

RELATIONSHIP BETWEEN CULTURE AND THE LEVEL OF INTERNAL INTEGRATION OF LOGISTICS AND MARKETING FUNCTIONS – AN EXPLORATIVE ANALYSIS

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Abstract Cultural characteristics and different managerial aspects that may influence the degree of internal integration through facilitating and hindering factors play an important role in exploring internal integration of different functions. The following paper examines the relationship between cultural characteristics of logistics managers of different nationalities and inter-functional integration of company's logistics and marketing functions. More specifically, it aims to investigate whether and to what extent cultural traits and nationalities of logistics managers may influence the level of integration of logistics and marketing functions. For this purpose, the level of internal integration and the role of national cultures will be examined. Using quantitative research methods, the relationship between culture and the level of internal integration between logistics and marketing functions will be examined. A small data sample for the research was collected from Slovenian parent retail companies and their foreign subsidiaries. The findings suggest that there is a connection between the level of integration and cultural characteristics of employees from logistics function.

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1. INTRODUCTION

Integration has been extensively examined in various disciplines such as management, corporate strategy, organizational theory, production management and information systems (Barki & Pinsonnault, 2005, p. 168). The conceptual roots of integration go back to Fayol's (1949, pp. 24-39) idea of co-operation and coordination and to Lawrence and Lorsch's (1967, pp. 25-37) conceptualization of integration who defined it as a process towards achieving mutual efforts between different subsystems in pursuit of accomplishing organizational tasks. Given that no function in a company is fully efficient when operating in isolation (Ahmed & Rafiq, 2003, p. 1180), business processes from various function departments thus ought to be implemented so as to meet customer needs. As a result, companies can no longer afford to have their individual functions or departments operating in isolation. On the contrary, relationships between employees play an important role in understanding who is in charge of carrying out specific activities or tasks, for example in logistics and marketing functions. In small organisations, people are functionally familiar with each other in that they know one another's working style etc. In larger organisations, however, functional familiarity is harder to achieve (Schein, 2009) what may have an impact on the degree of internal integration (i.e. information flow may be hindered and tasks, employees have to accomplish in different functions, may overlap or duplicate). Hence, managers must understand the implications the various degrees of internal integration may have on organizational culture of the company or subsidiary and thus its performance as well as the consequences it may have on intercultural communication between the company's headquarters and its foreign subsidiaries. Hence, (sub)cultures of individual functions, as in our case the logistics function and marketing function, ought to be integrated so as to enable the achievement of a common corporate purpose. In this respect, relationships between employees are of great importance for the level of internal integration and are, to a large extent, related to employees' national culture. The values of the national culture, for instance, influence the organization in connection with communication surrounding time and relationships (Driskill & Laird Brendon, 2005, p. 29). In this respect, each culture has its own unique interactional style, made up patterns of interaction (Pinto, 2011), which result from the way members perceive, feel about, and act on daily events. Moreover, relationships between employees from different functions of the same company also play an important role in organizational success (Daugherty, Chen, Mattioda & Grawe, 2009, p. 1). According to Holmlund (2004, pp. 279-280) relationships are a dynamic system, as they continuously evolve through time. Time is an inherent and unique factor that has an impact on relationships and thus presents an important aspect when conceptualising and empirically investigating relationships. From the viewpoint of the level of internal integration of logistics and marketing functions, the relationships between employees in a company were studied by Topolšek

(2010, pp. 125-131) who found a positive link between the two functions. Using the so called variable approach to culture, which focuses either on internal variables such as values, rules, etc. or on external variables such as the national culture, the aim is to predict important organizational outcomes such as productivity etc. (Driskill & Laird Brendon, 2005, p. 35). Organizational cultures are influenced by the national culture. They may be understood as having several dimensions which influence the formation of relationships. At the deeper, unconscious level of organizational cultures are shared tacit assumptions (Schein, 2009), shared values and trust through which its members try to understand the organization. They were found to have an impact on organizational success (Gordon, 1991, p. 408).

Typically, good interpersonal relationships have a positive impact on efficient communication and vice versa. Furthermore, at the workplace, good interpersonal relations increase the level of relaxation, the degree of trust, which assist in accomplishing tasks. Without communication there would not be any relationships, intimacy, co-operation, empathy, social life, public life, let alone any media activities. The development of social bonds that enhance trust building are often said to be culturally determined (Bianchi & Bellini, 1991). Freeman (1990) maintains that due to the importance of personal trust relationships cultural factors such as language, educational background, regional loyalties, shared ideologies, experiences, and even common leisure interests will continue to play an important role in collaboration.

