The research on buying behaviour among group buyers: the case of Croatia

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Abstract: In Croatia, first group buying website appeared in 2009 and today there are 40 active group buying websites. For the purpose of this paper, a primary research was conducted among social network fans of group buying websites. The research instrument was online questionnaire. The purpose of the research was to profile group buyers in Croatia regarding their demographic and behavioural characteristics and to identify factors customers take into consideration when deciding whether to make a purchase and which group buying websites to use. Results analysis was conducted using parametric and non-parametric test for comparing means and assessment of characteristics independence. Research findings imply that customers’ demographic characteristics significantly affect their group buying behaviour and that some factors have detrimental effect on adopting of online group buying. Research findings are expected to help group buying websites to attract new customers, keep existing ones satisfied and learn how to distinguish themselves from their competitors.

Keywords: internet; group buying; quantity discounts; social network; students; survey; Croatia.


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1 Introduction

Internet has brought many benefits for consumers: simplified search for information about products and services, fast and easy comparison of products’ characteristics and prices, and easy exchange of experiences among consumers, which can all result in big savings of time and money for consumers. The global recession faced consumers with decreasing purchasing power and has encouraged them to exploit advantages of the internet to group together and to strengthen their position against the retailers in order to receive quantity discounts. Internet forums, chat rooms and social networks facilitated the process of consumer grouping around subjects of mutual interest and allowed for fast and inexpensive information dissemination. The phenomenon of online group buying was launched in 2008 by the US website Groupon.com, even though the concept of group buying can be noticed even earlier among Eastern collectivistic cultures (Areddy, 2006). Online group buying is part of an innovative wave of online market-based mechanisms along with auctions, reverse auctions, and ‘name your own price’ schemes (Anand and Aron, 2003). In a short time, lots of group buying websites has sprung and spread throughout the world (Erdogmus and Cicek, 2011) and the topic of online group buying has gained its deserved popularity in scientific circles. Previous research studies focused mainly on price (Kauffman and Wang, 2001), information searching (Wang and Archer, 2007), economies of scale (Chen et al., 2007), information visibility (Chen et al., 2009) and incentive discounts (Kauffman et al., 2010). Following the trend observed in the world, the phenomenon of online group buying was very rapidly adopted in Croatia as well. However, studies on group buying behaviour are rare and are mainly conducted in collectivistic cultures.

Chen and Wu (2010) investigated reasons and motives of consumer’s enthusiasm about online group buying. They examined factors such as price, community trust, conformity, involvement and perceived risk. The research results show that dominant demographic groups in online group buying are females, 31 to 40 years old. The most frequently purchased items are food and daily necessities. Liao et al. (2012) in their paper propose a data mining approach for exploring online group buying behaviour in Taiwan with the purpose of proposing solutions for future development of online group buying business. Pi et al. (2011) present three perspectives of sociology, economics and psychology to investigate factors influencing the behaviour of online group-buying in Taiwan. The research of Shiau and Yeh (2012) focuses on the effects of website characteristics (information richness and navigation) on shopping value (perceived utilitarian and hedonic value) and on online group buying intention. Research results show that the navigation functions assist consumers to find the product discount they need in time, and graphics in the navigation bar enhance interaction between the consumer and website and consumer intention towards online group buying. In their
research, Cheng and Huang (2012) explore antecedents of intention to participate in online group buying and the relationship between intention and behaviour.

Fierce competition and steady market saturation along with the general scarcity and the novelty of the research topic of online group buying imposed the need for research about group buyers, their demographic characteristics and buying behaviour. Stulec et al. (2011) conducted a first research on group buyers in Croatia and chose students as target population because Modahl (2000) states that students are representatives of typical online consumers. The authors of this paper acknowledge the findings of Stulec et al. (2011) and work to enhance it by broadening the research sample. Study of Stulec et al. (2011) was chosen as a reference for comparison of results because it currently presents the most comprehensive study of group buying in Croatia. Value of the research conducted for the purpose of this paper can be found in greater validity of research results because researched sample represents the group buying population more accurately than does the one surveyed by Stulec et al. (2011).

The aim of this paper is to present new online buying concept, the benefits it provides to both buyers and sellers and to give an overview of Croatian group buying market. The purpose of the research is to provide holistic view of group buyers in terms of their behavioural characteristics and to identify factors that customers take into consideration when deciding whether to make a purchase and which group buying websites to use. Several research questions are raised:

- What are demographic and behavioural characteristics of group buyers in Croatia?
- How do customer demographics such as gender, age and monthly income affect their group buying behaviour?
- Which factors affect customers’ buying decision?
- Which factors limit wider application of group buying in Croatia?

Findings of this research are expected to be useful to group buying websites so it will help them to attract new customers, keep existing ones satisfied and learn how to distinguish themselves from their competitors.

