



Impact of Acculturation and Internal and External Influences on Food Consumption Behaviour among Asian American Ethnic Groups

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Abstract: Retail food sales in the United States surpassed \$5 trillion annually in 2015 and this number is on the rise. As a growing industry, it is important to understand what factors influence consumption. In this paper, the authors report on data collected from an ethnic segment that is growing in terms of overall population and spending power in the U. S.; Asian Americans. Through analyses of internal and external influences, and measurement of acculturation across 1,284 respondents, the authors suggest that more acculturated individuals are more prone to be influenced by external factors (i.e., other foods and peers), whereas less acculturated individuals are more prone to be influenced by internal factors (i.e., home and family traditions). These findings indicate that acculturation has an impact on food consumption among those identifying as Asian American. Further theoretical and managerial implications are discussed.

I. INTRODUCTION

Food is a basic need for individuals, and is a need situated in the base of Maslow's Hierarchy of Needs (Gawel, 1997; Maslow, 1943). Among other basic needs including thirst, shelter, and warmth, hunger is viewed as a basic need that is to be fulfilled in order to progress through the hierarchy to eventually reach self-actualization (Maslow, 1943). Retail food sales in the U.S. specifically have surpassed \$5 trillion annually in 2015, and have steadily grown since trending down to \$4 trillion annually in 2008-2009-included in the 2015 figure are annual grocery store sales (\$606 billion) and specialty food service sales (\$46 billion) (U.S. Food Retail Market, 2017). As food consumption grows, so does the need for marketers to understand consumption behaviors of those in the general population. Among the challenges facing food and

other retail organizations in the U. S., the growing multiculturalism is perhaps the most critical.

Interactions between ethnic groups and markets are occurring at a fast pace as ethnic groups continue to grow in number in the U. S. (Latinos and the New Trump Administration, 2017; The Rise of Asian Americans, 2012). This constant first-hand contact between groups of individuals with different ethnic backgrounds is termed acculturation (Berry, 1997); a phenomenon that has been studied in relation to many ethnic groups in the U. S. (e.g., Hispanic Americans, Cuellar, Arnold, & Maldonado, 1995; Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987; African Americans, Landrine & Klonoff, 1994), including Asian Americans (Suinn, Rickard-Figueroa, Lew, & Vigil, 1987). Asian Americans specifically are now the biggest source of immigrants to the U. S., outpacing the Hispanics, and it is projected that by the year 2055, White



Americans will no longer be a majority in the U.S. (“10 Demographic Trends”, 2016). This trend is aided through the migration to the U. S. of Asians from India, The Philippines, Japan, and China among other countries (U. S. Census Bureau, 2017), who possess varying levels of median household income and consumption patterns (“The Rise”, 2012). In order to avoid prospective threats due to growing multiculturalism and to prepare for many opportunities as the U. S. becomes a country without a single racial or ethnic majority, marketing managers must make efforts to understand consumer behavior patterns of Asian Americans-the ethnic population growing at the fastest pace and making a large economic impact in the U. S.

In 2010, Asian Americans led all other ethnic groups in the U. S. in terms of percentage with a bachelor’s degree or more over the age of 25 (49%), and median household income (\$66,000) (“The Rise”, 2012). The median household income of Asian Americans rose to nearly \$75,000 in 2016, and the Asian American buying power in the U.S. is expected to reach \$1.1 trillion by 2020; this total accounting for 6.7% of the U.S. total buying power (Consumer, 2016). As the buying power of the average Asian American continues to rise, it is imperative for marketers to understand that the presented averages include data from many Asian American ethnic groups-those born in different countries outside of the U. S. (e.g., China, Japan, and India). Efforts to understand differences in consumer behavior across Asian American ethnic groups have focused on differentiating groups based on measures of acculturation (Barry, 2001; Gim, Atkinson, & Kim, 1991; Gim Chung, Kim, & Abreu, 2004; Suinn et al., 1987). Acculturation is a viable unit of measurement to distinguish between members of ethnic groups (Berry, 1997),

but further analysis is needed to assist in the understanding of Asian American consumption in the retail environment.

Asian Americans spend three times as much on public transportation and one and a half times as much on men’s and women’s clothing than the average U.S. population (Nielsen, 2016). Concerning food consumption specifically, Asian Americans were 31% more likely than the average population to spend more than \$200 weekly-over \$10,000 annually-at the grocery store (Nielsen, 2015). Efforts in the Asian American food consumption literature however remain focused on fast-food consumption (Niemeier, Raynor, Lloyd-Richardson, Rogers, & Wing, 2006; Paeratakul, Ferdinand, Champagne, Ryan, & Bray, 2003). A recent article from Hartwell, Edwards, & Brown (2011) presented an external push-internal pull model that helped explain the complex process of food consumption for individuals of different ethnic backgrounds as they acculturated to a new society. Specifically, the authors suggested that food consumption is impacted by both external (e.g., social facilitation) and internal (e.g., emotional) influences. Hartwell and colleagues (2011) presented their qualitative findings, but presented no empirical evidence to support their claims. Utilizing the key themes presented by Hartwell et al. (2011), the authors in the current study empirically investigate the impact of both external and internal influences on food consumption behavior.