In one of the most recent and focused analyses of inter-firm trust, Sako (1991, p. 377) argues that trust is "a state of mind, an expectation held by one trading partner about another, that the other will behave in a predictable and mutually acceptable manner". Her study (Sako, 1991, 1992) examined subcontracting relationships in Britain and Japan.

Given that the findings from previous studies suggest a link between internal integration and employees' relationships, the following paper aims to examine the relationship between the degree of internal integration and culture.

A recently published article by Topolšek and Orthaber (2011) provided a literature review on internal integration theories and presented cultural models, which have been developed to differentiate workers of one national culture from another. In addition, implications were raised as to how the two areas of research may be applied to a specific set of data. The following paper thus draws on those theoretical implications. Hence, the next section presents the methodology followed by the research findings with the objective to determine the relationship between culture and the level of internal integration. It is important to note that the notion of culture, here, may involve a simultaneous meeting of national, organizational and occupational cultures (Schein, 2009).

2. RESEARCH METHODOLOGY

The following section presents the methodology that is typically used to examine the existing level of internal integration, which is based on interaction and collaboration. The independent variable of the existing level of internal integration in analysed companies is based on some recent studies. Research methodology is premised on Edmondson and McManus (2007, p. 1163), who proposed the so called *intermediate* research methodology based on the scope of previous research and may also be used for our data. They proposed three types of research that depend on the level of previous research.

The first, or the so called developing approach studies the developing research area which includes quantitative data collection through questionnaires.

The second, or the so called intermediate approach refers to data collection after the proposed relationships and the new ones had already been investigated. In this case, a hybrid approach to data collection can be applied (quantitative and qualitative, whereby the latter can be smaller in scope).

The third, or the so called *ripe* approach refers to testing and examining the relation of existing constructs but for which a large amount of quantitative data is required.

Our research is based on arithmetic means of questionnaire findings to identify the existing level of internal integration, followed by the analysis of data, whereas the independent culture variable refers to nationalities of logistics managers who participated in the survey. Based on the findings, the relationship between nationality or cultural characteristics and the level of internal integration will be examined. In order to confirm the set hypothesis entitled "cultural traits and nationality of logistics managers and other employees are linked to the level of internal integration of logistics and marketing functions", a link between the two variables must be identified.

2.1. Sampling of companies

The sample included companies from the industry sector Retail companies excluding motor vehicle retailers. This operation line is defined as such by the Slovenian Chamber of Commerce. This institution served as a primary source for collecting data in that it provided information on relevant companies that participated in the survey. To this end, three Slovenian companies were surveyed (from altogether 30 registered ones, classified as large companies) that agreed to participate in the study. The three companies also have foreign subsidiaries. More specifically, their subsidiaries are located in the countries of former Yugoslavia (see Table 1). Moreover, the state represents the nationality of the managers.

Table 1 Data on companies included in the study

Companies registered in Slovenia			
Subsidiaries	1	2	3
Slovenia	Mother company	Mother company	Mother company
Serbia	1	1	1
Macedonia	1		1
Croatia		1	1
Bosnia and Herzegovina	1	1	

2.2. Questionnaire methodology and analysis

Questionnaires were first sent to all three companies. In addition, questionnaires were subsequently also forwarded by the logistics managers from Slovenian home base to other logistics managers in companies' foreign subsidiaries. Enclosed was a letter, in which logistics managers were asked to complete the questionnaires.

12 completed questionnaires were returned from Slovenia, Croatia, Bosnia and Herzegovina, Serbia and Macedonia. Data were analysed using Microsoft Excel to conduct basic analysis and *Statistical Package for the Social Sciences* (SPSS) for Windows to carry out statistical data analysis.

3. FINDINGS

Most prominent theories of internal integration of logistics and marketing functions and models for studying national cultures for the countries in question have already been presented. Moreover, a relationship and potential impact culture may have on the level of internal integration of logistics and marketing functions was also studied from the theoretical viewpoint (see, for example, Topolšek & Orthaber, 2011).

In the findings, we will first examine the level of internal integration according to individual companies. Subsequently, the findings will assist in establishing its relationship with culture. In this respect, the level of internal integration of each company in question will be examined in relation to the state, in which its foreign subsidiaries are located. In addition, the connectivity or non-connectivity of the level of integration in relation to interviewees' nationalities will be examined and implications discussed.

3.1. Analysis of existing level of internal integration

The level of internal integration is reflected by the extent to which logistics activities interact or co-operate with other functional areas, for example the market-

ing function. Hence, higher levels of internal integration would be reflected in an increased coordination of logistics activities with, for example, the marketing department, as well as other departments in a company, in increased communication, mediated and face-to-face interactions between logistics and other departments (Stock et al., 2000).

