. The total population of four cities is approximately 8.25 million. The sample size of 550 participants taken in the present study was more than 400 participants which are recommended for the population of 0.25 million with a confidence level of 95% and a 5% margin of error (The Research Advisors, 2006; Singh and Kathuria, 2016; Hena *et al.*, 2021a, 2021b). A total number of 49 participants were excluded because they did not provide complete information. Thus, the final sample size of the participants was 501, which resulted in a response rate of 91.09%.

### 2.5 Data collection

The structured and pre-tested questionnaires were distributed to 550 participants in four universities, eight colleges and twelve corporate offices in January 2019. The data were collected from a varied range of consumers, which includes students, teaching and non-teaching staff and professionals. The participants were asked to gather at the conference/meeting room provided by universities, colleges and corporate offices. The participants were informed one day in advance regarding time and venue to achieve the desired number of participants as well as to avoid inconvenience. A group of 25 participants were invited to complete the questionnaire. The researcher distributed the questionnaire to the participants and briefed them about the purpose, objectives and importance of the study. The participants were further briefed about the contents of the questionnaire. The role of marital status, gender, age, employment status, meal patterns, family income, food price and food availability on purchase intention and consumption of convenience food was evaluated on a five-point Likert scale (Strongly disagree = 1, disagree = 2, don't know = 3, agree = 4, strongly agree = 5). The participants were asked to select one from 1 to 5 for each question (Stephoe *et al.*, 1995; Buckley *et al.*, 2007; Singh and Kathuria, 2016; Ting *et al.*, 2017; Contini *et al.*, 2018; Hena *et al.*, 2021a, 2021b).

## 2.6 Data analysis

The statistical software SPSS version 24 was used to determine to mean, standard deviation, skewness and kurtosis for each item of the constructs. Further, SPSS version 24 was carried out to determine Cronbach's alpha of the constructs to ensure internal consistency and reliability for scale items of the questionnaire (Nunnally, 1978; Rezai *et al.*, 2014, Singh and Kathuria, 2016; Konuk, 2019; Guiné *et al.*, 2020; Hena *et al.*, 2021a, 2021b). The AMOS software version 23 was employed for confirmatory factor analysis (CFA) and structural equation modelling (SEM). The CFA was carried out to estimate factor loading, composite reliability, average variance extracted and model fit indices. The composite reliability of the constructs of the questionnaire was determined to examine the reliability of scale items (Nunnally, 1978; Pieniak *et al.*, 2009; Singh and Kathuria, 2016; Konuk, 2019; Hena *et al.*, 2021a, 2021b). The factor loading and average variance extracted were determined to assess the convergent validity of the constructs of the measurement model (Nunnally, 1978; Wang *et al.*, 2015; Contini *et al.*, 2018; Konuk, 2019; Hena *et al.*, 2021a, 2021b). Correlations amongst the constructs and the square root of average variance extracted were used to examine the discriminant validity of constructs (Fornell and Larcker, 1981). The statistical indices such as Comparative fit index (CFI), Tucker-Lewis index (TLI), Goodness of fit index (GFI), Root mean square error of approximation (RMSEA) and Standardized mean square residual (SRMR) were determined to examine the fit of measurement model (Hair *et al.*, 2010; Singh and Kathuria 2016; Contini *et al.*, 2018; Konuk, 2019; Guiné *et al.*, 2020; Hena *et al.*, 2021a, 2021b).

The structural equation modelling approach was adopted to test the proposed hypotheses (Wang *et al.*, 2015; Konuk, 2019; Soon, 2019; Guiné *et al.*, 2020; Hena *et al.*, 2021a, 2021b). The structural model was constructed to examine the relationship between marital status, gender, age, employment status, meal patterns, family income, food price and food availability with purchase intention as well as purchase intention with consumption of convenience food. The CFI, TLI, GFI, RMSEA, SRMR and  $\chi^2/df$  (Chi-square/ degree of freedom) were determined to assess the fit of the structural model (Rezai *et al.*, 2014; Singh and Kathuria, 2016; Konuk, 2019; Soon, 2019; Guiné *et al.*, 2020; Hena *et al.*, 2021a, 2021b). Further, modification of indices was performed to improve the overall fit of the structural model (Wang *et al.*, 2015; Soon, 2019). The standardized estimate (path coefficient), standard error, t-value and p-value were used to test the hypotheses

(Singh and Kathuria, 2016; Olsen and Tuu, 2017; Konuk, 2019; Hena *et al.*, 2021a, 2021b).

