Közgazdász Fórum
Forum on Economics and Business
18 (125), 3–54.
2015/4

Environmental adaptation patterns in the Hungarian public retail drug supply – Testing the applicability of Miles and Snow's strategic typology in a regulated industrial setting

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Our study intended to explore the (in)consistent behavioural patterns observable in the adaptation process of domestic pharmacies experiencing turbulent environmental changes. Our research questions aimed to identify how many of the original strategic orientations of Miles and Snow and in what form are observable in a sector characterised by strong market and bureaucratic coordination mechanisms simultaneously. In our hypotheses we highlighted the business performance implications of strategic orientations and also tested the potential moderating effect of environmental uncertainty perceived by the pharmacist and the geographical location of the drugstore in the stochastic relationship between strategic orientation and business performance. Our theoretical findings provide clear guidelines for pharmacy managers pursuing various strategic orientations to enhance their sales and profitability.

Keywords: Miles and Snow (M&S), mix/hybrid strategic orientations, business performance, pharmacy management, Hungarian public retail drug supply.

JEL codes: M38, M30.

Introduction

The adaptation to changing environmental conditions plays a decisive role in the life of organisations. In the academic discipline of strategic management, it is generally accepted that in the period of economic turbulence and intensifying competition the toolkit of conventional managerial intuition and empirical wisdom becomes

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Published: Hungarian Economists' Society from Romania and Department of Economics and Business Administration in Hungarian Language at Babeș–Bolyai University
ISSN: 1582-1986 www.econ.ubbcluj.ro/kozgazdaszforum

useless (Inkpen–Choudhury 1995). As a corollary, by lacking a theoretically well-grounded, then successfully implemented strategy, the prosperity of businesses is going to be hampered. To achieve their long term effectiveness and efficiency goals, firms increasingly need to develop consistent patterns of adaptive behaviour.

Our paper deals with one of the most prominent strategic taxonomies of business economics, the classification that has been developed by Miles and Snow (1978). Our empirical research considered explicitly testing the Miles and Snow (M&S) typology and revealing its business performance (BP) implications as a priority within a special industrial context – the Hungarian Public Retail Drug Supply (HPRDS) – restricted by state regulations and featured by the unique manifestation of microeconomic characteristics of public as well as private goods.

As far as the sector-specific and business policy relevance of our study is concerned, we have to note that during the liberalisation period (2006–2011) the number of pharmacies increased by 20% in Hungary (Hankó et al. 2014). The "2006 XCVIII Act on the secure and efficient supply of drugs and medical devices and on the general rules of drug distribution" has resulted in a growing need for managerial tasks such as the adjustment of product/service portfolio to changing patient needs and preferences, the rationalisation of inventory management, the execution of marketing activities and the maintenance of close ties to key stakeholders of the drug supply chain (Mihályi 2012). However, the majority of pharmacists – formerly got used to limited competitive intensity – were lacking business knowledge and managerial competences for the successful accomplishment of the abovementioned strategic level tasks that should have been originated from a consistent pattern of environmental adaptation (Hamilton 2009).

The "ethical restoration" process launched in 2011 partly eliminated the most harmful effects of liberalisation, but austerity measures introduced by the government to minimise the deficit of the healthcare budget resulted in significant losses of income for

pharmacies (Hankó et al. 2015). Within such conditions many practitioners and sectoral policy makers direct their attention to the emerging adaptation patterns of pharmacies and the BP outcomes of strategic orientations (SOs). Therefore, our study has proven its relevance and topicality by intending to fulfil the following objectives:

• To determine whether consistent SOs can be observed in the HPRDS, and if yes, how many we can distinguish, since by the identification of relevant SOs, we could get a clear picture of the differences in strategic level management characteristics between pharmacies that have developed various environmental adaptation patterns (Lindblom 1959; Mintzberg–McHugh 1985; Boyne–Walker 2004).

• To reveal to what extent pharmacies pursuing different SOs find (un)predictable changes in the conditions and in the behaviour of stakeholders to help decision makers seek to optimally modify key environmental factors.

• To shed light on the proportion of variance in the BP of pharmacies that can be explained by SOs, so to the amount of resources and competencies that should be allocated to their development and consistent realisation (Andrews et al. 2006).

• To offer guidelines concerning which behavioural characteristics of SOs contribute to an optimal BP.

• To discover the potential moderating effect that perceived environmental uncertainty (PEU) and geographical location (GL) play in the relationship between SO and BP. Through the integration of control variables concerning the pharmacies' socio-demographic and site characteristics, the effect of additional factors (beyond SOs) on the pharmacies' BP could also be proven or refuted.

As far as the academic relevance of our research is concerned, we tried to do our best to eliminate the theoretical and methodological shortcomings of past studies. We highlighted those aspects of M&S's typology that have not been given much attention in international research so far. In order to provide greater degrees of validity and

reliability we employed various extraction techniques to identify M&S's SOs, and then we used statistical tests to evaluate the match between the results obtained by the application of different methods. Despite the difficulties in the operationalization of their identification, we also integrated pharmacies pursuing the "failure" Reactor SO into our research and we attempted to push them into the direction of a consistent strategic behavioural pattern (Vorhies–Morgan 2003; Olson et al. 2005). As a part of the examination aiming at revealing the industry-specific emergence of M&S's SOs we performed several Exploratory Factor Analyses (EFA) and Confirmatory Factor Analyses (CFA) to highlight the blinding of strategic management characteristics, thereby to identify and make distinctions between simple "mix" and organic "hybrid" adaptation patterns (Ghobadian et al. 1998; DeSarbo et al. 2006, 2009).

We examined the emergence and tested the validity and reliability of M&S classification in a special sector – featured by bureaucratic coordination mechanisms – of a relatively small country where the operation of firms is less affected by the ideal-typical socio-economic characteristics of the Anglo-Saxon business culture that has been dominant in previous studies (Dyer–Song 1997; Jusoh–Parnell 2008; Kabanoff–Brown 2008; Parnell et al. 2012; Pinto–Curto 2007; Talpová 2012). Moreover, in contrast with the dominance of large corporations in the mainstream of researches on M&S typology, our paper sought to identify Prospector, Analyser, Defender and Reactor SOs in the context of micro and small enterprises – providing health care services – that were often neglected in strategic management (Ghobadian–O'Reagan 2005; Aragón-Sanchez–Sanchez-Marín 2006; Pittino–Visintin 2009).

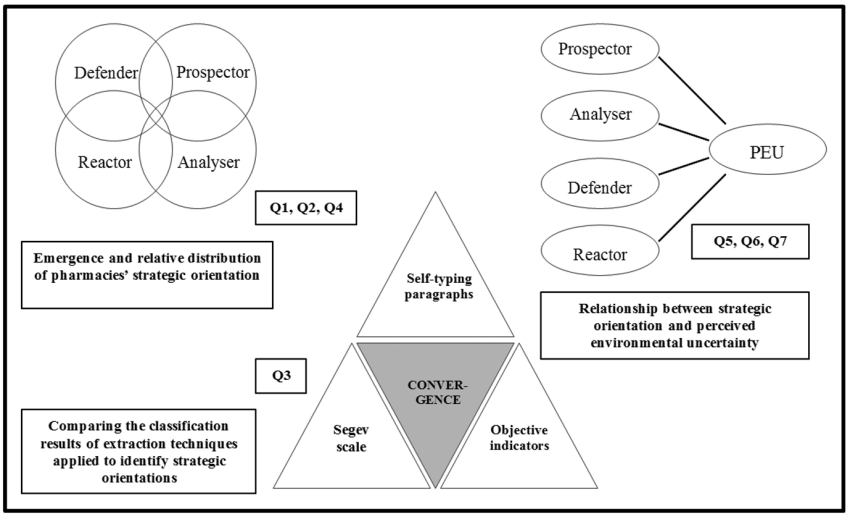
Beyond examining the sector-specific manifestation of M&S's taxonomy we methodologically "confronted" the contingency theory (Hofer 1975) and managerial choice approach (Child 1972). We explored whether the observed changes in the external conditions and stakeholders' behaviour determine the SOs of pharmacies (Hrebiniak–Joyce 1985; Boyd et al. 2012) or rather the conscious strategic choice of

pharmacists determines how they perceive changes in the turbulent environment (Sharma–Vredenburg 1998; Sharma–Aragón-Correa 2003).

Concerning the BP of pharmacies, we used "managerial ratings for objective indicators": sales for market effectiveness and net profit for financial efficiency (Morgan et al. 2004; Hoque 2005). We have examined how the GL of pharmacies and the PEU by pharmacists – pertaining to the development of conditions and behaviour of key industrial stakeholders – have affected the relationship between the pharmacies' SO and BP in the HPRDS, which undergoes turbulent changes. Our research sought to contribute to the clarification of mixed results previously registered by studies evaluating the effects of potential moderating factors in the stochastic relationship between SO and BP, and to try to minimise knowledge gaps identified in those papers (Venkatraman–Prescott 1990; Nandakumar et al. 2010; Parnell et al. 2012). By using moderated moderation (SEM) it was our methodological priority to highlight the moderating role that the GL of pharmacies and the PEU by pharmacists simultaneously play in the relationship of SO and BP. By integrating control variables, we also tested the robustness of the influence that SOs and potential environmental moderating factors have on BP.

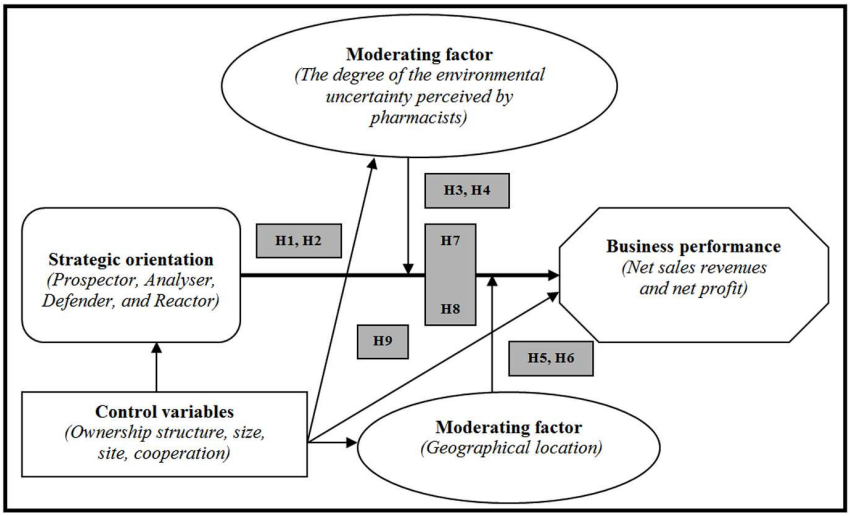
Literature review and conceptual framework

In the following sections of the paper we present the main scientific constructs that were included in our examination, then we briefly summarise the results – concerning the connections between our constructs – of past international studies. Based on theoretical implications and experiences of more than 30 in-depth interviews conducted with representatives of key stakeholders of the HPRDS we formulated our research questions and hypotheses which are arranged into a conceptual model and demonstrated in Figures 1 and 2.



Source: author's own design

Figure 1. A comprehensive scheme of the research questions



Source: author's own design

Figure 2. Displaying research hypotheses in the conceptual model of the paper

The M&S strategic typology – the main theoretical framework of our study – focuses on the environmental adaptation process of organisations. The central construct of the classification is the adaptive cycle, according to which companies need to come up with adequate solutions for three main problems (Miles–Snow 1978). To resolve the entrepreneurial problem an organisation should define the products/services it would like to produce/sell and identify market segments to target. By addressing the engineering problem, firms should develop a feasible operating system for the production and sales of their products/services (Miles et al. 1978). The adaptive cycle's third element is the administrative problem, where businesses should form such mechanisms – e.g. (in)formalisation, (de)centralisation, specialisation, control, reward systems – which ensure the seamless running of systems created at the entrepreneurial and engineering stages (Hage–Aiken 1967).

Miles and Snow discovered four relatively easy to identify enduring patterns (strategic orientations) by observing the environmental adaptation behaviour of the companies (Csepeti 2010). The Prospectors continuously strive to identify new business opportunities and proactively locate and target new product/customer segments. Unlike Prospectors, the Defenders with conventional solutions, consider to exploit their narrow and stable product/market segments as a priority. Standing in the middle of the strategic adaptation continuum, the Analysers, by seeking to create an optimal combination of strengths of Prospectors and Defenders, both want to ensure cost-efficiency and to leverage the potential lying in product innovation. Contrary to the previous three SOs, the Reactors are not capable to consciously develop a consistent behavioural pattern, which would be crucial for a successful environmental adaptation.

Strategic management has always put great emphasis on the exploration of the stochastic relationship between SO and BP (Doty et al. 1993), thus after the classification and summary of M&S typology's past 30 years' research, our interest drifted to the thorough secondary analysis of the Prospectors', Analysers', Defenders' and Reactors' BP.

After the review of the effectiveness, efficiency, adaptability and innovativity dimensions of BP (Ambler–Clark 2001), we have discussed the empirical observations of the two original propositions of M&S concerning the BP of SOs: 1) Prospectors, Analysers and Defenders outperform Reactors in any industrial circumstances, 2) Prospectors, Analysers and Defenders can exhibit equally optimal BP if they implement the chosen SO in a consistent manner.

By systematically grouping the results of past empirical studies, we came to the conclusion that in most industries even with diverse environmental factors being present, Reactors are consistently outperformed by Prospectors, Analysers and Defenders, while the three viable SOs are able to exhibit optimal BP under any circumstances. However, certain SOs' resources and competencies are favoured, while others are not by different industrial settings (Bastian–Muchlisch 2012; Boyd et al. 2012). However, several environmental and industry-specific variables can affect the relationship between SO and BP (Porter 1979; Slater–Narver 1994; Csepeti 2010). Given the fact that we have been witnessing turbulent changes in the conditions and the behaviour of key industrial stakeholders of the HPRDS – which have fundamentally changed the system-level factors of the pharmacies' operation and their management processes – in this paper's literature review stage we put remarkable emphasis on the environment-strategy-performance interdependence in order to reveal possible moderating factors potentially influencing the relationship of the pharmacies' SO and BP.

To choose a consistent SO and to implement it, managers should adequately interpret the observable changes in the internal and external environments (Sharma 2000), which are generally classified in strategic literature according to the following five criteria:

1) simple vs. complex (Lukas et al. 2001; Tan 2002; Tan–Tan 2005; Gotteland–Boulé 2006; Kabadayi et al. 2007); 2) stable vs. instable (Venkatraman–Prescott 1990; Miller–Friesen 1993; Yeung et al. 2013; White et al. 2013); 3) the rate of changes (McArthur–Nystrom 1991; Zahra 1996; Pelham 1999; Menguc–Auh 2008; Bechor et al. 2010); 4) the

stakeholders' hostile or munificent behaviour (Goll–Rasheed 1997; Zahra–Bogner 1999; Davies–Walters 2004; Nandakumar et al. 2010) and 5) the quantity and quality of available information (Aguilar 1967; Hambrick 1982; Starbuck–Milliken 1988; Daft et al. 1988; Newkirk–Lederer 2006).

The researches examining the interaction of the environment and strategy emphasise that external factors influence the companies' SO not in their pure, objective form, but rather through managers' filter (Child 1972; Buchko 1994). The subjective perception of the conditions and stakeholders' behaviour can lead to the fact that managers interpret the same industrial contingencies differently and they respond with alternate strategic approaches (Hambrick 1981; Meyer 1982; Forte et al. 2000; DeSarbo et al. 2005). Thus, to shed light on the subtler aspects of the relationship among M&S's SOs, BP and the environment, we integrated the PEU into the conceptual model of our research (Namiki 1999). By involving the PEU – besides the exploration of its potential moderating effect on the relationship between M&S's SOs and BP – we could investigate the strategic management's conflicting "environmental determinism" (Lawrence–Lorsch 1967; Snow–Hrebiniak 1980) and "managerial choice" (Child 1972; Augier–Teece 2009) approaches and assess their prevalence in the HPRDS.

We also emphasised that different environmental contexts favour ideal-typical resources and capabilities of each SO, hence the fit or misalignment of the companies' SO and external contingencies might have significant consequences on BP that changes the strength, the direction and the nature of the relationship between SO and BP. Based on experiences, we identified those streams of studies, in which external environmental moderating variables did not have significant influence on the relationship between SO and BP (Venkatraman–Prescott 1990; Slater–Narver 1994; Srnivasan et al. 2011). However, the other group of researches shed light on the significant impact of these factors (Zahra 1996; Agbejule 2005; Bstelier 2005; Hoque 2005; Tan–Tan 2005; Wang et al. 2012; White et al. 2013). Researchers could not make robust conclusions on the moderating effect of environmental factors,

hence there are still many open questions and under-researched aspects in the literature, so our paper intended to contribute to the decrease of these knowledge gaps.

The fourth important theoretical construct of our study is the GL. In our research on the HPRDS the influential effect of GL on SO and BP is worth for interpreting only within industrial context, therefore we highlighted the meaning of GL on micro-level business strategy and management. Past researches laid special emphasis on the difference between urban and rural locations in various aspects such as the SO of companies, operation of functional fields, consumer behaviour and the willingness of managers on cooperation and risk taking etc. (Sun–Wu 2004; Velayudham 2007). The empirical results of retail management shed light on the fact that sales and profitability opportunities of enterprises are mostly determined by the choice of the GL and site (Huff 1964; Ghosh–McLafferty 1987; Levy–Weitz 2012). The liberalisation process in the HPRDS also valorised the role of GL through the significant relief of conditions of pharmacy establishment (Aguiar et al. 2014). The GL of pharmacies has partly become a factor that can be modified by managers, hence in our research we aimed to analyse the moderating effect of the GL in the relationship between the pharmacies' SO and BP.

Research questions and hypotheses

As it can be derived from the general objectives of our study, it is not surprising that our main research questions concern the sector-specific emergence of M&S's SOs. We intended to reveal whether there are any consistent environmental patterns in the HPRDS featured by risen, but still limited competitive intensity and the unique manifestation of microeconomic traits of both public and private goods (Andrews et al. 2009). Consequently, in Q1 we wanted to answer, whether all the original SOs of M&S could be observed in this regulated setting. Second, starting from the ongoing environmental changes in the HPDRS we presumed that market coordination mechanisms foster pharmacy managers to modify their behavioural patterns to adapt,

which in turn could lead to a possible "transformation" of formerly developed homogeneous SOs. Hence, Q2 examined to what extent we could observe markedly distinct, "pure" SOs or "hybrid/mix" environmental adaptation patterns can be identified?

Since we considered providing greater levels of reliability and validity when classifying firms into SOs, we applied several strategy extraction techniques. To corroborate the convergent validity of the results of diverse measurement tools in its classical scientific interpretation our Q3 sought to ascertain the extent to which distribution ratios of pharmacies – following Prospector, Defender, Analyser and Reactor SOs identified in the HPRDS – differed based on the classification results of various strategy extraction methods applied in our research?

According to some implications in the literature, managers of Defenders perceive environmental conditions stable, therefore, similar enterprises rather operate in more predictable industrial settings (Zahra–Pierce 1990). Dynamic and variable industrial and operational conditions favour the behavioural features of Prospectors since their managers consider some momentums of environmental turbulence as business opportunities to seize (Gray et al.1999; Namiki 1999). The executives of companies pursuing Analyser SO can perceive both stability and dynamism in the operational environment. They might occur in reliable and unpredictable sectors as well, but their effort aims at a more thorough analysis and prediction of changes in conditions (Zinn et al. 2008). Reactor enterprises can be present both in stable and variable environments, nonetheless, their less consistent SO and management features might easily lead to suboptimal BP among predictable, but especially insecure circumstances (DeSarbo et al. 2005).

Given the fact that we have been witnessing turbulent market and legislative changes in the HPRDS, we assumed that the distribution ratio of pharmacies pursuing various industry-specific SOs of M&S would differ from each other (Q4). Due to competitive pressures we examined whether the distribution ratio of pharmacies following

Reactor SO is exceeded by Defender, Analyser and Prospector pharmacies in this order (Q4a, Q4b, Q4c, Q4d). Similarly, owing to the permanent environmental shifts we investigated the potential differences in the degree of environmental uncertainty that pharmacists – pursuing various M&S's SO – perceive (Q5). Based on theoretical suggestions we supposed that the degree of PEU by Analysers would be exceeded by the degree of PEU by pharmacists pursuing Defender, Prospector and Reactor SOs in this order (Q5a, Q5b, Q5c, Q5d).

To further scrutinize the effect of contingency theory in the HPRDS we tested, whether the prevalence of various M&S's SOs differs according to the groups of pharmacies characterised by high or low degrees of PEU (Q6). We thought that the emergence of Prospectors and Reactors was greater in the group of pharmacies characterised by higher levels of PEU (Q6a, Q6d), while the number of pharmacies pursuing Analyser and Defender SOs would be higher in the group featured by lower levels of PEU (Q6b, Q6c). Finally, in Q7 we intended to compare the influential power of SOs followed by pharmacies on PEU by pharmacists and vice versa via running SEMs with second order latent constructs.