As the Asian American population continues to grow with migrants coming from East, South, and Southeast Asia, marketers should make efforts to understand the diverse ethnicities that make up the Asian American market segment and their diverse consumption behavior. Understanding that the U.S. is a growing multicultural marketplace (Cleveland & Laroche, 2007; “Latinos”, 2017;



Ogden, Ogden, & Schau, 2004; “The Rise”, 2012), and that individuals can consume at different rates based on their ethnic background and level of acculturation (Berry, 1997; Cleveland, Laroche, Pons, & Kastoun, 2009; Gim et al., 1991), it is imperative for marketers to understand the impact that acculturation has on food consumption behavior across Asian American ethnic groups.

II. LITERATURE REVIEW

A. Acculturation

Berry (1997) defined acculturation as the phenomena that occur because of two or more groups with different cultures come in continuous first-hand contact with each other. Subsequent with the contact, it is suggested that changes will occur in the original cultural patterns of either one or both groups (Redfield, Linton, & Herskovits, 1936), although changes may not be uniform across individuals with different ethnic backgrounds (Berry, 1997). Acculturation is viewed as a bi-dimensional process, where individuals are presented with the options of 1) maintaining elements of their original culture, and 2) adopting elements of the new culture (Berry, 1997; Smith Castro, 2003). Answers to these prompts are indicative of an individual being segmented into one of the four acculturation strategy segments; with a response of ‘yes’ to both equating to the integration strategy; ‘no’ to both equating to marginalization; ‘yes’ to maintenance and ‘no’ to adopting equating to separation; and ‘no’ to maintenance and ‘yes’ to adopting equating to assimilation.

Scholars have suggested that selection of acculturation strategy is influenced by the dominant culture-the culture with the most relevant power in situations where differences exist (Berry, 1997; Smith Castro, 2003). The

acceptance-or lack thereof-of the dominant culture on minority populations can positively or negatively impact members of minority groups. These acculturation strategies are presented under the assumption that members of non-dominant groups have the freedom to choose how they acculturate into the new society (Berry, 1997). In a multicultural society, such as the U. S., this is a pre-established condition (Berry & Kalin, 1995).

Under this assumption, efforts to examine acculturation have expanded across consumer contexts. Scholars have examined the impact of acculturation on shopping behavior (Ayala, Mueller, Lopez-Madurga, Campbell, & Elder, 2005; Ownbey & Horridge, 1997), sport consumption behavior (Allen, Drane, Byon, & Mohn, 2010; Gacio Harrolle & Trail, 2007), and general consumer behavior (Henry, 1976; Kara & Kara, 1996); results of these studies supported their hypothesis that behavior was different across levels of acculturation. Efforts have also been made to examine the impact of acculturation among individual of the same ethnic background. Hispanic (Cuellar et al., 1995; Geoscape, 2014; Marin et al., 1987), Asian (Barry, 2001; Suinn et al., 1987), and African American (Landrine & Klonoff, 1994) scales for measuring acculturation in the U. S. have been conceptualized, and members of ethnic groups segmented based on their levels of acculturation. To measure acculturation, scholars presented items focused on language use “I feel more comfortable socializing with Americans than I do Asians” (Barry, 2001), social relationships “My friends now are of Mexican origin” (Cuellar et al., 1995), and length of time in the U. S., “How long have you been in the United States?” (Geoscape, 2014). Scholars suggested these elements of culture significantly impact acculturation to a new culture. Interestingly, the many factors that have been



linked to acculturation and how they impact cultural groups differently can be explained by the basic tenants of ethnicity theory. In the next section, we discuss this theory and demonstrate how it can be applied to this study on acculturation and influences on food consumption across Asian Americans.

B. Ethnicity Theory

Influences on consumers' decision-making processes stem from cultural elements (de Mooij & Hofstede, 2010; Kacen & Lee, 2002; Ogden et al., 2004; Richardson & Smith, 2007). Cultural elements can be used to identify a consumer, their personality, and consumption behavior (de Mooij & Hofstede, 2010). Historically, cultural elements-or values-have been viewed as centrally held beliefs that are enduring in nature (Luna & Gupta, 2001; Rokeach, 1968). These values, however, can vary between individuals with different ethnic backgrounds or cultural experiences (Kacen & Lee, 2002; Ogden et al., 2004; Richardson & Smith, 2007; Swaidan, Vitell, Rose, & Gilbert, 2006). The complexity of culture and presence of ethnic values is explained by Glazer (1975) in his conceptualization of ethnicity theory.