## 3. Results

### 3.1 Descriptive statistics

The marital status, employment status and meal pattern were important socio-demographic determinants positively influencing consumers toward purchase intention and consumption of convenience food. Furthermore, the gender and age of consumers had no significant influence on purchase intention and consumption of convenience food (Table 2). The economic determinants such as family income, food price and food availability had a positive influence on purchase intention and consumption of convenience food (Table 2). The mean respondents' score of items revealed that 'single' within the marital status, 'spend more time for work' within employment status, 'eating in odd hours' within meal patterns, 'high family income' within family income, 'good value for money' within food price and 'easy product availability' within availability constructs were the key factors influencing convenience food choice (Table 2). The skewness for different items of marital status, gender, age, employment status, meal patterns, family income, food price, food availability, purchase intention and consumption constructs ranged from -0.949 to 0.982, which were within the threshold value of -1 to 1 (Table 2). Whereas, the Kurtosis of the same constructs ranged from -1.438 to 1.865, which were within the acceptable range of -2 to 2 (Table 2). The skewness and kurtosis values indicated that the data obtained were normally distributed (Muthén and Kaplan, 1985; Olsen *et al.*, 2012; Rezai *et al.*, 2014; Hena *et al.*, 2021a, 2021b).

### 3.2 Measurement model

Table 2 shows factor loading, Cronbach's alpha ( $\alpha$ ), composite reliability (CR) and average variance extracted (AVE) for marital status, gender, age, employment status, meal patterns, family income, food price, food availability, purchase intention and consumption of convenience food. The factor loading of all items of the aforementioned constructs was significant ( $p \leq 0.01$ ). The factor loading for marital status, gender, age, employment status, meal patterns, family income, food price, food availability, purchase intention and consumption constructs ranged from 0.541 to 0.997, which were higher than the threshold value of 0.50 (Nunnally, 1978; Hair *et al.*, 2010; Contini *et al.*, 2018; Konuk, 2019; Hena *et al.*, 2021a; Hena *et al.*, 2021 b). Therefore, all items of the constructs were included to assess their role in purchase intention and consumption of convenience food (Hair *et al.*, 2010; Januszewska *et*

Table 2. Mean respondent's score, factor loading, Cronbach's alpha ( $\alpha$ ), composite reliability (CR), average variance extracted (AVE) for socio-demographic and economic determinants influencing purchase intention and consumption of convenience food.

