ASSESSMENT OF THE RESULTS OF THE STRATEGIC ORIENTATION ON REGIONAL AND LOCAL PRODUCTS IN FOOD RETAIL

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Abstract

The aim of this paper is to assess if there is a difference in food choice behaviour between regular customers of stores of the retail chain Terno and other consumers. Consequently, the paper aims to discover, if the strategy formulated by the consumer co-operative Jednota České Budějovice was a good strategy. The core of this strategy is the orientation on the region, local and regional food and food products and the co-operation with local small and medium suppliers. Another part of this strategy is also the permanent control of quality of these products and creation of the special private label – Quality food from our region. The consumer co-operative co-operates also with the regional grouping under another label – Tastes great. Southbohemian. The assessment is done by means of the analysis of a questionnaire survey that was done among consumers in the South Bohemia in 2011. The strongest factor differentiating customers of the retail chain Terno from other consumer is the orientation on regional or local products, which explains about 41% of variability. Other differentiating factors are environment-friendly production and selling and quality of food. All these three factors explain in total 66.5% of variability of the data set.

regional product, local product, food choice behaviour, retail
to feel that the strategy of permanent promotion and price reduction that is applied by all retail chains is not a good way to increase their profits. It is thus necessary to seek for ways of how to attract consumers and let them spend their money right in their stores.

Food retailers seek for new strategies of how to attract consumers and after the long-term and strong strategy of low cost and low prices would want to replace it by a differentiation strategy. Le (2009) points out that in particular in recession period, retailers need to exercise a combination of competitive strategies: low cost focus and differentiation focus strategy. In one of his examples, retailers are shifting their product ranges towards healthier, ready-to-eat foods and home meal replacements and successfully meet their customers’ needs. Organic food selling that has developed since last ten years in retail chains (Doležalová, Picha and Navrátil, 2009) is no more such differentiating tool as the organic food is equally present in most of retail shops. Strategy of communicating the relation of products to the consumers’ domicile (Domanski and Bryla, 2012) could be one of such differentiation. Local food selling strategy could be an opportunity, particularly in case where there is some support from public administration or government because of the trend of environmental measures (Handy and Clifton 2001) or support of local employment (Feenstra, 1997).

Orientation to the local product sourcing in the retailers’ promotion policy when communicating to their customers becomes topical even in the Czech Republic.

Local food focus strategy

Local and regional food represents recently a frequently discussed topic from many point of view (e.g. Hinrichs, 2000; Feenstra, 2002; Kremer and DeLiberty, 2011; McIntyre and Rondeau 2011; Mundler and Rumpus, 2012; Knight, 2013).

In public discussion the concept of ‘local food’ has been defined in many ways. The mostly used approach defines local food on the basis of the distance that the food travels from production to consumption (Pearson et al., 2011). For example the Department of Agriculture in USAS uses a 400 mile (644 km) boundary to define local products when providing financial support (Clancy and Ruhf, 2010). Within the UK, definitions using this geographic proximity approach range from distances of 30 miles (19 km), within a county, within a sub-region, or even a whole country (Pearson et al., 2011). Much closer to the nowadays understanding in the Czech Republic is the Finnish definition cited by Forsman and Paananen (2003): local food is food produced and consumed by exploiting the raw material and production inputs within the region, promoting the economic development and employment of this particular area. This particular area may be a municipality, province, or economic area.

Local food has the following advantages associated with it: high quality and safety of food product; freshness and non-industrial; minimum use of packaging materials; customer satisfaction and friendliness to the environment (Forsman and Paananen, 2004). It could be also related simply to the local patriotism, particularly in case of specific or traditional product (Foret, 2005). There is a group of consumers that started, for various reasons, to turn back to and increase their preferences for locally produced food and food products (Picha, Doležalová and Navrátil, 2008; Skořepa et al., 2009; Srbová 2010; Skořepa and Picha, 2011).

There are, however, some limitations associated with local food as e.g. local ecosystems are not capable of providing many products, nor are they able to provide many existing products in the volumes required by contemporary diets. Instead, local food is seen to complement international trade, for both bulk commodities as well as specialised products, and hence meet the preferences of some customers for particular products (Pearson et al., 2011).