This paper is organised as follows. After the introduction, theoretical background of group buying is given. Section 3 of this paper gives an overview of group buying market in Croatia. Section 4 outlines methodology used and gives sample characteristics. Section 5 presents research findings and implications for practice. In the final part, conclusion about most important theoretical and empirical findings is given.

2 Online group buying

Group buying can be defined as buying in group in order to achieve quantity discounts. The concept of online group buying is as well that simple with a difference that group buying website comes as an intermediary between sellers (producers, local retailers and service providers) on one side and buyers (customers) on the other (Stulec and Petljak, 2010). Group buying websites work with sellers to agree on the products and services that will be offered at discount, the amount of discount that will be granted and the minimum number of customer requirements needed for an offer to become valid. Those being agreed, the group buying website publishes the offer on the internet. If enough
people sign up for buying a particular product or service, the offer becomes valid and
people that signed up for buying receive a large discount. Sellers typically grant a
discount of 50% to 90%. After becoming valid, every offer has a specified lifespan. The
usual length of offer lifespan is one day to one week. It is common practice that group
buying website offers new product or new service every day (which is called ‘the deal of
the day’). A customer that has purchased a deal of the day receives on his/her e-mail
address or customer account a coupon that allows him/her to get a discount. All customer
has to do is print a coupon and show it to the seller when purchasing product or service.
Many group buying websites, in order to attract as many customers as possible, beside
publishing offers online, also offer the possibility of informing customers about the deal
of the day via e-mail, popular social networks and SMS messages. Some have gone even
further in their effort to attract customers and provide rewards to existing customers who
bring in new ones.

A customer wanting to participate in group buying must open an account with the
respective group buying website. The account allows group buying website to access
customers’ identity data and track their activity, whereas customers gain easy access to
review of previous purchases, printing of coupons and editing of account settings (Kolic,
2010). Customers who signed up for buying a particular deal cannot withdraw their intent
of purchase. By expressing their buying intention, consumers give consent to charge their
credit cards in a case the offer becomes valid. Customers’ credit cards are being charged
only if the offer becomes valid, i.e., if minimum number of customers expresses their
buying intention. If particular offer does not reach specified minimum number of
customer requests, credit cards of customers who have already signed up for purchase are
not being charged. Lately, many group buying websites also offer payment by internet
banking and slip payment, which provide customers an opportunity to withdraw their
purchase intention.

Group buying websites do not charge sellers for presentation of their products and
services through publishing the deals of the day on the internet. Websites are being
compensated for their services only after the offer becomes valid – when minimum
number of customers sign up for purchase, the website charges seller a certain percentage
of each deal sold (Stulec and Petljak, 2010). If sufficient number of customers does not
sign up for purchase, sellers have no financial obligation toward the website.

2.1 History of group buying

The phenomenon of group buying, in a form that became popular among the shoppers
worldwide, was launched by US website Groupon.com in year 2008. However, the
concept of group buying can be noticed even earlier in Eastern collectivistic cultures.
Levy and Weitz (2007) argue that shoppers from collectivistic cultures are more inclined
to buy in groups than shoppers from individualistic cultures. Price sensitivity and
prudence are values that are traditionally being appreciated in collectivistic cultures
(Ackerman and Tellis, 2001) and such cultural characteristics have contributed to the
acceptance of bargaining as a common form of trading (Fang, 1999). For example, Jacobs
et al. (1991) report that more than 50% of stores in Hong Kong, Taiwan and Singapore
allows bargaining. By contrast, in Western cultures, bargaining is acceptable mainly in
market place.
Chinese shoppers were the first shoppers who organised themselves in large groups in order to gain lower prices from retailers on wanted merchandise. This practice, known under the original term tuangou, started on the internet forums and chat rooms where shoppers grouped themselves around similar needs and elaborated plan for the collective purchase of furniture, appliances, food, and even cars (Areddy, 2006). After having formed a sufficiently large group, members of the group would agree the time and place of physical meeting and would visit a retailer, without former notice, requesting a discount. In the western hemisphere, the idea spread in a slightly modified form, including the group buying websites as mediators in the whole story. In a very short time, the concept of group buying has gained fans around the world. Over the years, the concept of group buying has spread to Europe, South America, Africa and Australia and has returned to China and other Asian countries in somewhat modified and simplified form. DailyDealGame (2012) states that online group buying is present in 89 countries around the world and that by the end of May 2012 there were total of 1,845 group buying websites in the world. In order to ease browsing of daily deals of multiple websites for customers, aggregator websites are starting to appear. Aggregator websites do not offer a possibility of collective purchase but are simply aggregating offers of all group buying websites in the country at one place. Among other trends on group buying market, the appearance of specialised group buying websites and regional expansion can be observed.

2.2 Benefits for sellers and buyers

Group buying provides various benefits for both sellers and buyers (Chen et al., 2007; Kauffman et al., 2010). Moreover, given that group buying websites are paid based on a percentage of each successful deal, it can be said that the group buying concept provides a win-win-win outcome.