Construct / Items	Mean	Factor	p –	$\alpha$	CR	AVE
Marital status (MRS)	4.07			0.981	0.941	0.928
I prefer convenience food because I am single (MRS 1)	4.01	0.970	***			
I prefer convenience food due to the influence of friends (MRS 2)	3.88	0.976	***			
I prefer convenience food due to the influence of my children (MRS 3)	3.44	0.954	***			
I prefer convenience food due to the influence of my partner /spouse (MRS 4)	3.25	0.953	***			
Gender (GNR)	2.77			0.711	0.940	0.601
Being a male, I prefer convenience food more often (GNR 1)	2.32	0.872	***			
Being a male, I prefer convenience food because I spend most of my time out of home (GNR 2)	2.41	0.899	***			
Being a male, I prefer convenience food because I consider cooking food from scratch as a women's task (GNR 3)	2.15	0.678	***			
Being a female, I prefer convenience food because don't like to follow norms (GNR 4)	2.47	0.613	***			
Age (AG)	2.94			0.752	0.898	0.613
I prefer convenience food because of age it is difficult to collect the raw ingredients to cook food from scratch (AG 1)	2.21	0.665	***			
I prefer convenience food over cooking from scratch because of my young age I am involved in other leisure activities (AG 2)	2.91	0.708	***			
I prefer convenience food over cooking from scratch because of my age I have various social involvements (AG 3)	2.81	0.947	***			
Employment status (EMP)	3.41			0.856	0.961	0.534
My employment status demands convenience food to entertain high profile guests / clients (EMP 1)	2.40	0.727	***			
My employment status demands convenience food to spend more time for work (EMP 2)	3.23	0.721	***			
My employment status demands convenience food to make my life easy / less complicated (EMP 3)	3.21	0.728	***			
My employment status demands convenience food to treat my high-profile guest with more variety / cousine (EMP 4)	2.57	0.793	***			
My employment status demands convenience food to arrange variety of food quickly for the guest/visitor (EMP 5)	2.93	0.680	***			
Meal patterns (MP)	3.84			0.845	0.959	0.603
I prefer convenience food because I eat in odd hours (MP 1)	3.72	0.610	***			
I prefer convenience food because I eat frequently (MP 2)	3.59	0.995	***			
I prefer convenience food because I like variety of food (MP 3)	3.63	0.997	***			
I prefer convenience food because I change my meal type frequently (MP 4)	2.64	0.541	***			
I prefer convenience food because my family members have unique meal requirements (MP 5)	2.91	0.605	***			
Family income (FI)	3.78			0.824	0.961	0.525
I prefer convenience food because my family income is substantially high (FI 1)	3.63	0.731	***			
I prefer convenience food because I can purchase multi cuisine food (FI 2)	2.68	0.678	***			
I prefer convenience food because I want to substantiate my income by avoiding extra cooking hour (FI 3)	2.37	0.791	***			
I prefer convenience food because my family has dual income (FI 4)	3.58	0.679	***			
I prefer convenience food because I earn more for working overtime as cooking from scratch is time consuming process (FI 5)	2.33	0.737	***			
Food price (FP)	4.13			0.812	0.980	0.513
Convenience food is not expensive (FP 1)	3.56	0.783	***			
Convenience food is cheap (FP 2)	2.99	0.793	***			
Convenience food is economical because I save considerable amount of time and physical effort (FP 3)	3.51	0.639	***			
Convenience food is economical because I get more variety spending lesser amount of money (FP 4)	3.21	0.625	***			

Measurement model fit indices: CFI = 0.918; TLI = 0.904; GFI = 0.902; RMSEA = 0.076; SRMR = 0.069

\*\*\* Significant at  $p \leq 0.01$ ; Skewness: -0.949 to 0.982; Kurtosis: -1.438 to 1.865.

Table 2 (Cont.). Mean respondent's score, factor loading, Cronbach's alpha ( $\alpha$ ), composite reliability (CR), average variance extracted (AVE) for socio-demographic and economic determinants influencing purchase intention and consumption of convenience food.

