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Source / Izvornik: **Economic research - Ekonomska istraživanja**, 2015, 28, 63 - 74

Journal article, Published version

Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

<https://doi.org/10.1080/1331677X.2015.1022390>

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:213:025666>

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Download date / Datum preuzimanja: **2025-01-23**



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**To cite this article:** Ivan-Damir Anić, Edo Rajh & Sunčana Piri Rajh (2015) Exploring consumers' food-related decision-making style groups and their shopping behaviour, Economic Research-Ekonomska Istraživanja, 28:1, 63-74, DOI: [10.1080/1331677X.2015.1022390](https://doi.org/10.1080/1331677X.2015.1022390)

**To link to this article:** <http://dx.doi.org/10.1080/1331677X.2015.1022390>



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Published online: 10 Mar 2015.



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## Exploring consumers' food-related decision-making style groups and their shopping behaviour

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(Received 28 July 2014; accepted 18 February 2015)

The purpose of this research is to develop consumer typology, classify consumers by using food-related decision-making styles and link the resulting typology with consumer shopping behaviour. A modified Sproles and Kendall's CSI instrument was used to identify decision-making styles in food-product context in Croatia. The data obtained from the survey was analysed using factor, cluster and ANOVA analyses. Three groups of consumers were identified: Recreational, Novelty-driven and Economic consumers. The study confirms that food-related consumers' decision-making (CDM) styles can be used for market segmentation. Significant differences among groups were found for monthly food expenditure, expenditure at main retailers and expenditure on major trips. Marketers should take into account the characteristics of the identified groups while developing marketing programmes.

**Keywords:** food shopping behaviour; consumers' decision-making (CDM) styles; market segmentation

**JEL classification:** L81, M31

### 1. Introduction

Globalisation, fierce competition, demanding consumers, more complicated consumer decision-making (CDM) and growing retailers' expense on promotions have increased the need to gain better knowledge about consumer shopping behaviour, and to adjust the company's strategy accordingly. One way to tackle this issue is by exploring CDM styles – which are important for companies since they determine consumer behaviour – are relatively stable over time, and are relevant for market segmentation (Walsh, Hennig-Thurau, Wayne-Mitchell, & Wiedmann, 2001). Many studies have examined Sproles and Kendall's (1986) Consumer Style Inventory (CSI) instrument to examine the validity of this instrument and identify CDM styles in various environments and countries, while fewer studies delved into the usage of this instrument to segment consumers and examine the characteristics of resulting consumer typology. There is still no single universally accepted consumer typology based on CDM styles, while past research calls for further investigation of this issue (McDonald, 1993; Mitchell & Bates, 1998).

This article examines CDM styles in food-product context in Croatia. The purpose of this study is to segment consumers by applying modified Sproles and Kendall's CSI instrument (1986) and to link the resulting typology with their food shopping behaviour.

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The study aims to examine whether consumers could be grouped based on similarities and differences in food-related CDM styles (FCDM styles), and investigate whether statistically significant differences exist among the resulting FCDM style groups with respect to various shopping behaviour variables.

This study contributes to the consumer behaviour literature and to the theory of CDM styles. Our study develops consumer typology based on FCDM styles. Sproles and Kendall's CSI instrument (1986) modified for usage in a food-product context was applied to develop FCDM style typology, while previous studies used general shopping styles mostly in product-neutral, catalogue or apparel settings (Akturan & Tezcan, 2007; Firat, 2011; Hiu, Siu, Wang, & Chang, 2001; McDonald, 1993; Mitchell & Bates, 1998). We expect to find various FCDM style groups in the food-product environment, since consumers are driven by different motives when they purchase food or apparel products. Grocery shopping is mostly seen as a routine, 'needs-driven' type of behaviour, in which consumers tend to optimise their time and money expenditures (Umesh, Pettit, & Bozman, 1989).