Benefits for buyers are more than obvious. Major benefit of group buying is that customers gain great discounts. Furthermore, the concept of group buying allows customers to discover their city and enjoy the things that before were not even aware of or were not able to afford them. The assortment of group buying websites is diverse and includes health services, beauty services, dinners at restaurants, tickets for concerts and theatrical performances, subscriptions to magazines, gym memberships, photo services, dance courses, foreign language learning, cleaning services, etc. Merchandise is far less present in websites’ offers than services and, if present, is most commonly of low monetary value.

Benefits for sellers are harder to define unambiguously because they are not exclusively of financial nature. First, group buying websites are an excellent way of promotion. For an offer to become valid, a minimum number of interested customers must sign up for buying. In this way, interested customers are self-motivated to inform their friends, family and acquaintances of an interesting offer. Furthermore, this form of promotion allows companies to reach new customer segments that are more likely to notice an ad on a computer screen than in printed form because of their lifestyle (Stulec and Petljak, 2010). Group buying websites’ customers are computer literate persons, mostly younger aged who do not have an aversion towards electronic commerce and are mostly members of social networks (Stulec et al., 2011). Businesses like the group buying because they get a short-term boost that can lead to new, long-term customers. Since group buying websites publish offers on its pages free of charge, group buying can be considered a form of free promotion. Unlike traditional forms of promotion, which
require payment regardless of achieved results, group buying websites take compensation only if minimal specified results are achieved.

3 Group buying in Croatia

In Croatia, group buying websites emerged in 2009. Over the years, the group buying market has become extremely attractive, which prove 40 currently active group buying websites and five aggregator websites. Group buying market in Croatia is highly concentrated – majority of offers are concentrated on large cities and nine leading websites comprise as much as 90% of market value (measured in revenue), whereas the two leading websites comprise 52% of market value (Sikic, 2012). Group buying websites that have first entered the market began to notice saturation of domestic market and are spreading regionally. Extent of group buying in Croatia can be confirmed by the fact that largest group buying sale is at the same time the largest online sale in Croatia (Pocuca, 2010).

Group buying in Croatia is heavily dependent on e-mail and social networks as a way of information dissemination. Social networks are an excellent way of promotion because they are personal by nature and massive by reach. It was already mentioned that customers can keep track of daily offers through social networks. Moreover, if a customer likes a certain offer, it can express its liking through social network as well. Every action of ‘liking’ is visible to all customer’s friends and if some of customer’s friends also ‘like’ the offer, these action will be visible to all his/her friends and so on. That is why the reach of information dissemination through social networks is almost unlimited. And most importantly, such communication has greater credibility than paid forms of communication since customers generally do not receive any compensation for ‘liking’.

4 Methodology and sample characteristics

The purpose of this study is to profile group buyers, assess their online group buying behaviour and identify factors that affect customers’ buying decision. The research instrument was an online questionnaire and online survey was conducted through social network among potential group buyers in Croatia in 2011. The research was conducted according to recommendations of Stulec et al. (2011) who conducted a first research on group buying in Croatia and chose students as target population. However, given the poor results (only 58.9% of surveyed students were familiar with the concept of online group buying and only 16.2% of them have participated in group buying) and the fact that students present only a part of potential group buying population, the authors concluded that the future research should broaden the research sample in order to include the entire group buying population.

In an attempt to reach wider population of group buyers, the authors contacted group buying websites that were operating in Croatia at the time of conducting a research, and agreed with them to post a link to online questionnaire on their social network walls. During five weeks, a total of 796 answers were collected. According to findings of Stulec et al. (2011) that majority of students track offers of several group buying websites at the
same time, online questionnaire was set so that multiple answers from the same computer were not allowed. This way, multiplying of responses of respondents who are fans of several group buying websites on social network was avoided and one of necessary assumptions for statistical techniques to compare groups was fulfilled.

The questionnaire was constructed as a mixture of close-ended, open-ended and rating scale questions about experience with and attitudes toward online group buying. The questionnaire was based on the questionnaire used by Stulec et al. (2011) with exception of questions that were added in order to capture new trends on the group buying market. In research results analysis, following methods were used: descriptive statistics, parametric independent-samples t-test for comparison of means and non-parametric Chi-square test for assessment of characteristics independence. Below are presented research findings and are compared to the findings provided by Stulec et al. (2011). Results comparison will provide insights whether results obtained through survey among students can be generalised for the entire group buying population. To avoid confusion, the respondents of a research conducted by Stulec et al. (2011) will be referred as ‘students’ and respondents of this research will be referred as ‘social network users’. Purpose of such terminology is not to characterise respondents but to shortly address how each research was conducted.

Characteristics of the respondents in the sample are presented in the Table 1.

