ROLE OF COGNITIVE STYLE OF A MANAGER IN THE DEVELOPMENT OF TOURISM COMPANIES’ DYNAMIC CAPABILITIES

Oleksandr P. Krupskyi
Tetiana Grynko

Abstract
Purpose – The purpose of this paper is to investigate the relationship between cognitive styles of managers working in tourism companies and dynamic capabilities of these companies.
Design – The research relies on a quantitative questionnaire.
Methodology – To answer the research question, the bivariate (Pearson) correlation was applied. A number of 268 answers from people working in tourism were received.
Findings – We found a positive correlation between different dimensions of dynamic capabilities of tourism companies. These capabilities are influenced by managers’ cognitive characteristics. The organizational culture plays a mediating role in the latter relationship.
Implications for theory – The paper offers an alternative understanding of dynamic capabilities in tourism and hospitality; the paper also opens new paths for academic research on the impact of cognitive characteristics of managers on the dynamic capabilities of tourism companies. Implications for practitioners – Making accurate psychological portrait of the candidate can predict his/her behavior in certain situation, such as response towards environmental change using dynamic capabilities and when making the necessary changes to the organizational culture.
Originality – This study proposes model of influence of a manager’s cognitive style on dynamic capabilities, whereby organizational culture moderates this relationship.

Keywords: tourism and hospitality, dynamic capabilities, organizational culture, tourism company, manager’s cognitive style, Ukraine

INTRODUCTION

The process of globalization has brought significant changes to the society in general, and to the business environment, in particular. It has led to the intensification of competition, the reduction of the product life cycle, accelerating the emergence of breakthrough innovations in terms of increased instability; it made necessary a frequent communication and collaboration of people of different nationalities or representatives of different regions of the world (Tacheva 2007; Nadkarni and Herrmann 2010). In order to face these challenges, companies need to develop dynamic capabilities (Teece and Pisano 1994; Teece et al. 1997; Eisenhardt and Martin 2000; Barreto 2010).

Dynamic capabilities are a multidimensional concept. For instance, Teece (2007) proposes capacities of sensing and shaping of opportunities and threats; seizing an opportunity, and reconfiguring organizational resources in order to achieve the seized
opportunity. Barreto (2010) disentangles the seizing capacity and proposes sub-concepts of timely and market-oriented decision making. At the same time, several scholars argue for an important role of managers in dynamic capabilities of a company (e.g., Adner and Helfat 2003; Sirmon and Hitt 2009; Helfat and Peteraf 2014).

Dynamic managerial capabilities can be seen as a part of dynamic capabilities with a stronger focus on managerial role in routines needed to face environmental challenges (Bogodistov 2015). Adner and Helfat (2003) propose three dimensions of managerial human capital, managerial social capital and managerial cognition. In their recent work, Helfat and Peteraf (2014) stress the role of psychological factors as predictors for managerial cognitive capabilities forming a dynamic capability (further DC) of a company. This work develops this notion and proposes to approach dynamic capabilities over managerial cognitive styles.

Managers lead a company, interact with employees, and co-develop a company’s organizational culture. Managers also interact with other involved actors – stakeholders. The stakeholders, among whom the first place is occupied by leading consumers, – are a source for change detection which, in turn, can become the main sources of opportunities (Ţuţceanu and Şerban 2013). It is the immediate task of the managers’ team to anticipate them. Nevertheless, managers’ can be boundedly rational due to beliefs and judgments of which play a significant role in the identification / implementation of new strategic opportunities and approaches to the allocation of resources (Augier and Teece, 2009); knowledge and experience – in managing the foreign company operations (Tacheva 2007); cognitive style – in the formation of the general attitude towards organizational change (Đurišić-Bojanović 2016); procedures – in making key decisions of the company associated with the use of dynamic capabilities (Ambrosini and Bowman 2009; King and Tucci 2002), or adopting other forms’ experience (e.g., franchising) (Grynko and Krupskyi 2015), etc.

This paper focuses on one of the aspects, creating the bounded rationality, namely, managerial cognitive styles. While Adner and Helfat (2003) investigated “…time-varying corporate effects associated with corporate-level managerial decisions…”, we focus on the research question “Is there any psychological portrait of a manager which is associated with certain capacities constructing a dynamic capability of his/her company?” Dynamic capabilities can have different forms in environments of different dynamics (Eisenhardt and Marint 2000). Barreto (2010) stresses the link between a dynamic capability of a company and the presence of rapidly changing environments. Due to a high dynamism of the tourism sector in Ukraine (Bogodistov et al. 2017), we decided to make our research in tourism and hospitality companies. Moreover, not only the aspects of dynamic capabilities but also of personal traits of managers were largely ignored in the rapidly growing industry of tourism and hospitality (Krupskyi 2015). In the next sections, we provide a theoretical background, propose a set of hypotheses, describe methodology and sampling, and provide results and a short discussion on our findings.
THEORETICAL BACKGROUND

Personal characteristics of managers and organizational change

With a limited number of tangible resources, human resources become the key aspect of organizational life (Grant and Jordan 2015). Managers, as decision makers, become the group of a particular interest for researchers. For instance, Sirmon and Hitt (2009) compared companies which should possess very similar resources, however, they differed in their performance. The companies’ management was, supposedly, the key differentiator in this study. This idea became interesting for other researchers. Rodenbach and Brettel (2012), for example, showed that the physiological characteristics of the Chief Executive Officers (further CEO), e.g., age, can significantly increase or decrease the marketing and innovative dynamic capabilities of the company in their ability to respond to turbulent environments. A similar issue was discussed in the recent paper by Bogodistov and colleagues (2017) – researchers illustrated that manager’s gender matters for the micro company’s dynamic capability. Female managers, for instance, have a positive impact on a micro company’s sensing capacity. This study builds upon the Kaemmerer’s (2015) work on diversity in companies and their relatedness to dynamic capabilities.