This article also adds to the knowledge of consumer food purchasing behaviour. We examine whether FCDM styles can be used to predict food expenditures, shopping frequencies, shopping trip type (whether it is major- or fill-in trip), and retailers' loyalty. Past research explored different demographic characteristics and limited number of shopping behaviour variables (e.g. spending or shopping frequency) of consumer groups based on CDM styles (Akturan & Tezcan, 2007; Hiu et al., 2001). Previous studies explored shopping trips as a driver of purchases (Walters & Jamil, 2003), while we examine shopping trip types as a resulting behaviour of FCDM styles.

The results of this study might give food marketers guidance on how to use market segmentation strategy more effectively, differentiate their food product offerings and develop more effective promotional activities.

The article includes the following sections. Conceptual framework and hypotheses are presented in the second section, followed by methodology in the third section. Results are presented in the fourth section, followed by discussion and conclusions in the fifth section.

## **2. Conceptual framework and hypotheses**

Consumers go through different stages in shopping; companies are interested to learn why and how consumers shop and understand their CDM styles, to influence their decision-making at each stage. This study examines CDM styles, which can be defined as a mental orientation characterising a consumer's approach to making choices in shopping. Sproles and Kendall (1986) developed 40-items CSI instrument to measure CDM styles. They conceptualised the following eight basic CDM styles: (1) 'Perfectionism, high-quality consciousness'; (2) 'Brand consciousness'; (3) 'Novelty-fashion consciousness'; (4) 'Recreational, hedonistic shopping consciousness'; (5) 'Price consciousness'; (6) 'Impulsiveness'; (7) 'Confusion by overchoice'; (8) 'Habitual, brand-loyal purchasing orientation'. Much previous research seeks to establish the generalisability of CSI scale and examine demographic characteristics of CDM styles (Anić, Piri Rajh, & Rajh, 2014), while fewer studies examined the usefulness of this instrument for market segmentation (Walsh et al., 2001). Various consumer groups in response to CDM styles have been identified, by using general styles and testing the instrument in product-neutral environment. Summary of past research on CDM styles and resulting consumer typology is presented in Table 1.

Table 1. Literature review on CDM style groups.

Past research	CDMS groups
McDonald (1993)	General CDM styles were applied in the US, using apparel catalogue shoppers. Six groups of women catalogue-shopper were identified: loyalist shoppers, value shoppers, fashionable shoppers, diverse shoppers, recreational shoppers, and emotional shoppers.
Mitchell and Bates (1998)	General CDM styles were applied in UK, and four groups of student consumers were identified: trend setters, shopping avoiders, recreational quality seekers, and cautious, brand loyal consumers.
Walsh et al. (2001)	General CDMS styles were applied in Germany. Six groups of consumers identified: value oriented consumers, the demanding comparison shoppers, impulsive consumers, emotionally dominated consumers, brand-oriented and shopping enthusiastic consumers, fashion conscious consumers.
Hui et al. (2001)	General CDMS styles were applied in China, in clothing environment. Three groups of adult consumers were identified: trendy and perfectionistic consumer, traditional and pragmatic consumer, and confused by overchoice consumer
Akturan and Tezcan (2007)	General CDMS styles were applied on young consumers in Turkey. Four groups of young adults were identified in apparel setting: recreational consumers, fashion-quality conscious consumers, independent consumers and quality conscious-opinion seeker consumers. Authors examined demographic and a few buying characteristics of groups (e.g. monthly spending).
Anić, Ciunova-Suleska, and Rajh (2010)	Two groups of young adult consumers were identified in the Republic of Macedonia: economic consumers and recreational consumers. Demographic characteristics of consumer groups were examined.
Akturan, Tezcan and Vignolles (2011)	Four groups of young adults were identified: fashion-brand conscious consumers, indifferent consumers, recreation seekers, and quality seekers
Firat (2011)	Three groups of consumers were identified in Turkey and France, by using general CDM styles: enjoy shopping consumers, undecided consumers, non-conscious shopping consumers

Source: Compiled by the authors.