Under the guise of ethnicity theory researchers have posited there are multiple aspects that contextualize an ethnicity—including race, customs, and religion (Glazer, 1975). Luna and Gupta (2001) extend this contextualization through suggesting that cultural symbols, heroes, and rituals impact consumer behavior. Measures that have been used for analyses include regional level factors, individual cultural difference factors, communication context and other cultural dimensions (Hofstede, 1984; Kacen & Lee, 2002; Kim, Pan, & Park, 1998; Richardson & Smith, 2007). Based on measured aspects of the ethnic group, scholars have been able to better explain

participation and consumer behavior differences among individuals from different ethnic groups and cultural experiences. The writing of Hofstede (1980) substantiates this view.

In the influential writing of Hofstede (1984; 2011), Hofstede and Minkov (2010), the authors argued that individuals from different cultures can be ranked along a continuum in relation to other cultures. Cultures were individually ranked based on their measured level of power distance, uncertainty avoidance, masculinity, individualism, indulgence, and long-term orientation. Scholars have provided support for both the utility of the dimensions (Chan & Lau, 2002; Kacen & Lee, 2002; Richardson & Smith, 2007) and that cultural differences impact consumer behavior (Kim et al., 1998; Kwon & Trail, 2001; Yoshida & James, 2010).

This study examines self-identifying Asian Americans born in different cultures: United States, India, China, The Philippines, South Korea, and Japan. Considering the scholarship on the impact of ethnic values on consumer behavior, the following hypothesis was formulated:

- H1: Impact of external and internal influences on food consumption across self-identifying Asian Americans will differ in magnitude across ethnic groups.

Recently, scholars have examined the impact acculturation has on food consumption (Adekunle et al., 2013; Hartwell, 2011). It has been suggested that length of stay in a location, ethnic background, acculturation level, and surrounding have an impact on food consumption behavior. Through qualitative interviews, Hartwell and colleagues (2011) can identify these key aspects as either internal pull or external push influences.

C. Internal and External Influences

In their qualitative study of food behavior among acculturating European and Asian students in the



United Kingdom, Hartwell et al. (2011) identified two key themes of internal pull and external push influences on food consumption behavior. Internal pull factors are personal influencers that are elements of the individuals' emotions or personality (e.g., comfort and being shy). External push factors are personal influencers that are elements of social facilitation and purchase influence (e.g., peer pressure and national chain stores).

According to Hartwell et al. (2011), this "model towards food choice is proposed where adjustment is described as a dynamic and multifaceted process fluctuating as a result of individual, cultural and external forces" (p. 1393). The authors suggested that external influences pushed migrants further from the ways of their original culture, whereas internal influences pulled migrants closer to the ways of their original culture (Hartwell et al., 2011). Findings presented by Adekunle et al. (2013) provide support for the impact of internal and external factors across levels of acculturation. In line with results and suggestions presented by Adekunle et al. (2013) and Hartwell et al. (2011), the following hypotheses are made:

- H2a: More acculturated Asian-Americans are more likely to be influenced by external factors.
- H2b: Less acculturated Asian-Americans are more likely to be influenced by internal factors.

III. METHODS

A. Methodology

The authors employed a self-administered questionnaire through Qualtrics survey software. Respondents were recruited through their connection with an online survey panel. Data were

collected through a three-week period. Only individuals self-identifying as Asian American were included in the analysis.

B. Participants

Data in this study were collected from 1,284 respondents who identified as Asian American (56% female and 44% male). Most respondents were between the ages of 25 and 34 (21.6%), followed by 35 and 44 (17.8%), and 45 and 54 (17.8%). When asked about their place of birth, 543 respondents (42.3%) indicated that they were born in the United States, followed by 157 (12.2%) indicating they were born in India, 123 (9.6%) in China, 76 (5.9%) in the Philippines, 55 (4.3%) in South Korea, and 52 (4%) in Japan.

C. Instrument

The questionnaire contained three sections. Section 1 of the questionnaire consisted of general demographic questions covering gender, age, and ethnic background. Those who identified as Asian American were directed to the Section 2 of the questionnaire. In the second section, subjects were asked to respond to five questions on their level of acculturation to culture in America. Adapted from the work of Geoscape (2014), two of the questions measure language and lifestyle preferences, and three questions measure length of time in the U.S. and place of birth. Upon collection of the information, scholars have organized an algorithm to place subjects in levels of acculturation. In Section 3 of the questionnaire, subjects were presented with eight items adapted from the work of Hartwell et al. (2011) relating to internal pull (four items) and external push (four items) influences on food habits. Respondents were informed to indicate the level they disagreed or agreed with the statement by selecting a number on an accompanying 1-5 Likert scale, where



“strongly disagree” was represented by (1) and “strongly agree” represented by (5).