It is, however, not only about physiological factors. The research by Pansiri (2005) outlined the impact of personality characteristics and perceptions of managers on entry into strategic alliances and relationships within them; it can become a decisive factor for the survival of a company. In order to prove the effects of top management’s individual characteristics on a company’s DC, a team of scholars led by Von den Driesch (Von den Driesch et al. 2015) analyzed the relationship between certain characteristics of CEOs, such as demographic, personality, and communication factors, and organizational capabilities of a company (such as marketing, technological, and industrial capabilities). A number of relationships proved to be statistically significant, indicating a high importance of further research in this field.

Following these notions, Haaso (2013) proposed a Big five personality traits model (extroversion, agreeableness, conscientiousness, openness to experience, and neuroticism) as a predictor for innovativeness of small and medium-sized enterprises (further SMEs). Haaso (2013) demonstrated that, first, a CEO with high scores on extroversion and agreeableness has a significant impact on the effectiveness of innovation in SMEs; and, second, that the human resource management should be considered in terms of its ability to compensate for the overall management shortcomings to mutually influence on the company’s innovative capacity. This notion was indirectly confirmed by Najmiae (2014), who performed a study on cognitive abilities of senior management (with focus on analytical and intuitive abilities) and emphasized their crucial importance for the explanation of organizational behavior and timely response to changes in the external environment. In particular, the attitude to the acquisition and dissemination of knowledge, to the use of an effective business model innovation; the ability to analyze the situation in the new and old markets and, consequently, the adoption of an investment in these solutions depends on the manager’s cognitive style (further MCS). Timely response to change is one of the dimensions introduced by Barreto (2010). One can conclude, therefore, that manager’s cognitive style might be related to dynamic capabilities of a company.
Dynamic capabilities and the manager’s cognitive style

Dynamic capabilities are a fastly growing concept in strategic management research (Schilke et al. 2017). The first definition of dynamic capabilities appeared in the work by Teece and Pisano (1994) but it became more popular after the scholars, together with Shuen, described dynamic capabilities in more detail in their paper of 1997. Teece and colleagues (1997, 516), defined DC as “an organization’s ability to integrate, build and reconfigure internal and external competences to correspond rapidly changing environments”. The idea was picked up by Eisenhardt and Martin (2000), who described the DC as organizational procedures of a strategic nature, with the help of which companies get new resources of configuration in case of collision, separation, market development, or death.

Dynamic capabilities can be viewed as an emerging and potentially integrative approach of understanding the new sources of competitive advantage (Teece et al. 1997; Prieto and Easterby-Smith 2006; Vivas López 2005); as the way to keep this advantage (Chiou 2011), and as the source of a company strategic flexibility (expansionary, marketing, productive, including in relation to a new product, etc.) (Singh et al. 2013); a necessary condition for the creation and improvement of knowledge transfer system which is supported, expands or destroys itself (Prieto and Easterby-Smith 2006); “guide”, which ensures the development of organizational capabilities by changing the company’s main resource base (Ahenkora and Adjei 2012); the mechanism of organizational learning that can be seen as the operational capacity and allows you to understand the complex / new situations and, as a result, to generate the ideas that allow one to modify an existing behavior and procedures (Bustinza et al., 2010); an essential element of asset accumulation, which is knowledge-based (Vivas López, 2005); factor, a “predecessor” of functional competencies that have a strong impact on the results of any activities (Protogerou et al. 2008).

As all capabilities can be treated as organizational routines (Felin and Foss 2009), dynamic capabilities are first and foremost strategic routines (Winter 2003). Routines assume interaction of a company’s personnel, their cooperation and coordination. Grant and Jordan (2015) explained this notion: if a company develops a capability, it has to routinize underlying processes, it has to embed these processes into organizational structure, it has to have an appropriate motivation, and it has to be aligned with other organizational routines and processes. Managers might play a crucial role in this regard: they plan, organize, participate in staffing, coordinate and control. Each of these five manager’s functions is represented in the dimensions proposed by Grant and Jordan (2015).