Table 1  Sample characteristics

<table>
<thead>
<tr>
<th>Sample characteristics</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>114</td>
<td>14.3</td>
</tr>
<tr>
<td>Female</td>
<td>682</td>
<td>85.7</td>
</tr>
<tr>
<td>Age (in years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 15</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>16–20</td>
<td>26</td>
<td>3.3</td>
</tr>
<tr>
<td>21–25</td>
<td>201</td>
<td>25.3</td>
</tr>
<tr>
<td>26–30</td>
<td>291</td>
<td>36.6</td>
</tr>
<tr>
<td>31–35</td>
<td>167</td>
<td>21.0</td>
</tr>
<tr>
<td>36–40</td>
<td>59</td>
<td>7.4</td>
</tr>
<tr>
<td>≥ 41</td>
<td>47</td>
<td>5.9</td>
</tr>
<tr>
<td>n/a</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td>Monthly income (in HRK*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 999</td>
<td>112</td>
<td>14.1</td>
</tr>
<tr>
<td>1,000–2,999</td>
<td>129</td>
<td>16.2</td>
</tr>
<tr>
<td>3,000–4,999</td>
<td>175</td>
<td>22.0</td>
</tr>
<tr>
<td>5,000–6,999</td>
<td>207</td>
<td>26.0</td>
</tr>
<tr>
<td>7,000–8,999</td>
<td>80</td>
<td>10.0</td>
</tr>
<tr>
<td>≥ 9,000</td>
<td>85</td>
<td>10.7</td>
</tr>
<tr>
<td>n/a</td>
<td>8</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Notes: *HRK – currency of Croatia (kuna). 1 EUR ≈ 7.5 HRK.
Table 1  Sample characteristics (continued)

<table>
<thead>
<tr>
<th>Sample characteristics</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet experience (in years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1</td>
<td>11</td>
<td>1.4</td>
</tr>
<tr>
<td>1–3</td>
<td>39</td>
<td>4.9</td>
</tr>
<tr>
<td>4–6</td>
<td>149</td>
<td>18.7</td>
</tr>
<tr>
<td>7–9</td>
<td>215</td>
<td>27.0</td>
</tr>
<tr>
<td>≥ 10</td>
<td>378</td>
<td>47.5</td>
</tr>
<tr>
<td>n/a</td>
<td>4</td>
<td>0.5</td>
</tr>
<tr>
<td>Frequency of internet usage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Every day</td>
<td>781</td>
<td>98.1</td>
</tr>
<tr>
<td>Every other day</td>
<td>11</td>
<td>1.4</td>
</tr>
<tr>
<td>Two times a week</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>Once a week</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Less than once a week</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>n/a</td>
<td>2</td>
<td>0.3</td>
</tr>
<tr>
<td>Daily internet usage (in hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1</td>
<td>35</td>
<td>4.4</td>
</tr>
<tr>
<td>1–3</td>
<td>298</td>
<td>37.4</td>
</tr>
<tr>
<td>4–5</td>
<td>229</td>
<td>28.8</td>
</tr>
<tr>
<td>6–7</td>
<td>68</td>
<td>8.6</td>
</tr>
<tr>
<td>&gt; 7</td>
<td>165</td>
<td>20.7</td>
</tr>
<tr>
<td>n/a</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>Total</td>
<td>796</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Notes: *HRK – currency of Croatia (kuna). 1 EUR ≈ 7.5 HRK.

Table 1 shows that 85.7% of respondents were female. Majority of surveyed sample are from 16 to 30 years old, with monthly income between 5,000 and 6,999 HRK. Regarding the internet experience, majority of respondents have 10 or more years of internet experience and use internet every day in duration from 1 to 3 hours.

5  Research results analysis

5.1  Group buying behaviour

Research findings show that majority of respondents have heard of online group buying through social networks (51.9%) while word-of-mouth takes second place in information dissemination (25.8%). Such research findings were expected having in mind the age of respondents and the fact that survey was conducted among group buyers that are social network users as well. On the contrary, Stulec et al. (2011) found that traditional form of communication such as word-of-mouth is still dominant way of information dissemination among students. Other ways in which social network users have found
Further on, majority of respondents browse for new offers on a daily basis (58.8%) and 84.1% of them track offers of several group buying websites at the same time. In accordance with this trend, the so called aggregators have begun to appear. Majority of respondents (82.5%) inform their friends and family about interesting offers which is consistent with the results of a survey conducted among students (87.6%).

Research findings show that 572 respondents (72.7%) have purchased a product or a service via group buying websites, opposed to only 16.2% of students. Regarding the frequency of participating in group buying, Table 2 shows that social network users buy via group buying websites more frequently than students, which can be explained by differences in monthly income. Majority of respondents surveyed through social network have monthly income in a range between 5,000 and 6,999 HRK (see Table 1), whereas majority of students have a monthly income lesser than 999 HRK.