Acculturation: Scholars have indicated that proxy measures of acculturation are adequate for collection of necessary information, are statistically valid, and that inclusion of extra questions would not significantly increase the accuracy of the scale (Cruz, Marshall, Bowling, & Villaveces, 2008; Geoscape, 2014). Measurement of an individual’s acculturation therefore consisted of five questions generated from the work of Cruz and colleagues (2008), and personal communication with a member of the Geoscape organization (2014). Respondents were placed in one of four acculturation categories—Un Acculturated, Bicultural, Partially Acculturated, and Acculturated—based on their responses to these questions.

Internal Pull and External Push Influences: In a qualitative study of international students’ food habits in the United Kingdom, Hartwell et al. (2011) conducted semi-structured interviews with European and Asian postgraduate students (n = 10). External push and internal pull influences emerged as key themes from analyses of the interviews. Examples of external push influences includes social facilitation (e.g., influence of friends) and purchase influence (e.g., specialty stores). Examples of internal pull influences includes emotion (e.g., comfort) and personality (e.g., tradition). Identified key themes were used by the authors in this study to generate eight items representing external push (four items) and internal pull (four items) influences.

Adapted from the writing of Hartwell et al. (2011), external push items in this study focused on four unique objects: national chains, specialty stores, other foods, and peer influence. Internal pull items in this study also covered four unique objects: original culture, family, original home,

and tradition. All the items were rated on a scale ranging from “strongly disagree” (1) to “strongly agree” (5).

D. Data Analysis

Data were collected from Qualtrics and analyzed on IBM SPSS Statistics Data Editor software. Descriptive statistics and frequencies were generated for the demographic items (i.e., gender and age). Acculturation levels were calculated through the algorithm suggested by Geoscape (2014). The authors conducted multiple multivariate analysis of variance (MANOVA) to test H1, H2a, and H2b.

MANOVA was used to obtain data on the between-subjects effects. The eight influence items were tested individually relative to acculturation level of the entire sample for H2a and H2b. Wilks’ Lambda values were generated to indicate levels of variance in the dependent variables (i.e., internal and external influences) not explained by the different levels in the independent variable (i.e., acculturation). Significance levels below .05 indicate that there are mean differences in the internal and external influences across levels of acculturation. The Bonferroni post hoc test was used to determine where the significant differences were located at the $p = .05$ level.

IV. RESULTS

A. Acculturation

Individual acculturation scores were calculated for respondents as the sum of scores across all five acculturation items per the point distribution. Seven hundred thirty-nine individual scores ranged from five (i.e., close to being unacculturated) to 28 (close to being fully acculturated), with 544 respondents indicating they were born in the U.S. Individuals born in the



U.S. were coded as ‘acculturated’ (4). To sort the remaining sample into comparable clusters, respondents were coded into one of three groups; 5-13 representing partially un-acculturated (1), 14-20 representing bicultural (2), and 21-28 representing partially acculturated (3).

Descriptive analyses indicated that 152 (11.8%) of respondents were partially acculturated— scoring between 5 and 13 on the five acculturation items. Four hundred fifty-seven (35.6%) of respondents

were bicultural—scoring between 14 and 20; 131 (10.2%) of the respondents scored between 21 and 28 indicating they were partially acculturated; and 544 (42.3%) indicated they were born in the U.S.— categorized as acculturated. Acculturation levels were coded from lowest (i.e., un-acculturated; 1) to highest (i.e., acculturated; 4) to efficiently examine between-subject’s effects of the external push and internal pull influences.

Table I
External and Internal Influences’ Means and Standard Deviations

		External Influences			Internal Influences				
		National	Specialty	Other Foods	Peers	Culture	Family	Home	Tradition
<i>Un-Acculturated</i> N = 152	Mean	4.12	3.45	3.86	3.01	4.14	4.06	3.54	3.66
	SD	1.15	1.10	1.07	1.22	1.02	1.08	1.14	1.13
<i>Bicultural</i> N = 457	Mean	3.97	3.33	3.82	2.95	4.23	4.12	3.45	3.68
	SD	1.15	1.19	1.05	1.14	0.86	0.90	1.12	1.01
<i>Part Acculturated</i> N = 131	Mean	3.90	3.12	3.70	2.66	4.30	4.17	3.55	3.90
	SD	1.21	1.24	1.07	1.07	0.81	0.84	1.05	0.84
<i>Acculturated</i> N = 544	Mean	3.92	3.23	4.02	2.97	4.15	4.03	3.24	3.46
	SD	1.21	1.21	1.01	1.12	0.91	0.96	1.08	1.03