For instance, Engelen, Neumann, and Schwens (2015) suggested that the level of entrepreneurial orientation of the company is largely determined by the personal qualities of the CEO. The degree of influence, in turn, depends on the intensity of the corresponding indicators. The study showed that the decision-making by arrogant leaders and by evaluating stimulus (demotivating) effect on subordinate activity might be relevant for the dynamic capabilities of the company. In the same vein, Botts (2017) showed that managerial cognition has influence on dynamic capabilities of a team, whereby this influence is mediated by the managerial social capital. I.e. when managerial
beliefs correspond to team members’ beliefs, dynamic routines work more efficient. This issue has also been described in studies about motivation (e.g., Barbuto and Scholl 1998). Motivational dimension of a (dynamic) capability is, thus, influenced by manager’s cognitive style. Consequently, we hypothesize:

**Hypothesis 1:** There is a relationship between the DC and manager cognitive style.

Scholars have different vision of the DC structure. For example, Teece (2007) proposed to split DC in capacities: a) to sense and shape opportunities and threats, b) to seize an opportunity and c) to maintain competitiveness by improving, combining protection and, if it is necessary, by reconfiguring tangible and intangible company’s assets. Barreto (2010), first, stressed the role of previous actions on each capacity and called them “propensities”; and, second, he split the seizing capacity into propensities of timely and market-oriented decision making.

Whereas Teece (2007) and Barreto (2010) used the sequential logic (first, a company has to sense a threat or an opportunity, then it has to make a decision, then it has to reconfigure resources accordingly), other scholars looked at other capabilities, necessary for a dynamic capability. For instance, Tondolo and Bitencourt (2014) distinguished between components of the behavioral orientation, the activities of high-level management, organizational skills, organizational capacity, procedures, processes, measures, standards; and training system. Tashman and Marano (2010) propose that the main components are transformation, integration, and acquiring (the latter is associated with the adoption / development of new technologies). Scholars also included the capacity to get rid of unnecessary resources as the fourth dimension of DC. Singh and colleagues (2013) focused on technological capabilities, research and development capabilities, innovative capabilities, alliance capabilities, advanced technologies, and human resource capabilities. Other notions for DC structuring are constantly appearing (e.g., Dentoni et al. 2015; Fainshmidt 2014, etc.).

Having interest in dynamic capabilities but being confused by criticism of the concept (e.g., Priem and Butler 2001; Arend and Bromiley 2009; Barreto 2010; Arend 2014), we decided to make a series of preliminary interviews with representatives of tourism companies in order to discover dimensions and capacities associated with a dynamic capability. We discovered following capacities which were constantly mentioned when answering the question “How does your company respond to environmental change?” Practitioners mentioned in particular accumulation capacity, transformation capacity, capacity to “get rid of” some resources, capacity to respond quickly to change, capacity to absorb knowledge, capacity to predict, and capacity to implement innovations. Consequently, we focus on these and hypothesize:

**Hypothesis 2:** Dynamic capabilities are formed by the capacities of accumulation, transformation, “get rid of” some resources, to respond quickly to change, capacity to absorb knowledge, capacity to adapt, capacity to predict, and capacity to implement innovations. All these capacities are correlated.
Organizational culture

The work by Martin, Martin, and Minnillo (2009) confirmed that cognitive model of a leader (in this case a high or low level of market orientation) is an important factor for the perception of the business problem as an opportunity or as a threat. This notion indicates that managerial psychological characteristics might have influence on the sensing capacity (as proposed by Teece (2007)). At the same time, it was found that in SMEs management is considered to focus on the competition as an integral component of the values, norms, and behavioral patterns. This notion, on the one hand, relates organizational alignment dimension with a manager’s cognitive style; on the other hand, it stresses the role of organizational culture for dynamic capabilities.

In the Giberson and colleagues’ work (2009), the connection of a set of personal managers’ characteristics and corporate culture was found. For example, in power aesthetics, commitment to the organization, benevolence, economic motivation, hedonism, addiction to power, theoreticity (i.e. a tendency to new knowledge, ideas, satisfaction of curiosity), traditionalism, and the type of organizational culture (clan, hierarchy, market and adhocracy) were correlated. On the one hand, this study showed the dependence of organizational culture on psychological managers’ portraits; on the other hand, it related both personal managers’ characteristics and organizational routines. For instance, Grant and Jordan (2015) mentioned organizational culture as one of the necessary conditions for a capability formation. In fact, in the work by Belak, Duh, and Milfelner (2012) the effect of importance of a company’s organizational culture on its dynamic capabilities was experimentally confirmed.

Huysentruyt and colleagues (2015) investigated the values of CEOs (such as openness to change, conservatism, universalism together with benevolence and self-expansion) and their influence on financial results. Interestingly, other studies supported this and other relationships: the personality characteristics of the CEO have impact on the company’s culture, and also on a wide range of organizational results, including financial performance (revenue growth, Tobin’s coefficient) reputation and attitudes of personnel (O’Reilly et al. 2014). Organizational culture might have even a more significant impact, since strong leaders may form their organization’s culture. Legitimacy of the leader can be dependent on the type of relationships employees have in a company and these relationships (as argued above) are influenced by a manager’s cognitive style. At the same time, since organizational culture is related to dynamic capabilities it might be a moderator for the relationships between a manager’s cognitive style and a company’s dynamic capability. Therefore, we argue:

Hypothesis 3: Organizational culture is a moderator for the relationship between a manager’s cognitive style and a company’s dynamic capability.