Past research suggests that consumers are rarely oriented exclusively to one CDM style, but are mostly covered by several CDM styles (Wesley, LeHew, & Woodside, 2006). One group of consumers (e.g. shopping avoiders, traditional pragmatic, and independent consumers) is the most price-conscious, and value the other seven CDM styles less, while other groups of consumers value the other seven CDM style dimensions more than price (e.g. trend setters, recreational shoppers, brand-loyal shoppers, trendy, perfectionistic consumers, fashion-quality conscious, quality conscious-opinion seeker consumers). We assume that consumers can be grouped according to FCDM styles also in a food-product setting. In this study we examine behavioural characteristics between two types of consumers: (1) price-conscious consumers (who are very price-oriented); and (2) value-conscious consumers (who are less price-conscious and value the other seven FCDM styles more).

CDM styles were shown to affect food expenditures. Price-conscious consumers were shown to spend less money on food than other consumers. Trendy consumers spent more than traditional, pragmatic consumers (Hui et al., 2001). Quality conscious-opinion seeker consumers had higher levels of spending than other consumers, while price-conscious consumers had low monthly expenditure (Akturan & Tezcan, 2007).

Perfectionism and brand conscious styles are related to seeking high quality and paying a high price, while CDM style related to price-consciousness includes unwillingness to pay high prices. We assume that in a food-product context, consumers oriented towards acquiring high-priced products would spend more money than price-oriented shoppers who are unwilling to pay high prices. Price-oriented shoppers are the most interested in making savings from discounts and they tend to buy the fewest items, mostly planned products, and spend the least amount of money (Walters & Jamil, 2003).

Past research suggests that consumers' motivations and CDM styles can predict loyalty (McDonald, 1993), which is the single most important factor in building revenues and profitability (Hallowell, 1996). In our study we examine loyalty through consumer purchasing behaviour at their main retailer. Shoppers who visited a retailer to shop for special offers were shown to visit several stores in search for low prices and store specials, spend the least amount of money and be the least loyal (Walters & Jamil, 2003). We assume that price-oriented shoppers in search of low prices are more likely to visit discount retailers that focus on low prices than other types of stores like supermarkets, hypermarkets or convenience stores that have higher prices, and would spend less money than other groups of consumers

Consumers might undertake a major- or fill-in shopping trip, depending on the households' needs, money and available time. Past research shows that different shopping trip types produce differences in consumer behaviour and retail outcomes (Kahn & Schmittlein, 1992; Walters & Jamil, 2003). A major trip is conducted on a less frequent basis, where consumers spend much time inside the store, purchase a large number of items to fulfil short- and long-term needs, and spend a larger portion of their grocery budget. As opposed to a major shopping trip, a fill-in trip is conducted more frequently in an average month. On this trip, consumers satisfy more urgent needs to replenish perishables that are frequently consumed, spend less time inside the store, purchase fewer items, and spend less money per trip. Since both trips are driven by different motives we suppose that there should be differences in shopping trip type behaviour according to the FCDM styles. Price-conscious consumers, in search of the best deals, visit more stores on both major and fill-in trips, and spend less money on both trips. The following hypotheses are tested:

**Hypothesis 1.** *FCDM styles vary among consumers and form meaningful clusters.*

**Hypothesis 2.** *Monthly food expenditure is higher for value- than price-conscious consumers.*

**Hypothesis 3a.** *Expenditure at main retailers are higher for value- than price-conscious consumers.*

**Hypothesis 3b.** *Percentage expenditure at main retailer is higher for value- than price-conscious consumers.*

**Hypothesis 3c.** *Value-oriented consumers visit the most value-oriented retailers, while price-conscious consumers visit mostly price-oriented retailers.*

**Hypothesis 4a.** *Expenditure on major trips are higher for value- than price-conscious consumers.*

**Hypothesis 4b.** *Major trip frequency is lower for value- than price-conscious consumers.*

**Hypothesis 4c.** *Expenditures on fill-in trips are higher for value- than price-conscious consumers.*

**Hypothesis 4d.** *Fill-in trip frequency is lower for value-oriented than price-conscious consumers.*

### 3. Methodology

The data were collected by telephone survey conducted during the period from January to March 2010 in Croatia. A pre-test was carried out on the sample of 40 consumers. Phone book pages were selected using simple random sampling procedure. The sample consists of 450 respondents from 18 to 70 years of age, with a response rate of 45% (Table 2).