B. External Push Influences

Overall there was a statistically significant difference in external push influences based on acculturation level, $F(12, 3379) = 2.28, p < .001$; Wilk’s $\Lambda = .974$, partial $\eta^2 = .009$. Further analyses revealed significant differences in the external items focused on other foods, $F(3, 1280) = 4.88, p = .002$, and peer influence, $F(3, 1280) = 3.04, p = .028$, across acculturation levels at the $p < .05$ level. Significant differences in national chain, $F(3, 1280) = 1.23, p = .297$, and specialty store $F(3, 1280) = 2.34, p = .072$, were not recognized across levels of acculturation at the $p < .05$ level. See Table 1 for item means and standard deviations across levels of acculturation.

Post Hoc Tests (Bonferroni) revealed significant differences in desire to try foods from other cultures between those measured as bicultural ($M = 3.82, SD = 1.05$) and acculturated ($M = 4.02, SD = 1.01$), and between those measured as

partially acculturated ($M = 3.70, SD = 1.07$) and acculturated. A significant difference was also recognized in peer influence, with those measured as partially acculturated ($M = 2.66, SD = 1.07$) scoring significantly lower than those measured as acculturated ($M = 2.97, SD = 1.12$). See Table 2 for MANOVA results on external influence variables. No significant differences were recognized across levels of acculturation for national chain and specialty store influences.

C. Internal Pull Influences

There was a statistically significant difference in internal pull factors based on acculturation level, $F(12, 3379) = 2.90, p < .001$; Wilk’s $\Lambda = .973$, partial $\eta^2 = .009$. Significant differences were recognized across levels of acculturation for the internal items focused on food from home, $F(3, 1280) = 5.87, p = .001$, and tradition, $F(3, 1280) = 8.35, p < .001$. No significant differences across acculturation levels were recognized for the

internal items focused on culture $F(3, 1280) = 1.42, p = .236$, and family, $F(3, 1280) = 1.17, p = .320$.

Post Hoc Tests (Bonferroni) revealed that those measured as acculturated ($M = 3.24, SD = 1.08$) scored significantly lower than those measured at all other levels of acculturation for the food from home item; partially acculturated ($M = 3.55, SD = 1.05$); bicultural ($M = 3.45, SD = 1.12$); and unacculturated ($M = 3.54, SD = 1.14$). The test also revealed significant differences between those measured as acculturated ($M = 3.46, SD = 1.03$) when compared to those measured as partially acculturated ($M = 3.90, SD = 0.84$) and bicultural ($M = 3.68, SD = 1.01$) for the tradition item at the $p < .05$ level. See Table 3 for MANOVA results on internal influence variables.

In H2a and H2b, we hypothesized that individuals with higher levels of acculturation would be impacted more by external push factors, and those with lower levels of acculturation would be impacted more by internal pull factors. Analyses of the descriptive statistics across acculturation levels (see Table 1) indicate no continual pattern between levels of acculturation for any of the influence items. However, all significant differences recognized at the $p < .05$ level across acculturation levels provide support for both H2a and H2b. The authors suggest that the data provide limited support for the hypotheses.

D. Influence Measures across Ethnic Groups

When examining the impact of internal and external food consumption factors across ethnic groups, the authors examined MANOVA results

for self-identifying Asian Americans born in the U.S. (544), India (157), China (123), The Philippines (76), South Korea (55), and Japan (52). Descriptive statistics for the external influence factors are presented in Table 4, internal influence factors in Table 5.

External Influences: Multivariate test results indicated significant differences in external influences' magnitude across countries of origin, $F(20, 3311) = 4.01, p < .001$; Wilk's $\Lambda = 0.924$, partial $\eta^2 = 0.02$. Significant differences were recognized for the items focused on national chains, $F(5, 1001) = 5.55, p < .001$, specialty stores, $F(5, 1001) = 4.07, p = .001$, and other foods, $F(5, 1001) = 3.84, p = .002$. Significant differences were not recognized across countries of origin for the peer influence item.

Post Hoc Tests (Bonferroni) at the $p < .05$ level illustrated that Asian Americans born in India measured significantly differently on the national chain item ($M = 4.35, SD = 1.01$) when compared to those born in the U.S. ($M = 3.92, SD = 1.21$) and China ($M = 3.65, SD = 1.25$). For the specialty store item, India-born Asian Americans scored significantly higher ($M = 3.62, SD = 1.14$) than those born in the U.S. ($M = 3.23, SD = 1.17$) and The Philippines ($M = 2.95, SD = 1.21$). Measures of the other food item revealed a significant difference between those born in the U.S. ($M = 4.02, SD = 1.01$) and China ($M = 3.62, SD = 1.00$). Ethnic group measures did not remain consistent across all four external influence items relative to measures of other ethnic groups (see Table 4).