Our research model with all hypothesized relationships is depicted in Figure 1.
Figure 1: Research model

![Diagram showing the relationship between organizational culture, manager's cognitive style, and dynamic capabilities of a tourism company. The diagram includes hypotheses H1, H2, and H3.](image)
METHODOLOGY

Sample

In order to perform the research, a sample of Ukrainian tourist companies was selected. Tourism and hospitality is a very dynamic sector, especially in Ukraine, where the warfare in the East as well as the occupation of Crimea drastically impacted the tourism market: companies had to change their offers since Crimean locations became unavailable. The MH17 catastrophe in the East of Ukraine has also a drastic impact on tourism business (e.g., Ruggia 2014; Lim 2015, Musa and Thirumooorthi 2016; Chan et al. 2016). Tourism companies are also largely underrepresented among studies on dynamic capabilities (Bogodistov et al. 2017). Finally, during our pretest we conducted qualitative interviews on dynamic capabilities. Rather coincidentally, we received most of the comments from tourism companies. Based on this comments we developed our dynamic capabilities questions. Although we developed our theory for for-profit companies in general, tourism companies were the most appropriate sample for our measurement test. We are aware that it restricts generalizability of our findings and, therefore, we refer to this issue in the limitations part of this paper.

The tourism companies in Ukraine are usually represented by small and medium companies (State Statistics Services of Ukraine 2017) with a high degree of female employees (Krupskyi 2014). After data cleaning the sample contained 69 companies, 40% of which were represented by hotels. The rest was uniformly distributed among travel agencies, travel documents preparation companies, hostels, sightseeing tour agencies, etc. In our sample, there were 12 micro companies (less than 10 employees), 44 were small (10 – 50 employees), and 13 were medium-sized companies (51-250 employees). The average number of employees was 18 (SD = 71.59). 67% of participants were female, 27% were male, and 6% did not indicate their gender. The average age was 36.15 years (SD = 17.76). The proportion of companies of different size as well as the gender structure corresponded to the targeted population: Ukrainian tourism industry (State Statistics Services of Ukraine, 2016). Consequently, we considered the sample as appropriate.

Data collection

The data for the study was collected using quantitative surveys. First, we wrote short inquiry to the largest group of Ukrainian tourism and hospitality companies on Facebook. Eighty two companies showed interest in our study. Second, a number of 394 people from 82 companies were invited to take part in the survey. We also contacted those companies which showed an interest in the study during preliminary interviews. In general, 268 responses from 69 companies were received (the response rate of 68% was achieved). The questionnaire was sent both in the electronic form (81 answers, 30%); and paper-and-pencil form (62 answers, 23%). The filled out questionnaire were collected by researchers or were sent via regular mail. Additionally, 125 questionnaires (about 47%) were filled during one of the authors conducted personal interviews. Participants were informed on the overall purpose of the study, the precise description, however, was avoided in order to reduce social desirability of answers.
Measures

Dependent variable. Dynamic capabilities are the dependent variable in this research. We developed a set of items to measure different dimensions of the concept. We went through our interviews and analyzed statements of interviewees. We looked for commonalities and grouped them to categories. Finally, we looked in literature for concepts which are most fitting to the developed categories. The categories as well as underlying items can be found in Table 1. Participants were asked to evaluate in how much these items influence their company’s ability to adapt to environmental change. All items were evaluated using 7-point Likert scales, ranging from “completely disagree” to “completely agree”.

Independent variable. Myers-Briggs Type Indicator (further MBTI) was used as the independent variable. The measurement was carried out using the standardized procedure for this test (e.g., Rashid and Duys, 2015 or Yang et al., 2016). Psychological analysis of MBTI has been performed in accordance with 4 dimensions, represented by opposing pairs “Extraversion (E) – Introversion (I)”, “Sensing (S) – Intuition (N)”, “Thinking (T) – Feeling (F)”, “Judging (J) – Perceiving (P)”. Organizational culture was measured using types as proposed by Krups’kyy (2015): result-oriented, aggressive, subject-oriented, command. All types were asked using 5-Likert scale, ranging from “completely disagree” to “completely agree” as proposed by (O’Reilly et al., 1991). Based on this answers 4 groups were created. Since the two types (“result-oriented” and “aggressive”) are very close in meaning and produced almost no difference in scores, we merged them into one category (“result-oriented/aggressive”).

Control variables. We asked several open-ended questions in order to control for confounding effects and biases. We analyzed control variables were in a qualitative way. No confounding effects were found.
Table 1: The components of dynamic capabilities of a tourism company