Construct / Items	Mean	Factor loading	p-value	$\alpha$	CR	AVE
Convenience food is cheaper due to discount price (FP 5)	3.30	0.768	***			
Convenience food is cheaper due to promotional offer (FP 6)	3.34	0.758	***			
Convenience food is good value for money (FP 7)	3.98	0.620	***			
Food availability (FA)	3.78			0.875	0.961	0.624
Convenience food is available close to my work place (FA 1)	3.49	0.843	***			
Convenience food is available close to my school / university (FA 2)	3.38	0.823	***			
Convenience food is easily available (FA 3)	3.69	0.896	***			
Convenience food is available in my locality (FA 4)	3.58	0.865	***			
Convenience food is available 24 hours (FA 5)	2.48	0.725	***			
Purchase intention (PI)	4.21			0.780	0.900	0.576
I will continue to buy convenience food due to competitive price and promotional offer (PI 1)	4.14	0.628	***			
I will continue to buy convenience food to save time (PI 2)	4.17	0.689	***			
I will continue to buy convenience food due to lack of cooking skills and motivation (PI 3)	3.65	0.842	***			
I will continue to buy convenience food to reduce environmental damage (PI 4)	3.59	0.907	***			
I will continue to buy convenience food due to good quality, safety and health (PI 5)	3.50	0.754	***			
I will continue buy convenience food because it is readily available and easy to prepare (PI 6)	4.20	0.694	***			
I will continue to buy convenience food as there are choices available for multi cuisines (PI 7)	3.93	0.763	***			
Consumption (CON)	3.95			0.740	0.940	0.690
I consume convenience food due to convenience (CON 1)	3.83	0.900	***			
I consume convenience food due to minimum physical and mental effort to cook (CON 2)	3.38	0.767	***			
I consume convenience food due to good taste, smell and appearance (CON 3)	3.79	0.826	***			
I consume convenience food due to attractive packaging (CON 4)	3.59	0.765	***			
I consume convenience food due to competitive price (CON 5)	3.81	0.816	***			
I consume convenience food due to good quality, high safety and healthiness (CON 6)	3.36	0.912	***			
I consume convenience food due to my religious and ethical beliefs (CON 7)	3.67	0.741	***			

Measurement model fit indices: CFI = 0.918; TLI = 0.904; GFI = 0.902; RMSEA = 0.076; SRMR = 0.069

\*\*\* Significant at  $p \leq 0.01$ ; Skewness: -0.949 to 0.982; Kurtosis: -1.438 to 1.865.

al., 2011; Pula et al., 2014; Contini et al., 2018; Konuk, 2019; Hena et al., 2021a, 2021b). Cronbach's alpha constructs ranged from 0.711 to 0.981, which were higher than the threshold value of 0.70 (Nunnally, 1978; Rezai et al., 2014; Singh and Kathuria, 2016; Konuk, 2019; Guiné et al., 2020; Hena et al., 2021a, 2021b). Composite reliability varied from 0.898 to 0.980, which was higher than the minimum acceptable value of 0.70 (Nunnally, 1978; Singh and Kathuria, 2016; Contini et al., 2018; Konuk, 2019; Hena et al., 2021a, 2021b). Cronbach's alpha and composite reliability values obtained for different constructs indicated good internal consistency and reliability of scale items of the questionnaire (Fornell and Larcker, 1981; Hair et al., 2010; Ricci et al., 2018; Konuk, 2019; Hena et al., 2021a, 2021b). The average variance extracted ranged from 0.513 to 0.928, which was higher than the

minimum acceptable value of 0.50 (Fornell and Larcker, 1981; Singh and Kathuria, 2016; Contini et al., 2018; Konuk, 2019; Hena et al., 2021a, 2021b). The factor loading and average variance extracted for different constructs and items within the construct confirmed the convergent validity of the constructs (Fornell and Larcker, 1981; Hair et al., 2010; Singh and Kathuria, 2016; Contini et al., 2018; Hena et al., 2021a, 2021b). The square root of average variance extracted estimates (diagonal values) were higher than the correlation estimates amongst the constructs (Table 3) confirming the discriminant validity of the constructs (Fornell and Larcker, 1981; Singh and Kathuria, 2016; Konuk, 2019; Hena et al., 2021a, 2021b).

The comparative fit index (CFI), Tucker-Lewis index (TLI), Goodness of fit index (GFI), Root mean

Table 3. Discriminant validity of the constructs

Constructs	MRS	GNR	AG	EMP	MP	FI	FP	FA	PI
MRS	0.963								
GNR	0.394	0.775							
AG	0.382	0.305	0.783						
EMP	0.429	0.489	0.240	0.730					
MP	0.287	0.256	0.245	0.306	0.776				
FI	0.220	0.201	0.519	0.208	0.383	0.724			
FP	0.388	0.187	0.304	0.203	0.475	0.285	0.716		
FA	0.585	0.547	0.594	0.621	0.411	0.513	0.656	0.789	
PI	0.661	0.318	0.279	0.403	0.289	0.129	0.082	0.654	0.758