Table II
MANOVA – External Influences

Acculturation Levels

Effect	Value	F	Hypothesis df	Error df	Sig.
Acc Level Pillai's Trace	.026	2.775	12.000	3837.000	.001
Wilks' Lambda	.974	2.779	12.000	3378.916	.001
Hotelling's Trace	.026	2.781	12.000	3827.000	.001
Roy's Largest Root	.017	5.336	4.000	1279.000	.000

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
I frequently shop at national chain grocery stores (i.e. Publix, Walmart, Kroger)	5.165	3	1.722	1.231	.297
I frequently shop at specialty grocery stores	9.957	3	3.319	2.339	.072
I like trying foods from cultures other than my own	15.779	3	5.260	4.877	.002*
My peers influence what I eat/where I purchase food	11.727	3	3.909	3.036	.028*

Bonferroni

Dependent Variable	Acculturation Level	Acculturation Level	Mean Difference	Std. Error	Sig.
I like trying foods from cultures other than my own	Un-Acculturated	Bicultural	.04	.097	1.000
		Partially Acculturated	.16	.124	1.000
		Acculturated	-.16	.095	.580
	Bicultural	Un-Acculturated	-.04	.097	1.000
		Partially Acculturated	.12	.103	1.000
		Acculturated	-.20*	.066	.019
	Partially Acculturated	Un-Acculturated	-.16	.124	1.000
		Bicultural	-.12	.103	1.000
		Acculturated	-.32*	.101	.010
	Acculturated	Un-Acculturated	.16	.095	.580
		Bicultural	.20*	.066	.019
		Partially Acculturated	.32*	.101	.010
My peers influence what I eat/where I purchase food	Un-Acculturated	Bicultural	.06	.106	1.000
		Partially Acculturated	.35	.135	.059
		Acculturated	.04	.104	1.000
	Bicultural	Un-Acculturated	-.06	.106	1.000
		Partially Acculturated	.29	.112	.055
		Acculturated	-.02	.072	1.000
	Partially Acculturated	Un-Acculturated	-.35	.135	.059
		Bicultural	-.29	.112	.055
		Acculturated	-.31*	.110	.027
	Acculturated	Un-Acculturated	-.04	.104	1.000
		Bicultural	.02	.072	1.000
		Partially Acculturated	.31*	.110	.027

Internal Influences: Multivariate test results indicated significant differences in internal influences' magnitude across countries of origin, $F(20, 3311) = 2.91, p < .001$; Wilk's $\Lambda = .944$, partial $\eta^2 = 0.01$. Significant differences between-

subjects were recognized for the items focused on family, $F(5, 1001) = 3.94, p = .002$, home, $F(5, 1001) = 6.60, p < .001$, and tradition, $F(5, 1001) = 8.58, p < .001$. No significant differences were recognized across countries for the culture item.



Table III
MANOVA – Internal Influences

Acculturation Levels

Effect	Value	F	Hypothesis df	Error df	Sig.	
Acc Level	Pillai's Trace	.027	2.885	12.000	3837.000	.001
	Wilks' Lambda	.973	2.897	12.000	3378.916	.001
	Hotelling's Trace	.027	2.907	12.000	3827.000	.001
	Roy's Largest Root	.023	7.201	4.000	1279.000	.000

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Food is an important part of my culture	3.406	3	1.135	1.416	.236
Food reminds me of my family (home culture, etc.)	3.099	3	1.033	1.169	.320
I go out of my way to locate food that reminds me of home	21.314	3	7.105	5.870	.001*
I try to maintain my family's traditions when it comes to food	25.998	3	8.666	8.346	.000*