The questionnaire included 40 CSI items from original Sproles and Kendall's (1986) instrument. All original items were adjusted in wording for food products context. Three original statements were changed as follows: 'I usually have one or more outfits of the very newest style' to 'I purchase the trendy food product items', 'I keep my wardrobe up-to-date with the changing fashions' to 'I pay attention that my nutrition is in line with trends', and 'Fashionable, attractive styling is very important to me' to 'It is very important to me to buy food products that are in line with trends'.

Shopping behaviour variables were measured as: (1) monthly food expenditures (i.e. the amount of money in kunas spent by a household on food products in an average month); (2) expenditure at the main retailer (i.e. monthly food expenditure at the main retailer, in which consumers purchased the most food products in the last 12 months); (3) percentage expenditure at main retailer (i.e. expenditures at main retailer/monthly food expenditures); (4) main retailer type (i.e. retailers grouped as price oriented retailer if the reported retailer run mostly discount stores, and value-oriented retailer if a retailer runs mostly supermarkets, hypermarkets or convenience stores); (5) expenditures on major trips (i.e. the amount of money in kunas spent by a household on food products in an average month on major trips); (6) major trip frequency (i.e. number of major trips conducted in an average month); (7) expenditure on fill-in trips (i.e. the amount of money in kunas spent by a household on food products in an average month on fill-in trips); and (6) fill-in trip frequency (i.e. number of fill-in trips conducted in an average month). Shopping trip types were determined according to the HRK amount spent on the trip, number of items and types of products purchased (Kahn & Schmittlein, 1992).

Table 2. Demographic characteristics of respondents, N = 450.

Sample characteristics	%
<i>Gender</i>	
Male	49.8
Female	50.2
<i>Age</i>	
18–35	30.9
36–55	42.0
56 and over	27.1
<i>Household income (HRK)*</i>	
up to 5,000	32.0
5,001–10,000	49.6
10,001 and over	18.4
<i>Education level</i>	
Primary school or no school	11.3
Secondary school	61.3
University or higher education	27.3

Notes: \*HRK stands for Croatian kuna. The 2010 average exchange rate of EUR 1 to HRK was 7.39 (<http://www.hnb.hr>).

Source: Consumer survey conducted by authors.

Exploratory and confirmatory factor analyses were employed to examine reliability and validity of the food-related CSI instrument. K-means cluster analysis was employed to classify consumers according to their FCDM styles, while ANOVA was performed to test the statistical difference between FCDM styles and consumer shopping behaviour.

## 4. Results

### 4.1. Reliability and validity of the food-related CSI instrument

Exploratory factor analysis with varimax rotation of factors was performed on 40 food-related CSI items. Items with loadings greater than 0.5 on more than one factor and items with loadings lower than 0.5 on their primary factor were removed from further analysis. The remaining items were analysed again. They loaded on eight factors and were named as follows: Perfectionism, high-quality consciousness (PQC); Brand consciousness (BC), Novelty consciousness (NC), Recreational, hedonistic shopping consciousness (HC), Price consciousness (PC); Impulsiveness (IMP), Confusion by overchoice (CBO), Habitual, brand-loyal orientation (BL). The eight-factor solution, with factor loadings ranging from 0.63 to 0.94, explained 73.5% of the variance. 25 items were subjected to confirmatory factor analysis to test the validity of measures and detect the unidimensionality of each construct. One item was found to have low factor loading estimate (item i2) and it was removed from further analysis. Measurement model fit the data well (Table 3). Factor loadings for all items were significant at  $p < .01$  level, which indicates a high level of unidimensionality of scales.