Table 2  Comparison of frequency of group buying between social network users and students

<table>
<thead>
<tr>
<th>Frequency of group buying</th>
<th>Social network users</th>
<th>Students*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only once</td>
<td>21.6%</td>
<td>50.6%</td>
</tr>
<tr>
<td>Once in two months or less often</td>
<td>33.7%</td>
<td>28.1%</td>
</tr>
<tr>
<td>At least once a month</td>
<td>36.5%</td>
<td>19.1%</td>
</tr>
<tr>
<td>At least once a week</td>
<td>8.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: *Stulec et al. (2011)

Further on, it can be seen from Table 3 that the two groups do not differ substantially when considering the price of purchased coupons (from 100 to 299 HRK).

Table 3  Comparison of price of purchased coupons between social network users and students

<table>
<thead>
<tr>
<th>Price of purchased coupons</th>
<th>Social network users</th>
<th>Students*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 49 HRK</td>
<td>7.9%</td>
<td>6.7%</td>
</tr>
<tr>
<td>From 50 to 99 HRK</td>
<td>37.3%</td>
<td>38.2%</td>
</tr>
<tr>
<td>From 100 to 299 HRK</td>
<td>46.0%</td>
<td>43.8%</td>
</tr>
<tr>
<td>From 300 to 499 HRK</td>
<td>5.5%</td>
<td>7.9%</td>
</tr>
<tr>
<td>500 HRK and more</td>
<td>3.4%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: *Stulec et al. (2011)

Next was analysed which product and service categories customers buy most often via group buying websites (Figure 1). Respondents were given the possibility to choose multiple categories and to write down additional categories if the ones they buy were not already listed. It can be generally concluded that social network users buy more diverse categories of products and services than students, which can be again explained by higher purchasing power. Other than that, both groups of group buyers show similar category preferences. Beauty products and services are the most widely bought category both by students (51.7%) and social network users (62.5%), which can be explained by the fact...
that vast majority of respondents in both research were women. Other most widely purchased products and services by both groups of group buyers are tickets for cultural and entertaining events, gastronomy services and travel arrangements.

**Figure 1** Comparison of product and service categories bought by social network users and students

Note: **The category of photo and video products and services was not yet offered by group buying websites in Croatia when Stulec et al. (2011) were conducting the research among student population.

Source: *Stulec et al. (2011)*

Regarding the customers’ motivation for participating in group buying, 61.5% of respondents state that their primary reason for group buying is purchase of new, unfamiliar, i.e., yet never purchased products and services at discount prices which can be related to ‘idea’ dimension of hedonic motivation (Arnold and Reynolds, 2003). On the other hand, 38.5% of respondents cite purchase of familiar and well-known products and services at discount prices as primary reason for group buying which can be related to ‘efficiency’ dimension of utilitarian motivation (Babin et al., 1994). Results of a survey conducted among students confirm that majority of students who buy via group buying websites do it for hedonic (52.8%) rather than utilitarian reasons (47.2%).

Majority of respondents pay for bought coupons by credit cards (54.5%), followed by internet banking (31.7%) and slip payment (13.8%). Regarding customer satisfaction, 67.6% of respondents state they were satisfied with purchased products and services every single time, 31.8% were satisfied, but not every time and 0.5% were not satisfied with purchased products and services. Furthermore, 95.9% of respondents would repeat their purchase with the same group buying website, 3.2% would repeat the purchase, but would choose another group buying website and 0.9% would not repeat the purchase, regardless of the group buying website. Distribution of results is consistent with results for student population.
5.2 Association between sample characteristics and group buying behaviour

A series of Chi-square tests for independence was conducted in order to examine is there an association between characteristics of the respondents in the sample and pattern of group buying behaviour. Results of Stulec et al. (2011) indicated significant association between gender and frequency of browsing offers, monthly income and buying status, and buying motivation and price of bought coupons. Given the wider sample of group buyers, aim was to find more significant associations between sample characteristics and group buying behaviour. Associations found by Stulec et al. (2011) were not confirmed by research conducted among social network users but several new significant associations were discovered. Among sample characteristics listed in Table 1, age, monthly income, internet experience and daily internet usage proved to have significant affect of certain patterns of group buying behaviour.

5.2.1 Association between age and group buying behaviour

Age proved to have statistically significant impact on customers’ motivation for group buying and means of payment.

According to the age, respondents were divided in three groups:

1. less than 25 years old
2. 26 to 30 years old
3. 31 years of age and older and according to their buying motivation in two groups:
   - those who use group discounts mainly to buy familiar products and services (so are considered to be motivated by utilitarian reasons)
   - those who use group discounts mainly to buy new and unfamiliar products and services (so are considered to be motivated by hedonic reasons).