Following the elaboration of our research questions concerning the sector-specific manifestation of M&S's strategic typology, in the next sections we formulate our hypotheses pertaining to the BP implications of pharmacies pursuing different adaptation patterns. Contrary to the theoretical recommendations of M&S – which suggested that consistent and viable SOs perform equally well – we assumed that the strength of the relationship between Prospector, Analyser, Defender, Reactor SOs as well as the sales and net profit of pharmacies would be different (H1). By experiencing that broadening the product/market domains and addressing new patient segments became a key success factor in the changed HPRDS, we hypothesised that the strength of the positive relationship between Defender SO and sales would be exceeded by the one measured between Analysers, Prospectors and sales in this order (H1a, H1b, H1c). Taking into account their inconsistent strategic stance we presumed a negative relationship between the prevalence of Reactor SO and the sales of pharmacies (H1d).

We assumed diverging performance outcomes of pharmacies as measured in terms of net profit as well. Considering the precautious nature of managerial steps Defenders used to take, while witnessing strong pressures on Prospectors and Analysers coming from the competitive context to make huge investments into product/service or market innovations, we believed that the relationship between SOs and the profitability of pharmacies would differ (H2) in the following manner. We hypothesised that the positive relationship between Defender SO – stressing operational efficiency and protecting its existing domains – and net profit exceeds the ones between Analysers, Prospectors – making financial commitments to locate new business opportunities – and net profit in this order (H2a, H2b, H2c). Based on theoretical implications and in-depth interviews we assumed a negative relationship between Reactor SO – inconsistently directing resources to realise their less unfounded business decisions – and the pharmacies' net profit (H2d).

In line with recommendations of strategic management we supposed the degree of environmental uncertainty perceived by pharmacists would refine the strength of the relationship between various SOs and BP (H3, H4). We thought the higher degrees of PEU emanating from competitive pressures and austerity measures would spur pharmacy managers to tackle the shrinking level of demand by introducing new products/services and cater unconventional market segments. Hence, we hypothesised that in parallel to the increased degree of PEU the positive relationship of Prospector, Analyser, Defender SOs and the pharmacies' sales became stronger (H3a, H3b, H3c). Assuming that higher degrees of PEU would just reinforce their strategic acts originally described as "in haste" we hypothesised that higher the degree of PEU by their pharmacists, the stronger the negative relationship of Reactors and sales (H3d).

However, according to the consequences of preliminary in-depth interviews we made with key stakeholders of the HPRDS, the higher degrees of PEU can easily stimulate pharmacists to take on unusual and risky initiatives. Given that these need sophisticated business

knowledge and managerial competences which they often lack we hypothesised the excessive amount of financial resources directed to carry out these actions would lower the profitability of pharmacies. Thus, in parallel to the increased degree of PEU the positive relationship of Prospector, Analyser, Defender SO and the pharmacies' net profit weakens (H4a, H4b, H4c), while the negative relationship between Reactor SO and net profit strengthens (H4d).

As the GL is of key importance in determining the BP of firms in any retail setting, it was plausible that the urban/rural location would moderate the strength of the relationship between M&S's SOs and BP (H5). Pharmacies operating in cities face more diverse patient needs and higher purchasing power, thus, we assumed the positive relationship between Prospector, Analyser, Defender SO and sales strengthens in case of urban pharmacies compared to rural ones (H5a, H5b, H5c). However, Reactor pharmacies – due to high competitive intensity and inconsistencies in their resource and capability set – are not even able to take advantage of the otherwise favourable urban conditions. Hence, we supposed urban location would further strengthen the negative influence of Reactor SO exerted on sales (H5d).

However, based on the results of the interviews the nature of the potential moderating effect of the GL tends to be much more complicated in case of profitability. In urban setting favourable demand conditions and heterogeneous patient needs foster Prospector and Analyser pharmacies to make costly investments to expand their product and service portfolio which in turn weakens the positive relationship (H6a, H6c). At the same time, we assumed rural environment favours the Defenders' strategic intents to exploit the potential lying in conventional products and loyal patient segments, thereby increasing their net profit (H6b). Finally, Reactors' inconsistent steps toward launching innovative solutions and serve new patient markets can easily entail costly but non-recoverable investments which further strengthen the negative relationship between this SO and the net profit of pharmacies (H6d).

We also assumed that the impact of PEU, playing a potentially moderating role in the relationship between SO pursued by pharmacies and BP, can occur differently in urban and rural environments, thus we analysed the combined moderating effects of PEU and GL in H7 and H8. The turbulent changes in the sector encourage pharmacies pursuing various SOs to expand their product/service portfolio, address new patient segments and introduce innovative business applications. However, the success rate of these business policy measures depends not only on the idiosyncratic characteristics of SOs, but also on whether the pharmacy is operated in urban or rural environment.

In line with the abovementioned paragraphs we hypothesised that in the urban context the increasing degree of PEU makes the positive relationship between Prospector, Analyser and Defender SOs and the sales of pharmacies stronger than that experienced in rural environment (H7a, H7b, H7c). In case of profitability, we expected that urban pharmacies – following viable SOs and acting definitely in product/market expansions – could generate more demand and newly introduced value propositions can be sold at a higher margin. Hence, we hypothesised that in rural context the increasing degree of PEU makes the positive relationship between Prospector, Analyser, Defender SOs and the pharmacies' net profit weaker than that experienced in urban environment (H8a, H8b, H8c).

However, we presumed that the increasing degree of PEU by pharmacists degraded the sales and net profit of Reactors in a more considerable way in the countryside than in cities, because favourable urban environments can partly compensate for the negative impact on performance caused by inconsistent and hasty strategic measures taken in response to increased PEU (H7d, H8d). Finally, in H9 we examined whether we filter the effect of industry-specific control variables – pertaining to socio-demographic and site characteristics of pharmacies – most probably determining BP, the connections formulated in H1-H8 still maintained or not regarding the complex relationships between SO, PEU, GL as well as sales and net profit (H9a, H9b). The research questions and hypotheses are displayed concisely in Annexes 1 and 2.

Methodology and data collection

In our study we used primary and secondary research methodologies to identify strategic behavioural patterns in the HPRDS and to discover the BP implications of M&S's SOs. In the qualitative section of our primary research, we organised expert interviews with representatives of key stakeholder groups in the HPRDS. After more than 30 consultations, besides the sector-specific objectives, the finalisation of the conceptual model emerged, and we also pre-tested the validity, reliability, dimensionality of measurement instruments intended to use in the quantitative survey. During the quantitative section, data collection has been delivered by survey inquiry with the support of the Hungarian Chamber of Pharmacists (HCP) and its regional leaders. The sampling frame consisted of all pharmacies operating in the capital and in other four counties of Hungary. The census-like data collection was conducted in Budapest, and also in Baranya, Borsod-Abaúj-Zemplén, Pest and Vas counties. Surveys were distributed by post to approximately 1000 pharmacy managers. After reminder mails and telephone calls, all in all 207 completed questionnaires – featured by high quality data, thus applicable in multivariate analyses – have been returned, which means a 22% response rate.

Regarding the operationalization of our key theoretical constructs, we intended to identify environmental adaptation patterns in the HPRDS by applying three different strategy extraction techniques. The self-typing paragraph method summarises briefly the strategic behaviour of Prospectors, Analysers, Defenders, Reactors, and pharmacists were asked to choose the one which best describes their firms' adaptive stance. Second we adopted the multi-item scale of Segev (1987) to reveal strategic behavioural patterns of pharmacies, which several times were included in international examinations and proved its validity and reliability. We also tried to use objective indicators of pharmacy management [e.g. the distribution Prescription (Rx), Over The Counter (OTC) and other products in sales (%)] to categorise the firms' SO.

We measured the BP of pharmacies via using the widely accepted effectiveness (net sales revenues in million HUF) and efficiency (net profit after tax in million HUF) indicators. The PEU by pharmacist was operationalised by a metric scale adopted from Miles and Snow (1978) and tailored to the specific features of the HPRDS. Pharmacist rated the degree of environmental uncertainty in seven dimensions (the behaviour of wholesalers, producers, patients, competitor pharmacies, regulatory authorities, HCP and changes in financial conditions) and 45 items belonging to them altogether. Evaluations were ranging from 1 (completely unpredictable) to 5 (entirely predictable). The GL of pharmacies was indicated by respondents, who – according to the official guidelines of settlement registers of the Hungarian Central Statistical Office and HCP – were faced five categories to choose from: 1) Budapest, 2) city with more than 50 thousand inhabitants, 3) city where 10-50 thousand people live, 4) township with 5-10 thousand people and 5) settlement with less than 5 thousand people. In order to answer our research questions pertaining to the sector-specific manifestation of M&S's behavioural patterns and to test our hypotheses concerning the BP implications of SOs we ran several uni-, and multivariate mathematical and statistical methods that are highlighted in Table 1.

Table 1. Multivariate techniques applied to test our research questions and hypotheses

Question/ Hypothesis	Applied mathematical-statistical methodologies
Q1	Self-typing paragraphs and objective indicators method, exploratory (EFA) and confirmatory factor analyses (CFA) of the multi-item Segev scale
Q2	Exploratory factor analysis (EFA), confirmatory factor analysis (CFA), ANOVA, post-hoc paired comparisons by Tukey-, Scheffe- and Bonferroni-tests
Q3	Crosstabs, McNemar-tests
Q4	Paired sampled t-tests

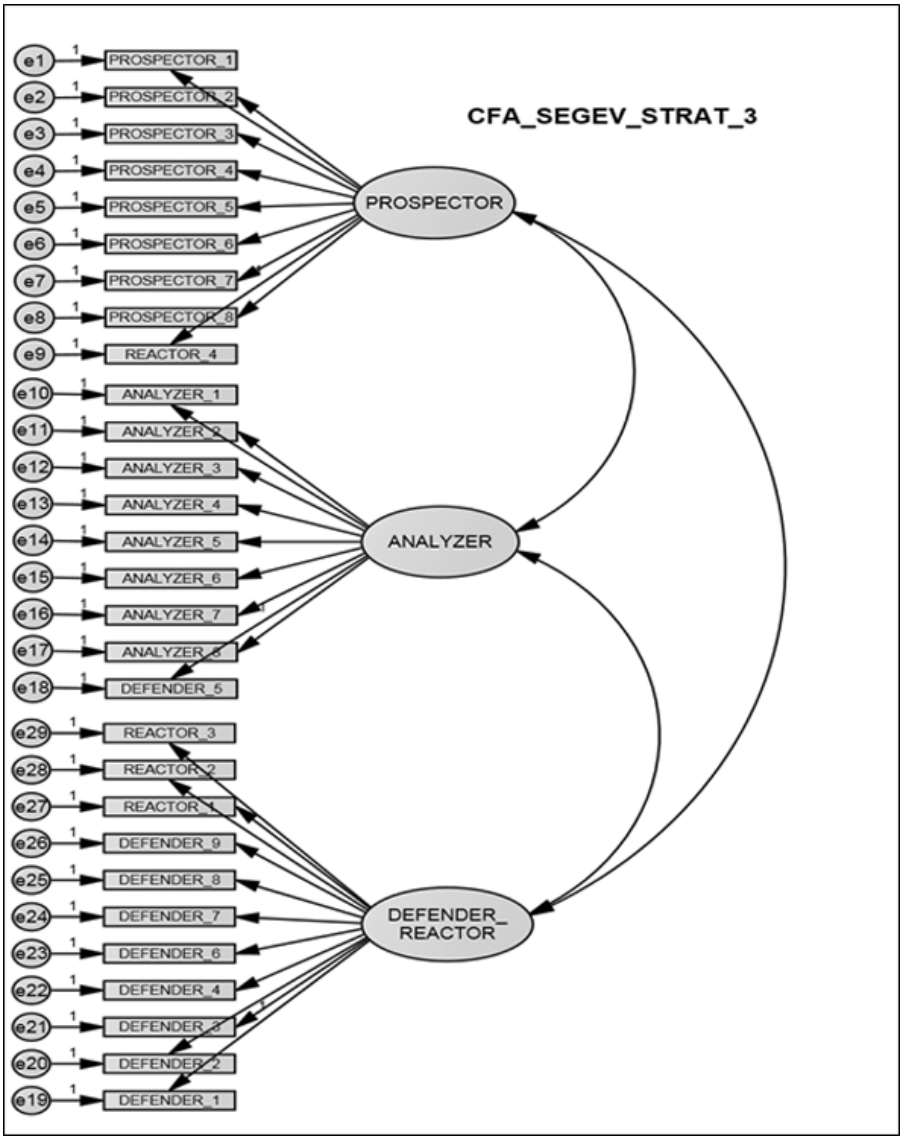
Q5	Crosstabs, correlations, ANOVA, structural equation modelling (SEM)
Q6	Crosstabs, correlations, ANOVA
Q7	Crosstabs, correlations, ANOVA, SEM
H1	ANOVA, hierarchical interaction and multi-group moderated regression, SEM
H2	ANOVA, hierarchical interaction and multi-group moderated regression, SEM
H3	Hierarchical interaction and multi-group moderated regression, multi-group and interaction moderation (SEM)
H4	Hierarchical interaction and multi-group moderated regressions, multi-group and interaction moderations (SEM)
H5	Hierarchical interaction and multi-group moderated regressions, multi-group and interaction moderations (SEM)
H6	Hierarchical interaction and multi-group moderated regressions, multi-group and interaction moderations (SEM)
H7	Moderated moderation (SEM)
H8	Moderated moderation (SEM)
H9	Moderated moderation (SEM) by integrating control variables pertaining to socio-demographic factors and characteristics of the site of pharmacies

Source: author's own design

Data processing and results

Before presenting the experiences we gained by running several mathematical and statistical methods, we have to note that due to the size limits of the paper we did not have the opportunity to go into a detailed analysis of our results. The answers for our research questions are grounded only by the results of the main statistical probes described below, while quantitative experiences of hypotheses testing are summarised in Tables 2, 3, 4 and 5.

We revealed that the four original strategic patterns of M&S cannot be observed in the HPRDS. According to the EFA and CFA analyses of Segev scale, the behavioural characteristics of Defender and Reactor SOs were loaded into the same factor (Figure 3).



Source: author's own design based on Segev (1987)

Figure 3. The confirmatory factor analysis (CFA) of Segev scale operationalising the industry specific SOs of M&S relevant in Hungary

Thus, by the identification of the Defender/Reactor "mix" – beside Prospectors and Analysers – three SOs have been observed in the environmental adaptation of pharmacies (Q1). The fit indices (CMIN/d.f. =1.968, RMSEA=0.059, CFI=0.903) of this sector-specific factor structure gained via CFA by and large met the criteria of methodological literature (Hu-Bentler 1999). Cronbach's alpha coefficients (Prospector=0.887, Analyser=0.865, Defender/Reactor=0.875) were above the threshold value of 0.7 while the CR indicators (Prospector=0.935, Analyser=0.919, Defender/Reactor=0.923) corroborate the reliability of the scale with latent constructs and the belonging items. In case of the realistic 3-factor solution AVE indicators – commonly applied to test convergent and discriminant validity by Fornell-Larcker criterion – surpassed the "thumb rule" of the literature (Prospector=0.622, Analyser=0.564, Defender/Reactor=0.527).

The multi-item PEU scale developed by M&S and tailored to the specific features of the HPRDS similarly performed well after the CFA as the main fit indices (CMIN/d.f.=1.495, RMSEA=0.05, CFI=0.925) all surpassed their threshold values, so we can state that the theoretical factor solution was reproduced by the data structure in a quite decent way. Concerning reliability based on internal consistency we can note that Cronbach's alpha coefficients of all factors (Wholesalers=0.720, Producers=0.788, Patients=0.773, Competitor pharmacies=0.910, Regulatory authorities=0.875, HCP=0.885, Financial conditions= 0.854) satisfied the criteria of 0.7. According to the CR values (Wholesalers=0.787, Producers=0.802, Patients=0.824, Competitor pharmacies=0.917, Regulatory authorities=0.884, HCP=0.890, Financial conditions=0.861) the reliability of this measurement instrument was also confirmed. The AVE indicators of each dimension were above the threshold value of 0.5 confirming convergent and discriminant validity (Wholesalers=0.569, Producers=0.593, Patients =0.585, Competitor pharmacies=0.780, Regulatory authorities=0.608, HCP=0.748, Financial conditions=0.581).

We can also conclude that standardised regression weight of neither indicator variable was less than the 0.4 value specified by

Churchill (1979), thus, none of them had to be removed from any individual constructs of both the PEU and Segev's "strategy identification" scales. Construct validity of the abovementioned scales were assessed by nomological, convergent, and discriminant validity tests where checks for the latter contained EFA, CFA, reliability of indicators, covariance between latent constructs, comparison of the CFA models (original vs. latents' cov=1) and Fornell-Larcker criterion. The common method variance was examined by Harman's single factor test, adding a single latent factor and "marker" variable techniques, indicating that CMV all in all was not an issue at any of the scales. We also performed non-response bias analyses for the Segev scale operationalising M&S's SOs, for the PEU scale and for the BP indicators reported by pharmacists. Based on the results of ANOVA we could not observe any significant difference between early and late respondents, so non-response bias did not distort the validity and generalizability of our study in any county.

Returning to the question of industry-specific emergence of M&S's strategic typology, based on EFA and CFA structures the Defender/Reactor SO cannot be considered as a distinct, organic behavioural pattern, but more as a simple "mix" of the Defenders and the Reactors (Q2). After a thorough analysis of the factorial structure of this SO and comparing the prevalence of Defender and Reactor characteristics respectively based on weighted averages of the pharmacists' evaluations, we could establish that the inconsistent behavioural aspects of Reactors dominate this adaptation pattern. The identified two "pure" and one "mix" SOs markedly dissevered from each other, as to post-hoc Tukey, Scheffe and Bonferroni tests, the behavioural aspects of Prospectors, Analysers, Defender/Reactors significantly differ.

There was a minimal gap between the results of the two successfully applied strategy extraction techniques – the multi-item Segev scale and the self-typing paragraph method, thus the convergent validity of the measurement tools was confirmed in its classical interpretation (Q3). The insignificance of pairwise McNemar's χ^2 tests denoted that the classification results of various measurement

instruments aiming to identify Prospector, Analyser, Defender/Reactor pharmacies did not differ from each other (Defender/Reactor: $\chi^2=0.22$, sig=0.883, Prospector: $\chi^2=1.641$, sig=0.200, Analyser: $\chi^2=0.522$, sig=0.470). In spite of the intensified competition, the relative majority of pharmacies were identified as Defender/Reactors, they are followed by the Analysers, whilst Prospectors – who proactively seek business opportunities in turbulent legislative changes and expand their product/service portfolio – were in a relative minority (Q4). This was proven by pairwise two-sampled t-tests, where we coded the distribution of Prospector, Analyser and Defender/Reactor pharmacies by dummy variables.

Pharmacists pursuing different SOs, have perceived different levels of uncertainty in environmental circumstances and in the behaviour industrial stakeholders (Q5). Analysers perceived the alteration of environmental conditions and the behaviour of stakeholders of the drug supply chain significantly more predictable, than Prospectors and Defender/Reactors. We identified no difference between the groups with low and high PEU in regard of the emergence of Prospector, Analyser and Defender/Reactor SOs. Similarly, we did not observe any significant difference in the distribution of the SOs either among groups of pharmacists perceived low and high PEU even after running several tests (Q6). Operationalised as second order latent constructs in SEM, the pharmacists' conscious choice of SO imposed a stronger influence on the degree of PEU ($\beta=0.174$, sig=0.042, CMIN/d.f.=1.967, CFI=0.889, RMSEA=0.057 and SRMR=0.0987), than the extent of strictly regulated industrial factors determined the possibilities of pharmacies in selecting and following SOs ($\beta=0.043$, sig=0.650, CMIN/d.f.=1.970, CFI=0.882, RMSEA=0.058 and SRMR=0.1007) (Q7). With the exception of the SRMR indicator the obtained fit indices are tolerable (Hu–Bentler 1999).

Concerning the BP implications of M&S's SOs and the potential role of moderating and control variables in the next lines we only report fit indices of structural models. Assessing the "pure" effects of SOs on sales and net profit we obtained CMIN/d.f.=544/357=1.524,

CFI=0.936, RMSEA=0.05 and SRMR=0.0906, as well as CMIN/d.f. =586/359=1.633, CFI=0.922, RMSEA=0.055 and SRMR=0.093. With the exception of SRMR these values comply with the criteria of methodological literature (Chen et al. 2009).

The examination of the moderating effect of PEU on the relationship between Prospector, Analyser, Defender/Reactor SOs and BP by multi-group moderation has resulted in the following values of fit indices: CMIN/d.f.=1086/692=1.57, CFI=0.874, RMSEA=0.053 (sales) and SRMR=0.1034, CMIN/d.f.=1175/720=1.632, CFI=0.854, RMSEA=0.056 and SRMR=0.1066 (net profit). Similarly, uncovering the moderating influence of GL on BP by multi-group technique CMIN/ d.f.=1104/728=1.517, CFI=0.864, RMSEA=0.051 and SRMR=0.0971 in case of sales, while CMIN/d.f.=1109/722=1.537, CFI=0.869, RMSEA=0.052 and SRMR=0.0992, when estimating net profit. It can be stated that except for the SRMR indicator the values comply with the threshold criteria of mathematical-statistical literature (Baumgartner–Homburg 1996).