<table>
<thead>
<tr>
<th>Dynamic capability</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulation capacity</td>
<td>new technology experience (including competitors); a reasonable amount of “insurance reserve” (to be able to maneuver in a recession); information about competitors and potential tourists; qualified personnel, the personal characteristics which contribute to sales (improving the quality of service); interaction networks, communication skills and negotiation</td>
</tr>
<tr>
<td>Transformation capacity</td>
<td>transform destructive conflicts in functionality, promising ideas into a new tourist product; standard procedures and processes into quickly adapted to the new conditions; errors into experience; acquired knowledge into innovations</td>
</tr>
<tr>
<td>Capacity to “get rid of” some resources</td>
<td>abandonment of the resources that were ineffective (especially the staff); rejection of unpopular routes and services, the quality of which caused consumer discontent</td>
</tr>
<tr>
<td>Capacity to respond quickly to changes in</td>
<td>the ability to assess the potential of new markets, to create a network of relationships, to generate sales channels; to take advantage of the brand (if it is) and new segments; to conduct an aggressive marketing policy, in social networks; to develop and introduce new products, including especially for foreign markets, without delay, to make changes to the already proposed range of tourist services; to create a system of post-sales customer support (as a vacation spot source of information); to track changes in consumer behavior</td>
</tr>
<tr>
<td>the external and internal environment</td>
<td></td>
</tr>
<tr>
<td>Capacity to absorb knowledge</td>
<td>active participation on a regular scheduled basis in international conferences and workshops, internships, study tours travel agents; organization in the field of thematic lectures and presentations (in particular regarding the social and responsible tourism, cross-cultural issues, the “green” way of doing business, improvements in the information support of the working process, etc.); holding (encouraging visits) courses of learning foreign languages, especially English; read specialized magazines; promote the development of decision-making skills;</td>
</tr>
<tr>
<td>Capacity to adapt</td>
<td>changes introduction in organizational culture: the harmonization of the objectives of individual units (if they exist); team creating; support pluralism and provide feedback; consideration as common values of tolerance, understanding, concerning people and environment care; construction of a reward system in strict accordance with the operating results and customer feedback; initiatives promoting</td>
</tr>
<tr>
<td>Capacity to predict</td>
<td>trends of “supply and demand”; “opportunities / threats / risks”; development of measures for their use / prevention / overcome;</td>
</tr>
<tr>
<td>Capacity to implement innovations</td>
<td>development of new methods of demand generating and sales promotion (including – an attractive pricing policy to the client); creative approach to satisfy the travelers’ exclusive requests; the development of new competences; reconfiguration of resources to more effective usage; to diversify the sources of information; the search for new ways of doing things; Create an alert system whereby any market information becomes public (NP appearance, change in the situation of a competitor or major customer, etc.)</td>
</tr>
</tbody>
</table>

Source: Authors’ development

Analysis. The data was analyzed using bivariate correlation method in STATISTICA™ 10.
RESEARCH RESULTS

As can be seen from Table 2, there is a positive relationship between different types of dynamic capabilities. Nevertheless, we found significant relationships only between some of the dimensions. E.g., knowledge absorption as well as the timely response to change did not correlate with other dimensions in a statistically significant way. We refer to this finding in the Discussion section of our work. We ran this analysis also for different company size separately (control variable). In general, the results did not change significantly, with a small exception of “adapt”-dimension. The results for medium companies were higher for the scales “transform” (6.5% higher), “transform” (11%), “to absorb knowledge” (22%). We will refer to this finding in the Discussion part. Micro and small companies also demonstrated a higher degree of flexibility (r = 0.68 against 0.57 – in medium companies). Since our hypothesis 2 assumed correlation of dimensions of dynamic capabilities and we found correlation only of some dimensions, we hold the hypothesis for partially supported.

Table 2: Dynamic capabilities components’ correlation results

<table>
<thead>
<tr>
<th>DC</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To accumulate</td>
<td>0.37***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>To transform</td>
<td></td>
<td>0.48**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>To get rid of the ballast</td>
<td>0.25</td>
<td>0.6</td>
<td>0.51</td>
<td>0.43</td>
<td>0.38</td>
<td>0.54</td>
<td>0.33</td>
</tr>
<tr>
<td>4</td>
<td>To respond quickly to changes in the external and internal environment</td>
<td>0.43</td>
<td>0.6</td>
<td>0.51</td>
<td>0.38</td>
<td>0.33</td>
<td>0.41</td>
<td>0.54</td>
</tr>
<tr>
<td>5</td>
<td>To absorb knowledge</td>
<td>0.16</td>
<td>0.4*</td>
<td>0.34</td>
<td>0.62</td>
<td>0.29</td>
<td>0.16</td>
<td>0.4*</td>
</tr>
<tr>
<td>6</td>
<td>To adapt</td>
<td>0.21***</td>
<td>0.27</td>
<td>0.43***</td>
<td>0.46*</td>
<td>0.32</td>
<td>0.28</td>
<td>0.16</td>
</tr>
<tr>
<td>7</td>
<td>To predict</td>
<td>0.18***</td>
<td>0.5</td>
<td>0.22</td>
<td>0.39</td>
<td>0.36</td>
<td>0.24</td>
<td>0.41</td>
</tr>
<tr>
<td>8</td>
<td>To implement innovations</td>
<td>0.21***</td>
<td>0.27</td>
<td>0.43***</td>
<td>0.46*</td>
<td>0.32</td>
<td>0.28</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Source: Authors’ analysis

In order to test our hypothesis 1 on relationships between a manager’s cognitive style and dynamic capabilities of a company, we used the typology of cognitive style by Myers-Briggs (Myers 1962) applied to managers. We followed the guidelines by Krups’ky (2015) and focused on 10 MBTI-types (see Table 3). The results of the correlation indicated that certain types of personality indeed appear together with certain dimensions of dynamic capabilities. This finding is of a rather explorative nature, and we will discuss it in the according part of our work.
We ran the same analyzes for companies of different size. We found several discrepancies: e.g., the ENTJ correlation coefficient for the “accumulate” was 14% lower in micro and small companies as compared to medium-sized companies; the same appeared for the dimensions of “transform” (5.5% lower), “to respond quickly” (10.8% lower), “to absorb knowledge” (18% lower), to adapt (23% lower), “to forecast” (15.3% lower), and to “implement innovations” (18.4% lower). Only in the event of the variable “getting rid of the ballast” medium companies showed a higher degree of correlation (3%). The latter might have appeared due to a higher amount of resources in medium companies rather than due to manager’s cognitive style. We will refer to this issue in the Discussion section of our work.