Selling the local food or “locally grown produce” is becoming also a part of the retailers’ strategy of achieving sustainability or social responsibility of their business as it results for instance from the reports of sustainability of two largest food retail companies –Wal-Mart (Beyond, 2012) and Carrefour (Carrefour, 2012) or from a research survey – Tesco declared that it is looking at helping the local economy (Ilbery and Maye, 2006).

The most important retailer in the Czech Republic from the point of view of selling local food is Jednota České Budějovice with its chains of food stores Terno and Trefa. This retailer is involved in the project “Tastes Great. Southbohemian." It has introduced its own labelling project “Quality food from our region” as well.

The aim of this paper is to assess the food choice behaviour of consumers in the South Bohemia with regards to the particular strategic focus of the consumer co-operative Jednota České Budějovice.

MATERIAL AND METHODS

Selection of measured parameters

The set objective was pursued using a structural model. This model comprised main variables influencing the frequency of shopping in such supermarket as the Terno is. Those variables are as follows:

- preference of the price – it is and it is supposed to be an influencing factor of choice the store for shopping (Bell and Latin, 1998, Nagyová, Stávková and Tunkovičová, 2008)
- frequency of food shopping that is often used to study the general consumer behaviour and its relation to the dietary habits (Larson, et al., 2006) or buying specific kinds of food (Daher, Larocque and Taboubi 2007) but also as to study
consequences of food store choice and loyalty to a store (East et al., 1997),
• preference of the local food that emerged recently among the Czech consumers (Pícha, Doležalová and Navrátil, 2008; Skořepa et al., 2009; Srbová 2010; Skořepa and Pícha, 2011).

**Data set**

Data were collected by means of a questionnaire survey. The non-random sample was created by the face to face inquiry of customers of various food stores and shops in the South Bohemia. The questionnaire survey was carried out during the spring and summer 2011. 1,258 questionnaires were finally used for the presented analysis. The questionnaire consisted of questions oriented to the general behaviour of consumers when buying food and their food choice criteria. Other questions were focused on the consumers' attitude to the regional or local food as well as their awareness and attitude to the existing regional brand. These variables were measured on the 4-point scale (definitely yes, rather yes, rather not and definitely not). The questionnaire contained further questions for consumer's preference and frequency of shopping in the stores of the retail chain Terno.

**Data analysis**

The aim of collecting the data was to enable to use them in the structural equation model (SEM) of causality of particular variables that influence the shopping frequency in the TERNO stores. SEM is a modern strong rather robust method of non-experimental modelling of the causality in theoretical relations of bigger or even big number of the interdependent variables (Nusair and Hua, 2010). Its advantage is, compared to the multiple linear regression (that is usually used in this case), the possibility to study not only the mutually independent variables but also the relations between partial variables.

Indicators of multi-item construct were first identified by explorative factor analysis (EFA). The principal components analysis with varimax rotation (Robinson, 1998) was employed and only the factors with an eigenvalue greater than 1 were assessed. Then, for each factor, the composite mean was calculated, i.e. average value for indicator (EFA factor) from values of items loaded at least with value of 0.6 on this factor (Chen & Tsai, 2007). Reliability for each of the indicators was obtained using the calculation of a Cronbach's alpha coefficient and indicators with value of alpha coefficient less than 0.8 were excluded from further analyses.

After this preparation the two-stage structural modelling process (Anderson and Gerbing, 1988) was performed and the maximum likelihood of estimation method was used (Schumacker and Lomax, 2004). First, the measurement model was evaluated using confirmatory factor analysis (CFA) and several measures of goodness-of-fit indices (Nusair and Hua, 2010) – chi-square, RMSEA, GFI and AGFI. No multiple indicators were used for both exogenous and endogenous constructs. Some of them were directly measured – frequency of shopping in TERNO, frequency of buying food and the rate of the importance of price when buying (as in Chen and Tsai, 2007) – and some calculated – orientation to the local and regional products and environmentally friendly production and selling. After that the testing of the structural model was performed. Here the chi square/d.f. ratio, root mean square error of approximation (RMSEA), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normed fit index (NFI), non-normed fit index (NNFI), and comparative fit index (CFI) were used as measures of goodness-of-fit indices. The chi square/d.f. rate is commonly used, as the chi square statistic itself is considered by many to be an unrealistic standard (Long and Perkins, 2003). As chi square is dependent on a number of observations, the rule of 'close fit' states that chi square/d.f. should be a smaller number than 1 + n/400 (Steiger, 2009). The values of RMSEA lower that 0.05 indicates a very good fit and values between 0.05 and 0.08 an acceptable fit (Browne and Cudeck, 1992). The GFI, NFI, NNFI, and CFI have ranges of 0 to 1 and scores 0.90 and above are desirable (Long & Perkins, 2003). As AGFI corrects GFI for the number of parameters in the model, the value 0.80 or above is acceptable (Long & Perkins, 2003).