By running multi-group moderations, we also analysed the general discrepancies of the "unconstrained" and "constrained" models of high/ low PEU and urban/rural group of pharmacies as well as the "path by path" differences discovered in the standardised regression weights. Since in the case of interaction moderation techniques we operationalised the main effects and product terms as imputed variables from SPSS, thereby we could not compute fit indices at AMOS. In the next two paragraphs we briefly summarised the findings – concerning the BP implications of the pharmacies – derived from Tables 2, 3, 4 and 5.

The sales of pharmacies following the observed Prospector, Analyser and Defender/Reactor SOs in the HPRDS are significantly different (H1). The profitability of pharmacies pursuing Prospector, Analyser and Defender/Reactor SOs did not differ significantly (H2). The PEU by pharmacists – apart from one or two exceptional cases (e.g. profitability of Prospectors in rural and sales of Defenders in urban context) – did not moderate the relationship between the SO of

Table 2. The moderating effect of perceived environmental uncertainty in the relationship of strategic orientation and business performance

Moderating variable: **Perceived environmental uncertainty**		**Applied mathematical-statistical methods**											
Strategic orientation	Business performance	Hierarchical (interaction) moderated regression		Multi-group moderated regression				Interaction moderation (SEM)		Multi-group moderation (SEM)			
				High		Low				High		Low	
		β	Sig.	β	Sig.	β	Sig.	β	Sig.	β	Sig.	β	Sig.
Prospector	Sales	-0.074	0.392	0.375	0.000	0.265	0.007	-0.057	0.448	0.401	0.000	0.248	0.033
Analyser	Sales	0.059	0.498	-0.171	0.074	-0.001	0.994	0.095	0.167	-0.174	0.088	0.021	0.850
Defender/ Reactor	Sales	-0.099	0.172	-0.165	0.102	-0.304	0.002	-0.162	0.027	-0.147	0.199	-0.334	0.009
Prospector	Net profit	-0.075	0.424	0.158	0.145	0.036	0.734	-0.034	0.684	0.153	0.201	0.056	0.630
Analyser	Net profit	0.071	0.452	-0.123	0.207	0.086	0.420	0.060	0.442	-0.114	0.282	0.085	0.482
Defender/ Reactor	Net profit	0.066	0.399	-0.207	0.066	0.009	0.935	0.045	0.589	-0.241	0.059	0.0012	0.918

Source: author's own design

Table 3. The moderating effect of geographical location in the relationship of strategic orientation and business performance

Moderating variable: **Geographical location**		**Applied mathematical-statistical methods**											
Strategic orientation	Business performance	Hierarchical (interaction) moderated regression		Multi-group moderated regression				Interaction moderation (SEM)		Multi-group moderation (SEM)			
				Urban		Rural				Urban		Rural	
		β	Sig.	β	Sig.	β	Sig.	β	Sig.	β	Sig.	?	Sig.
Prospector	Sales	-0.039	0.615	0.276	0.004	0.396	0.000	-0.024	0.727	0.279	0.015	0.384	0.002
Analyser	Sales	-0.050	0.515	-0.028	0.773	-0.332	0.001	-0.077	0.244	-0.023	0.845	-0.302	0.013
Defender/ Reactor	Sales	-0.016	0.814	-0.160	0.120	-0.290	0.002	-0.053	0.456	-0.134	0.280	-0.325	0.030
Prospector	Net profit	0.010	0.910	0.056	0.574	0.199	0.051	0.026	0.742	0.037	0.741	0.244	0.039
Analyser	Net profit	-0.019	0.822	0.028	0.793	-0.190	0.081	-0.091	0.233	0.079	0.524	-0.271	0.029
Defender/ Reactor	Net profit	-0.093	0.237	0.028	0.800	-0.308	0.004	-0.104	0.203	0.006	0.961	-0.342	0.028

Source: author's own design

Table 4. Evaluation of the combined moderating effect of perceived environmental uncertainty and geographical location (Sales)

Moderating variable: **Perceived environmental uncertainty**	Moderating variable: **Geographical location**							
	Applied mathematical-statistical methods							
Strategic orientation	Business performance	Moderated moderation (SEM)				Moderated moderation (SEM) by integrating relevant, industry-specific control variables			
		Urban		Rural		Urban		Rural	
		β	Sig.	β	Sig.	β	Sig.	β	Sig.
Prospector	Sales	0.311	0.002	0.342	0.000	0.262	0.010	0.204	0.049
Prospector*PEU	Sales	-0.023	0.814	-0.214	0.055	-0.030	0.761	-0.205	0.052
Defender/Reactor	Sales	-0.158	0.143	-0.304	0.002	-0.219	0.043	-0.232	0.017
Defender/Reactor*PEU	Sales	-0.188	0.085	-0.153	0.222	-0.196	0.073	-0.101	0.391
Analyser	Sales	-0.082	0.439	-0.180	0.081	-0.089	0.389	-0.130	0.089
Analyser*PEU	Sales	0.124	0.253	0.125	0.241	0.080	0.450	0.162	0.080

Source: author's own design

Table 5. Evaluation of the combined moderating effect of perceived environmental uncertainty and geographical location (Net profit)

Moderating variable: **Perceived environmental uncertainty**	Moderating variable: **Geographical location**								
	Applied mathematical-statistical methods								
Strategic orientation	Business performance	Moderated moderation (SEM)				Moderated moderation (SEM) by integrating relevant, industry-specific control variables			
		Urban		Rural		Urban		Rural	
		β	Sig.	β	Sig.	β	Sig.	β	Sig.
Prospector	Net profit	0.020	0.857	0.174	0.100	-0.066	0.561	0.051	0.631
Prospector*PEU	Net profit	0.017	0.876	-0.260	0.024	-0.023	0.826	-0.274	0.009
Defender/Reactor	Net profit	0.004	0.974	-0.298	0.003	-0.045	0.696	-0.276	0.005
Defender/Reactor*PEU	Net profit	0.131	0.277	0.069	0.592	0.156	0.182	0.074	0.532
Analyser	Net profit	0.007	0.955	-0.166	0.120	0.037	0.743	-0.157	0.121
Analyser*PEU	Net profit	-0.017	0.884	0.193	0.078	-0.006	0.959	0.230	0.022

Source: author's own design

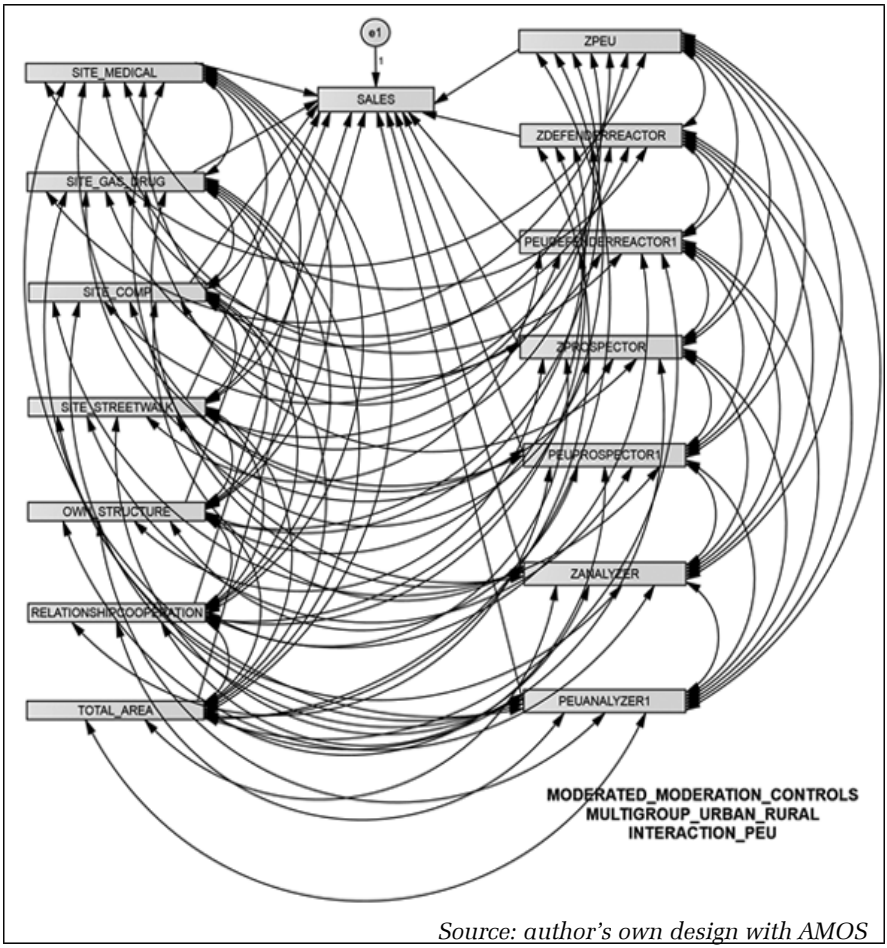
pharmacies and their BP (H3, H4). We experienced mixed results in connection with the potential moderating influence of GL on the relationship between the M&S SOs and BP of pharmacies (H5, H6). According to the interaction techniques the GL does not have a moderating effect in the relationship between the pharmacies' SO and their BP, while according to multi-group methods it does so. It is discernible, that the effect of the prevalence of Prospector, Analyser and Defender/Reactor SOs on BP strengthens in rural context characterised by less favourable demand conditions (H5, H6, H7, H8).

The majority of the revealed interrelations remained robust after controlling for variables originally having a significant effect on the effectiveness and profitability of pharmacies (H9). The influence of the pharmacies' SOs on BP has not been "suppressed" by such sector-specific and socio-demographic features (e.g. space of total area, number of colleagues) and variables pertaining to pharmacies' sites (e.g. number of passers-by in front of the pharmacy, proximity of medical service institutes and retail stores), which otherwise had a substantial, additional effect on BP. The prevalence of M&S's SOs – depending on the specialties of different methodological techniques as well as moderating and control variables involved – explained the variance of the pharmacies' sales to 16.5%-48%. As an illustration, in Figure 4 we present a structural model estimating the influence of M&S's SOs on sales by filtering the effect of relevant control variables.

Thus, SOs of M&S can be considered as useful proxy variables in the explanation of the pharmacies' sales. However, M&S's SOs– depending on the employed methods as well as integrated moderating and control variables – explained only 3.0%-40.7% of the variance experienced in the net profit of pharmacies, thus the SOs of M&S did not prove to be adequate proxy variables of the pharmacies' profitability.

Discussion

In the following paragraphs we intend to find potential explanations for our most equivocal or intriguing findings. Due to



Source: author's own design with AMOS

Figure 4. Revealing the combined moderating effect of PEU and GL in the relationship between SOs and sales by integrating the relevant, sector-specific control variables

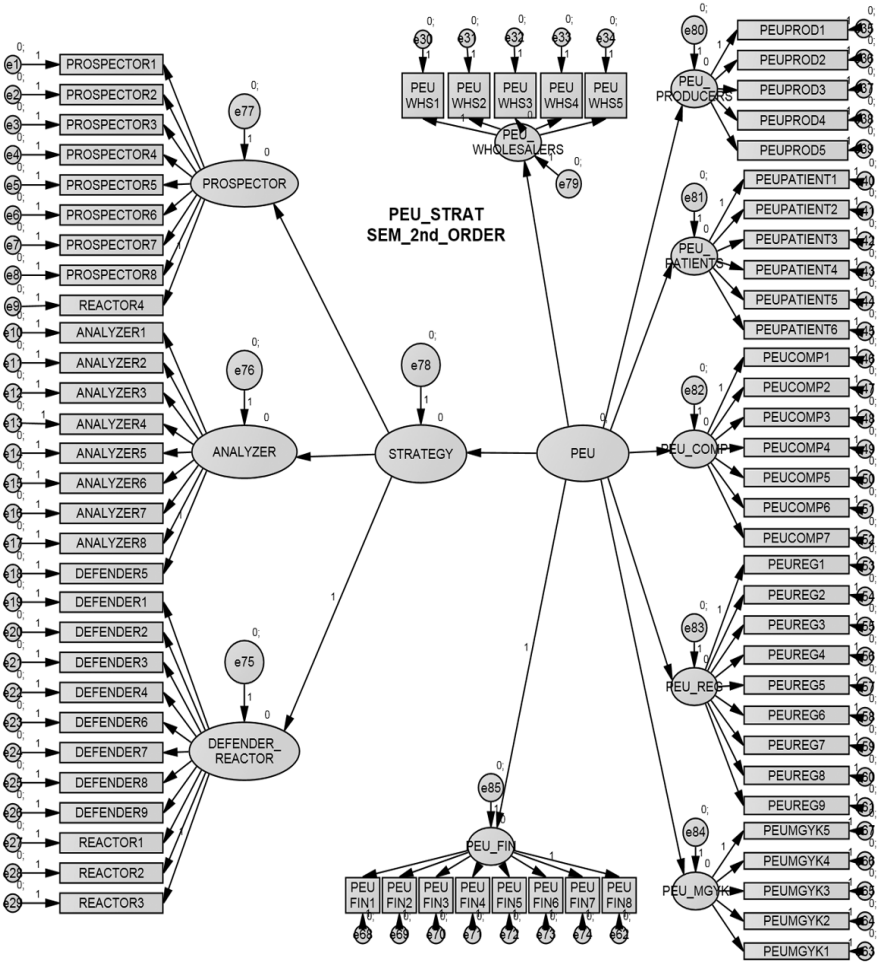
length limitations, however, we could only briefly sum-up the possible theoretical, methodological and practical causes behind the results. Researchers started to focus on the "blending" of behavioural characteristics of M&S's SOs over the last few years (DeSarbo et al.

2006, 2009; Helmig et al. 2014). The development of multivariate methods made it possible to avoid classifying pharmacies into ideal-typical SOs artificially created by academics, but to reveal more realistic environmental adaptation patterns (Hambrick 2003). This led to our consequence that micro and small enterprises operating in the HPRDS – which is characterised by bureaucratic coordination mechanisms and increased, but limited competitive intensity – still develop conscious adaptation patterns, though only three SOs instead of four and not pure, but mixed ones.

As previous researches have not truly gone beyond the identification of mixed adaptation patterns (Pinto–Curto 2007; Kabanoff–Brown 2008), we examined both the content elements, the causes of their mixing and its consequences on BP. We made a distinction between the simple "mixture" of behavioural aspects and their "organic" connections. We have shown that 1) in the factor structure of Defender/Reactor SO the Reactor characteristics are dominant and 2) their mixture does not form an organic hybrid adaptation pattern. We assume that earlier Reactor pharmacies initiated a strategic change process due to intensified competition, but these actions are still in an early stage (Hofer 1980). Since Defenders are closest to Reactors, it makes logical sense that the latter have taken steps to develop a "Defender-like" SO. However, the BP of Prospectors and Analysers exceeded that of Defender/Reactors, thus it is predicted the latter would also pay more attention to evolve less "retractive" SOs.

One of our paper's experiences most worthy for consideration is that the pharmacists' conscious choice of strategy had a stronger impact on the degree of PEU, than the degree to which the pharmacists' margin in selecting, following SOs was determined by contingency conditions regulated by bureaucratic coordination mechanisms (as an illustration in Figure 5 we attached a structural model estimating the influence of the PEU on the SO, both constructs were operationalised as second-order latent factors).

According to the contingency theory (Lawrence–Lorsch 1967; Hofer 1975) and the results of the qualitative research we predicted the



Source: author's own design

Figure 5. The influence of the PEU on the SO of pharmacies

opposite of this (Child 1972; Sharma 2000; Boyd et al. 2012). There are several possible explanations, the most idealistic being that pharmacists recognised the necessity of evolving a consistent SO compliant with the pharmacy's local attributes, resources and

competences (Augier–Teece 2009). In turn, pharmacists pursuing different SOs probably perceive changes of external conditions and stakeholders' behaviour differently – in a manner fitting their SO and confirming their own choice (DeSarbo et al. 2005; Song et al. 2007).

It might also come to mind, that the various adaptation patterns of M&S are no direct "products" of pharmacists, but rather indeed the results of turbulent environmental changes. Although not apparent from our cross-sectional study, it appears possible that today's distinctly different SOs evolved due to the environmental determination from a few years ago (Hrebiniak–Joyce 1985). The "defeat" of the contingency theory may have also been partly brought forth by methodological causes (Podsakoff et al. 2003): in regard of the pharmacists' PEU the significant difference between SOs was primarily caused by the prevalence of the Analysers' behavioural aspects. The Analyser is a quite "likeable and preferred" strategic option amongst respondents characterised by lower degrees of PEU, as it emphasises balance, i.e. conventional pharmaceutical and innovative business practice to an equal degree, thus dominance of the "managerial choice" theory's implications may have been partly caused by the respondents' "tendency toward the middle option" (Albaum 1997).

As far as the BP implications of M&S's SOs are concerned, based on our experiences gained after preliminary in-depth interviews it was not at all surprising that pharmacies following Prospector SO realised the highest levels of sales. According to our results continuously locating new product/market opportunities is of strategic importance if a pharmacy intends to operate in a successful way, especially when it faces increased competitive intensity and shrinking demand conditions. However, it was striking that Prospectors outperformed Analysers and Defender/Reactors even in terms of net profit, which was contrary to the theoretical approach as cost management is not one of their main strengths. A possible explanation to this could be that expansions of pharmacies' range of products and services are mainly realised within categories of OTC drugs and other products that can be marketed at a higher margin (Hawes–Crittenden 1984; DeSarbo et al.

2005). It is plausible, that changes in net profit could be better explained by integrating additional management characteristics of tactical and operative levels, but this fell outside of our research.

The majority of our empirical tests suggest that the prevalence of Analyser SO worsened BP to an almost significant degree for pharmacies. It is possible that in their case the "over-analysis" of turbulent and complex environmental conditions received too much attention, which could have impaired reactivity, obstructed explicit managerial decision-making and hampered committed allocation of resources toward introducing innovative pharmaceutical solutions (Zahra–Pierce 1990; Forte et al. 2000; Ghobadian–O'Reagan 2005).

The realisation of Defender/Reactor SO mostly exerted a significant negative effect on the pharmacies' BP. Seeing as manifestations of the content elements of this SO are dominated by the Reactors' behavioural characteristics, our result complies with the findings of most M&S research (DeSarbo et al. 2005). At the same time, being aware of the HPRDS' contingencial attributes, we would not have been surprised, if the Defender/Reactors' BP had turned out to be optimal. Some publications brought to attention that within industries characterised by bureaucratic coordination mechanisms and limited competitive intensity even firms with inconsistent SOs might be successful (Snow–Hrebiniak 1980). It is noteworthy, that the Defender/Reactor pharmacy managers in cities with more favourable perspective of BP perceive the turbulently changing environment as less uncertain. In their case the decrease in BP caused by "becoming too comfortable" is not significant only because the more favourable conditions of demand provide them with some protection for a shorter or longer time, while the lack of explicit strategic responses leads to an immediate decrease of their BP in smaller settlements (McKee et al. 1989; Aguiar et al. 2014; Helmig et al. 2014).

Concerning the PEU, we could not observe its significant moderating effect on the relationship between M&S's SOs and BP. According to the pharmacists' qualitative feedbacks the environmental changes can easily be interpreted as radical shifts which necessitated a

business oriented transformation of pharmacy operation. It means that pharmacy managers willing to locate potential ways out from the negative effects of restrictive measures find quite axiomatic that opening up new markets, launching innovative products and services are of most promising, if any strategic solution. Thus, more venturesome SOs (e.g. Prospectors) are rewarded by BP irrespectively the degree of PEU. Apart from the PEU's by and large insignificant moderating effect, it still exerted some influence on changes of the pharmacies' BP in some cases. We again point towards the potential worsening of BP caused by "becoming too comfortable" in parallel to a decreased degree of PEU, as there indeed were some situations, when a decrease of PEU and the pharmacies' BP exhibited correlation.

The difference in results shown by multi-group and interaction techniques aimed at uncovering the GL's moderating effect can be viewed upon as the biggest methodological "mystery" of our study. Based on in-depth interviews with representatives of key sectoral stakeholders conducted beforehand and after obtaining our results, we accepted the experiences gathered from multi-group mathematical-statistical techniques. It seems logical, that SO really exerts a more substantial impact on BP in case of rural pharmacies characterised by less favourable demand conditions, than in case of urban pharmacies "protected" by larger population, higher purchasing power and a diversity of patients' needs and preferences. Hence, our paper revealed that the widespread sectoral "cliché" as rural pharmacies are doomed to failure is not true, since if they explicitly take on challenges coming from increased competitive intensity imposed by competitor pharmacies or retail stores and consistently expand their product/service portfolio, they are indeed capable to realise optimal BP.

We expected the pharmacies' BP to be largely determined by socio-demographic characteristics, yet when integrating these variables into the more complex regression and SEM analyses with SO, PEU, GL and site attributes, only the variables "total area of space" and "number of employees" exerted a significant influence on changes of sales and net profit. The number of employees is more of a consequence than a cause

of BP, as probably the basic relationship of "the higher the BP, the more employees are needed" prevailed (Helmig et al. 2014). It is unrealistic to assume pharmacies would hire more employees just in order to increase BP by directing more human resources on expanding their portfolio, on stock management and marketing activities. The significance of the total area of space as compared to the officina's (sales area) size is surprising, as based on conventional marketing logic it is the larger sales area that leads to higher sales, not the larger storage room, back office or laboratory (Desselle–Zgarrick 2004). The area of the officina and the pharmacies' total space however, correlate with each other, which confirms the sectoral experience according to which a sizeable back office capacity is also needed to successfully run pharmacies offering a wide range of products (Clark–White 2009).