Discriminant validity of the measures was assessed by comparing constructs pairwise with two models: (1) one with the correlation between the constructs is constrained to 1; and (2) one with correlation between the constructs is specified as free (Anderson & Gerbing, 1988). In each case, two-factor model had a better fit than a single-factor model, indicating an acceptable level of discriminant validity of applied measures. Additionally, discriminant validity was assessed by comparing the shared variance (squared correlation) between each pair of constructs against the Average Variance Extracted (AVE) for these constructs. In all cases AVE indicators were larger than the squared correlations, which is an additional evidence of discriminant validity. Convergent validity of the measures was assessed by AVE indicator and its comparison with Composite Reliability (CR) indicator. For all scales AVE was higher than 0.5 threshold value as well as higher than respective CR value. Values of both Cronbach's alpha coefficients and CR indicators were higher than recommended values which indicate acceptable level of reliability.

### 4.2. Identification of food-related CDMS groups

K-means cluster analysis was employed to identify FCDM style groups. Item mean values were calculated for each factor using only items that remained after the reliability and construct validity assessment. They were taken as an input in cluster analysis. K-means cluster analysis classified study participants into three homogeneous groups: (1) Recreational consumers; (2) Novelty-driven consumers; and (3) Economic consumers. Significant differences among consumers' groups ( $p < 0.05$ ) were found for all FCDM styles (Table 4). Hypothesis 1 is supported.

*Recreational consumers* are the largest FCDM style group (37.8%). The majority of those consumers have the highest income (more than 10,000 HRK) and possess



Table 3. Confirmatory factor analysis results and Cronbach's alpha coefficients.

Constructs and items	Factor loading
<i>PQC</i> , $\alpha = 0.81$ ; <i>CR</i> = 0.97; <i>AVE</i> = 0.50	
I1: In purchasing food products getting very good quality is very important to me.	0.64*
I3: In general, I usually try to buy the best food products overall quality.	0.73*
I4: I make a special effort to choose the very best quality food products.	0.75*
<i>BC</i> , $\alpha = 0.72$ ; <i>CR</i> = 0.97; <i>AVE</i> = 0.53	
I9: The well-known national food product brands are best for me.	0.71*
I10: The more expensive food product brands are usually my choices.	0.81*
I11: The higher the price of a food product, the better its quality.	0.67*
I13: I prefer buying the best-selling food product brands.	0.74*
<i>NC</i> , $\alpha = 0.93$ ; <i>CR</i> = 0.99; <i>AVE</i> = 0.88	
I15: I purchase the trendy food product items.	0.90*
I16: I pay attention that my nutrition is in line with trends.	0.99*
I17: It is very important to me to buy food products that are in line with trends.	0.92*
<i>HC</i> , $\alpha = 0.84$ ; <i>CR</i> = 0.98; <i>AVE</i> = 0.88	
I20: Shopping for food products is not a pleasant activity to me. (f)	0.96*
I21: Going shopping for food products is one of the enjoyable activities of my life.	0.99*
I22: Shopping in the grocery stores wastes my time. (f)	0.87*
<i>PC</i> , $\alpha = 0.78$ ; <i>CR</i> = 0.97; <i>AVE</i> = 0.84	
I25: I buy food products as much as possible at sale prices.	0.84*
I26: The lower price food products are usually my choice.	0.99*
<i>JMP</i> , $\alpha = 0.66$ ; <i>CR</i> = 0.96; <i>AVE</i> = 0.59	
I28: I should plan my shopping of food products more carefully than I do.	0.78*
I29: I am impulsive when purchasing food products.	0.72*
I30: Often I make careless food product purchases I later wish I had not.	0.81*
<i>CBO</i> , $\alpha = 0.87$ ; <i>CR</i> = 0.99; <i>AVE</i> = 0.96	
I33: There are so many food product brands to choose from that often I feel confused.	0.97*
I34: Sometimes it's hard to choose in which grocery stores to shop.	0.98*
I35: The more I learn about food products, the harder it seems to choose the best.	0.99*
I36: All the information I get on different food products confuses me.	0.99*
<i>BL</i> , $\alpha = 0.82$ ; <i>CR</i> = 0.96; <i>AVE</i> = 0.62	
I37: I have favourite food product brands I buy over and over.	0.81*
I38: Once I find a food product or brand I like, I stick with it.	0.77*

Notes: *CR* – Composite Reliability; *AVE* – Average Variance Extracted; Model fit: Chi-square = 423.71, d.f. = 224, Chi-square/d.f. = 1.89, RMSEA = 0.04, GFI = 0.93, AGFI = 0.91, NFI = 0.91, NNFI = 0.95, CFI = 0.96.