In order to examine the relationship between the level of internal integration and culture of logistics managers, the existing level of internal integration in companies in question needs to be determined. The level of internal integration was identified using questionnaires, which feature a list of activities. Accordingly, the interviewees rated the degree or frequency of mutual co-operation with the marketing function in performing these tasks. More specifically, the list of questions featured 16 different activities (Table 2) such as formal meetings, telephone conversations, e-mails, etc. The interviewees thus rated the frequency of implementing specific tasks using one of the following answers: never, yearly, monthly, weekly or daily.

Table 2 List of 16 activities

	Activities
1	Formal meeting
2	Telephone conversation
3	E-mails
4	Exchange of forms
5	Exchange of reports
6	Exchange of fax material
7	Mutual pursuit of goals
8	Reaching mutual understanding
9	Informal team work
10	Sharing ideas
11	Sharing information and other sources
12	Achieving mutual goals of a company
13	Teamwork
14	Developing mutual understanding of responsibility
15	Managed mutual planning for forecasting and problem solving
16	Making mutual decisions based on ways for improving the entire price efficiency

As indicated in Table 2, the interviewees rated how frequent individual activities are carried out. Due to space constraints, their individual replies were not included in this paper.

From the viewpoint of the hypothesis, the indicator of the level of internal integration appears to be more interesting than the implementation of individual activities and may be observed for each company separately. This way, differences between replies of logistics managers from different countries that belong to the same company may be identified. Based on this we may see that although rules of doing

business are quite the same and subsidiaries are organized in much the same way, differences are evident. Hence, the influence of managers' and employees' nationalities (typically, they are citizens of the country in question, where the subsidiary is located – see, Table 1) implies that there is a connection with the level of internal integration with individual subsidiaries or the company's headquarters.

However, in order to determine the link between the level of internal integration and the nationality which is connected with the location of subsidiaries or the company's headquarters a bivariate analysis of both variables and One-Way ANOVA analysis have been conducted.

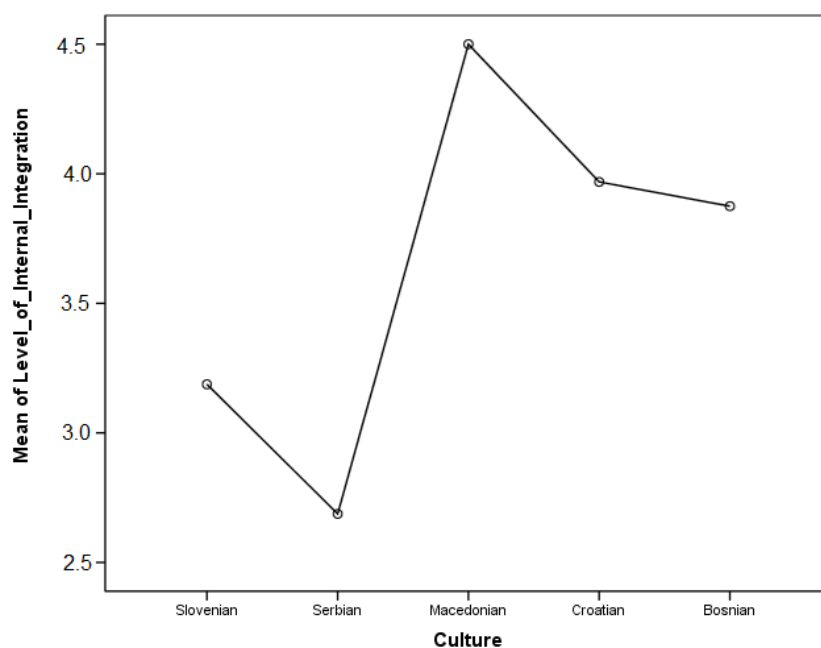


Fig. 1 The level of internal integration in relation to culture

Based on the findings resulting from the statistical analysis (see, Fig. 1) it is evident that the highest level of internal integration between the logistics and marketing functions was found to be amongst Macedonians (4.50), followed by Croats (3.96), Bosnians (3.87), Slovenians (3.19) and Serbs (2.68). On a scale from 1 to 5, total value of the level of internal integration amounts to 3.42. The value 3.42 presents a high level of internal integration and high presence of implementing interactional activities (two thirds of mentioned activities are implemented in appropriate time intervals). Despite the differences identified here, e.g. in different levels of internal integration, other studies have found that companies with foreign subsidiaries have a strong influence on the practices of their foreign subsidiaries, i.e. deci-

sion making (see, for example, Krishna Erramilli, 1996). A study by Stock et al. (2000) examined whether performance will be higher in firms achieving a fit between internal integration of a logistics function and geographic dispersion. Geographic dispersion is the extent to which the elements in a firm's supply chain are located across a wide range of geographic regions, whereas elements of the supply chain include suppliers, production facilities, distributors, and customers (p. 533). They have identified a clear positive relationship between operational performance and fit between internal integration and geographic dispersion of the firm's supply chain. Next, we will take a look at the findings.