We predicted a notable contribution of site characteristics to BP (Pillittere et al. 2009), but it was only the number of passers-by the pharmacy that imposed a significant positive effect on both sales and net profit. Curiously, even the effect of the hospitals', healthcare institutions' and retail units' vicinity only approached significance. The pharmacies' BP hence was determined rather by socio-demographic characteristics and SO, collectively "suppressing" partial effects of site attributes. On the one hand our results contradict the majority of retail economics' empirical experiences (Huff 1964; Levy–Weitz 2012), while on the other they prove that a conscious choice of viable SO and its consistent implementation could contribute to the increase of BP in a more substantial way. This indicates the supervision of financial resources spent on the development of location and site parameters as well as physical evidences of pharmacies.

Conclusions

Following the detailed presentation of our results, as a conclusion of the paper we provided a clear arrangement and summary of the key findings derived from answering and testing our research questions and hypotheses pertaining to the sector-specific emergence and the BP implications of M&S's SOs.

In our study we made an attempt to approach the transformation process of the HPRDS in a scientific way without any political preconceptions or professional interests. We have proven that due to turbulent changes experienced in the market, legislative and pharmaceutical environments we could witness a clear divergence in the pharmacies' adaptive behaviour and BP. Our findings pointed out that in spite of the restrictive austerity measures and bureaucratic/ethical coordination mechanisms, consciously chosen and consistently implemented SOs have sporadically appeared and became of crucial importance in successfully running pharmacies. Our results suggest that market oriented and proactive strategic stances pursued by pharmacies could substantially contribute to the enhancement of BP irrespectively to any socio-demographic, location or site characteristics. However, as managerial skills of pharmacists are rudimentary, many of them still struggle with the development of such entrepreneurial behaviour and the execution of proper strategic tasks.

As far as the main limitations of our research are concerned we have to admit that we only managed to apply two of the originally planned three extraction techniques aiming to identify M&S's SOs (Snow–Hambrick 1980). Besides the Segev scale and self-typing paragraphs method, the method of objective indicators did not contribute to the assignment of pharmacies to SOs, thus the classical convergent validity of measurement instruments can be further improved in later studies. The prevalence of Prospector, Analyser and Defender/Reactor SOs identified in the HPRDS did not contribute substantially to the explanation of the pharmacies' profitability. In the vast majority of our examinations conducted by SEM-based techniques, we obtained quite decent values for fit indices (CMIN/d.f., RMSEA, CFI) with the exception of the SRMR indicator that did not comply with the cut-off criteria determined by the methodological literature in any case.

In the future we would promote to shift from cross-sectional data collection designs, since the development of strategic awareness and trends in changes of SOs observed within the sector can only be quantified via longitudinal studies. Moreover, studies conducted on the

development of necessary management skills and competencies of pharmacists represent a promising research area and a sector-specific challenge to both academics and practitioners.

One of the main deficiencies of our paper lies in the fact that – knowing the structure of the Hungarian public pharmacies – the criteria of representativeness were not completely met in our research. This was already determined by the sampling frame, but the chosen counties according to their socio-demographic and sector-specific characteristics, demonstrate quite well the structural peculiarities of the total pharmacy population. Our sample was representative in terms of settlement structure, BP, and corporate legal form, whereas it was not according to ownership structure and the participation in horizontal and vertical cooperation forms. Nevertheless, despite our expectations, the participation of pharmacies in horizontal cooperation and/or vertical integrations did not influence their BP. The examination of strategic behavioural patterns in similar cooperation forms could be a promising and gap-filling research area, especially around the degree of con(di)vergence in SOs pursued by the "headquarter" and participating pharmacies, and its BP implications as well.

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Annexes

Annex 1. The summary of the answers given to the research questions of our study

	RESEARCH QUESTION	ANSWER
Q1	According to the environmental adaptation behaviour of pharmacies, can we observe all the original SOs of M&S in the HPRDS?	No
Q2	In the HPRDS whether markedly distinguished, pure SOs or hybrid/mix environmental adaptation patterns can be identified?	2 pure and 1 hybrid, rather "mix"
Q3	To what extent the distribution ratios of pharmacies - following Prospector, Defender, Analyser and Reactor SOs identified in the HPRDS - differ based on the classification results of diverse strategy extraction techniques applied in our research?	4 factor: significantly 3 factor: minimally
Q4	To what extent the distribution ratios of pharmacies - pursuing different industry-specific SOs of M&S - differs from each other?	According to both method: D/R(%) >A(%) >P(%)

Q4a	Is the distribution ratio of pharmacies following Defender SO exceeded by that of pharmacies pursuing Prospector SO?	Deleted
Q4b	Is the distribution ratio of pharmacies following Analyser SO exceeded by that of pharmacies pursuing Prospector SO?	Paragraphs: No Segev: No
Q4c	Is the distribution ratio of pharmacies following Defender SO exceeded by that of pharmacies pursuing Analyser SO?	Deleted
Q4d	Is the distribution ratio of pharmacies following Analyser and Prospector SOs exceeded by pharmacies pursuing Defender/Reactor SO?	Paragraphs: Prospector Yes, Analyser No Segev: Yes, both
Q5	Does the degree of PEU by pharmacy managers - following different SOs of M&S - differ from each other?	Yes
Q5a	Is the degree of PEU by pharmacists following Analyser SO exceeded by the degree of PEU by pharmacists pursuing Prospector SO?	Yes
Q5b	Is the degree of PEU by pharmacists following Defender SO exceeded by the degree of PEU by pharmacists pursuing Analyser SO?	Deleted
Q5c	Is the degree of PEU by pharmacists following Defender SO exceeded by the degree of PEU by pharmacists pursuing Prospector SO?	Deleted
Q5d	Is the degree of PEU by pharmacists following Prospector and Analyser SOs exceeded by the degree of PEU by pharmacists pursuing Defender/ Reactor SO?	No (Analyser: Yes Prospector: No)
Q6	Does the prevalence of different SOs of M&S differ according to groups of pharmacies characterised by high/low levels of PEU?	No
Q6a	In the group of pharmacies characterised by high levels of PEU is the prevalence of Prospector SO greater than in the group featured by low levels of PEU?	No

Q6b	In the group of pharmacies characterised by high levels of PEU is the prevalence of Defender SO lesser than in the group featured by low levels of PEU	Deleted
Q6c	In the group of pharmacies characterised by high levels of PEU is the prevalence of Analyser SO lesser than in the group featured by low levels of PEU?	No
Q6d	In the group of pharmacies characterised by high levels of PEU is the prevalence of Defender/ Reactor SO greater than in the group featured by low levels of PEU?	No
Q7	Is the degree of influence of SOs followed by pharmacies on PEU exceeded by the effect of PEU by pharmacists exerted on the SOs?	No

Source: author's own design

Annex 2. Summarised evaluation of the results of the hypotheses formulated and tested

	HYPOTHESES	RESULTS
H1	The strength of the relationship between Prospector, Analyser, Defender SOs and the sales of pharmacies differ from each other	Accepted
H1a	The strength of positive the relationship between Prospector SO and sales of pharmacies exceeds the degree of the positive relationship between Analyser SO and sales of pharmacies	Accepted
H1b	The strength of the positive relationship between Prospector SO and sales of pharmacies exceeds the degree of the positive relationship between Defender SO and sales of pharmacies	Cancelled
H1c	The strength of the positive relationship between Analyser SO and sales of pharmacies exceeds the degree of the positive relationship between Defender SO and sales of pharmacies	Cancelled

H1d	Following Defender/Reactor SO makes a negative influence on the sales of pharmacies	Accepted
H2	The strength of the relationship between Prospector, Analyser, Defender SOs and the net profit of pharmacies differ from each other	Rejected
H2a	The strength of the positive relationship between Defender SO and the net profit of pharmacies exceeds the degree of the positive relationship between Analyser SO and the net profit of pharmacies	Cancelled
H2b	The strength of the positive relationship between Defender SO and the net profit of pharmacies exceeds the degree of the positive relationship between Prospector SO and the net profit of pharmacies	Cancelled
H2c	The strength of the positive relationship between Analyser SO and the net profit of pharmacies exceeds the degree of the positive relationship between	Rejected
H2d	Prospector SO and the net profit of pharmacies Following Defender/Reactor SO has a negative effect on the net profit of the pharmacies	Rejected
H3	The PEU moderates the relationship between M&S's SOs and sales of the pharmacies	Rejected
H3a	In parallel to increased degree of PEU the positive relationship between Prospector SO and the sales of the pharmacies becomes stronger	Rejected
H3b	In parallel to increased degree of PEU the positive relationship between Analyser SO and the sales of the pharmacies becomes stronger	Rejected
H3c	In parallel to increased degree of PEU the positive relationship between Defender SO and the sales of the pharmacies becomes stronger	Cancelled
H3d	In parallel to increased degree of PEU the negative relationship between Defender/Reactor SO and the sales of the pharmacies strengthens	Rejected
H4	The PEU moderates the relationships between M&S's SOs and net income of the pharmacies	Rejected

H4a	In parallel to increased degree of PEU the positive relationship between Prospector SO and the net profit of pharmacies weakens	Rejected
H4b	In parallel to increased degree of PEU the positive relationship between Analyser SO and the net profit of pharmacies weakens	Rejected
H4c	In parallel to increased degree of PEU the positive relationship between Defender SO and the net profit of pharmacies weakens	Cancelled
H4d	In parallel to increased degree of PEU the negative relationship between Defender/Reactor SO and the net profit of pharmacies strengthens	Rejected
H5	The GL of the pharmacies moderates the relationship between the SOs and sales of the pharmacies	Partially accepted
H5a	In urban context the positive relationship between Prospector SO and sales of pharmacies becomes stronger compared to rural areas	Rejected
H5b	In urban context the positive relationship between Defender SO and sales of pharmacies becomes stronger compared to rural areas	Cancelled
H5c	In urban context the positive relationship between Analyser SO and sales of pharmacies becomes stronger compared to rural areas	Rejected
H5d	In urban context the negative relationship between Defender/Reactor SO and sales of pharmacies becomes stronger compared to rural areas	Rejected
H6	The GL of pharmacies moderates the relationship between the SOs and net profit of pharmacies	Partially accepted
H6a	In urban context the positive relationship between Prospector SO and the net profit of pharmacies is weaker than in rural areas	Accepted
H6b	In rural context the positive relationship between Defender SO and the net profit of pharmacies is stronger than in urban areas	Cancelled

H6c	In urban context the positive relationship between Analyser SO and the net profit of pharmacies is weaker than in rural areas	Accepted
H6d	In urban context the negative relationship between Defender/Reactor SO and the net profit of pharmacies is stronger than in rural areas	Rejected
H7	PEU in combination with GL moderates the relationships between M&S's SOs and the sales of pharmacies	Rejected
H7a	In urban context the increasing degree of PEU makes the positive relationship between Prospector SO and the sales of pharmacies stronger than that experienced in rural environment	Rejected
H7b	In urban context the increasing degree of PEU makes the positive relationship between Analyser SO and the sales of pharmacies stronger than that experienced in rural environment	Rejected
H7c	In urban context the increasing degree of PEU makes the positive relationship between Defender SO and the sales of the pharmacies stronger than that experienced in rural environment	Cancelled
H7d	In rural context the increasing degree of PEU makes the negative relationship between Defender/Reactor SO and the sales of the pharmacies stronger than that experienced in urban environment	Rejected
H8	PEU in combination with GL moderates the relationships between M&S's SOs and the net profit of pharmacies	Rejected
H8a	In rural context the increasing degree of PEU makes the positive relationship between Prospector SO and the net profit of pharmacies weaker than that experienced in urban environment	Rejected

H8b	In rural context the increasing degree of PEU makes the positive relationship between Analyser SO and the net profit of pharmacies weaker than that experienced in urban environment	Rejected
H8c	In rural context the increasing degree of PEU makes the positive relationship between Defender SO and the net profit of pharmacies weaker than that experienced in urban environment	Cancelled
H8d	In rural context the increasing degree of PEU makes the negative relationship between Defender/Reactor SO and the net profit of pharmacies stronger than that experienced in urban environment	Rejected
H9	The interrelations established as a result of the potential moderating influence of the PEU and GL - on the relationship between the SO and BP are robust after controlling for the effect of relevant industry-specific variables	Partially accepted
H9a	The observed relationships between the SOs of Miles and Snow and sales of pharmacies are robust	Partially accepted
H9b	The observed relationships between the SOs of Miles and Snow and net profit of pharmacies are robust	Partially accepted

Közgazdász Fórum
Forum on Economics and Business
18 (125), 55–77.
2015/4

Sport development initiatives at micro-regional level – Theoretical propositions and case study analysis[1]

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Sport development initiatives organized at micro-regional level have gained strength in line with sports becoming increasingly embedded in the Hungarian society. Our paper provides a structural overview of the economic aspects of these initiatives touching upon sporting, social policy, and social sciences aspects. Empirical case studies illustrate selected elements of best practices in various areas. Our results provide a benchmark for other micro-regional sport development programmes which weren't covered in our research, as well as a basis for consequent scholarly efforts.

Keywords: micro-region, regional development, youth development, sport, strategy.

JEL codes: L83, L38, L50.

Introduction

In 1951 in a small town in Baden-Württemberg there was a 25 years-old hair dresser, Emil Beck watching the skilful ability of the fencing gentlemen in the film "The Three Musketeers" overwhelmed by the beauty of swordsmanship. Impressed by the film based on Alexandre Dumas' novel he set his mind on becoming a professional fencer, establishing a fencing club in his town of 10 000 inhabitants, Tauberbischofsheim. Three years later they arranged trainings for

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Published: Hungarian Economists' Society from Romania and Department of Economics and Business Administration in Hungarian Language at Babeș–Bolyai University
ISSN: 1582-1986 www.econ.ubbcluj.ro/kozgazdaszforum

fencing in a cellar as the official section of the local sports club. The club achieved their first German championship title soon, followed by the 370 Olympic, world championship and European championship trophies. (Coyle 2009)

This story sounds like a fairy tale; however, it exemplifies how strong a driver sport may become for achieving social-economic development. The impacts may reach beyond the interests of an individual, a club or a town – it calls for the scholarly research of sport development programme's potential impact on the competitiveness of a region.

Such success stories also abound in Hungary. Our scholarly ambition was to uncover some of them, as well as to analyse the social-economic impacts of sport development programmes. The results from the first two case studies, along with the key points of the analytical generalisation are summarised in our current paper. These can form the basis of a further analysis on the topic to support the development of a theoretical model.

Literature review

Sport development initiatives may have an impact, in our understanding, on the competitiveness of the micro-region or the wider region with implications much beyond the direct sports related improvements. The major findings from our related literature review are shown below with no intention to provide an exhaustive overview of the topic.

The interpretation of micro-regional development

The plethora of related concepts like region, local region or micro-region may cause confusion at times (Pap 2004). According to Süli-Zakar (2005, 1994) a region is a functional connectedness of a social-economic geographical entity with strong internal cohesion reflecting a certain level of integration. Meanwhile, a micro-region is rather an umbrella concept of territorial nature stemming from legal terms and categories, but its practical interpretations may occasionally differ substantially (Pap 2004; Csatári 1995). Szörényiné (1997) underlines the bottom-up organisational characteristics of micro-regions that

reflect the strong role of a shared identity and the feeling of belongingness.

Cséfalvay (2004) interprets regions and micro-regions not as legal constructs, but as entities developed through a social process affected by the intentions, actions and interactions of stakeholders.

Dusek (2006) underlines how strongly social and economic inequalities across regions have risen over the last twenty years in Hungary. This context partly explains a key general priority of regional development driving attention to the idiosyncratic characteristics of each region in their quest for improvement opportunities (Lagendijk–Cornford 2000; Storper 1997; Malmberg–Maskell 1996). It is a fundamental responsibility of settlement marketing to appropriately present that content in the communication towards internal and external stakeholders (Rechnitzer 1995a).

In Rechnitzer's interpretation (1995b. 94) "a strategic approach [in regional development] supports the active management of regional processes with respect to internal resources, and the changes in the external environment. Our vision needs to be adjusted to these factors and implemented along a range of objectives, priorities and programmes." Regional development through sport development, in our view, may gain importance alike if its positive effects are to be fully exploited.

Competitiveness

Competitiveness is one of the most often used concepts in economics (Chikán 2006; Lengyel 2000a), also interpreted by business studies. There is a range of common interpretations of competitiveness, presented by Chikán–Czakó (2009). The ability to change (proactive adaptation) and the sustainability of continual operations are preconditions of competitiveness (Chikán 2006). Four levels of economic competitiveness are discussed by international literature: national, industrial, corporate and product level competitiveness (Boschma 2004; Ajitabh–Momaya 2004; Kitson et al. 2004; Buckley et al. 1988; Moon–Peery 1995; Chikán 2006; Czakó–Gáspár 2007; Némethné 2010).

Regional competitiveness may be interpreted in several ways, for example at macro-region level, e.g. USA, EU, China, Japan or South-East Asia (Chikán 2006) and at the level of smaller geographical regions, e.g. Northern Italy, East Anglia (Porter 1998; Chikán 2006).

Lengyel (2000b) refers to three main priorities in regional development: social and economic cohesion, the protection of natural and cultural heritage, and a more balanced competitiveness within Europe. These may be interpreted as objectives also for the implementation of regional development through sport development.

The regional impacts of sport development

The availability of sports opportunities in the capital and the country-side has shown different development patterns in Hungary since the change of the political-economic system (Laki–Nyerges 2001). While international trends (András 2006, 2011; András et al. 2012; András–Jandó 2012) are reflected well in the capital, supplies in the country-side are often limited to opportunities provided by schools and the local sports clubs (Laki–Nyerges 2006).

Csapó (2011), in his analysis of the sports opportunities in a small settlement, found that a wider availability of sports services may not only satisfy the need for physical activity, but it may serve as a framework for spending leisure time together. Sport provides a forum for fostering social relations and strengthens the feeling of belongingness.

In his work reflecting international phenomena Coyle (2009) identifies "talent hotbeds" at certain locations around the world. These are centres where a larger number of successful athletes from a particular sport are concentrated. Coyle visited a dozen locations to collect data and impressions about "talent factories" ranging from the Dominican fishing village San Pedro de Macoris famous for baseball players to the Spartak Moscow tennis club. By explaining the training and socio-cultural conditions of talent hotbeds he drives attention to the positive impacts of such initiatives at the level of micro-regions and beyond.

In her research paper illustrating the wider social policy context of the issue Szabó (2012) underlines how leisure sport activities may

restrain aggressive social behaviour by utilising excess energy reserves of youth. Furthermore, physically intensive pastime activities support the development of one's own body concept and may operate as a driver for the general improvement of younger generations (Boros–Kalmárné 2010; Neulinger 2008).

Methodology

The key research objective of our research was to understand and analyse the social-economic impact of sport development programmes in selected Hungarian cities. In our exploratory effort, we aim to stimulate discussions on the topic, as well as form the basis of further analysis to support the development of a theoretical model.

For the purpose of our research we interpret micro-regions in a focused way: the integration of settlements arranged by a sport club related to specific sport development initiatives. Their geographical reach may be limited by potentially competing initiatives. We will show how these integrations bear relevance far beyond the original scope of the sport development programme they are built around.

We used the case study research methodology in our research. According to Yin (2003), the case study research methodology is applicable to examine relatively new, unexplored subject areas. Even a single case can be the basis for valuable empirical statements that could lead to analytical generalisation. Our research primarily aims to support the better understanding of the subject, rather than testing particular hypotheses. Data collection was focused on interviews with key stakeholders, including senior officials of the local municipality, sport governing bodies, sport clubs, facility management, athletes and parents. In addition, the documentation and raw statistical data received from the related organisations were also processed. The primary method we applied was content analysis, using open coding procedures (Babbie 2012).

When selecting the settlements and sport centres in our sample we followed the recommendations of Miles–Huberman (1994). First, the youth development centre of an extraordinarily successful individual

sport was selected: the Dorog NC Wrestling Club. The wrestling centre of Dorog is organised at a micro-regional level, rather than at town level, hence a suitable subject to our investigation. Then we involved a strikingly different club into the sample: the women handball club of Székesfehérvár. Although it operates in the main town of the region, it organises the development of youth athletes at a micro-region level. In our analysis of Dorog NC Wrestling Club and the Fehérvár KC Handball Club we did not focus on sport successes but on understanding how youth development was organised and its impact on the development of the given micro-region. The analysis of the two cases, based on their similarities and differences, could form the strong basis of analytical generalisation that could support future research projects.

Data and results

Dorog NC Wrestling Club and its position in the micro-region

The first pilot project of our research subjected the analysis of Dorog NC Wrestling Club (DNC). Wrestling as a traditional individual sport is focused on measuring success by Olympic Games, World Championship and European Championship medals. These measures form the basis of how sport policy makers approach wrestling and also how the wrestling association approaches the performance of clubs (with the additional aspect of their performance in the national championship).