Similar trends appeared in such types of cognitive styles as ESTJ, ESFJ. In the case when the company was headed by a person who belongs to the MBTI-type ISTJ, ISFJ, INTJ, ISTP, the difference was not so high (the average deviations of correlation in these four pairs between the two groups of companies (micro and small vs medium-sized) were 4.7%, 2.3%, 3.4%,

Table 3: Correlation table for dynamic capabilities and a manager’s cognitive styles

<table>
<thead>
<tr>
<th>MCS</th>
<th>To accumulate</th>
<th>To transform</th>
<th>To get rid of the ballast</th>
<th>To respond quickly to change in the external environment</th>
<th>To absorb knowledge</th>
<th>To adapt</th>
<th>To predict</th>
<th>To implement innovations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTJ</td>
<td>0.56</td>
<td>0.6</td>
<td>0.43</td>
<td>0.49</td>
<td>0.71</td>
<td>0.51**</td>
<td>0.76</td>
<td>0.63**</td>
</tr>
<tr>
<td>ESTJ</td>
<td>0.37</td>
<td>0.21</td>
<td>0.1</td>
<td>-0.15</td>
<td>0.25</td>
<td>0.16</td>
<td>-0.05</td>
<td>-0.34</td>
</tr>
<tr>
<td>ESFJ</td>
<td>0.45</td>
<td>0.39***</td>
<td>0.22</td>
<td>0.15</td>
<td>0.4</td>
<td>0.31</td>
<td>0.29</td>
<td>0.26</td>
</tr>
<tr>
<td>ESFP</td>
<td>0.29</td>
<td>0.34</td>
<td>0.39</td>
<td>0.57</td>
<td>0.46</td>
<td>0.51</td>
<td>0.36</td>
<td>0.58</td>
</tr>
<tr>
<td>ESTP</td>
<td>0.33</td>
<td>0.48***</td>
<td>0.54</td>
<td>0.62</td>
<td>0.53</td>
<td>0.44***</td>
<td>0.47</td>
<td>0.52</td>
</tr>
<tr>
<td>INFJ</td>
<td>0.57</td>
<td>0.54***</td>
<td>0.13</td>
<td>0.24</td>
<td>0.73</td>
<td>0.61</td>
<td>0.56</td>
<td>0.33</td>
</tr>
<tr>
<td>ISFJ</td>
<td>0.67</td>
<td>0.24</td>
<td>0.12</td>
<td>0.53</td>
<td>0.66</td>
<td>0.26</td>
<td>0.32</td>
<td>0.13</td>
</tr>
<tr>
<td>INTJ</td>
<td>0.24</td>
<td>0.18</td>
<td>0.06</td>
<td>-0.26</td>
<td>0.31</td>
<td>0.08</td>
<td>0.17</td>
<td>-0.06</td>
</tr>
<tr>
<td>ISTP</td>
<td>0.26</td>
<td>0.21</td>
<td>0.18</td>
<td>-0.91</td>
<td>0.38</td>
<td>0.15</td>
<td>0.05</td>
<td>-0.27</td>
</tr>
<tr>
<td>ISFP</td>
<td>0.32</td>
<td>0.09</td>
<td>-0.52</td>
<td>-0.48</td>
<td>0.29</td>
<td>0.03</td>
<td>-0.02</td>
<td>0.23</td>
</tr>
</tbody>
</table>

Note: ENTJ Extraversion − iNtuition − Thinking − Judging
ESTJ Extraversion − Sensing − Thinking − Judging
ESFJ Extraversion − Sensing − Feeling − Judging
ESFP Extraversion − Sensing − Feeling − Perception
ESTP Extraversion − Sensing − Thinking − Perception
INFJ Introversion − iNtuition − Feeling − Judging
ISFJ Introversion − Sensing − Feeling − Judging
INTJ Introversion − iNtuition − Thinking − Judging
ISTP Introversion − Sensing − Thinking − Perception
ISFP Introversion − Sensing − Feeling − Perception

Source: Authors’ analysis
1.6%, 3.3%, 4.1%, 0.4% respectively; in the case of “getting rid of ballast” the significant difference in deviation was absent at all (see Table 4).