Bonferroni

Dependent Variable	Acculturation Level	Acculturation Level	Mean Difference	Std. Error	Sig.
I go out of my way to locate food that reminds me of home	Un-Acculturated	Bicultural	.09	.103	1.000
		Partially Acculturated	-.01	.131	1.000
		Acculturated	.30*	.101	.016
	Bicultural	Un-Acculturated	-.09	.103	1.000
		Partially Acculturated	-.10	.109	1.000
		Acculturated	.22*	.070	.012
	Partially Acculturated	Un-Acculturated	.01	.131	1.000
		Bicultural	.10	.109	1.000
		Acculturated	.31*	.107	.020
	Acculturated	Un-Acculturated	-.30*	.101	.016
		Bicultural	-.22*	.070	.012
		Partially Acculturated	-.31*	.107	.020
I try to maintain my family's traditions when it comes to food	Un-Acculturated	Bicultural	-.02	.095	1.000
		Partially Acculturated	-.24	.121	.275
		Acculturated	.20	.093	.195
	Bicultural	Un-Acculturated	.02	.095	1.000
		Partially Acculturated	-.22	.101	.158
		Acculturated	.22*	.065	.005
	Partially Acculturated	Un-Acculturated	.24	.121	.275
		Bicultural	.22	.101	.158
		Acculturated	.44*	.099	.000
	Acculturated	Un-Acculturated	-.20	.093	.195
		Bicultural	-.22*	.065	.005
		Partially Acculturated	-.44*	.099	.000



Post Hoc Tests (Bonferroni) at the $p < .05$ level revealed significant differences in measures of the family item between those born in The Philippines ($M = 4.41$, $SD = 0.82$) when compared to those born in the U.S. ($M = 4.03$, $SD = 0.96$) and South Korea ($M = 3.85$, $SD = 1.06$). Significant differences in the home item were recognized between those born in India ($M = 3.73$, $SD = 1.12$) when compared to those born in the U.S. ($M = 3.24$, $SD = 1.08$) and South Korea ($M = 3.15$, $SD = 1.10$). Significant differences in the tradition item were recognized between those born in India ($M = 3.96$, $SD = 1.01$) when compared to those

born in the U.S. ($M = 3.46$, $SD = 1.03$), South Korea ($M = 3.35$, $SD = 1.04$), and Japan ($M = 3.40$, $SD = 1.13$). A significant difference was also recognized between those born in the U.S. and those born in China ($M = 3.78$, $SD = 0.85$). Measures for the internal influence items remained consistent, with those born in The Philippines and India measuring highest and/or second highest across all four internal items, China measuring third highest, the U.S. and Japan measuring fourth and/or fifth, and South Korea measuring sixth highest for all items (see Table 5).

Table IV
External Influences' Means and Standard Deviations

Country of Birth	N	External Influences			
		National Mean (SD)	Specialty Mean (SD)	Other Foods Mean (SD)	Peers Mean (SD)
United States	544	3.92 (1.21)	3.23 (1.21)	4.02 (1.01)	2.97 (1.12)
India	157	4.35 (1.01)	3.62 (1.14)	3.82 (1.04)	3.05 (1.22)
China	123	3.65 (1.25)	3.28 (1.15)	3.62 (1.00)	3.10 (0.99)
Philippines	76	3.99 (1.06)	2.95 (1.21)	3.88 (1.13)	2.97 (1.19)
South Korea	55	4.05 (1.10)	3.40 (1.23)	3.73 (1.19)	2.73 (1.01)
Japan	52	3.81 (1.33)	3.29 (1.29)	3.79 (1.13)	2.88 (1.26)

Table V
Internal Influences' Means and Standard Deviations

Country of Birth	N	Internal Influences			
		Culture Mean (SD)	Family Mean (SD)	Home Mean (SD)	Traditions Mean (SD)
United States	544	4.15 (0.91)	4.03 (0.96)	3.24 (1.08)	3.46 (1.03)
India	157	4.27 (0.89)	4.25 (0.89)	3.73 (1.12)	3.96 (1.01)
China	123	4.20 (0.75)	4.10 (0.75)	3.49 (0.87)	3.78 (0.85)
Philippines	76	4.32 (0.91)	4.41 (0.82)	3.61 (1.22)	3.80 (1.02)
South Korea	55	4.04 (0.99)	3.85 (1.06)	3.15 (1.10)	3.35 (1.04)
Japan	52	4.13 (1.01)	4.00 (1.07)	3.25 (1.25)	3.40 (1.13)



In H1, the authors hypothesized that the impact of external and internal influences on food consumption across self-identifying Asian Americans will differ in magnitude across ethnic groups. To test this hypothesis, the authors analyzed mean differences across individuals self-identifying as Asian American who were born in the U.S., India, China, The Philippines, South Korea, and Japan. Significant differences across ethnic groups were recognized in three of the four external influence items and three of the four internal influence items, but not all ethnic groups measured significantly different from the others in these cases. The authors suggest the data provide partial support for H1.

V. DISCUSSION AND IMPLICATIONS

The purpose of this study was to examine the impact of external and internal influences on food consumption behavior among those identifying as Asian American and currently living in the United States. Not only was the aim of this study to examine external and internal influences across Asian Americans born in different countries, but also to measure the impact that acculturation has on food consumption behavior. Since no effort has been made to empirically identify the impact of acculturation and its relationship to external and internal influences on food consumption for those identifying as Asian American, we believe this study makes three significant contributions to the literature.