The results of a Chi-square test for independence show there is a statistically significant association between age and customers’ motivation for participation in group buying at the significance level $\alpha = 0.05$: $\chi^2(4, n = 583) = 11.252, p = 0.024$. Cross-tabulation results show that proportion of group buyers who buy out of utilitarian reasons decreases with age of respondents, based on which it can be concluded that younger customers tend to buy new and unfamiliar products and services whereas older customers tend to buy products and services they are familiar with and have used before.

Further was analysed the association between age and possible means of payment (credit cards, slip payment and internet banking). Chi-square test for independence indicated a statistically significant association between the two variables at the significance level $\alpha = 0.05$: $\chi^2(6, n = 585) = 27.864, p = 0.000$. Cross-tabulation results show that proportion of group buyers who pay with credit cards increases with age of respondents, whereas proportion of group buyers who pay by slip payment decreases with age. Results for group buyers who pay by internet banking are somewhat mixed and cannot be uniformly interpreted.

5.2.2 Association between monthly income and group buying behaviour

Monthly income proved to have statistically significant impact on buying motivation, frequency of buying and value of purchased coupons.
According to the monthly income, respondents were divided in five groups:

1. less than 999 HRK
2. from 1,000 to 2,999 HRK
3. from 3,000 to 4,999 HRK
4. from 5,000 to 6,999 HRK
5. 7,000 HRK and more.

Chi-square test for independence indicated significant association between monthly income and buying motivation (hedonistic vs. utilitarian) at the significance level $\alpha = 0.05$: $\chi^2(8, n = 582) = 27.460$, $p = 0.001$. Cross-tabulation results show that proportion of respondents who buy out of utilitarian reasons increases with monthly income, whereas proportion of respondents who buy out of hedonic reasons decreases with monthly income.

Further on, association between monthly income and price of bought coupons was examined and results of Chi-square test for independence indicated significant association at the significance level $\alpha = 0.05$: $\chi^2(8, n = 582) = 22.391$, $p = 0.004$. According to the price range of coupons they mainly buy, respondents were divided in three groups:

1. less than 99 HRK
2. from 100 to 299 HRK
3. 300 HRK and more.

Cross-tabulation results show that proportion of buyers who buy coupons in the price range up to 99 HRK decreases with the monthly income, whereas proportion of buyers who buy coupons in the price range 100 to 299 HRK increases with income. Results for coupons in the price range above 300 HRK are somewhat mixed and cannot be univocally interpreted. Based on such findings it can be concluded that buyers with higher incomes tend to buy higher priced coupons.

Next, Chi-square test for independence indicated significant association between monthly income and frequency of buying at the significance level $\alpha = 0.05$: $\chi^2(16, n = 584) = 57.812$, $p = 0.000$. Regarding the frequency of buying respondents were divided in four groups:

1. those who have participated in group buying just once
2. those who buy every two months or less often
3. those who buy on a monthly basis
4. those who buy on a weekly basis.

Based on the results of a cross-tabulation, it can be concluded that buyers with higher monthly income tend to buy coupons more frequently, on a monthly and weekly basis.
5.2.3 Association between internet experience and group buying behaviour

Customers’ internet experience was measured by number of years of internet usage and according to internet experience respondents were divided in three groups:

1. up to six years
2. seven to nine years
3. ten and more years of internet usage.

Internet usage proved to have significant affect on frequency of browsing offers and means of payment.

Regarding the frequency of browsing offers, respondents were divided in three groups: those browsing on a daily, weekly and monthly basis. Chi-square test for independence indicated significant association between internet experience and frequency of browsing offers at the significance level $\alpha = 0.05$: $\chi^2(4, n = 787) = 14.601$, $p = 0.006$. Based on the cross-tabulation results it can be concluded that customers with longer internet experience browse offers more frequently.

Table 4 Summary results of identified significant associations between sample characteristics and group buying behaviour

<table>
<thead>
<tr>
<th>Sample characteristics</th>
<th>Pattern of group buying behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buying motivation</td>
</tr>
<tr>
<td>Age</td>
<td>Younger – hedonics</td>
</tr>
<tr>
<td>Monthly income</td>
<td>Higher income – utilitarians</td>
</tr>
<tr>
<td>Internet experience</td>
<td>Shorter experience – slip payment</td>
</tr>
</tbody>
</table>

Furthermore, Chi-square test for independence confirmed significant association between internet experience and means of payment at the significance level $\alpha = 0.05$: $\chi^2(6, n = 586) = 54.114$, $p = 0.000$. Cross-tabulation results show that the longer the internet experience the higher the proportion of customers who pay by credit cards and lower the proportion of customers who use slip payment. Percentage of customers who use internet banking is somewhat evenly distributed.
In order to facilitate analysis of identified significant associations between sample characteristics and patterns of group buying behaviour Table 4 is provided.