\*Factor loadings significant at  $p < .01$  level.

Source: Authors' calculation based on consumer survey.

Table 4. FCDMS groups.

FCDM styles	Sample (N = 450)	Recreational consumers (n = 170)	Novelty-driven consumers (n = 155)	Economic consumers (n = 125)	ANOVA
1. Perfectionist, high-quality conscious consumers*	4.05	4.28	4.30	3.42	F = 72.12, df = 447
2. Brand-conscious consumers*	3.12	3.18	3.62	2.42	F = 95.26, df = 447
3. Novelty conscious consumers*	2.22	1.87	3.05	1.66	F = 134.22, df = 447
4. Recreational, hedonistic consumers*	3.20	3.59	3.06	2.80	F = 23.83, df = 447
5. Price-conscious consumers*	3.09	2.43	3.06	4.02	F = 127.81, df = 447
6. Impulsive consumers*	2.68	2.20	3.20	2.70	F = 54.88, df = 447
7. Confused by over choice consumers*	3.19	2.28	3.93	3.49	F = 148.43, df = 447
8. Habitual, brand-loyal consumers*	4.16	4.31	4.37	3.69	F = 28.38, df = 447

\*p = 0.000.

Source: Authors' calculation based on consumer survey.

university or higher education. They are hedonistic shoppers, who enjoy shopping and are interested in the quality of merchandise and the variety of merchandise, and prefer high quality products. They are also above average brand-loyal (Table 5).

*Novelty-driven consumers* are the second largest group (34.4%). The most of novelty-driven consumers have middle level of income (5,001 – 10,000 HRK) and secondary school. They are involved shoppers, and value above average all FCDM style dimensions (except the price). Novelty-driven consumers are the most interested in trendy food products, are perfectionists, brand-conscious, and buy well-known national brands. Those consumers are the most impulsive and the most confused by overchoice. Novelty-driven consumers are demanding, but at the same time the most brand-loyal.

*Economic consumers* are the smallest group (27.8%). They have the lowest income (5000 kunas and less), and have primary school or no school. Economic consumers are strongly price-conscious, indifferent consumers, not interested in shopping process. Those consumers tend to shop around for the lowest prices, and buy less on impulse. Economic consumers are also more likely to be confused by overchoice, and are the least brand-loyal.

#### 4.3. Differences among FCDM style groups in purchasing behaviour

The findings of one-way ANOVA are presented in Table 6. Significant differences among the FCDM style groups were found for monthly food expenditures, expenditures at main retailer, and expenditures on major trips. Novelty-driven and recreational consumers spend more on food in an average month, have higher expenditures at main retailer, and spend more money on major trips, which supports Hypothesis 2, Hypothesis 3a and Hypothesis 4a.

However, the results show that no significant differences exists among FCDM style groups in percentage expenditure at main retailer, main retailer type, major and fill-in

Table 5. Demographic characteristics of food-related CDMS groups, chi-squared test (%).

	Frequency	Recreational consumers (n = 170)	Novelty-driven consumers (n = 155)	Economic consumers (n = 125)	p
<i>Gender</i>					.428
Male	49.8	34.82	35.71	29.46	
Female	50.2	40.71	33.19	26.11	
<i>Age</i>					.595
20–35	30.9	36.69	30.94	32.37	
36–55	42.0	39.15	36.51	24.34	
56–69	27.1	36.89	35.25	27.87	
<i>Income (in HRK)</i>					.000
5,000 and less	32.0	28.47	31.94	39.58	
5,001–10,000	49.6	39.01	37.67	23.32	
More than 10,000	18.4	50.60	30.12	19.28	
<i>Education</i>					.000
Primary school or no school	11.3	15.69	35.29	49.02	
Secondary school	61.3	35.51	36.59	27.90	
University	27.4	52.03	29.27	18.70	

Note: HRK – Croatian kunas, Exchange rate: 7.3 HRK = 1 EUR (in 2010).