square error of approximation (RMSEA) and standardized mean square residual (SRMR) were used to assess the overall fit of the measurement model. CFI was 0.918 ( $\geq 0.90$ ), TLI was 0.904 ( $\geq 0.90$ ), GFI was 0.902 ( $\geq 0.90$ ), RMSEA was 0.076 ( $\leq 0.08$ ) and SRMR was 0.069 ( $\leq 0.08$ ), which were within the permissible range (Table 2). CFI, TLI, GFI, RMSEA and SRMR indices indicated that the measurement model fitted well with the data (Hu and Bentler, 1999; Hair *et al.*, 2010; Rezai *et al.*, 2014; Singh and Kathuria, 2016; Contini *et al.*, 2018; Konuk, 2019; Hena *et al.*, 2021a, 2021b).

### 3.3 Structural model

The structural model was constructed to examine the association between marital status, gender, age, employment status, meal patterns, family income, food price and food availability with purchase intention and consumption of convenience food. The CFI was 0.915 ( $\geq 0.90$ ), TLI was 0.907 ( $\geq 0.90$ ), GFI was 0.904 ( $\geq 0.90$ ), RMSEA was 0.070 ( $\leq 0.08$ ) and SRMR was 0.069 ( $\leq 0.08$ ) and  $\chi^2/df$  (Chi-square/degree of freedom) was 4.7 ( $\leq 5.0$ ), which were within the acceptable range (Figure 2). CFI, TLI, GFI, RMSEA SRMR and  $\chi^2/df$  indicated a good fit for the structural model (Hu and Bentler, 1999; Hair *et al.*, 2010; Rezai *et al.*, 2014; Singh and Kathuria, 2016; Contini *et al.*, 2018; Konuk, 2019; Guiné *et al.*, 2020; Hena *et al.*, 2021a, 2021b).

The results of the structural model presented in Table 4, demonstrate the extent of association for marital status, gender, age, employment status, meal patterns, family income, food price and food availability with purchase intention as well as purchase intention with consumption of convenience food. Hypothesis 1 (H1) which postulated a positive relationship between the marital status of consumers and purchase intention of convenience food was accepted because the standardized estimate ( $\beta$ ) of the path of the structural model was statistically significant (H1:  $\beta = 0.787$ ;  $t = 37.302$ ;  $p < 0.01$ ). Hypothesis 2 (H2), which proposed a positive relationship between the gender of consumers and purchase intention of convenience food was rejected as

the standardized estimate ( $\beta$ ) of the path of the structural model was not statistically significant (H2:  $\beta = 0.051$ ;  $t = 1.303$ ;  $p > 0.01$ ). Hypothesis 3 (H3), which proposed a positive relationship between the age of consumers and purchase intention of convenience food was also rejected because the standardized estimate ( $\beta$ ) of the path of the structural model was not statistically significant (H3:  $\beta = 0.046$ ;  $t = 1.413$ ;  $p > 0.01$ ). Hypothesis 4 (H4), which proposed a positive relationship between the employment status of consumers and purchase intention of convenience food was accepted as the standardized estimate ( $\beta$ ) of the path of the structural model was significant (H5:  $\beta = 0.506$ ;  $t = 18.520$ ;  $p < 0.01$ ). Hypothesis 5 (H5) stated that the meal pattern of consumers would positively predict the purchase intention of convenience food, which was accepted because the standardized estimate ( $\beta$ ) of the path of the structural model was statistically significant (H5:  $\beta = 0.625$ ;  $t = 23.615$ ;  $p < 0.01$ ). Hypothesis 6 (H6), which proposed a positive relationship between family income of consumers and purchase intention of convenience food was accepted as a standardized estimate ( $\beta$ ) of the path of the structural model was statistically significant (H6:  $\beta = 0.621$ ;  $t = 17.41$ ;  $p < 0.01$ ). Hypothesis 7 (H7) which proposed a positive relationship between the price of convenience food and purchase intention of convenience food was accepted because the standardized estimate ( $\beta$ ) of the path of the structural model was statistically significant (H7:  $\beta = 0.711$ ;  $t = 19.041$ ;  $p < 0.01$ ). Hypothesis (H8) that proposed a positive relationship between the availability of convenience food and purchase intention of convenience food was also accepted as the standardized estimate ( $\beta$ ) of the path of the structural model was statistically significant (H7:  $\beta = 0.711$ ;  $t = 19.041$ ;  $p < 0.01$ ). Hypothesis 9 (H9) stated that purchase intention of convenience food would positively predict the consumption of convenience food was also accepted because the standardized estimate ( $\beta$ ) of the path of the structural model was statistically significant (H9:  $\beta = 0.998$ ;  $t = 61.962$ ;  $p < 0.01$ ). The overall results of structural model indicated that marital status ( $\beta = 0.787$ ) was the most important factor