5.3 Factors affecting customers’ buying decision

In order to attract new customers and to increase their market share, group buying websites must pay attention to factors that customers take into consideration when deciding which group buying websites to use. Respondents were asked to assess on the scale from 1 to 5 the extent to which listed factors have affected their decision which group buying websites to use (1 being ‘insignificant factor’, 2 being ‘slightly significant’, 3 being ‘moderately significant’, 4 being ‘significant’ and 5 being ‘very significant’). They were also given the opportunity to write down additional factors if the ones they find important are not already listed. The mean assessments of factor significance provided by the social network users are presented in Figure 2, and are compared to mean assessments provided by students.

**Figure 2** Assessment of importance of factors affecting customers’ decision which group buying websites to use (measured by mean)

![Figure 2](image)

Note: *Award programmes for attracting new customers were non-existent among group buying websites in Croatia when Stulec et al. (2011) were conducting the research among student population.

Figure 2 shows that students, in general, tend to give higher rankings to all decision factors compared to social network users. However, comparing the intra-group assessments, the two groups of group buyers show somewhat similar pattern. Both groups assess ‘offer diversity’ as a most significant factor that affects their decision which group buying websites to use. Slight between-group differences appear when ranking other decision factors. Social network users rank ‘possible means of payment’ and ‘ease of website navigation’ as second and third most significant decision factors (M = 3.50 and
M = 3.47 respectively), whereas students rank ‘ease of website navigation’ and ‘possible means of payment’ as second and third most significant decision factors (M = 3.79 and M = 3.63, respectively). Both groups consider ‘customer service’ and ‘friend recommendation’ as least important decision factors.

Further on, respondents were asked to assess on the scale from 1 to 5 major concerns they worry about when deciding whether to make a group purchase or not (1 being ‘insignificant concern’, 2 being ‘slightly significant’, 3 being ‘moderately significant’, 4 being ‘significant’ and 5 being ‘very significant’). They were also given the opportunity to write down additional concerns if the ones they find important are not already listed. The mean assessments of concern importance are presented in Figure 3. Since this question is added beyond the questions used by Stulec et al. (2011), the comparison of social network users’ and students’ concerns cannot be done.

Figure 3  Customer concerns when deciding whether to make a group purchase

Figure 3 shows that customers’ major concern is not being able to use the coupon because of its short expiration term and large number of sold coupons (M = 2.95). In other words, they are afraid that they will not be given a service they paid for. Second most important concern is that group buying discounts are fictive (M = 2.74). Group buying websites have recognised this concern and request from the businesses they deal with to publish their regular prices in order to assure the customers that discounts are real. Following concerns customers worry about are that their credit card will be charged even though the offer did not become valid (M = 2.63) and that quality of goods offered is lower compared to quality of goods sold at regular prices (M = 2.48).

In order to examine whether importance of particular concerns can encourage customers not to buy via group buying websites, a series of independent-samples t-tests was conducted. Table 5 shows mean assessments and standard deviations of listed concerns for the two groups of customers:

1 those who have
2 those who yet have not bought a product or a service via group buying websites.
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Table 5 shows that customers who have not yet made a group purchase continuously give higher rankings to listed concerns compared to customers who have already made a group purchase. Regarding the concern that customers will not be able to use the coupon, results of independent-samples t-test show there is no significant difference in mean assessments of customers who have bought and customers who have not bought via group buying websites. It can be concluded that concern regarding the opportunity to use bought coupons has no affect on customers’ buying decision. On the contrary, other concerns prove to have significant affect on customers’ buying decision. Independent-samples t-test affirmed significant difference in mean assessments between customers who have and have not make a group purchase for fictive discounts concern \( t(776) = –4.284, p = 0.000 \) two-tailed, poorer quality concern \( t(774) = –3.845, p=0.000 \) two-tailed and credit card charging concern \( t(779) = –7.861, p = 0.000 \) two-tailed.

Next, respondents that have not yet participated in group buying were asked to mark the reasons for not buying. Respondents were given the possibility to give multiple answers and to write down additional reasons if the ones they find limiting were not already listed. Figure 4 presents the comparison of reasons that social network users and students find as limitation to wider application of online group buying.

Figure 4 generally shows that limiting factors are more evenly distributed among social network users than among students. For both groups, not finding an interesting product or service proves to be the main reason for not participating in group buying (mentioned by 52.4% of students and 43.7% of social network users). The major obstacle is of subjective rather than objective nature and implies that group buying websites should broaden the scope of their offers. What comes as a surprise is that, compared to students (10.5%), relatively large proportion of social network users (31.8%) do not have credit cards and/or are not using internet banking. This insight is rather troublesome not only for the future of online group buying but for the future prospects of an electronic trade in Croatia in general. In order to gain customers’ trust and to tackle with other possible limitations of wider application of online group buying, group buying websites should describe product and service features in details and thoroughly explain why certain data are requested when making payment.
Figure 4  Comparison of limitations to wider application of online group buying between social network users and students