Hungarian wrestling and DNC are in leading position at international level. Hungarian wrestlers won a silver medal at the 2008 Beijing Olympics, and one silver and two bronze medals at the 2012 London Olympics. The president of the wrestling section at DNC, Zoltán Lévai, once noted: "the club of a small town has developed into a multinational club, both in terms of results and the size of membership" (Lévai 2014). In the ranking of the Hungarian Wrestling Federation the club occupies either the first or the second position regularly. In 2011 and 2013, DNC achieved the highest score in the competition between clubs; they won a total of 111 medals (41 gold, 27 silver and 43 bronze medals) at the national individual championships and at the national

School Olympics. Furthermore, local talents won four medals at the Youth World Championship and the European Championship in 2013. In the 2013 European Greco-Roman Cadet Championship the wrestlers from DNC won more points than 23 of the total 34 participating nations.

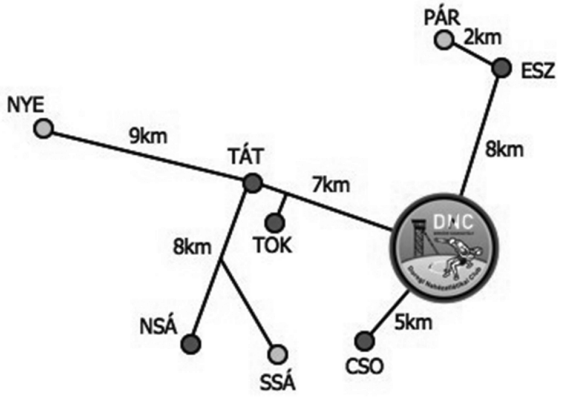
The contribution of DNC to the life of the town Dorog is not limited to the exceptional sport performance at national and international level. Based on our analysis, the regionally structured and internationally well-known wrestling club also plays a role in the health and moral education of youth. Furthermore, the historical performance of the club confirms that the personality of the trainers supports the character development of children. Generations of children who arrived to the club from disadvantaged communities became globally known athletes who deserve the appreciation of people in the region and further afield. Even those who did not eventually make it to the international scene received strong educational support in terms of school results, career perspectives and social relations. Sport creates value this way to the local community. Today DNC has over 300 members. According to Zoltán Lévai "wrestling has been the most popular sport in the town and the nearby settlements" (Lévai 2014).

DNC is not only active in Dorog, but also in the nearby settlements. Three schools in Dorog, two in Esztergom, as well as schools in Csolnok, Nagysáp, Tát, and Tokod have teams managed by DNC, and it plans to expand its operations to Párkány (Slovakia), Nyergesújfalu and Sárisáp (see Figure 1).

In spite of this high level of activity, there is no elementary or secondary school in Dorog with a sport focused education programme. Establishing such a school would be the natural next step in the implementation of a local sport and education strategy, all the more, as local (in the town at the micro-region) elementary and secondary schools form the recruitment basis of DNC. Fostering closer cooperation between schools and DNC would support the appropriate talent development of wrestling.

While the general and equipment quality of sport facilities in the town and nearby settlements vary greatly, they can provide the

necessary basis for continuous trainings for athletes in the micro-region. However, the wrestling hall in Dorog, and a few other training facilities are of a much lower quality than what would fit the requirements and reputation of a wrestling club of the status of DNC. This substantiates the bottleneck of further development both in terms of winning medals and increasing membership.



Note: CSO: Csolnok; ESZ: Esztergom; NSÁ: Nagysáp;
NYE: Nyergesújfalu; PÁR: Párkány; SSÁ: Sárisáp; TÁT: Tát; TOK: Tokod
Source: data from DNC edited by the authors

Figure 1. Settlements in the youth development programme of DNC

The centre of excellence in Dorog involving the youth development system in the micro-region and the in-house trainer development career plan illustrates the potential of local sport initiatives. This also exemplifies the "workshop" concept defined in the sport development programme of the Hungarian Wrestling Federation, as well as the "talent hotbed" concept used by Coyle (2009).

Youth development programme at Fehérvár KC Handball Club

Our second project was based on our research at Fehérvár KC Handball Club (FKC), a top-tier handball club located in Székesfehérvár, a regionally important city with approximately 100 000 inhabitants situated at about 60 kilometres from Budapest.

Handball enjoys unique popularity among team sports in Hungary; there are very few countries worldwide, where this game attracts so much public interest like in Hungary. That is even more conspicuous if we look at the women's side of the sport. Hungarian teams – both the National Team and at club level – belong to the world elite. The Hungarian women's league (NBI) is widely considered as the strongest domestic competition in Europe.

Being a contender in a prominent league as the women's NBI not only means fierce competition on the field, but also off-the-field, i.e. in business terms. Clubs are eager to edge out each other while securing key resources in order to remain competitive both on shorter and longer terms (Kynsburg 2011). The geographical characteristics of the country adds further pressure on the competing teams: due to the short distances between cities possessing internationally recognized women's handball teams, a high concentration of top teams has developed in Hungary. As a result, the markets of rival clubs significantly overlap geographically.

In such a knowledge intensive sector as professional sports, human resources have far-above-average importance (Kozma–Kazai Ónodi 2014; András 2003). Clubs have two main channels to obtain these crucial resources: by signing new players via transfers or by developing skilful athletes themselves via their youth development programmes (often called grass-roots development in professional sports).

In Hungary, the government started the so called "TAO Programme" (Government Decree 107/2011.(VI. 30.) and subsequent revisions), enabling companies to direct up to 70% of their corporate tax payments towards the grass-roots development programmes of five major ball sports including handball. By establishing the legal framework of this form of financing youth sports, the government incentivised handball clubs towards building grass-roots development programmes at a much wider base – lending increasing importance to not only qualitative, but also quantitative aspects of development. Young athletes in great numbers have become a strategic asset for the clubs, not only on longer, but on short term as well.

The strong demand towards children with interest for handball, and the need of geographically densely located clubs to expand their territories led to a new trend that clubs broadened their grass-roots development bases much beyond the boundaries of their respective cities. The conscious use of this regional strategy can be witnessed, for example, at FKC.

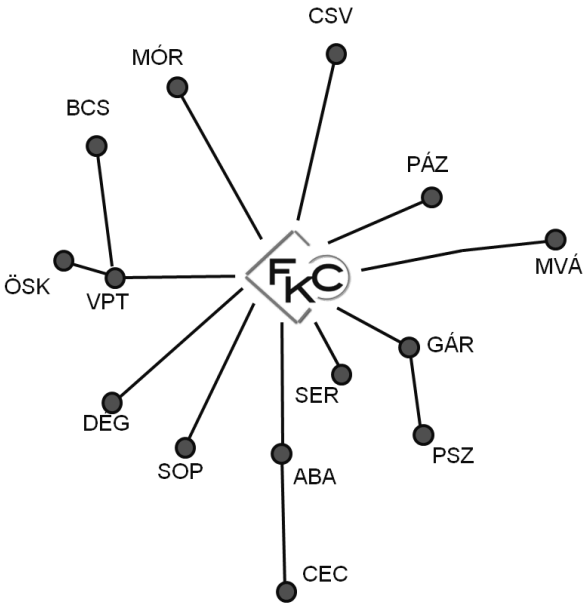
The origins of the predecessor of FKC date back to 1947. Since 1993, the handball team has been a member of the Hungarian top division NBI. Furthermore, FKC is a regular participant at the European club competitions with considerable results: it participated nine times during the last 12 years either in EHF Trophy or in the Cup Winners Cup; the biggest success of the club came in 2005 when FKC won the EHF Trophy, but also reached the semi-finals in 2002 and 2014. The club employs a list of internationally well-known players (e.g. Szabina Mayer, Orsolya Herr), and former greats (e.g. Bea Siti, Rita Deli and Tímea Sugár).

The adult team and the different younger age groups have already benefited from expanded scouting since 2000. FKC recruits among girls in nearby schools and in smaller teams of the neighbourhood who want to continue their studies in Székesfehérvár. Many of these talents – originally coming from small settlements like Csákvár, Pázmánd, Gánt and Aba – were eventually promoted to the first team of FKC and to the Hungarian youth or junior National Teams.

Early relationships with the mini-bases in the region were not in all cases formalised by written agreements before 2010. In that year, FKC established a structured system of affiliated teams by integrating them into the organisation of Kofem SC. This was called the "Regional System" within the club. The newly created farm-system consisted not only of teams from local schools and nearby cities and villages already fostering some handball activities, but the club started to build new groups in places where girls had no access to handball training.

As a unique solution, the so-called "FKC Regional League" has become the main platform and integrating force of the farm-system since its first season in 2010. That little league series runs from

November to May every season and it is played in two or three under-14 age groups. The competition format varies by age groups. The oldest ones (U14) play a "real league" in round-robin format with two games per teams on every game day, while younger ones compete in a certain number of one-day tournaments. There is no entry fee for the participating teams. Not only FKC's own farm-teams are permitted to enter the league, teams from the neighbourhood are also invited. Many of those getting in touch with the club by entering this competition became later an affiliated farm-team.



Note: ABA: Aba; BCS: Bakonycsernye; CEC: Cece; CSV: Csákvár; DÉG: Dég; MÓR: Mór; MVÁ: Martonvásár; GÁR: Gárdony; ÖSK: Öskü; PÁZ: Pázmánd; PSZ: Pusztaszabolcs; SER: Seregélyes; SOP: Soponya; VPT: Várpalota.

Source: data from FKC edited by the authors

Figure 2. Settlements participating in the regional youth championship organised by FKC in the last four seasons

The pool of affiliated grass-roots teams is not fixed. There are changes from time to time, due to the involvement of new groups and some teams also drop out temporarily or permanently. As of the 2014/2015 season, teams from Bakonycsernye, Csákvár, Soponya, and Várpalota were active members of the system; Öskü participated in the FKC Regional League for the first time and was scheduled to join the system in August 2015; while Aba, Pázmánd and Seregélyes ran farm teams (teams that form part of the grassroots development structure of a club) at the time, they did not have full squads to be able to participate in the interim championship of that season.

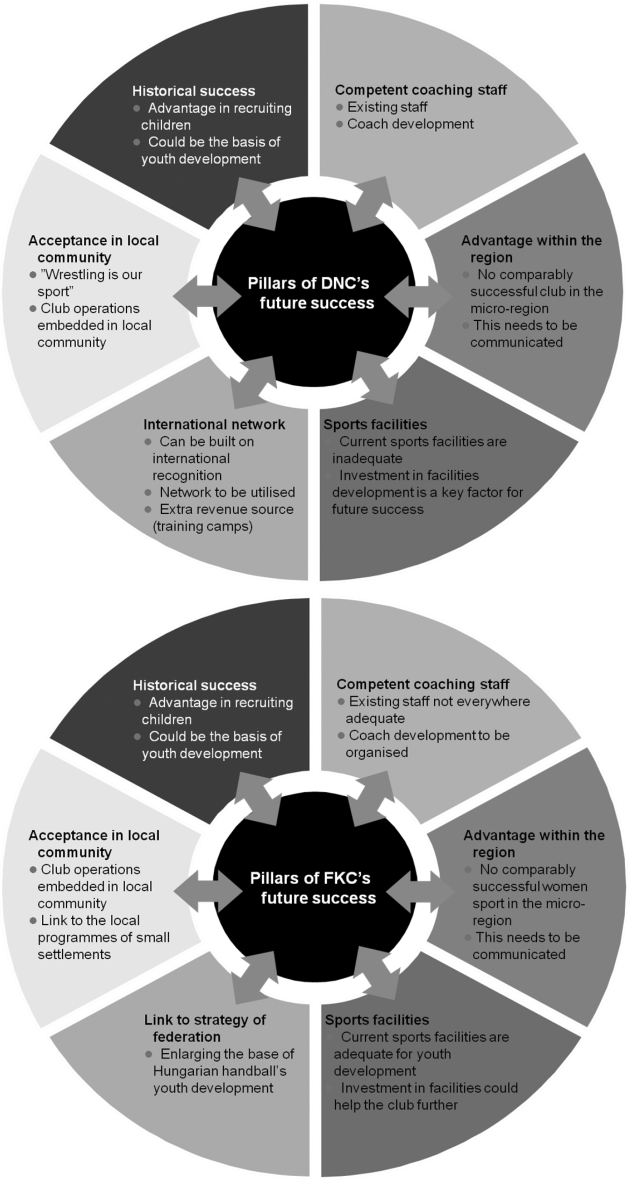
In total, 15 cities and villages from the neighbourhood of Székesfehérvár participated in the FKC Regional League during the four years of its operation (see Figure 2). As a result, about 20% of the players of FKC's junior, youth and cadet teams came from the regional system in the 2014/2015 season.

The pillars of long term success at DNC and FKC

By comparing similarities and differences observed in the two pilot case studies we aimed for further analytical findings related to the factors of long term success for the clubs. We examined the aspects of potential future success along six dimensions. In the conceptual model developed by us, we identified the following pillars of sustainable competitiveness and success: the influence of past successes on recruiting children; the competence base represented by the knowledge of coaches; the position in the competition of different sports within the micro-region; the state of facilities; international recognition and network; and acceptance in local community (see the different components of these pillars in Figure 3).

Historical success

The speciality and distinctiveness of the grass-roots development systems of DNC and FKC lie in being embedded in a regional community reaching over the boundaries of their home towns, Dorog and Székesfehérvár respectively. On one hand, it brings the opportunity of cultivating sports to children living in smaller settlements; on the other hand, it provides their clubs a much wider base to develop potential



Source: own design based on pilot the case-studies

Figure 3. Main pillars of future success for DNC and FKC

future champions. When comparing the two clubs, regional thinking is one of the main similarities. However, there are significant differences to be observed due to the incompatible characters of the two sports (wrestling and handball) and the environment surrounding the two clubs.

Advantage within the region

Successes of the past may be a competitive advantage when attracting the attention of children by expressing credibility towards parents. Every sport relies on grass-roots development by providing potential future champions and by creating a wide base of recreational athletes. Recruiting children may be successful if the club communicates well-defined messages, possesses past successes as sources of credibility and employs coaches with strong and charismatic personality. This pillar is considered as strength in both cases.

The sporting landscapes of Dorog and Székesfehérvár put the two clubs in a completely different competitive position. Dorog with its 12 000 inhabitants is a small town compared to Székesfehérvár with a population of 100 000. On the other hand, DNC enjoys little competition from other local sports, while FKC operates in a very competitive environment by sharing the local market with top Hungarian teams in football (Videoton FC), basketball (Alba Fehérvár) and ice-hockey (AV19), not to mention successful clubs in individual sports like athletics or modern pentathlon: all competing for the same local resources and recognition.

In relation to the different local positions, DNC and FKC communicate different messages to their community in order to meet the expectations of athletes, coaches and the community. In Dorog and its wider region, there are no sports organisations matching the success of DNC: the Hungarian Wrestling Federation awarded Dorog the title "The Town of Wrestling". DNC's main goal is to maintain and to increase that competitive advantage. Based on the situation described above, FKC faces more local competition: although Székesfehérvár possesses larger economic potential, more sports and more clubs share this potential market. We identified FKC's regional advantage as being the region's only successful team in women's sports, and also being the only club with European cup trophy (EHF Trophy in 2005).

Acceptance in the local community

In Dorog, the wrestler Ferenc Bacsa played a key role in raising the so-called "Golden Generation" of the 1980s and 1990s. The members of these generations won the national adult and youth titles consecutively and many of them finished on podium positions at the European, World and Olympic competitions. The European cadet champion László Micskei, the World Championship silver medallist János Kismoni, the Olympic 10th placed Péter Bacsa, the European and World Championship bronze medallist Otto Aubeli are just a few names of internationally successful wrestlers of DNC.

FKC also boasts stars of the recent past and current internationals both in the club and in the local community. Still, their situation is different to the one of DNC and Dorog. First, women's handball is one of the most popular and successful team sports in Hungary; their best players are well-known sports personalities. On the other hand, the popularity of Fehérvár KC cannot be compared to Győri Audi ETO KC, Europe's arguably best team in the last decade and to Ferencváros TC, the second best team in the country. There is an additional aspect of difference based on sports characteristics: while players in team sports switch clubs frequently, in individual sports – like wrestling in the case of Dorog – athletes have a more loyal attitude and stronger links to their clubs. Therefore, it is of great importance to FKC to keep the stars of the recent past within the club and employ them as coaches after the termination of their active career. This was actually the case with the Olympic silver medallists Bea Siti and Rita Deli, the World Championship medallists Tímea Sugár and Eszter Siti.

We observed that past and current role-models play an important role in attracting children to wrestling and handball at DNC and FKC. This effect is often backed by the positive past memories of the parents. Furthermore, role models contribute significantly to keep talented youngsters within the frames of the club and to strengthen the regional farm-system of grass-roots development.

Competent coaching staff

Former greats contribute considerably to the accumulated competences within the coaching staff at FKC. Beáta Siti works as

assistant coach of the adult team, Rita Deli as head of the youth department and coach of the junior team, Tímea Sugár as the goalkeepers' coach through the whole system and Eszter Siti started coaching a younger age group when she was still playing handball. However, the affiliate teams present a rather mixed picture in terms of the composition of coaching staff. While in Várpalota, a former Hungarian international, Erzsébet Sulyok works with the youngsters, and in some places competent physical education teachers take the coaching role, there are examples – Aba and Seregélyes – where the lack of teachers with handball background led to a setback in the operation of the farm-teams.

In Dorog, the names of Ferenc Bacsa and Zoltán Lévai mark the coaching competence of the club. After developing the Golden Generation, Ferenc Bacsa worked with the Hungarian National Team and returned to DHC at the end of 2000. At that time, he convinced his former pupil, Zoltán Lévai to start working as a coach at the club. The club's regional model is a fruit of their successful co-operation. Within the frame of this model, they have established a coach development program in order to satisfy the need of the system for competent young coaches.

An outstanding coaching staff, both in terms of personality and coaching qualities, is indispensable for sustainable success. At that pillar of success, there are differences observed at the two clubs. With handball being a professional team sport exposed to substantial public interest in Hungary, due to its popularity and media presence, the club operates under constant pressure to perform well in the league, both on short term and long term. Achieving expected results by the adult team week-by-week is a primary goal for the organisation. As a consequence, there are frequent changes in the head coach position. The lasting continuity of the coaching staff observed at DNC is rare in handball. In general, constant coach development, building a competent coaching staff for long term may be one of the main priorities of clubs in order to maintain a high professional level of operations.

Sports facilities

The quality of infrastructure is an increasingly important factor in terms of attracting children and providing them an environment where

their talent may develop. That requires facilities in a certain number, size and quality, appropriate equipment and ancillary installations. Suitable facilities are indispensable for future success and at the same time they add considerable value to the life of local communities.

The state of infrastructure shows a rather mixed picture at both clubs. While DNC's wrestlers train in recently built, high quality facilities in Csolnok, Nagysáp and Tokod, the conditions of the halls used in Dorog and Esztergom lag far behind the requirements of the professional work managed at the club. Dissolving this bottleneck of development through infrastructural investments is a congruent intention of both town and club management.

Köfém Sports Hall is owned by the Székesfehérvár municipality, but it is operated by FKC. The sports hall is the venue of handball trainings throughout the day. Besides that, the club rents training halls in different schools to let all their grass-roots teams sufficient practice time on handball field. However, the rented halls do not match the size of a handball court (40x20 metres) meaning a difficult compromise in terms of suitability. There is an urgent need for constructing their self-owned training hall next to the current sports hall to solve the situation. The facility landscape of the teams in the farm-system shows a mixed picture: the school in Seregélyes possesses a 40x20 metres sports hall fulfilling all needs for high quality training; teams in Csákvár, Bakonycsernye, Soponya and Várpalota train in smaller good halls; and some school teams use but basketball court sized (much smaller) halls.

International network

International relations, well-functioning networks are beneficial assets for a club: international cooperation inspires athletes (both adults and young ones), enables an exchange of knowledge and experience, and has a positive effect on settlement marketing and tourism. Due to the international recognition of Hungarian wrestling and the central geographical location of Hungary, DNC is able to generate additional revenue by organising international tournaments and hosting training camps. There is further room for improvement in this segment as the planned infrastructural projects will be completed.

These projects will give the club a further boost by exploiting the advantages of its international network.

International relations are one of FKC's main strengths. Besides regular participation in European cup competitions, the club hosts its own sporting events each year. These involve summer tournaments for club teams and training camps for both clubs and National Teams contributing to Székesfehérvár's tourism with approximately 500-700 hotel nights per year. In the last ten years, Norwegian and Danish club teams, National Teams from Argentina, Chile, Angola and Japan were recurring guests of FKC. The international network of the club was further enriched by employing a Norwegian head coach for two seasons. As it is common in professional team sports, the playing squad includes a number of foreign players. Two Japanese and one Serbian professionals play for FKC this season. The encounter of different handball cultures has constructive and fruitful effects on both the coaching staff and on the development of players.