All computations were performed using STATISTICA 10.0 software package, including CFA and SEM using SEPATH module of STATISTICA 10.0 (StatSoft, 2011).

**RESULTS AND DISCUSSION**

Three supposed to influence the frequency of shopping in stores of the retail chain TERNO factors were identified. These factors explain 66.5% of variability of the data set. The strongest factor is the orientation on regional/local products (41.17%), other, weaker, factors are environment-friendly production and selling (12.71%) and quality of food (12.46%). However, only the two first cited factors have an acceptable value of the Cronbach's Coefficient Alpha (0.81; 0.87). The factor analysis was acceptable because at least two loadings greater than 0.4 for all factors were loaded (Yoon and Uysal, 2005) and all items were loaded for at least one factor. The importance of the factor friendliness to the environment could be even related with the orientation on the regional/local food as this could be one of characteristics of local food according to e.g. Forsman and Paananen (2004) or Pearson et al. (2011) or Pícha and Bartošovská (2010). The finding about the orientation on the quality do not significantly correspond with conclusions of Miškolci (2011) who states that consumers prefer quality food products and are willing to pay for high quality products. We have also obtained information on the preference to the price, the frequency of
purchasing food and the frequency of shopping in Terno.

The overall fit indices for the proposed model were acceptable with chi square = 0.10, RMSEA = 0.028 (90% confidence interval 0.000–0.058), GFI = 0.99, AGFI = 0.99. This model yielded an adequate fit that met all seven measures of goodness-of-fit indices. The internal consistency of the measurement model is demonstrated as Cronbach’s alpha coefficients of indicators (Tab. I) are above the recommended value of 0.70 (Spector, 1992). The goodness-of-fit indices provide overall evidence of validity of our study (Chou et al., 2002).

To illustrate the causal paths among selected constructs (preferences for environmental friendliness, preferences for region/local products, preferences for price, frequency of shopping in Terno and frequency of buying food), the second stage of the modelling process was performed (Anderson and Gerbing, 1988) – testing of the hypothetical structural model. Theoretical model based on literature retrieval has a good fit to the data with chi square/d.f. = 4.46, RMSEA = 0.049 (90% confidence interval 0.029–0.070), GFI = 0.99, AGFI = 0.98, NFI = 0.96, NNFI = 0.93, CFI = 0.97 (Fig. 1).

I: Factors influencing frequency of shopping in Terno supermarkets

<table>
<thead>
<tr>
<th>Preference of national products</th>
<th>Regional product</th>
<th>Environmental friendliness</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference of local products</td>
<td>0.658</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Preference or regional/local brands</td>
<td>0.764</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Awareness of the brand “Taste great. Southbohemian”</td>
<td>0.760</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Awareness of the brand „Quality food from our region“</td>
<td>0.700</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Taste as food choice criterion</td>
<td>0.687</td>
<td>0.856</td>
<td>.</td>
</tr>
<tr>
<td>Freshness as food choice criterion</td>
<td>.</td>
<td>.</td>
<td>0.848</td>
</tr>
<tr>
<td>Interest in environmental responsibility - retailer</td>
<td>.</td>
<td>0.810</td>
<td>.</td>
</tr>
<tr>
<td>Interest in environmental responsibility - producer</td>
<td>.</td>
<td>0.823</td>
<td>.</td>
</tr>
<tr>
<td>Interest in social responsibility - retailer</td>
<td>.</td>
<td>0.817</td>
<td>.</td>
</tr>
<tr>
<td>Interest in social responsibility - producer</td>
<td>.</td>
<td>0.854</td>
<td>.</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>4.53</td>
<td>1.39</td>
<td>1.37</td>
</tr>
<tr>
<td>% of total variability</td>
<td>41.17</td>
<td>12.71</td>
<td>12.46</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>0.81</td>
<td>0.87</td>
<td>0.66</td>
</tr>
</tbody>
</table>