Table 4. Structural model results to examine the association between socio-demographic and economic determinants and purchase intention and consumption of convenience food.

Hypothesis	Structural path	Standardized estimate (β)	Standard error (SE)	t-value	p-value	Results
H1	Marital status → Purchase intention	0.787	0.021	37.302	***	Accepted
H2	Gender → Purchase intention	0.051	0.037	1.303	0.11	Rejected
H3	Age → Purchase intention	0.046	0.032	1.413	0.081	Rejected
H4	Employment status → Purchase intention	0.506	0.027	18.52	***	Accepted
H5	Meal pattern → Purchase intention	0.625	0.025	23.615	***	Accepted
H6	Family income → Purchase intention	0.621	0.033	17.41	***	Accepted
H7	Food price → Purchase intention	0.711	0.027	19.041	***	Accepted
H8	Food availability → Purchase intention	0.459	0.043	3.774	***	Accepted
H9	Purchase intention → Consumption	0.998	0.016	61.962	***	Accepted

\*\*\* Significant at  $p \leq 0.01$

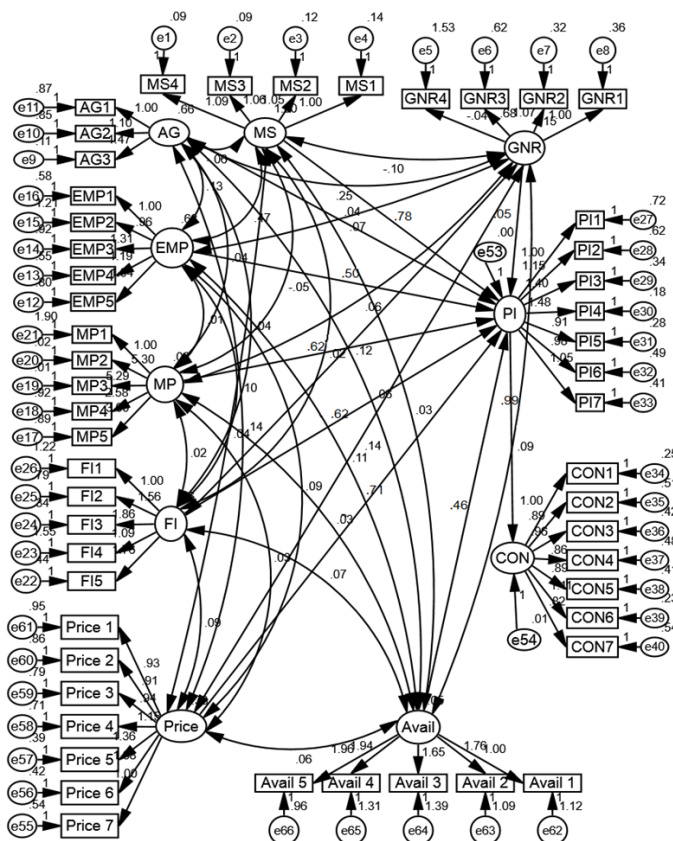


Figure 2. Structural equation modelling to assess the role of socio-demographic and economic determinants on purchase intention and consumption of convenience food. Structural model fit indices: CFI = 0.915; TLI = 0.907; GFI = 0.904; RMSEA = 0.070; SRMR = 0.076;  $\chi^2/df = 4.7$

followed by food price ( $\beta = 0.711$ ), meal pattern ( $\beta = 0.625$ ), family income ( $\beta = 0.621$ ), employment status ( $\beta = 0.506$ ) and food availability ( $\beta = 0.459$ ), influencing purchase intention and consumption of convenience food.