Table 4: Correlations for different types of organizational culture

<table>
<thead>
<tr>
<th>DC</th>
<th>ENTJ</th>
<th>ESTJ</th>
<th>ESFJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>To accumulate</td>
<td>0.61</td>
<td>0.39</td>
<td>0.42</td>
</tr>
<tr>
<td>To transform</td>
<td>0.54</td>
<td>0.19</td>
<td>0.36</td>
</tr>
<tr>
<td>To get rid of the ballast</td>
<td>0.65</td>
<td>-0.49</td>
<td>0.25</td>
</tr>
<tr>
<td>To respond quickly to changes in the external and internal environment</td>
<td>0.58</td>
<td>0.36***</td>
<td>0.38***</td>
</tr>
<tr>
<td>To absorb knowledge</td>
<td>0.27</td>
<td>0.23</td>
<td>0.26</td>
</tr>
<tr>
<td>To adapt</td>
<td>0.76</td>
<td>0.23</td>
<td>0.24</td>
</tr>
<tr>
<td>To predict</td>
<td>0.63</td>
<td>-0.46</td>
<td>0.19</td>
</tr>
<tr>
<td>To implement innovations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subject-oriented</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTJ</td>
<td>0.43</td>
<td>0.41</td>
<td>0.45</td>
</tr>
<tr>
<td>ESTJ</td>
<td>0.47</td>
<td>0.23</td>
<td>0.36</td>
</tr>
<tr>
<td>ESFJ</td>
<td>0.51</td>
<td>0.08</td>
<td>0.28</td>
</tr>
<tr>
<td>Command</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTJ</td>
<td>0.59</td>
<td>0.37</td>
<td>0.51</td>
</tr>
<tr>
<td>ESTJ</td>
<td>0.68</td>
<td>0.21***</td>
<td>0.44***</td>
</tr>
<tr>
<td>ESFJ</td>
<td>0.24</td>
<td>0.03**</td>
<td>0.18</td>
</tr>
</tbody>
</table>

**p<0.01; ***p<0.001; p<0.05

Interestingly, some of the MBTI-types might be associated with “charisma” as defined by Gibson and Blackwell (1999, 124-128): a personality who has “vision of how to make things or do things better”, “extraordinary communication skills, ability to articulate the vision”, “high level of personal energy and enthusiasm, willingness to work very hard”, “self-confidence in their own abilities”, “high level of commitment and conviction about the correctness of their ideas”, and “acts as role models to their followers”. It should be noted that the figures slightly change, when the company had a manager who has characteristics associated with charismatic leadership; his or her impact particularly strongly affected the company's ability to respond, transform, learn, and adapt. We hold, therefore, the hypothesis 1 as supported.

To test the hypothesis 3, we focused on the four types of organizational culture which are the most common in tourism industry (classification proposed by Krupskyi (2014)). Then, we compared the correlations tables between DC and MCS for these three types of organizational culture. Even the example of 3 MCS in Table 4 shows that the relationships are different. Without doubt organizational culture alters the power of relationships between a manager’s cognitive style and dynamic capabilities of a company.
Regarding the differences between small and medium companies, they were similar to the previous test, but the predictive power became smaller. For example, in the case of the ENTJ in aggressive culture, small and medium companies were differently adaptable (the difference in rates is 0.4%). Nevertheless, “command” culture is more appropriate for large companies with almost 25% of DC advantage. As for ESTJ, the maximum deviation in the direction to medium companies took place in the ability to accumulate at the command organizational culture (+14%); minimum was at “getting rid of the ballast”, and focus on the result (1.6%). Subject-oriented organizational culture did not reflect significant fluctuations between the two categories of companies (other than adaptive capacity – 13%); however, it has shown that excessive focus on details, coupled with the inability of management to withstand stress has negative consequences in terms of active measures application in unstable conditions (statistically significant correlation is either absent or very small). The final results are depicted in Figure 2.

Figure 2: Final results

Note: + indicates a support of the hypotheses, whereas * indicates a partial support.
DISCUSSION

Dynamic capabilities are one of the most popular and important topics, especially for tourism companies. A high degree of turbulence in the market of tourism services makes the capability to adopt the key to a company’s performance (Bogodistov et al. 2017). At the same time, there is less unity on what dimensions or components a dynamic capability consists of (e.g., Barreto 2010). We approached this issue in a more pragmatic way by asking representatives of the tourism business on capacities underlying their abilities to respond to environmental changes. Interestingly, they included many related concepts, such as absorptive capacities into dynamic capabilities concept.

Dynamic capabilities are organizational routines, rooting in interaction of individuals and are essentially dependent on senior managers; their role appears, at least in the scanning of the environment, understanding and optimizing the composition of resources, in accordance with managerial vision and evaluation of existing opportunities (Martin 2014). It largely determines the success of the company, especially on volatile markets. As it was shown in this study, one of the main factors influencing DC development is manager’s cognitive capabilities.

Helfat and Peteraf (2014) argued that a manager’s cognitive capabilities have impact on dynamic capabilities. Our test on managerial cognitive styles supported this notion. Indeed, several cognitive styles correlate with certain dimensions of a dynamic capability. We ask readers to interpret this finding with care – a correlation was tested in an exploratory way and should be retested with a stronger theoretic support for each dimension of MBTI. We also would like to stress that these tests should follow a previous dynamic capability conceptualization. Our work indicated that certain MBTI-types correlate with concepts which were indicated by practitioners as integral parts of their companies’ dynamic capabilities.