* 0.361
** 0.371
*** 0.473
**** 5.654

1: Causal paths among predictors of buying in Terno supermarkets. Beta-values, values of t-test with significance of t-test are shown (* denotes p < 0.05, *** denotes p < 0.001)
Not only the created structural model is valid, but also all the paths are significant (Fig. 1). We succeeded about all to prove, that the orientation of the chain's marketing communication to promote the local/regional products is purposeful, as the frequency of shopping depends in direct proportion on the consumers preference to their purchase of local and regional products. We have also identified within the whole model the conditioned relation between the consumers' preference to the purchase of local/regional products and their preference to those products, which are environmentally-friendly. The strategy of the chain is thus not only successful and promoting the local production, but also supporting the environment friendly ways of farming the landscape.

The retailer then contributes meaningfully to the socially and environmentally responsible customer-supplier relationships in the region as well as to the endogenous growth based on the local sources, which is important especially in times of the uncertain development of the global economy. The specific position of the brand TERNO in the retail market is given also by the influence of other studied variables – shopping frequency in the stores of the chain TERNO depends positively on the frequency of purchase of food and on the preference to the price. The impact of the frequency of purchase of food is not surprising, as the chain is oriented especially on selling fresh food and the stores are usually located in the direct proximity of the residential areas of settlements (Klusáček et al., 2009). What is more surprising is to find an important impact of the preference to the price on the shopping in TERNO. This preference is important in our model (b = 0.475) and statistically strongly significant (p < 0.001).

CONCLUSION

Since about 10 years, food retailers in the Czech Republic have experienced a strong competition that could be for at least one part of this period called the price war. Retailers found themselves in situation, where it is almost impossible to sell some food products for the "normal price" [without any reduction]. A small period of general essay of a non-price competition in 2007 was very early terminated by the economic recession followed among others by the decrease of the consumer demand. In spite of that, retailers try to find various tools to differentiate one from another and to attract more consumers and increase the profit. One of the factors of attractiveness of the food store seems to be the offer of regional or local products as there is such trend generally in developed countries and also in the Czech Republic. The consumer cooperative Jednota České Budějovice has staked on this strategy and the aim of this article was to assess partially the success of this strategy due to analysis of differences of consumer behaviour among customers of the stores of the retail chain TERNO and customers who are shopping elsewhere. It was proven that customers of TERNO are more oriented on regional or local products than those consumers who do not shop in this retail chain. They are also more concerned by environmental friendliness of the production and selling products. We can thus state that there is a segment of people who are really more interested in local and regional products and that the retail chain TERNO succeeded to attract those consumers.

SUMMARY

The aim of this paper is to assess the food choice behaviour of consumers in the South Bohemia with regards to the specific focus of the consumer co-operative Jednota České Budějovice. The questionnaire survey among consumers in South Bohemia was carried out during the spring and summer 2011. 1,258 questionnaires were finally used for the presented analysis. The questionnaire consisted of questions oriented to the general behaviour of consumers when buying food and their food choice criteria and of those questions focused on the consumers' attitude to the regional or local food as well as their awareness and attitude to the existing regional brand. Indicators of multi-item construct were first identified by explorative factor analysis (EFA). Quite a high part of respondents declared their preference (55%) for regional or local food. Three factors were identified within the factor analysis of factors supposed to influence the frequency of shopping in stores of the retail chain TERNO. These factors explain 66.6% of variability of the data set. The strongest factor is the orientation on regional/local products (41.17%); others, weaker factors are environment-friendly production and selling (12.71%) and quality of food (12.46%). However, only the two first cited factors have an acceptable value of the Cronbach's Coefficient Alpha (0.81; 0.87). Not only the created structural model is valid, but also all the paths are significant (Figure 1). We succeeded about all to prove, that the orientation of the chain's marketing communication to promote the local/regional products is purposeful, as the frequency of shopping depends in direct proportion on the consumers preference to their purchase of local and regional products. We have also identified within the whole model the conditioned relation between the consumers' preference to the purchase of local/regional products and their preference to those products, which are environmentally-friendly. The strategy of the chain is thus not only successful and promoting the local production, but also supporting the environment friendly ways of farming the landscape.
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Assessment of the results of the strategic orientation on regional and local products in food retail


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