Source: Authors' calculation based on consumer survey.

Table 6. Purchasing behaviour of food-related CDMs groups, ANOVA results.

	Sample average	Recreational consumers (n = 170)	Novelty-driven consumers (n = 155)	Economic consumers (n = 125)	p
H <sub>2</sub> Monthly food expenditures (HRK),	2625.3	2690.6	2821.3	2293.6	.003
H <sub>3a</sub> Expenditures at main retailer (HRK)	1498.3	1568.1	1565.0	1320.8	.017
H <sub>3b</sub> Percentage expenditure at main retailer	58.3	58.8	57.4	58.7	.741
H <sub>3c</sub> Main retailer type (%)*					.125
Price-oriented retailer	23.6	31,1	34.0	34.9	
Value-oriented retailer	76.4	39.8	34.59	25.58	
H <sub>4a</sub> Expenditures on major trips (HRK)	565.7	545.0	624.9	520.4	.044
H <sub>4b</sub> Major trip frequency	2.50	2.52	2.61	2.30	.223
H <sub>4c</sub> Expenditures on fill-in trips (HRK)	60.5	58.7	65.1	57.1	.316
H <sub>4d</sub> Fill-in trip frequency	22.7	22.4	23.3	22.3	.591

\*Chi-square.

Source: Authors' calculation based on consumer survey.

trip frequencies and expenditures on fill-in trips. Thus, Hypothesis 3b, Hypothesis 3c, Hypothesis 4b, Hypothesis 4c and Hypothesis 4d are rejected.

## 5. Discussion and conclusions

The results of this study show that FCDM styles can be used for market segmentation, what is in line with past research (Walsh et al., 2001). In the Croatian food-product market, consumers can be classified into three FCDM styles: Recreational, Novelty-driven and Economic consumers. Some of the CDM style groups were confirmed in line with past research, e.g. economic consumers (Anić, Ciunova-Suleska, & Rajh, 2010), recreational consumers (Akturan & Tezcan, 2007; McDonald, 1993; Mitchell & Bates, 1998), and novelty-driven consumers (Akturan & Tezcan, 2007; Hiu et al., 2001; McDonald, 1993).

The findings from the present study also show that the identified groups have clear needs associated with consumer characteristics. Consumers are either economical, functional, search for low prices and savings, or are more hedonic-oriented, or driven by innovative product assortment. Only Economic consumers contain one dominant CDM style dimension (price-consciousness), while other two CDM style groups contain several dimensions, although one dimension seems to be dominant (hedonism in recreational consumers and novelty in novelty-driven consumers). This confirms that grocery shopping can be also driven by hedonism or novelty-driven motives.

Furthermore, the results show that only monthly food expenditures, expenditures at main retailer and expenditures on major trips discriminate among FCDM style groups. Value-oriented consumers spend more money in their favourite retailer than price-oriented consumers. However, with the respect to percentage expenditure at main retailer, there is no significant difference among three of the CDM style groups. This can be explained by the fact that consumers are loyal to leading Croatian retailers, which offer very good sales offers, and issue loyalty cards to attract and keep their loyal consumers.

The results may help food marketers profile the FCDM styles, differentiate their food-product offerings better and target their consumers more efficiently in local markets (Mitchell & Bates, 1998). For companies the most valuable groups are recreational and novelty-driven consumers, since they are the most brand-loyal. Companies should offer them high-quality products, prestigious brands, and entertaining activities to keep them. They can continue with loyalty programmes tailored to their needs to motivate them. Marketers should capitalise on novelty-driven impulsive consumers to stimulate unplanned purchases. Economic consumers might be targeted by using price promotion. Marketers should also inform them on product assortment to reduce their confusion with overchoice.