Conclusions

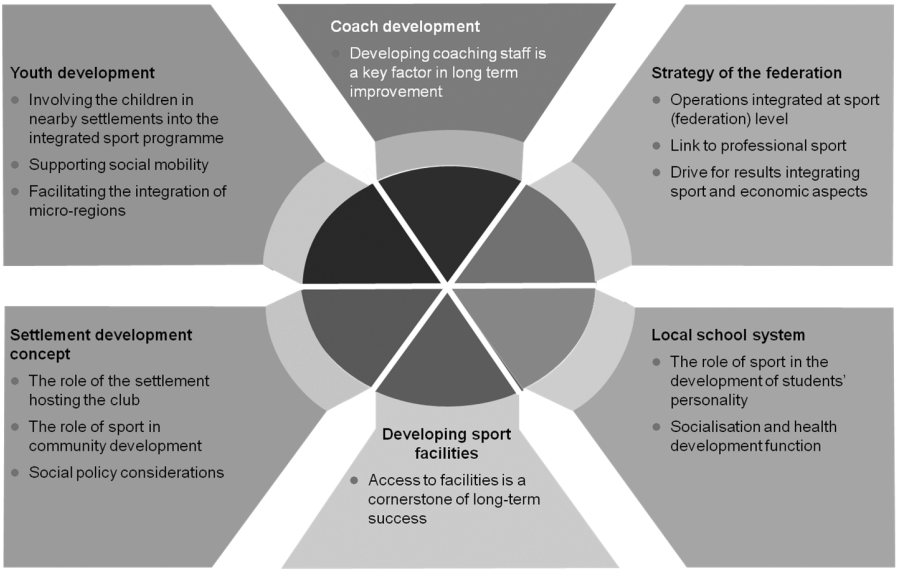
As a result of our analysis of the two case studies, we developed a preliminary conceptual model for sports development at micro-regional level (Figure 4). Our intention was to let this model serve as a framework to be used in analysing the regional effects of other sports and clubs. In this closing section we summarise the analytical findings of our research done so far.

Our suggested model, reflecting the concept enabling the development of DNC and FKC, is based on six main pillars (see Figure 4).

First, the regionally embedded structure of the grass-roots development programme at DNC and FKC is in accordance with the sports development concepts of their respective federations (Hungarian Wrestling Federation and Hungarian Handball Federation).

Furthermore, the development of the coaching staff is a strategic priority; it is currently the strength of DNC, and a task to be accomplished at FKC in the near future.

Infrastructure development is another key aspect; here we have observed a different pattern: the club in Székesfehérvár is in better



Source: own design based on pilot the case-studies

Figure 4. A conceptual framework for regional sports development

position, than the one in Dorog. In both cases the strategic direction to follow is the same, but the respective scales are different.

In both cases, a key feature of the grass-roots development structure lies in being embedded in a regional community reaching over the boundaries of their settlements. This structure allows sporting opportunities to children living in small villages and at the same time it provides the clubs a wider base in developing potential top athletes. Local communities may support the clubs both morally and practically by giving them organisational help and by showing interest towards their events. If this happens, it will strengthen the perspectives of the clubs both financially and strategically in a locally embedded way. The grass-roots development models established by these two clubs could have a significant role in the general development of the relevant micro-regions. Sports may create closer interaction between the populations of settlements in the region. Even children living in villages may have access to activities that help them towards a healthy lifestyle, provide

them the opportunity to participate in sporting activities guided by competent coaches, and they face better perspectives in their further studies.

Finally, the development concepts of the local municipalities of the involved cities and villages may provide critical support for the initiatives' sustainable success. Local policies may emphasise the positive effects that reach beyond sports. These sport based systems foster relationships spanning over micro-regions, involving different cities and villages. Municipalities may communicate with and link important stakeholders, and may apply for vital funding sources.

Based on our initial model development efforts, under the given conditions, sport development concepts will not only improve local sports, but will provide strategic benefits to the educational system and the wider social-economic processes of the settlements and micro-regions involved. Additional case studies are expected to further refine the relationships defined by our preliminary conceptual model.

We aimed to build a starting point for future scholarly efforts driving attention to the subject. Our results may become a source of inspiration, orientation for actual sport development programmes in Hungary, thereby contributing to more effective and efficient operations.

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Közgazdász Fórum
Forum on Economics and Business
18 (125), 78–97.

2015/4

Social media activities of small and medium-sized enterprises – Special contents and their consumer reactions in the case of Hungarian catering establishments[1]

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Presence in social media is an important element in the communication of catering establishments. The most frequently used platform in Hungary – that is extraordinarily important, and the only reasonably accessible marketing communications platform for many catering companies – is Facebook. The marketing approach of small and medium-sized enterprises help us understand how these organizations exploit the opportunities offered by social media. In our empirical research we analyse how users perceive the business-purposed information forwarded to them on the social media platform, and how intensive are the consumers' activities on their most preferred catering establishment's site. For this purpose, we content-analyse subjective consumer narratives (N=151) where respondents were asked to write about their relationship with their most preferred catering establishment in the online social sphere. Based on the results of the present analysis, and in a practical perspective, conscious content management of brands could contribute to reach and to engage users in the virtual sphere more efficiently.

Keywords: social media, brand community, small and medium-sized enterprises.

JEL codes: M31, M37, M39.

[1] We gratefully acknowledge the funding from the European Community's Seventh Framework Programme under grant agreement CRE8TV.EU-320203 that has enabled us to undertake this research. Specifically, this paper has been derived from Task 4.3.2. and constitutes Deliverable 4.3.2(R).

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Published: Hungarian Economists' Society from Romania and Department of Economics and Business Administration in Hungarian Language at Babeș–Bolyai University
ISSN: 1582-1986 www.econ.ubbcluj.ro/kozgazdaszforum

Introduction

Applying social media as a marketing communications tool has become nowadays a requirement, because consumers expect it as a substantial ingredient. Besides, the competitors' social media activities force companies to be present on these platforms (He et al. 2014). A good example of this pressure is that on Facebook – considered to be the most famous social media platform – 30 million companies are present (Paradiso 2015), and this platform can give the companies the opportunity to engage existing customers, and attract new ones (He et al. 2014). The question is whether this "physical" presence goes hand in hand with an informed use of the platform. Indeed, the fact that the majority of these companies are not able to use these platforms effectively as a marketing communications tool can be described as a general phenomenon (Csordás et al. 2014). That is especially true in the case of small and medium-sized enterprises (hereinafter referred to as SMEs), which have limited resources and experiences for their marketing activities. The constrained use of these SMEs' financial, IT, and human resources, compared to their larger counterparts (He et al. 2014) can lead to distinctive social media strategies and usage patterns (Vuori–Okkonen 2012). Scientific papers formerly studied how companies in general can harness social media and reach their consumers (Kaplan–Haenlein 2010; Kietzmann et al. 2011; Culnan et al. 2010; Csordás et al. 2014). Most of these studies examined the case of large, international enterprises and their social media usage (He et al. 2013), and the SME-specific-analysis is yet to come. This study is focused on the social media – and especially on Facebook – usage of small firms, focusing on their application of specific social media contents that are rather accessible for SMEs than large companies. We consider these companies' social media contents as distinctive marketing communications tools to achieve better business outcomes.

Attributes of small and medium-sized enterprise marketing in social media usage

The general definitions of marketing are more applicable to large companies. Carson (1993) suggests applying general marketing notions and theories in a way that these approaches adapt to the unique attributes of SMEs. SME definitions for marketing are present in the related literature – nevertheless these are not widely accepted –, and the common point is that they are in connection mostly with entrepreneurial behaviour (Carson et al. 1995; Reynolds 2002).

According to Reijonen (2010), the main purposes of SME marketing is not substantially different from that of large companies' (i.e. informing consumers of the company and its products, raising sales, marketing communications), but what it is more relevant and feasible is the elaboration and maintenance of significant and honest relationships with consumers or business partners (Hill 2001). The larger a SME is the higher the probability that marketing officially becomes an integral part of the business processes, and it is not identified anymore as sales and/or advertising. The relevance of the question whether marketing is a standalone function in the life of the company or not increases with company size. Reijonen (2010. 279) presumes that "marketing is used as the needs of the moment", that is only insignificant attention is paid on planning, strategy, and analysis. Moreover, it is typical that SMEs have a marketing that is informal, loose, unstructured, spontaneous, and reactive, adapting itself to industry norms (Gilmore et al. 2001).

SMEs cannot compete with large companies with their marketing practices, because they lack the resource conditions of a neck and neck competition (Carson 2001).

Table 1 presents the contradictions among the marketing theories and the SME-specific reality. The specific characteristics of SME marketing presented in Table 1 help us understand how these organizations exploit the opportunities offered by social media.

Table 1. Differences of traditional and SME-specific marketing theories

Formal marketing practices		SME marketing behaviour
• linear, rational behaviour-predictions • faith in rationality • ignoring social effects on behaviour • limited information and knowledge exists in the real world, and that leads to theoretical disadvantage	Gap between the traditional marketing theories and the actual SME-specific behaviour	• application of marketing practices in a non-linear, irrational way • limited resources • entrepreneurial decision-making under the conditions of limited knowledge • uncertainty and market turbulence • owner/manager effect on SME behaviour • dependence on manager intuition

Source: own design, based on Fillis (2003)

The advantages harnessed by social media in the case of large companies is already known: branding (advertising, public relations, content delivery); sales; enhancing customer and firm interaction; understanding customer needs and wants; attracting new customers; retaining customers (He et al. 2014). Although SMEs do not have the same resources as large companies, social media usage as – in a way, "free" – social networking can be a potential competitive tool for achieving the aforementioned advantages. Moreover, consumers tend to interact more with SMEs rather than with large enterprises; SMEs are seen by consumers as "friends", inspiring them to support small business owners in the social media sphere (Vorvoreanu 2009). The more personal tone is a potential opportunity and a potential threat for them, only because of their limited resources, and at the same time, limited number of fans in the social media sphere (Michelidou et al. 2011).

Content marketing and special Facebook content types

Content marketing is "the marketing and business process for creating and distributing valuable and compelling content to attract, acquire, and engage a clearly defined and understood target audience—with the objective of driving profitable customer action" (Pulizzi 2014. 5). Indeed, content is the instrument of choice through which

interaction can be stimulated in social media (Sabate et al. 2014). Content marketing alone, or in line with what is referred to as native advertising on one hand or brand storytelling on the other hand is a current trend in marketing communications. While firms struggle to make "ads not to act like ads anymore" (Campbell–Marks 2015) and insert their messages into user-relevant contexts, small businesses – by dint of their limited scope of activity, but also the personal tone of communications – can offer an organic context to their (social) activity. Moreover, in an engaged environment, with consumers making the first step in communications by hitting, for various reasons, the "like" or "follow" buttons at a firm's social media pages, a two-sided marketing (and social media) communications pattern emerges, with organizations operating in two different environments, thereby becoming media content providers. On one hand, a more direct, "marketing" (target) audience is made up by the actual consumers of the firm's products or services. They remain of primary importance, and are reachable by both traditional and new marketing (communications) techniques. At the same time, an extended, less direct, secondary audience, that we can refer to as the brand's "media" audience is likely to follow the various channels of the firm for the sake of their contents (Csordás 2015).

As the two target groups only partially intersect, the firm needs to emphasize on handling the needs of both, or – as it is often the case with SMEs – find an active niche at the intersection of the two, thus appealing to the interest of a clearly defined target audience with the aim of making them actual "fans" (or, in business terms, long-term partners) by effectively serving the reasons for their "likes", through valuable, relevant, and consistent communications. For best returns, the organization should set up this niche by identifying and properly stimulating key influencers in order to repackage and curate the brand message (Kilgour et al. 2015). In this consumer-oriented logic, the members of this community, their reactions, activities and preferences are then ready to define the brand's (social) communications (e.g. expected incentives, tone of voice, content types) on the long run.

Content marketing techniques are intended to offer users less disruption in their online experience. By changing the function of advertising (Ha–McCann 2008), they aim to make commercial contents perceived by users as useful and/or interesting (i.e. clickable) and less as out-of-context advertising. One important reason behind this movement is that in an era of limited attention consumers are free to follow but then also to unfollow brands on social media. More, it was shown in several studies that consumers are repelled by overt sales and promotional messages (see e.g. Baird–Parasnis 2011). Still, in order not to make corporate publishing a self-serving function, the organization is bounded to structure its communications activities around its activity (yet in a differentiated way), as well as around its target audiences' interests (Holliman–Rowley 2014). Key objectives for content marketing can include brand awareness or reinforcement, lead conversion and nurturing, customer conversion, customer service, customer upsell, and passionate subscribers (Pulizzi 2014).

To elaborate a successful content strategy, a company's activity in online communities can take various shapes (Miller et al. 2009): monitoring, gathering information, supporting or sponsoring communities, establishing or managing sites, or taking part in these groups as a member. Not many empirical studies have revealed a defined typology for categorizing social media contents (Kwok–Yu 2013). According to Csordás and Gáti (2014), company-generated posts on the Facebook pages of catering establishments can be divided into two main groups: informative and entertaining. Whilst in the first case, the main aim is the satisfaction of the consumers' information need with primarily formal impersonal information, hitherto in the latter case, more personal, lighter contents appear, supporting time-out and experience. Many informative contents are normally about the marketing-mix of the catering establishment. This includes information about the physical product, price reductions, or public relations (reference to the news about the company, e.g. in a daily newspaper) included in marketing communications (see also in He et al. 2014). The importance of public relations (hereinafter referred to as PR) contents in

a social media environment cannot be underestimated (He et al. 2014), because long-term relationships with customers and company image-related marketing communications aims can be cost-effectively achieved through social media-driven PR messages. Additionally, informative contents can give many extra service marketing-mix elements of the company like news about the store itself, or about the staff. Entertaining contents are diverse in their topics, but some main themes can be differentiated, such as pictures and comments of the catering establishment, or activity-based contents like games, quizzes, votes, funny pictures and posts, etc. (Csordás–Gáti 2014) that can inspire consumer engagement.

Another differentiation of Facebook contents identified the rather unidirectional sales/marketing messages, and the interactive conversational messages that imply more two-way communication with consumers (Kwok–Yu 2013). The latter can be more personal as a specific type of social media content in the context of catering establishments (see He et al. 2013). Conversational messages can generate more active participation of the consumers, inspiring them to take part in the interactive company-consumer communication.

Research methodology

It is a great challenge for SMEs to apply Facebook appropriately as a strategic marketing tool, since they have to face limited user attention, and continuous and gradually increasing noise caused by their competitors' similar activities (Paradiso 2015). In order to offer a unique tone of voice in social media these firms have the opportunity to create unique content (Vorvoreanu 2009; James 2014). Yet, they equally need to engage the community to participate in the brand's co-creation of value.

As there is no simple formula for successfully publishing in social media due to sectorial characteristics and the diversity of each firm's goals (Agresta et al. 2010), our work aims to extend the knowledge on the characteristics of popular (i.e. memorable) company-generated contents in a specific context, by answering the following research questions:

RQ1. What kinds of unique contents do catering establishment SMEs have?

RQ2. What kinds of contents can be used for the company to inspire consumers for active participation?

We based our research on consumer narratives (N=151) written by university students at business studies related to their preferred catering establishment's Facebook pages (see Table 2). The resulting narratives represent the view of the respondents' own reality (Heinonen 2011) about the Facebook content of the analysed SMEs. The respondents were asked about their perceptions of the different types of contents that the company shared with them. The sample contains restaurants, confectionaries, bakeries, cafeterias, pubs, and bars. We have conducted content analysis of the narratives to identify the categories of contents that were memorable enough for our respondents to mention in their recollections. In this sense, our codes of different content types are the reflections/extracts of the consumers' perceived reality of the SMEs' company-initiated Facebook messages. The coding was done by two independent coders. The content analysis – the "study of recorded human communications", which is "particularly well suited to the study of communications" (Babbie 2010. 333) – was conducted, because we created rules and categories for classifying the units in question to distinguish different social media content types based on our literature review. We tested our preliminary presumptions through qualitative content analysis, which is appropriate for our explorative research design.

Table 2. Research design and methodology

Objectives	Methods	Sample characteristics	Industry	Inclusion criteria	Period of analysis
Analysing consumer narratives to identify catering SME-generated social media content	Qualitative content analysis of consumer narratives about experiences in social media	151 consumer narratives of business university students, aged 20-35, 64 male and 91 female	Services; catering establishments (restaurants, confectionaries, bakeries, cafeterias, pubs, bars)	SMEs (less than 250 employees)	February - April 2015 (3 months)

Source: own design

We focused our research on a selected sector to provide our sample a more homogeneous environment for the more transparent and comparable analysis. Few former studies worked with the use of social media in catering establishments (Durkin–McGowan 2013; He et al. 2014), but we found our selection reassuring, because "eating and drinking motivates people easily, and it is visible on their Facebook sites, too. A restaurant or a confectionary that communicates properly with its fans can attract them even without serious campaigns" (Lévai 2012. 42).

We have used Facebook as our analysed social media platform. The reason for this is the following: in Hungary, the most commonly used platform is Facebook. This social media platform has a great importance for many such SMEs. Moreover, it is even the only really available (affordable and manageable) marketing communications platform.

Data and results

Special Facebook content types

Mentions of unique and idiosyncratic SME-generated Facebook contents were given special attention in the study. Indeed, mentions of these are proof of being most memorable to consumers, and as such these contents performed as unique differentiators from the competition, thereby supporting the company to emerge from the information clutter present on the social media platform. Among these unique contents, we found that the informative and entertaining dimensions as observed by Csordás and Gáti (2014) were identifiable, although often with a significant overlap.

Informative contents (in the form of menu offers, contacts, opening hours, or sales/discounts) are more formal, mainly sales/marketing-related contents that are rather unidirectional and impersonal in nature. In contrast, entertaining contents are related to offers, employees, holidays, funny pictures, and music. These are conversational messages, implying consumer engagement and interaction. A relative liberty of expression and personal tone that SMEs are more prone to use are what makes these contents special and

unique, leading to a more personal and close relationship between SMEs and their consumers.

Among the unique features mentioned in connection with the respondents' favourite catering establishments, five main topic areas were identified, two of which (PR and news) can be related to the informative, while three to the entertainment dimension.

First, PR contents were present in several forms in the narratives, where casual informative content is complemented by different unique information disclosure:

(1) In using social media as a PR channel, companies can promote their media appearances on the social media platform (e.g. promote a blog post), or they can relate to physical events on their Facebook site. PR presence can be identified as informative content, which can be considered special in a way that it can give extra experience for the consumers. Those consumers who liked the site can have additional experience through confirming their positive attitude towards the company. Therefore, PR presence can be useful not only for acquiring new customers, but also for confirming already established relationships.

(2) Second, companies can exhibit extra information about the catering establishment in more personal ways. These contents benefit the consumer for offering instantly useful information (e.g. the store running out of a product). So if some kind of internal, in-store changes happen, the company can report it on its Facebook page. These kind of contents can be reports on the situation, posts about renovations or innovations, special guests (e.g. cute pictures of guests with pets, or updates on the visit of a celebrity), and news attracting customers (e.g. special short-term offers or attention-raising messages about the place broadcasting sports events on a given evening), or job offers. These contents can facilitate consumers getting an inside look into the life of the company, thereby raising their interest for their next physical visit into the store.

If the company informs its Facebook followers before opening time, or about news, it can mean some kind of exclusivity for the consumers,

which can enforce binding towards the company (Vorvoreanu 2009). Based on these findings, the extension of the already existing image and binding can be advantageous.

(3) As special entertaining contents, companies posted private, more personal information (e.g. like a personal blog of the operators, containing many intimate additional traits to their social media platform), with the primary aim of building relationships. SMEs, with their flat organizational hierarchy and a more personal social media management can upload messages more quickly, and without an overcomplicated top level control, because the SME owner/manager mostly immediately gets to know about the content uploaded.

(4) Consumer-generated contents are integrated into the posts, thereby expressing and enforcing the importance of the relationship with the consumers. Based on the consumer narratives, in one of the examples a restaurant lends a teddy bear to guests who wish to travel anywhere in the world. The teddy bear thus becomes an idiosyncratic and identifiable element of the SME's corporate identity. The guests then take photos of the teddy bear, and finally the catering establishment shares these photos on its own Facebook site, which makes the whole content more personal, giving us the feeling of "one of us".

(5) Company-generated contents include entertaining stories, pictures, or videos about the SME itself, or about the atmosphere of the place where the company operates (e.g. company-generated video about Budapest, where the restaurant is situated can give a unique feeling to the consumer). These special media contents are shared by the companies, with the primary aim of mediating some kind of atmosphere, to give the feeling of being special, have an intimate experience with the SME and thereby to engage more the consumer. These special contents can be created by the company itself, but the company can share e.g. artistic photos, too.