#### 4. Discussion

Socio-demographic and economic factors play an important role in driving consumers towards convenience food choices. Despite good culinary training, young professionals and dual working families

in developing and emerging economies such as India prefer to spend minimum time and energy in cooking and cleanup to maximize social and leisure time (Hawa et al., 2014; Gupta and Singh, 2016; Srinivasan and Kulkarni, 2019; Verma and Chawla, 2020; Hena et al., 2021b). The mean respondents' score of constructs and items within the construct as well as path analysis of the structural model revealed that marital status had a positive influence on purchase intention and consumption of convenience food. Single or unmarried consumers prefer convenience food due to the influence of friends, desire to maximize leisure time, lack of motivation, hectic work schedule and competitive lifestyle. Further, married consumers prefer convenience food due to the demand of children and partner/spouse, dual working conditions, desire to maximize leisure time with family/partner, desire to try new cuisine and multiple responsibilities. The overall results indicate that marital status is an important socio-demographic factor associated with convenience food choices (Harris and Shiptsova, 2007; Daniels and Glorieux, 2015; Yamini, 2019; Konttinen et al., 2021). However, Romeiro et al. (2020) reported no significant effect of marital status on the food choice of consumers.

The mean participant score of construct and path analysis of the structural model indicated that gender (male/female) had no significant influence on purchase intention and consumption of convenience food. In fact, the consumer (male/female) selected for the study have equal opportunities in relation to economic status, job opportunities, education and decision making, which in turn diminishes the influence of gender on purchase intention and consumption of convenience food (Olsen et al., 2012; Contini et al., 2018). On the contrary, Manippa et al. (2017) and Bärebring et al. (2020) reported significant differences between male and female consumers regarding food choices. The mean participants' score of construct and path analysis of the structural model also indicated that the age of the

consumer had no significant effect on purchase intention and consumption of convenience. On contrary, some previous studies reported a significant and positive association between the age of consumers and convenience food consumption (Olsen *et al.*, 2012; Priyadarshini, 2015; Raj and Mishra, 2020; Konttinen *et al.*, 2021).

Employment status is another important factor that drives consumers towards convenience food marketing and consumption. Long and rigid work hours, competitive work environment, work-family balance, multiple responsibilities and completion of office work at home, consequently result in feeling time pressure. The mean respondents' score of construct and path analysis of the structural model revealed that the employment status of consumers was the important determinant, positively influencing purchase intention and consumption of convenience food. The findings further revealed that employed consumers preferred convenience food due to time scarcity induced by long and odd working hours, hectic work schedules, professional and organizational commitments and preference for leisure and social activities. Previous studies carried out under a wide range of social, cultural and economic conditions support the findings of the present study (Buckley *et al.*, 2007; Devine *et al.*, 2009; Peltner and Thiele, 2017; Yamini, 2019; Dhir *et al.*, 2020). The meal pattern is also an important factor that motivates and drives consumers towards purchase intention and consumption of convenience food. The mean respondents' score of construct and path analysis of the structural model revealed that meal pattern has a positive influence on purchase intention and consumption of convenience food. Eating at odd hours, eating frequently and the variety of food were the key factors positively influencing purchase intention and consumption of convenience food. In spite of the impressive market growth of convenience food worldwide, the information regarding the role of meal patterns of consumers on convenience food choices is lacking.