Although this study produced interesting findings, there are some limitations as well. It covers general food-related environments, and thus the results may be not generalised to specific food categories and products, which might be considered by future studies. Future research might compare the purchasing behaviour of FCDM style groups across various regions, countries, and store formats.

### Disclosure statement

No potential conflict of interest was reported by the authors.

### References

- Akturan, U., & Tezcan, N. (2007). Profiling young adults: Decision-making styles of college students for apparel products. Paper presented at the conference *6ème Journées Normandes de Recherche sur la Consommation: Société et consommations*, Groupe ESC Rouen, pp. 1–13.
- Akturan, U., Tezcan, N., & Vignolles, A. (2011). Segmenting young adults through their consumption styles: A cross cultural study. *Young Consumers*, 12, 348–360. doi: 10.1108/174736111111185896
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modelling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411–423. doi:10.1037/0033-2909.103.3.411
- Anić, I. D., Ciunova-Suleska, A., & Rajh, E. (2010). Decision-making styles of young-adult consumers in the Republic of Macedonia. *Ekonomska istraživanja*, 23, 102–113.
- Anić, I. D., Piri Rajh, S., & Rajh, E. (2014). Antecedents of food-related consumer decision-making styles. *British Food Journal*, 116, 431–450. doi: 10.1108/BFJ-10-2011-0250
- Firat, D. (2011). The use of decision making styles as a market segmentation variable: A study in Turkey. *The Journal of American Academy of Business*, 16, 223–229.
- Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: An empirical study. *International Journal of Service Industry Management*, 7, 27–42. doi: 10.1108/09564239610129931
- Hiu, A. S. Y., Siu, N. Y. M., Wang, C. C. L., & Chang, L. M. K. (2001). An investigation of decision-making styles of consumers in China. *Journal of Consumer Affairs*, 35, 326–345. doi:10.1111/j.1745-6606.2001.tb00117.x
- Kahn, B. E. & Schmittlein, D. C. (1992). The relationship between purchases made on promotion and shopping trip behaviour. *Journal of Retailing*, 68, 294–315.
- McDonald, W. J. (1993). The roles of demographics, purchase histories, and shopper decision-making styles in predicting consumer catalogue loyalty. *Journal of Direct Marketing*, 7, 55–65. doi:10.1002/dir.4000070308
- Mitchell, V.-W., & Bates, L. (1998). UK consumer decision-making styles. *Journal of Marketing Management*, 14, 199–225. doi:10.1362/026725798784959345
- Sproles, G. B., & Kendall, E. L. (1986). A methodology for profiling consumers' decision-making styles. *Journal of Consumer Affairs*, 20, 267–279. doi:10.1111/j.1745-6606.1986.tb00382.x
- Umesh, U. N., Pettit, K. L., & Bozman, C. (1989). Shopping model of the time-sensitive consumer. *Decision Sciences*, 20, 715–729. doi:10.1111/j.1540-5915.1989.tb01415.x

- Walsh, G., Hennig-Thurau T., Wayne-Mitchell, V., & Wiedmann, K.-P. (2001). Consumer decision-making style as a basis for market segmentation. *Journal of Targeting, Measurement, and Analysis for Marketing*, 10, 117–131. doi:[10.1057/palgrave.jt.5740039](https://doi.org/10.1057/palgrave.jt.5740039)
- Walters, R. G., & Jamil, M. (2003). Exploring the relationships between shopping trip type, purchases of products on promotion, and shopping basket profit. *Journal of Business Research*, 56, 17–29. doi:[10.1016/S0148-2963\(01\)00201-6](https://doi.org/10.1016/S0148-2963(01)00201-6)
- Wesley, S., LeHew, M., & Woodside, A. G. (2006). Consumer decision-making styles and mall shopping behaviour: Building theory using exploratory data analysis and the comparative method. *Journal of Business Research*, 59, 535–548. doi:[10.1016/j.jbusres.2006.01.005](https://doi.org/10.1016/j.jbusres.2006.01.005)