Based on the consumer narratives we can observe that the catering SMEs mentioned in the respondents' accounts try to differentiate themselves from their competitors on their Facebook page with

Table 3. Examples of special informative and entertaining Facebook contents

Topic of post	Example
Informative content	
(1) PR: promoting activities and media presence	"They posted the blog posts written about them right after the opening, and it was part of their popularization."
	"I find posts related to festivals, e.g. the latest post about Budapest Essentials urban festival that informs the fans of the page that the representatives of [the bar] will be present, and how and for how long can we get tickets for it."
(2) News about the store	"If they have a quadruped guest on that day (dog-friendly place), they immediately post it on their Facebook page."
	"It is important that under the shared pictures the waiters update the information, e.g. if you still want to taste it, hurry up, we only have 3 pieces left."
	"Occasionally, they have small competitions, too, e.g. who solves the Rubik's cube in the pub gets a free shot."
Entertaining content	
(3) Private information	"The two operators view the page as a personal blog, and they post a story every week."
(4) Sharing consumer-generated content	"They have a teddy bear that can be borrowed if someone goes to a special place, and photos can be made of the bear that the restaurant posts."
	"If any guest sends something interesting, they usually share it. For example, a dear customer made a painting portraying the store, and then a picture was posted of it on the Facebook page, too."
	"They present some creative, consumer-generated salad mix."
(5) Company-generated media content	"They made videos with the same exaggerated care, which presented the food production process, and they gave a good impression of the atmosphere, too."
	"The place shares (…) Youtube videos of the music bands that perform at the bar (promoting the concert to be organized)."
	"They share an artistic photo of Budapest every day, which makes me think how beautiful city we are living in, and the short films of Budapest make me feel alike."

Source: own research

distinctive, idiosyncratic contents that outline their unique, differentiating attributes (see Table 3.).

Contents that encourage active participation

Bearing in mind that the majority of consumers are passive in the social media sphere (van Mierlo 2014) and special Facebook content types have only a limited capability to activate the passive crowd, whereas activity-encouraging, conversational messages have this virtue (Kwok–Yu 2013), content managers have to encourage Facebook contents that generate active consumer participation. Creating engaging contents is a challenge for companies, since only a part of the

consumers are willing to express activity in a greater extent (van Mierlo 2014). However, this activity should be of key priority for companies from different perspectives: on one hand having successfully generated engaging content is a positive affirmation and reflection for the company and by being a channel of communication, it is also a tool to manage the operations in the community. All these contents are powerful only if they can emphasize the peculiar characteristic of the current SME, and if they can highlight its unique positioning strategy.

In the consumer narratives (see Table 4), respondents remembered several attempts for their engagement by the company. In the case of activity-based messages, the main objective is not to inform or to entertain consumers, but to inspire the passive crowd for different activities. Namely:

(1) Encouraging for votes, where the possibility is given for consumers to express their opinions, thereby emphasizing that their remarks are precious for the company. The object of this activity can be directly connected to the main activity of the company, but their other, supplementary opinions can be inquired, too. If the vote is significant in any company-related activity (e.g. the menu depends on the consumers' votes), it can, in turn, generate additional user involvement (e.g. consumers experiencing their voice being heard by the company) and participation in social media activities related to the SME.

(2) Another inspiring activity mentioned by the consumer narratives is questioning, where the emphasis is put on the importance of consumer opinions. As compared to voting, a higher degree of freedom can be identified by asking consumers to express their opinions. Based on the narratives, we were able to differentiate substantive, opinion-requiring, and inviting questions, where the main aim is to raise and maintain interest. On a larger scale, however, one can identify a number of potential risks for the establishments under study, and SMEs in general. Indeed, while SMEs' social media pages can be often considered as higher-involvement than many large brands' pages, for reasons detailed beforehand, they, however, often operate with a smaller number of fans, which can harm the users' willingness to

Table 4. Types of contents that encourage active participation

Contents that generate active participation	Examples
(1) Encouraging votes	"In a spirit of democracy, anyone can vote on particular elements of the menu for the next week."
(2) Questions	"This is a large part of their page, they attract their "fans" into their store, but you don't feel that they force their products on you. There are many offers, generally in the form of an interrogative sentence, like: »Today, all our outlets are open; do you come for a baby sandwich or for an outdoor milk shake? :)«"
(3) Game	"The essential of these games is that they draw lots from among the people who share their weekly menu, and then the winner gets a free menu the next day."
	"They try to inspire their fans to interactivity, and they ask in their post every time what is their favourite food/drink, and they encourage them to take a photo of their self-made hamburgers."
	"They used to promote some kind of game once a week, e.g. last time we had to search for a cup of tea on a photo, and the first one who solved it got a prize, unfortunately I was only the fourth."
(4) Promotion	"I liked the Facebook page of [the bar] a long time ago, because they had a sale, that if you like the page from a smartphone, they give you a discount from their beer."
	"According to a former initiative, the first visitor who checks in on Foursquare gets a free soup."

Source: own research

participate (Parent et al. 2011). Thus, as well as being a tool for consumer involvement, both voting and questioning can be considered as tools for testing a fan base's actual level of involvement. If the firm does not generate enough interest for the users to be involved, these tools should not be used until a higher level of involvement is reached.

(3) Games are probably the most wide-known form of contents that generate active participation. Games appear as external motivating factors, and a form of branded recreation. Beyond conventional games, various competitions and creative tasks were equally described in the narratives. Companies using games need to take into consideration that, on a long run, consumers who are active on a social media page because they expect to win prizes are likely to be harder to be reached without external motivation factors (Baird–Parasnis 2011), and do not belong to the brand's actual community. All this indicates that these kinds of activities should be used in a limited way.

(4) While the above-identified content types can be linked with

raising interest, providing time-out, and underpinning consumer opinions, promotion-type contents have the main purpose of raising sales. In this case, consumers are motivated by various direct incentives offered by the company. Promotions surely raise sales on a short run, however, this tool can be effective in social media on the long run if consumers are motivated to share these pieces of information with each other. Two types of promotions were identified in this category: like-collecting, and check-in promotions, where participants get remunerations for liking the site, and for checking in from the catering establishment, respectively.

Summing up, companies have more opportunities to inspire their consumers for interactivity by conversational messages. Votes and questions (asking about their consumers' opinions, and giving them "power" by e.g. influencing the actual menu in the form of votes or answering questions) give the opportunity for their consumers to get their opinions to the company, thereby creating the bedrock of interactive communication. Inviting questions can persuade consumers to enter the catering establishment even if they did not plan the visit. If done well (i.e. in ways peculiar to the place and/or memorable to their fan base) games can raise commitment towards the SME, while promotions can stimulate online word-of-mouth processes.

Discussion and conclusions

Although there are numerous opportunities on Facebook for consumer activities, consumers mostly do not harness these opportunities: while they perceive (and as the narratives show, they remember) company attempts, some of our respondents qualified themselves as passive users, even of their favourite catering establishment's social media site. This result underpins earlier research findings, namely that only a very few users actually participate online, a phenomenon that was summed up as the "1% rule" (Ebner et al. 2005; Arthur 2006; van Mierlo 2014).

As such, the majority of the consumers in virtual communities are only observers or lurkers, i.e. they view events in the community from outside, instead of posting. Most of the consumers mentioned "liking"

their preferred posts as the only activities they undertake, but some of them carry out other activities as well (e.g. share, comment, check-in, and evaluation). This supports the results of Alhabash and McAlister (2014), who found that consumers tend to give cognitively the least arduous feedback on the content coming towards them. In the case of Facebook, this means clicking on the like button, then sharing, then finally commenting, which happens the most rarely. These three activities were mentioned on several occasions by our respondents, others only occasionally. Nevertheless, companies should give considerably more attention to inspire their consumers for other activities – commenting, check-in –, because these contribute significantly to the word-of-mouth processes, too.

We can sum up that special SME social media contents can be differentiated by their informative and entertaining attributes. These categories are not mutually exclusive, a company can satisfy in the same time both the cognitive and emotional needs of their consumers. That is why we have to look at the personal, more intimate, "one of us" characteristic of a certain social media message besides its informative and/or entertaining nature (RQ1). These contents can only create added value for the SMEs if these businesses' product/service positioning can be used to generate distinctive, idiosyncratic contents.

Based on the analysed consumer narratives, contents that trigger consumer activities are more likely to be games, questions, or votes. Moreover, behind consumer activity, we can identify traditional sales promotion motives (company incentives related to sales, coupons, or presents), thus mixing the sales/marketing and conversational purposes of the message as proposed by Kwok and Yu (2013). Our results, in accordance with Alhabash–McAlister (2014), suggest that it would be advantageous for catering establishment SMEs to inspire more cognitive activities for faster information diffusion. Consumer activity is mostly characterized by clicking on the "like" button, showing a massive presence of passive consumers. This tendency can be reversed by properly positioned, activity-inspiring content creation (RQ2). To harness the opportunities given by social media, a SME from the

catering industry needs time and energy to manage its own official page(s) (Culnan et al. 2010; He et al. 2014). SME digital and social marketing research is in a relatively early stage of development, with few academic results so far in the area.

One of the main limitations of our research is the limited applicability of our results to other sectors, due to the sample selection. Besides, narrowing the focus of the research to Facebook has decreased the generalizability of our results to other social media platforms.

Further research should be conducted on different social media platforms, differentiating between small and medium-sized enterprises. Moreover, we should extend our research into more quantitative methodologies (see He et al. 2013, He et al. 2014), like quantitative content analysis, or exploring case studies from the best-case scenarios in the topic of social media content marketing management. Finally, our future research should focus on other sectors of industry (with significant SME activity), to compare companies' social media content marketing practices under different conditions, as social networking sites may be more relevant for certain industries than for others.

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Közgazdász Fórum
Forum on Economics and Business
18 (125), 98–123.
2015/4

The effect of product perception, shopping experience, and information access on the buying intention of online customers

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Online shopping is already adopted by more than half of the EU Internet users, however Romanian Internet users are much below average in e-commerce adoption. Therefore, assessing the effects of factors influencing buying intention of online customers has theoretical and practical relevance and timeliness. We measured the effects of three online commercial features (product perception, shopping experience, and information access) of web shops on the buying intention of Romanian e-commerce users. A sample consisting of N=259 Romanian online shoppers has been gathered. We found that shopping experience had a positive, highly significant effect on the buying intention, as well as the buying intention on the actual buying behaviour. We did not find significant connections between product perception and buying intention, neither between information access and buying intention. We formulated relevant conclusions regarding our findings, and we also presented future research directions.

Keywords: e-commerce adoption, online commercial features, shopping experience, product perception, information access.

JEL codes: M31, M39, O33, L86.

Introduction

Since the advent of e-commerce in the last decade of the 20th century, Internet technology has penetrated into every detail of our lives (Castells 2014; Gubán 2008). Moreover, with the diffusion of broadband Internet usage by rapidly decreasing costs, the World Wide Web has

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Published: Hungarian Economists' Society from Romania and Department of Economics and Business Administration in Hungarian Language at Babeș–Bolyai University
ISSN: 1582-1986 www.econ.ubbcluj.ro/kozgazdaszforum

become an attractive and engaging, simple-to-use, and acceptable sales channel for customers, and for retailers, as well (Terzi 2011; Gubán 2015). Web shops are sales channels commonly used by more than 50% of the EU Internet users (Eurostat 2015), and with the rapid diffusion of social commerce, the adoption rate will accelerate in the following years (Yadav et al. 2013). Given these above mentioned facts, one can see a very sharp trend regarding the diffusion of e-commerce related Internet. Consumers will increasingly adhere to the idea of shopping online in the following years and retailers are already under pressure to implement these new technologies in their sales strategy technology (Turban et al. 2012). Therefore, assessing the effects of factors influencing buying intention of online customers has an enormous theoretical and practical relevance and timeliness.

When conducting research on the antecedents of a certain behaviour, one has to take into account several possible factors which have an influence to some degree on the behaviour in focus (King–He 2006; Yousafzai et al. 2007a). In the case of online customers this behaviour can be divided into two main elements, namely behavioural intention (in our case the intention to buy), and actual buying. Although in our previous research we have assessed the effect of other relevant factors on the buying intention of online customers (Seer 2015), in this paper we focused only on the presentation of the effects of three main exogenous factors on the intention to buy, known also as 'online commercial features' (Jarvenpaa–Todd 1997). These three factors were product perception, shopping experience, and information access. We opted for the assessment of the effect of product perception, shopping experience, and information access, because these are the most obvious and common antecedents with a possible influence on the online buying intention, as suggested by the literature (Herrero Crespo–Rodriguez del Bosque 2010; Yousafzai et al. 2007a).

Given the above described considerations, our purpose was to present a conclusive research assessing the effect of product perception, shopping experience, and information access on the buying intention of online customers. Within this purpose we aimed to measure the

statistical validity and reliability of the involved constructs by assessing their indicators. After the validity and reliability assessment we aimed to look into the significance of the connections between exogenous (antecedent) variables and buying intention, as an endogenous variable.

We consider our research relevant, because Romania has some rather interesting record regarding e-commerce adoption by its Internet users. Romania has produced a stunning growth in Internet usage in the last decade (InternetWorldStats.com 2015). As for today, more than half of the population is already a regular Internet user and broadband Internet connections are also on a sharp rise compared not only to other countries in the region, but globally, as well (Eurostat 2015; Seybert 2012). Hence, it can be considered a peculiarity that even though there is a critical mass of Romanian Internet users, only a marginal part of these Internet users engage in online shopping activities. According to (Eurostat 2015) only 11% of the Romanian Internet users are also online shoppers. This low level of e-commerce adoption by the Romanian Internet user population is a concern for web shops and it is an interesting research question for specialists of the subject (Radu 2014; Seer 2015). This is why we considered conducting a research on a Romanian sample regarding factors influencing online buying intention in the first place.

Literature review and conceptualization

If one endeavours into the research of Internet technology adoption, one can rapidly see, that technologies as the Internet, or technologies derived from it (such as e-commerce), are in fact, innovations. Rogers (2003. 45) defines innovation "as an idea, a practice, or object that is perceived as new by an individual or other unit of adoption".

In the second half of the 20th century, we could witness the birth of several technological (and non-technological) innovations which had to be adopted, accepted by individuals on different levels of the society in order to become more productive, or to have a more comfortable life.

Gatignon and Robertson (1985) were among the first who modelled the diffusion and adoption of innovations from a market point of view

(more specifically, consumer research). The other perspective was the point of view of information systems scientists. Davis (1989) developed a highly reliable model for explaining technology acceptance which is known as the Technology Acceptance Model (TAM). In the last two decades several improvements have been made to this base model by testing and refining on several situations involving technology acceptance (Chuttur 2009). The basic TAM had been adapted and further developed to increase its explanatory power in different situations and under different contexts (Venkatesh–Bala 2008; Venkatesh et al. 2003).

The most prolific period for e-commerce adoption research using the Technology Acceptance Model was 2000-2005. Before 2000 most of the research was focused on other technologies, such as e-mail, software and enterprise resource management software adoption (King–He 2006), as the first applications of TAM had been also focusing on enterprise software adoption by employees (Davis 1989). After 2005 most TAM-related research focused on the adoption of more novel technologies, such as mobile, IPTV, smartphones and so on (Laroche 2010; Nyírő 2011; Turban et al. 2012). However, we should note that in Central Europe, and especially in Romania and Bulgaria, this proliferation of e-commerce started later, beginning with 2007 (Radu et al. 2008; Seer et al. 2012). This is why most of the research conducted in the first part of the 2000's is still relevant for our research.

Behavioural decision theories were also used as roots for technology adoption modelling. Some of the most important were the Theory of Reasoned Action (Fishbein–Ajzen 1975) and the Theory of Planned Behaviour (Ajzen 1991). These theories are also used till the present day in the context of technology adoption and especially e-commerce adoption.

The above mentioned theoretical models have an important construct in common, namely the 'intention' regarding a certain behaviour, i.e. the intention to accept, to use, or to buy a certain technology, product, etc. (Chuttur 2009; King–He, 2006; Yousafzai et al. 2007a, 2007b). In the following paragraphs we present the development of the behavioural intention construct.

Behavioural intention / Buying intention

The first concept related to behavioural intention was the 'behavioural belief', which meant an individual's belief about the consequences of a particular behaviour. For example, when someone wants to buy from a web shop, his/her (obviously) subjective belief about this planned behaviour can be of many kinds. The concept was rooted in the subjective probability that the behaviour would produce a given outcome (Ajzen 1991; Mathieson 1991).

In this sense, behavioural beliefs are causing the attitudes toward behaviour which refer to an individual's positive or negative evaluations of self-performance of the particular behaviours (Ajzen 1991). In our above mentioned example, an attitude towards buying from a web shop can be the user's positive attitude about this idea: "Shopping from this web shop is a good idea". According to Ajzen (1991) the attitude toward behaviour is the degree to which the performance of the behaviour is valued in a positive or negative way. Attitude can be determined by the total set of accessible behavioural beliefs that link the behaviour to the possible outcomes and other attributes that can have an impact (Ajzen 1991; Mathieson 1991).

In the TAM model of Davis (1989) however, the construct of attitude was not included because it has been found that behavioural intention was a better predictor of actual usage than attitude (Chuttur 2009). Behavioural intention (or BI) measures one's relative strength of intention to perform certain behaviour (Fishbein–Ajzen 1975). The relativity of strength is given by the subjective likelihood of performing or not performing a certain behaviour (Smith–Mackie 2004). The beliefs of important others, weighted by the importance one is attributing to each of their opinions, will influence one's behavioural intention to shop online, which will lead to the behaviour to shop or not to shop online (George 2004).

Actual buying behaviour

Actual buying behaviour (or actual usage) is virtually omnipresent in almost every e-commerce adoption-related research (Yousafzai et al. 2007a). Actual buying behaviour is the dependent variable of

behavioural intention which means, that the connection between the two constructs is largely attributed to the strong intention to act (to use e-commerce as a channel, or to buy) (Pavlou–Fygenson 2006). Actual buying behaviour is a consequent factor, since it refers to the consequences of technology acceptance, or in our case, the consequences of the buying intention.

Antecedents of buying intention

Another important question regarding the intention to accept/use/buy is to know its antecedents which have an influence on it. For example, in market research some typical answers for the antecedents of web shop usage in Romania include: the trust in the vendor, data security, honouring the order, good usability of the web shop interface, advantageous prices and so on (Radu et al. 2011). These all are linked to previous research. After a detailed scan of the literature we found several types of antecedents which can have significant influence on behavioural intention (see especially the meta-analysis of Yousafzai et al. (2007a).

The external variables (constructs) which enjoyed the most attention were: perceived risk (Pavlou 2003), trust (Benbasat et al. 2010; Koufaris–Hampton-Sosa 2002; Pavlou 2003), technology anxiety (Hwang–Kim 2007), self-efficacy (Pavlou–Fygenson 2006; Vijayasarathy 2004), privacy and security (Vijayasarathy 2004), shopping enjoyment (Childers et al. 2001), and commercial features of the Internet (Jarvenpaa–Todd 1996, 1997).

Another group of antecedents are the commercial features of web shops (Jarvenpaa–Todd 1996, 1997). These refer to those features which are related to the Internet (web shop), and not to the inner qualities of the users/customers (Herrero Crespo–Rodriguez del Bosque 2010). In our research we focus on the effect of these online commercial features on the buying intention of online customers.

Product perception

Product perception has been used in several contexts in the field of e-commerce acceptance and usage, mostly rooted in the work of Jarvenpaa and Todd (1996, 1997), who identified eleven factors that

precondition the e-commerce adoption by Internet users. These factors were classified into three categories: (1) product perceptions, (2) shopping experience and (3) customer services.

Product perception was measured by Jarvenpaa and Todd (1996, 1997) in terms of three dimensions, namely (a) price, (b) variety of the offer, and (c) product quality.

The 'price' construct means that the Internet provides competitively priced merchandise and attractive promotions and deals (Heijden et al. 2001; Herrero Crespo–Rodriguez del Bosque 2010; Jarvenpaa–Todd 1996).

The 'variety' construct means that the Internet provides a wide range of goods and services including those that consumers are not able to get elsewhere (Herrero Crespo–Rodriguez del Bosque 2010; Jarvenpaa–Todd 1997; Jarvenpaa et al. 2000).

The construct named 'product quality' means that the Internet is a source of high-quality goods and services that meet consumer expectations (Heijden et al. 2001; Jarvenpaa–Todd 1997; Herrero Crespo–Rodriguez del Bosque 2010).

These three variables form together the variable named 'product perception' which can have a negative or positive effect on online shopping intention. Vijayasarathy and Jones (2000) confirmed that positive product perception has a beneficial effect on behaviour intention (using e-commerce for shopping). In a more recent study Herrero Crespo and Rodriguez del Bosque (2010) also confirmed the positive effect of product perceptions on e-commerce adoption.

Shopping experience

Shopping experience is also a tridimensional construct, which consists of (a) effort/convenience, (b) compatibility, and (c) enjoyment/playfulness. These three dimensions were present among the original dimensions of Jarvenpaa and Todd (1996, 1997) that were hypothesized to have a positive effect on e-commerce adoption.

'Effort' can be defined as the Internet saves time and makes shopping easy for the customer. 'Compatibility' can be defined as the Internet fits consumer lifestyles and the way they like to shop.

'Enjoyment/playfulness' can be defined as shopping on the Internet allows the consumer to have fun (Herrero Crespo–Rodriguez del Bosque 2010; Jarvenpaa–Todd 1996, 1997).

Vijayasarathy and Jones (2000) also confirmed the beneficial effect of shopping experience on behaviour intention (using e-commerce for shopping). In a more recent study Herrero Crespo and Rodriguez del Bosque (2010) confirmed the positive effect of shopping experience on e-commerce adoption, as well.