<table>
<thead>
<tr>
<th>Reason</th>
<th>Students</th>
<th>Social network users</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find it to be an additional way of spending money</td>
<td>16.20%</td>
<td>19.20%</td>
</tr>
<tr>
<td>I have not found an interesting product or service</td>
<td></td>
<td>52.40%</td>
</tr>
<tr>
<td>Inability to verify product quality</td>
<td>21.80%</td>
<td>40.20%</td>
</tr>
<tr>
<td>Not having credit cards and/or not using Internet banking</td>
<td>10.50%</td>
<td>31.80%</td>
</tr>
<tr>
<td>General aversion towards Internet purchase</td>
<td>28.40%</td>
<td>28.70%</td>
</tr>
</tbody>
</table>

Source:  *Stulec et al. (2011)*

5.4 Implications for practice

Research findings offer some valuable insights for practice. More than half of respondents track offers on a daily basis which is rather low percentage, so group buying websites should work to increase the frequency of browsing offers. Research findings show that customers with longer internet experience tend to browse offers more frequently, so group buying websites should learn how to attract potential buyers with shorter internet experience. Furthermore, about four fifths of respondents track offers of several websites at the same time which implies that group buying websites should put meaningful emphasis on factors that affect customers’ decision which group buying websites to chose, among which offer diversity customers find to be most important. Majority of respondents in both samples were female, but given the fact that samples were not randomly selected from populations, it is hard to say whether majority of group buyers are really females or females are just more prone to participate in a research. However, given the finding that majority of products and services sold are of beauty category, it can be concluded that group buying websites should broaden their offering in order to attract more male buyers.

Almost two thirds of respondents buy via group buying websites in order to purchase new and yet unfamiliar products and services (hedonically motivated). Further analysis showed that respondents of younger age and higher monthly income buy motivated by hedonic reasons. Since hedonically motivated buyers tend to buy impulsively (Hausman, 2000) and compulsively (Bridges and Florsheim, 2008), targeting these groups of customers, group buying websites can increase their sales. Broadening the sample from students to social network users, it was found that majority of group buyers buy coupons at least once a month in a price range from 100 to 299 HRK. Further analysis showed that customers with higher income are the ones who buy coupons more frequently and the ones who buy higher priced coupons. Given such findings, group buying websites can design their marketing activities and growth strategies more target market oriented.
Group buying websites should continuously work on broadening of their offers because offer diversity, along with possible means of payment and ease of website navigation, is the most important factor customers take into consideration when deciding which group buying websites to use. Another reason for necessary offer diversification is research finding that almost half of respondents who have not yet participated in group buying as main reason state not finding an interesting product or service.

6 Discussion and conclusions

The phenomenon of online group buying was launched by US website Groupon.com in 2008 and first group buying website in Croatia appeared in 2009. Presently, there are 40 active group buying websites in Croatia which proves that Croatian consumers find the concept of online group buying quite alluring. As main factors that led to grouping of consumers online in order to strengthen themselves against retailers and service providers can be considered advantages that internet provides for the consumers and the recession induced reduction of purchasing power.

Based on the comparison of result of this study (which was conducted among social network users) and study of Stulec et al. (2011) (which was conducted among students) it can be concluded that research conducted among students has served as a valuable preliminary study. Findings of research conducted among social network users that regard general group buying behaviour are consistent with the findings of a research conducted among students. However, because of rather small sample of students who actually buy via group buying websites, conducted statistical test showed rather poor results. Conducting survey through social network provided larger and more representative sample of group buyers which enabled new findings to be reached. Among most important findings following should be highlighted. Vast majority of customers track offers of several group buying websites at the same time which emphasises the need of knowing factors that affect customers’ decision which group buying websites to chose. Both groups find offer diversity as the most important factor that affects their decision which group buying websites to use to make group purchase. Further on, almost half of respondents who have not yet participated in group buying as main reason state not finding an interesting product or service, which should as well encourage group buying websites to continuously diversify their offers. Finally, the major concern of customers when deciding whether to make a group purchase is that they will not get an opportunity to use bought coupons because of their short expiration term and large number of sold coupons.

There are several limitations to this research that need to be acknowledged. First and far biggest limitation is that research was conducted on convenience sample meaning that findings cannot be generalised to the entire group buying population. On the other side, it would be quite challenging, to construct a random sample of online group buyers without violation of customers’ privacy. The only way to construct a list of all customers from which a random sample would be chosen that authors can think of is gathering data on registered customers from every group buying website in Croatia, which violates customers’ privacy. Another limitation of this study results from not allowing multiple responses from the same computer in order to obtain independent sample assumption of statistical tests for comparing groups. This way it is possible that group buying customers
who use same computer were discarded from the research. Future research should broaden the research scope to neighbouring countries in order to determine characteristics and buying behaviour of group buyers from countries that domestic group buying websites will be forced to enter faced with saturation on domestic market.

References


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