In this regard, we would also like to point out the discrepancy between a leader and a manager. In our work we focused on manager who is “legitimate” in his/her decisions on strategic development of a company. However, one would be interested in the power of informal leaders – those who do not have formal leverages on a company’s strategic decisions, but often can still influence them (e.g., Krackhardt and Hanson 1993).

Finally, we argued for the moderating role of organizational culture. Indeed, can influence the relationship between managerial cognitive style and dynamic capabilities. A higher degree of centralization, for example, would allow managers to have a higher impact on organizational processes. In our work, we found several correlations which indicate that the moderation is there. Nevertheless, after developing a clear multidimensional concept of dynamic capabilities (including all proposed dimensions), a correlation of each dimension of MBTI should be performed. Is it about a certain dimension of MBTI (extroversion or intuition) or is it about a combination of several dimensions in one cognitive type? This question remains unanswered hitherto, whereby the answer could help researchers in their method selection: separate dimensions would

---

1 We thank one of our reviewers for this idea.
speak for regression, whereas a combination of dimensions would assume a multi-group ANOVA test.

**IMPLICATIONS FOR PRACTITIONERS**

The results of the study may be especially useful for human resource departments of companies, opting to recruit managers. Making accurate psychological portrait of the candidate might help predict his or her support of specific organizational routines – dynamic capabilities. As our study shows, different manager’s cognitive types correlate with different dimensions of a dynamic capability. It can happen, for different types of environmental change, different managers are needed. As long as the discussion on the structure of DC is going, practitioners can already use the results of this work and look for specific characteristics depending on what is demanded by a company at the moment. For example, if a company needs to innovate, a manager with an ENTJ-cognitive style would be the best solution, whereas when it is not about innovation but about transformation or a shift to another market or product, INFJ might be a more preferable cognitive style. Companies with internal human potential can produce ‘ad hoc’ positions of a change manager and fill this position by different types of employees according to the current situation. Of course, HR managers have to bear the organizational culture in mind: e.g., ENTJ style might be of more use for adaptation strategies in a company with a subject-oriented corporate style, but for innovation strategy in a result-oriented company.

**LIMITATIONS AND FURTHER RESEARCH**

Our work has several limitations. First, we collected our data in tourism companies only. This definitely reduces the generalizability of our findings. Although, the theory should be generalizable for other types of for-profit organizations, we cannot prove it. We suggest researchers to perform further studies in other industries. Moreover, we collected our data in Ukraine only. Ukraine might differ from other countries in corporate relationships (e.g., Bogodistov and Lizneva 2017), therefore, we suggest researchers to perform a similar analysis in other countries. Especially, countries of high cultural distance might be of interest. As a recent work by Bogodistov, Botts and Schlatterer (2017) shows – cultural distance might impact the perception of the role a manager plays in the company.

Second, we see a weakness in the explorative nature of our analysis. As a reader can see, we did not propose hypotheses on specific types of a manager’s cognitive style. The reason is twofold: on the one hand, there is not enough literature in this regard. We see it as a high potential for future studies on managerial cognitive styles and other organizational variables, such as dynamic capabilities. On the other hand, instead of regressions and complex models (e.g., mediated moderation for specific dimensions of DC), we applied a simple bivariate correlation. Correlation is not as interesting for interpretation as a regression analysis or a structural equation modeling. Nevertheless, it was sufficient and showed interesting avenues for further studies.
Third, we see a theoretical restriction. As we have already mentioned, we selected dimensions of dynamic capabilities based on our previous interviews in tourism companies. It can happen that the chosen dimensions are applicable for tourism companies only. Although we believe that the theory is generalizable, it should be shown in further studies for other spheres of business.

Further, our study revealed that not all of these relationships are correlated. For instance, capacities to respond quickly and to absorb knowledge did not correlate with any of the proposed dimensions. First, we agree on the notion of multidimensionality of the concept of dynamic capabilities. Second, we conclude that knowledge absorption and time of response represent additional dimensions but are still a part of the concept of dynamic capabilities (preliminary interviews). We propose researchers to perform further studies and develop more items for these additional dimensions. A confirmatory factor analysis may shed light on the relationships among these dimensions. At the moment, we cannot exclude overlapping of dimensions as well as we cannot conclude in how much other dimensions (transformation, prediction, etc.) can be approached separately. One needs further discriminant validity as well as external validity tests. We collected our data in a specific business domain and it has to be reassured that the theory holds in other domains.

REFERENCES


Oleksandr P. Krupskyi, PhD, Associate Professor (Corresponding Author)
Oles Honchar Dnipro National University
72 Gagarina Ave, Dnipro, 49010, Ukraine
Phone: +3809675648558
E-mail: krupskyy71@gmail.com
http://orcid.org/0000-0002-1086-9274

Tetiana Grynyko, PhD, Professor, academician of the Academy of Economic Sciences of Ukraine
Oles Honchar Dnipro National University
72 Gagarina Ave, Dnipro, 49010, Ukraine
Phone: +38067 6303434
E-mail: greisy25@gmail.com
http://orcid.org/0000-0002-7882-4523