Information access

As the third category from the original research of Jarvenpaa and Todd (1996, 1997), namely 'customer services' could not be confirmed as being a relevant precursor of the e-commerce adoption, it has been considered as these cannot provide a solid support for the effects of the e-commerce adoption (Vijayasarathy–Jones 2000). On the other hand 'information access', part of the original variables enumerated by Jarvenpaa and Todd (1996, 1997), has been confirmed several times as having a positive significant effect on the e-commerce adoption (Ahn et al. 2007; To et al. 2007). Information access can be defined as the degree to which consumers perceive that it is easy to get information about products on the Internet (Herrero Crespo–Rodriguez del Bosque 2010).

Research question

Marketing research theory tells us, that for a testable conceptual model we need an adequate theoretical framework (Malhotra et al. 2012; Plăiaş et al. 2008; Pop 2004).

In the above subchapter we have conceptualized the main constructs. In this section we will present the main connections between the three online commercial features assumed by the literature and the intention to buy, and then we will present our research question.

In Table 1 we present the main connections between the above presented concepts. The primary sources of these connections are the literature, but in some cases, where literature references did not provide the necessary data, we based the possible connections on our findings from a previous qualitative research (Seer 2015).

Table 1. The main connections between the independent and dependent variables

Independent variable	Dependent variable	Connection	References	Notes
Product Perceptions(PP)	Buying Intention (BI)	Product Perceptions have a positive effect on Buying Intention	Herrero Crespo–Rodriguez del Bosque 2010; Radu et al. 2011; Seer 2015	In the study of Herrero Crespo and Rodriguez del Bosque (2010) the connection was tested between PP and 'attitude'.
Shopping Experience (SE)	Buying Intention (BI)	Shopping experience has a positive effect on Buying Intention	Herrero Crespo–Rodriguez del Bosque 2010; Radu et al. 2011	In the study of Herrero Crespo and Rodriguez del Bosque (2010) the connection was tested between SE and 'attitude'.
Information Access (IA)	Buying Intention (BI)	Information Access has a positive effect on Buying Intention	Herrero Crespo–Rodriguez del Bosque 2010; Radu et al. 2011; Seer 2015	In the study of Herrero Crespo and Rodriguez del Bosque (2010) the connection was tested between IA and 'attitude'.
Buying Intention (BI)	Actual Buying Behaviour (ABB)	Buying Intention has a positive effect on Actual Buying Behaviour	Ajzen 1991; Bagozzi et al. 1992; Davis 1989; Turner et al. 2010; Venkatesh et al. 2003; Seer 2015	This connection is part of the classical Technology Acceptance Model, as well.

Source: authors own design

Product Perception (PP), Shopping Experience (SE), and Information Access (IA) – as described by the literature mostly based on Jarvenpaa and Todd (1996, 1997) – were tested for the connection with attitude to accept/use e-commerce and not directly to Behavioural Intention (BI) (for example in Herrero Crespo–Rodriguez del Bosque 2010). However other studies based on the TAM model do not use Attitude at all (Venkatesh–Bala 2008). Market research studies conducted in Romania (Radu et al. 2011) and qualitative research (Seer 2015) regarding this subject enable us to assume a direct relationship between these so called online commercial features and Buying Intention.

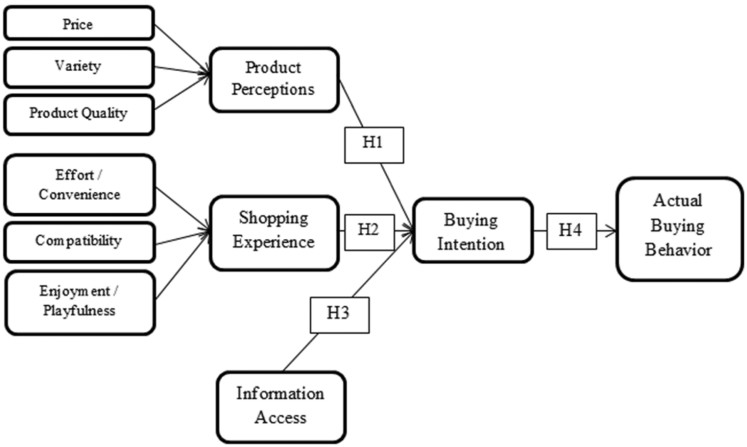
The connection between Buying Intention (BI) and Actual Buying Behaviour is a core connection tested several times in the past, mostly in TAM studies (King–He 2006). We included this connection in our conceptual model only to see the strength of the connection.

Concluding these above presented connections we can formulate our main research question: what are the effects of the relevant 'online commercial features' of web shops on the Buying Intention of Internet users?

Conceptual model and hypotheses

Based on the above presented constructs and connections we have built our conceptual model which includes the picked online commercial features (Product Perceptions, Shopping Experience, and Information Access) as exogenous constructs, and Buying Intention as the endogenous construct. Actual Buying Behaviour was drawn as the consequence of Buying Intention. Since Product Perceptions and Shopping Experience are multi-dimensional constructs, their dimensions are not part of the main conceptual model.

In this way the effect of the dimensions of Product Perceptions, namely Price, Variety, and Product Quality manifest their effect within the construct of Product Perceptions, and in the case of Shopping Experience, the dimensions of Effort/Convenience, Compatibility, and Enjoyment/Playfulness also manifest their effect within the construct in which these are included.



Source: authors' own design

Figure 1. The conceptual model of the research

Based on our conceptual model we have formulated four hypotheses:

H1(+): Product Perceptions of Internet users have a positive effect on their Buying Intention.

H2(+): Shopping Experience of Internet users has a positive effect on their Buying Intention.

H3(+): Information Access of Internet users has a positive effect on their Buying Intention.

H4(+): Buying Intention of Internet users has a positive effect on their Actual Buying Behaviour.

We tested these hypotheses based on our data collected from N=259 Romanian Internet users.

Research methodology

Development of the measurement instrument

After the hypotheses have been formulated we elaborated the measuring instrument by which we collected data about all the constructs involved in our research.

We found in the literature the exact items for all constructs being measured. Because the items were originally in English, we translated these to Romanian with the help of native Romanian speakers. After that, the items were semantically tested by two other native Romanian speakers in order to be completely sure about the consistence of meaning between the English and Romanian item versions. After this phase, we made a pilot study by applying the questionnaire on a small convenience sample to correct possible mismatches in meanings and other errors (the questionnaire items related to our study can be seen in the Appendix). Finally, we built an online version for the questionnaire.

Sampling process

The sampling process of our research consisted of the following steps based on Fricker (2008) and Malhotra et al. (2012). Our target population consisted of Internet users from Romania. We opted for the 'non-list-based random sampling' on the Internet which is the online version of the 'random digit dialling' (RDD) of the classical surveys.

This sampling method does not need a previous list of all Internet users (or IP addresses) in order to choose the elements in a random way (Fricker 2008). We opted for the non-list-based random sampling via the Internet with the application of random Internet Ads via Google AdWords, Google AdSense, and Facebook Ads, and providing incentive for filling up the questionnaire.

In total N=259 people filled up the questionnaire, however 520 Internet users clicked on one of the ads displayed in the above mentioned advertising platforms and the ads were seen by 6821 Romanian Internet users.

Assessing the reliability and validity of indicators

In cases when there are more variables but a low number sample, the Partial Least Squares (PLS) methods have the advantage over Covariance Based Methods (CBM) because they require fewer data points to accurately estimate loadings (Gaskin 2010; Jöreskog–Sörbom 1982). Therefore, we opted for the PLS method in assessing the reliability and validity of indicators and for hypothesis testing. For statistical calculations we used the Smart PLS 2.0 software (Ringle et al. 2005).

Reliability within a construct is also referred to as internal consistency, and it is assessed by the metric known as Cronbach's Alpha. In a reflective measurement mode, the loadings are equivalent to the correlations of one construct's indicators. Consequently, high values of the Cronbach's Alpha metric mean high correlations between indicators. High correlations are preferable for good indicator reliability. Literature sets the value of 0.7 as the limit for a high correlation (Peterson 1994), Cronbach's Alpha values above 0.7 mean good indicator reliability. Values below 0.7 mean poor indicator reliability. Others argue, that in the case of latent variables which have only 2-3 indicators, a Cronbach's Alpha value of 0.4 is acceptable (Ebert 2009).

The Cronbach's Alpha calculated was sufficiently high for all except one of our indicators. The underperforming indicator – the Actual Buying Behaviour construct (0.6) – was eliminated. Table 2 presents the average Cronbach's Alpha loadings of all the constructs.

Table 2. Validity and reliability metrics of indicators

Construct	Cronbach's Alpha	Composite reliability	AVE	R Square
Buying Intention	0.944353	0.957352	0.817916	0.544001
Product Perception	0.925858	0.938937	0.632732	0.999931
Price	*0.859435*	*0.913778*	*0.779676*	
Variety	*0.875361*	*0.923298*	*0.800636*	
Quality	*0.858905*	*0.914089*	*0.780155*	
Shopping Experience	0.94576	0.954352	0.699901	0.999995
Enjoyment / Playfulness	*0.91873*	*0.94868*	*0.860426*	
Compatibility	*0.939466*	*0.961229*	*0.892064*	
Effort / Convenience	*0.911907*	*0.944622*	*0.850488*	
Information Access	0.921019	0.950005	0.863681	
Actual Buying Behaviour	0.778126	0.870292	0.691095	0.201628

Source: authors' own calculations

The composite reliability is much above 0.6 for each variable, which means that the strength of all indicators' correlations with their constructs is unequivocal (Bagozzi–Yi 1988).

The convergent validity of the constructs is based on the Average Variance Extracted (AVE) that has to take values above 0.5 for each variable (Baumgartner–Homburg 1996). In consequence, we can state that each latent variable from the model has the necessary level of convergent validity.

Discriminant validity between the constructs can be assessed using the Fornell-Larcker criterion. The Fornell-Larcker criterion and the cross-loadings comparisons enable us to check for discriminant validity. According to the Fornell-Larcker criterion, the AVE of each latent construct should be higher than the construct's highest squared correlation with any other latent construct. This notion is identical to comparing the square root of the AVE with the correlations between the latent constructs (Fornell–Larcker 1981). By checking the Fornell-Larcker criterion according to the above described procedure, we found that all the constructs have a fair and acceptable level of discriminant validity.

The R-Square values are listed only in the case of endogenous variables (see Table 2). Hence, R-Square values describe the percent of

the explained variance, and we can observe, that there are rather different numbers. Exogenous (independent) variables explain 54.40% of the variance in the case of Behavioural Intention, but only 20.16% in the case of Actual Buying Behaviour, which means that there are probably several other factors affecting actual buying from the Internet, which are not assessed by our model. Our multidimensional factors in our model (Product Perception and Shopping Enjoyment) are well explained by their dimensions, as their R-Square metric is almost 100%.

In conclusion we can state that all our variables have the necessary clearances in terms of validity and reliability to be used for hypothesis testing with the help of our statistical model.

Results

After we assessed the validity and reliability of our data, we tested the connections for causality between the variables in our inner model. For testing the significance of the relations between constructs we ran the bootstrapping algorithm in Smart PLS software according to the literature (Ringle et al. 2005). Using the Partial Least Squares (PLS) method, significance was assessed with the t-values generated between constructs in the model. Significant t-values (two-tailed), according to the literature are the following: 1.65 for 10% significance level, 1.96 for 5% significance level, 2.58 for 1% significance level (Baumgartner–Homburg 1996; Gaskin 2010; Malhotra et al. 2012).

Table 3 presents the principal connections between the latent variables included in our model. In the last column we also presented the generated t-values for all examined connections. The values marked with one star (*) are significant on the 1% level. Values marked with no star are not significant.

We found high significance between our multidimensional constructs and our dimensions (in each case the t value was higher than 20), therefore we can assume an extremely robust relationship between the dimensions and their constructs.

As we can see, in the process of causality testing some of our variables did not achieve significance, therefore we could not suppose causality between them.

Table 3. Connections between variables

Causality between variables	Sample Mean	Standard Deviation	Standard Error	t-statistics
Product Perception -> Buying Intention	0.0922	0.0795	0.0795	1.1956
Shopping Experience -> Buying Intention	0.6750	0.0711	0.0711	9.4937*
Information Access -> Buying Intention	-0.0144	0.0672	0.0672	0.2521
Buying Intention -> Actual Buying Behaviour	0.4525	0.0508	0.0508	8.8364*

Source: authors' own calculations

In the case of our first hypothesis H1(+) in which we assumed a positive causal relationship between Product Perception of Internet users and their Buying Intention, the t value was not significant (t=1.1956).

In the case of our second hypothesis H2(+) in which we also assumed a positive causal relationship between Shopping Experience of Internet users and their Buying Intention, the t value (t=9.4937) was significant on a p=0.01 level, therefore we can accept H2.

In the case of our third hypothesis H3(+) in which we assumed a positive casual relationship between the Information Access of Internet users and their Buying Intention, we did not find significance (t=0.2521).

In the case of our fourth hypothesis H4(+) in which we assumed a positive casual relationship between the Buying Intention of Internet users and their Actual Buying Behaviour, we found a significant connection (t=8.8364) on the p=0.01 level.

Discussion

In the process of elaborating the conceptual model we found several possible arguments for testing the online commercial features of the web shops in connection with the intention of customers to buy from web shops. As we have already pointed out in the theoretical

section, the online commercial features of web shops have been tested mostly in relation to the attitude for buying from a web shop (Herrero Crespo–Rodriguez del Bosque 2010), or as an antecedent of the TAM model (Jarvenpaa–Todd 1996), for example by assuming an effect on the Perceived Usefulness of web shops (Seer 2015). Starting from this input we wanted to look into the direct effect of these online commercial features on the customers' intention to buy.

For our first hypothesis H1(+) in which we assumed a positive causal relationship between Product Perception of Internet users and their Buying Intention, we didn't find any significance. Since the validity and reliability metrics for the dimensions of Product Perception were ideal, we can assume that the manifest variables did not contradict each other in predicting the latent variable. Therefore, we can assume that the perception of customers about products was not that important to have a significant impact on Buying Intention. The good price, the quality, and wide variety of products in a web shop were not significant predictors of an increased Buying Intention in the case of our sample. This either means that there have to be other factors related to Product Perception which trigger the growth of the Buying Intention, or it also can mean that between Product Perception and Buying Intention has to be at least another link, such as a mediating variable or a moderating one.

In the case of our second hypothesis H2(+) in which we also assumed a positive causal relationship between Shopping Experience of Internet users and their Buying Intention, the t value ($t=9.4937$) has been significant on a $p=0.01$ level, therefore our hypothesis was true. This means that Shopping Experience, in general, and its dimensions have a positive impact on the Buying Intention of online buyers. The enjoyment or playfulness of a web shop, the compatibility between the interface and other functional items and between the user, and the relatively low level of effort associated with a higher level of convenience is definitely playing an important role in forming an intention to buy from a web shop. Comparing these results with the results of our first hypothesis, we can see a contrast between product information-based and experience-based buying.

In the case of our third hypothesis H3(+) in which we assumed a positive casual relationship between the Information Access of Internet users and their Buying Intention, we did not find a significant connection. We defined Information Access as the degree to which consumers perceive that it was easy to get information about products on the Internet. Our data suggests that those users who are helped by the Internet on gathering information regarding products and services, do not necessarily develop a higher degree of Buying Intention. In fact, the connection between Information Access and Buying Intention is so weak that probably we can suspect other explanations for the link between accessing information on the Internet and the intention to buy from the Internet. One explanation would be that however the manifest variables refer to information search and access in a general sense, but the manifest variables of Buying Intention are more specific. One can perceive the Internet as a very helpful tool in gathering information about products and services, but Buying Intention can be very different from one web shop to another. This effect could alter the data and produce a non-significant linkage. Another explanation would be the effect of mediator variables which are not represented in our model.

In the case of our fourth hypothesis H4(+) in which we assumed a positive casual relationship between the Buying Intention of Internet users and their Actual Buying Behaviour, we found a significant connection which cannot be considered a surprise. Several studies tackled the connection between the intention to buy and the act of actual buying. Given our result, a highly significant connection between intention and actual buying, we can state that our model has a consistency in measuring antecedences and consequences of Buying Intention. However, we have to note, that our model is far from being perfect since there is a visible problem regarding unexplained variance in the case of Buying Intention (R^2=0.544) and especially in the case of Actual Buying Behaviour (R^2=0.202). More than half of the variance of Buying Intention is explained by the three online commercial feature constructs, which is already plausible from a scientific point of view,

but in the case of the Actual Buying Behaviour only 20.2% of its variance is explained by the Buying Intention. Therefore, Actual Buying Behaviour has to have other factors which affect its outcomes.

Conclusions

We believe that our research deepened the understanding of the way online commercial features of web shops affect the buying intention of the Romanian Internet users. Based on our findings, the three dimensions of product perception (price, variety, quality) enhance the knowledge of Internet users about specific products. We also believe that it might help them to make buying decisions in offline situations. Further research is needed to assess the possible existence of mediating variables between product perception and buying intention, which could be culture specific, as well.

The significant relationship between shopping enjoyment and buying intention can also be a good starting point for further research in the topics of search goods and experience goods in an online environment. Further studies should address the importance of enjoyment compared to the importance of utility in the process of buying online.

Contrary to the literature we did not find information access to be a significant antecedent of buying intention. Despite our result, we want to emphasize that further research should look into the relationship between the information accessibility regarding a specific product, and its effect on the buying intention of the Internet users.

One limitation of our research was the sample size and the level of explained variance in the case of the Buying Intention, and especially of the Actual Buying construct. Further research should be carried out in search for possible variables which mediate and moderate these relationships.

Our research can be used by practitioners in two main ways: to use our conceptual model as guidance for planning an e-commerce system and to make use of the results, especially those regarding the linkages between shopping enjoyment and buying intention.

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Annex

Construct measurement scales

No	Construct	Code	Item	Scale type	Source
1	Behavioural Intention	BI1	I think it would be very good to use the Internet for my shopping activities in addition to traditional methods.	Likert 1 - 7	Klopping-McKinney 2004
2		BI2	In my opinion it would be very desirable to use the Internet for shopping activities in addition to traditional methods.	Likert 1 - 7	
3		BI3	It would be much better for me to use the Internet for my shopping activities in addition to traditional methods.	Likert 1 - 7	
4		BI4	Using the Internet for my shopping activities is a good idea.	Likert 1 - 7	
5		BI5	Overall, I like using the Internet for my shopping activities.	Likert 1 - 7	

6	Actual use	USE1	I use the Internet for my shopping activities very frequently (many times per day)	Likert 1 - 7	Klopping-McKinney 2004
7		USE2	On average, how many different online shopping places do you visit in a given month? (Choose only one)	none, 1-2, 3-5, 6-20, over 20	
8		USE3	In general, much time do you spend doing online shopping activities per week? (Choose only one)	0-5, 6-15, 16-60, over 60 minutes	
9		USE4	On average, how frequently do you use the Internet for your shopping activities? (Choose only one)	once a year, two or three times a year, monthly, daily	
10	Product perception – (price – variety – quality)	PPP1	Using the Internet to purchase ... makes it possible to save money	Likert 1-7	Herrero Crespo-Rodriguez del Bosque 2010
11		PPP2	... makes it possible to find cheaper products than those available from traditional retailers	Likert 1-7	
12		PPP3	... makes it easier to find interesting discounts on product prices	Likert 1-7	
13		PPVAR1	... makes it possible to choose from many brands	Likert 1-7	
14		PPVAR2	... makes it possible to find any kind of products	Likert 1-7	
15		PPVAR3	... makes it possible to choose from a wide variety of products	Likert 1-7	
16		PPPQ1	... makes it easier to find products with a good price-quality relationship	Likert 1-7	
17		PPPQ2	... makes it possible to buy products difficult to find in traditional shops	Likert 1-7	
18		PPPQ3	... makes it possible to find the most recent products that appear on the market	Likert 1-7	

19	Shopping experience – (effort/ convenience – compatibility – enjoyment)	SEEC1	... allows me to shop at the most convenient time for me	Likert 1-7	Herrero Crespo-Rodriguez del Bosque 2010
20		SEEC2	... makes it possible to save time during the purchasing process	Likert 1-7	
21		SEEC3	... makes it possible to purchase with no need to leave home	Likert 1-7	
22		SECOMP1	... will fit in well with the way I like to shop	Likert 1-7	
23		SECOMP2	… will be compatible with the way I like to do things	Likert 1-7	
24		SECOMP3	... will be coherent with my previous habits	Likert 1-7	
25	Information Access	SEENJ1	... is more exciting than buying in traditional shops	Likert 1-7	
26		SEENJ2	... is an activity that I enjoy	Likert 1-7	
27		SEENJ3	... is a fun way to purchase	Likert 1-7	
28		IACC1	Using the Internet to purchase … makes it possible to obtain more information about products	Likert 1-7	Herrero Crespo-Rodriguez del Bosque 2010
29		IACC2	... makes it easier to compare different alternatives	Likert 1-7	
30		IACC3	... makes it easier to look for information during the purchasing process	Likert 1-7	