Family income is one of the key factors influencing consumer food choices. Due to better employment opportunities, higher salary structure and a significant increase in dual working families, purchasing capacity as well as money spent on food items in developing and emerging economies like India have increased considerably in recent years. The mean respondents' score of the construct and path analysis of the structural model indicated that high family income was positively associated with purchase intention and consumption of convenience food. Further, high and dual family income were the key factors positively influencing purchase

intention and consumption of convenience food. The previous studies carried out under a wide range of social, cultural and economic conditions revealed that family income is one of the key factors influencing consumer food choice (Drewnowski, 2009; Hwang and Choe, 2016; French *et al.*, 2019; Ali and Ali, 2020; Palmer *et al.*, 2020).

The food price is one of the important factors that motivate and drive consumers toward convenience food choices. The mean respondents' score of the construct and path analysis of the structural model indicated that food price was positively associated with the purchase intention and consumption of convenience food. Further, competitive prices, promotional offers and good value for money were the key factors, positively influencing purchase intention and consumption of convenience food. The previous studies revealed that food price was one of the most important factors associated with purchase decisions and consumption of convenience food, supporting the findings of the present study (Share and Stewart-Knox, 2012; Pula *et al.*, 2014; Gupta and Singh, 2016; Ting *et al.*, 2017; Contini *et al.*, 2018; Ali and Ali, 2020; Daniel, 2020; Guiné *et al.*, 2020). Januszewska *et al.*, (2011) found that sensory appeal was the important determinant in Romania and Hungary, whereas convenience, health and food price were important determinants in Belgium that influenced consumers' food choices. Further, health, food price and mood were the most important determinants influencing the food choice of Philipino consumers.

The availability of products is one of the important factors which motivate consumers to purchase and consumption of convenience food. The path analysis of the structural model and mean participants' scores of constructs indicate that availability of convenience food was positively associated with purchase intention and consumption of convenience food. The easy and wide range of products available near the workplace/university/locality were the key factors, which drive consumers to purchase and consumption of convenience food. The findings of the previous studies support the results of the present study (Wang *et al.*, 2015; Wang and Hazen, 2016; Guiné *et al.*, 2020; Wongprawmas *et al.*, 2021).

## 5. Conclusion

The findings of this study highlight the association between marital status, gender, age, employment status, meal pattern, family income, food price, food availability and purchase intention and consumption of convenience food. The factor loading, Cronbach's alpha, composite reliability, average variance extracted and correlations

estimates indicate good internal consistency and reliability of scale items and validity of the constructs of the questionnaire, which was designed to examine the role of socio-demographic and economic determinants on purchase intention and consumption of convenience food. The fit indices demonstrate adequate fit of measurement and structural models, which were constructed to examine the relationship between socio-demographic and economic determinants with purchase intention and consumption of convenience food. The marital status, employment status, meal pattern, family income, food price and food availability of convenience food were positively associated with purchase intention and consumption of convenience food. The path analysis of the structural model revealed that marital status and competitive food price were the most important motivating factors, driving consumers toward convenience food choices in emerging economies like India.

The conceptual framework and research findings reveal some theoretical and practical implications. Some important factors, such as marital status, meal pattern and family income were not given due importance in the past to assess their roles in purchase intention and consumption of convenience food. The empirical evidence for the aforementioned factors adds new information to the literature. Changing meal patterns, competitive prices, high family income and easy availability are becoming important factors influencing consumers' choice from traditional to convenience food. Due to significant changes in food consumption patterns, food processing industries and marketing agencies need to understand the role of socio-demographic and economic factors on convenience food choices to promote their business and provide healthy convenience food to consumers. Due to time and resource constraints, the present study was carried out in four cities in Northern India, which limits the generalization of the results. Hence, it is recommended to carry out similar research across cities and countries to obtain more generalized, and representative results. The study concentrates on a specific group of consumers, which also limits the applicability of the findings. Therefore, future research should include a wide range of consumers to enhance the overall applicability of the results.

### Conflict of interest

The authors declare no potential conflict of interest regarding the publication of this work. In addition, ethical issues including plagiarism, informed consent, misconduct, data fabrication and, or falsification, double

publication and, or submission, and redundancy have been completely witnessed by the authors.

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