First, the analyses contribute to the ethnic marketing literature by identifying significant differences in the measures of external and internal factors on food consumption behavior across ethnic groups. A fundamental assumption of ethnicity theory is that the many aspects that contextualize ethnicity differ in magnitude across

ethnic groups (Glazer, 1975). In the current study, significant differences were recognized in both external and internal influences across ethnic groups (see Table 4 and Table 5). For the six factors with significant influence differences across ethnic groups—national chain, specialty store, other foods, family, home, and tradition—Asian Americans born in the U.S. measured significantly different from at least one other studied ethnic group. More specifically, mean internal influence scores across ethnic groups indicate that Asian Americans born in the U.S. are influenced to a lesser degree on average than Asian Americans born in India, The Philippines, and China relative to internal influences. Thus, we suggest that more effective marketing of food to Asian Americans born in India, The Philippines, and China would include elements of the individual culture, ties to family, memories of home, and traditions.

The second contribution the study makes is to advance our understanding of the impact acculturation has on food consumption behavior. Across levels of acculturation, significant differences were recognized in two of the four external influence—other foods and peer influence—items and two of the four internal influence—home and tradition—items. Significant differences revealed that more acculturated Asian Americans were more influenced by external factors, and that less acculturated Asian Americans were more influenced by internal factors. These relationships support H2a and H2b and are consistent with the writing of Adekunle et al. (2013) and Hartwell et al. (2011). From a managerial standpoint, these findings can be used to understand that as Asian Americans acculturate into the culture in the U.S., they become less influenced by elements surrounding home and



tradition and become more influenced by the presence of other foods and their peers.

Third, the study contributes to the literature by advancing our understanding of the relationship between acculturation and external and internal influences. Based on a review of relevant literature, the authors believe that efforts have not been made to empirically examine the relationship between acculturation and external and internal influences on food consumption. Significant differences in both external and internal influence items lead the authors to suggest that these relationships may be present in other consumer contexts, and potentially across other ethnic consumer segments. Scholars should utilize this information as they continue to examine the consumption patterns of the acculturating individual. In line with this suggestion, the authors address study limitations and directions for future research.

VI. LIMITATIONS AND FUTURE RESEARCH

Three limitations may have influenced the results of this study. The first limitation is in relation to the internal and external influences. In the current study, the authors generated eight items—four external and four internal—from the qualitative study conducted by Hartwell et al. (2011). No pre-test was conducted by the authors to verify the external and internal items are valid measures of each phenomenon respectively. Post Hoc construct reliability analyses of the four external items revealed weak evidence of reliability, $\alpha = .55$, and significantly low item-to-total statistics, ranging from .31 to .39. The four internal items revealed evidence of strong reliability, $\alpha = .83$, with moderately high item-to-total statistics, ranging from .61 to .71. It is suggested that results

offered in this study could be impacted by the fact that internal factor scores were being measured by a reliable four-item construct, whereas external factor scores were not. Given the results of the current study, we suggest that scholars generate and empirically verify reliable measures of external and internal influences on food consumption.

Second, concerning the acculturation model, it is not known whether the items used to measure acculturation for those identifying as Asian American are properly capturing the acculturation level of the target Asian American population. The model used, the Hispanic Acculturation Model (Geoscape, 2014), was developed through multiple tests on Hispanic Americans. The five questions are designed to be the most accurate and efficient measures able to assist scholars to place individuals identifying as Hispanic into the appropriate acculturation group. It is possible that the model does not provide scholars with accurate measures of acculturation for ethnic groups outside of those identifying as Hispanic. Valid scales and models for measuring Asian American acculturation can be found in the literature, but include many items; 29 items, EAAM, Barry, 2001; 26 items, SL-ASIA, Suinn et al., 1987. A higher number of items on a scale can lead to respondent bias (McGehee, Yoon, & Cardenas, 2003), and the larger number of items does not necessarily translate into more accurate results of acculturation (Geoscape, 2014). We suggest that scholars focus on the generation of a short Asian American acculturation scale that is accurate and efficient in placing individuals identifying as Asian into appropriate acculturation groups.

Third, measures of current or future consumer behavior were not included in the questionnaire. To assess the concurrent and/or predictive validity of scale items—external and internal influences in



this study—scores from the items are to be compared to an outside criterion measure (Kline, 2014). Scholars have provided evidence of concurrent and predictive validity to demonstrate psychometric properties and the overall reliability of scale items (Trail & James, 2001). It is suggested by the authors that scholars aim to validate external and internal influence constructs through the inclusion of measures of concurrent and predictive validity to demonstrate the psychometric properties of the scale.

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