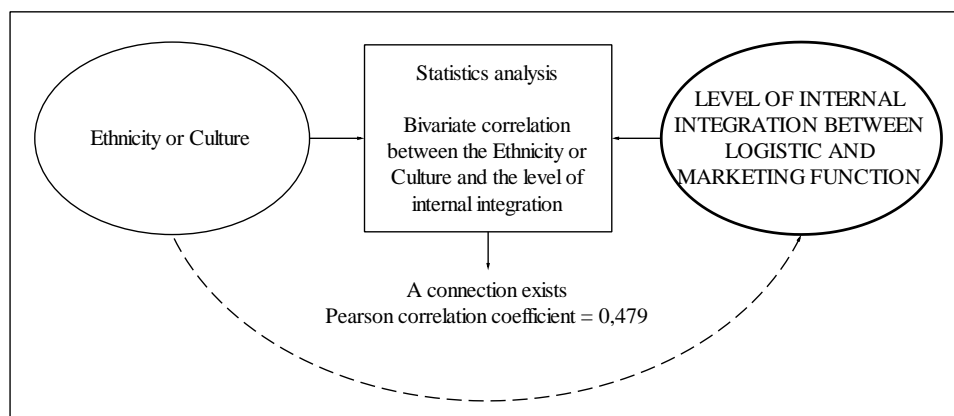
3.2. Setting of side

The data were analysed separately, i.e. for each individual company, as well as together, i.e. independent of the company. This is due to the fact that at this stage of the research, companies were analysed separately, given that each company (and its subsidiaries) has its own management. The analysis which incorporated all three companies and their subsidiaries was conducted with the objective to identify differences and similarities in relation to the company and their subsidiaries.

The next hypothesis states that cultural characteristics or nationalities of logistics managers and other employees influence the level of internal integration of logistics and marketing functions. Both variables are normally distributed; therefore, the main hypothesis may be tested using Pearson's correlation coefficient. Using bivariate correlation, the statistical analysis of variables, i.e. culture as a variable and the level of internal integration as a variable, has confirmed a link between them for Company 1, given that the value of Pearson's correlation coefficient was 0.188. Statistical analysis was also undertaken for Company 2 and Company 3. The findings have shown that Pearson's correlation coefficient was 0.625 (Company 2) and 0.831 (Company 3), respectively. The value of correlation coefficient always lies at the interval scale (-1, +1). In our case, the value for the Company 1 was 0.188, i.e. closer to 0 than 1, therefore indicating weak connectivity. A positive correlation coefficient shows that by increasing the level of collaborative behaviour the level of internal integration increases, too. The values of the coefficient for Companies 2 and 3 were higher, thus showing stronger connectivity.

However, with the objective to identify a more general connection, independent of a particular group of companies, statistical data analysis for all companies and their subsidiaries was conducted. Using bivariate correlation, the statistical analysis of variables of nationalities or cultural traits and the level of internal integration has confirmed a link between variables for all companies, thus indicating a connection (Pearson's correlation coefficient was 0.479). This indicates a semi-high connectivity between culture and internal integration (see Fig. 2).

Fig. 2 Dependence of the level of internal integration on nationality or cultural characteristics of employees



Below are provided the findings of the One-way analysis. Descriptive analysis has shown mean values of the level of integration in relation to the Culture as a variable (see Fig. 2).

ANOVA analysis has shown statistical insignificance with statistics test sig. (sig. = 0.227) being higher than the maximum value 0.050. This means that statistical inferences to the population cannot be made. The reason lies in a small population sample.

The results of bivariate correlation analysis and Oneway ANOVA analysis indicate the link between nationality of employees in the company's home base and its subsidiaries and the level of internal integration. Hence, for the three examples in question, the hypothesis entitled "cultural traits and nationality of logistics managers and other employees influence the level of internal integration of logistics and marketing functions" can be confirmed.

4. CONCLUSION AND FURTHER RESEARCH

Culture not only influences the nature of the organization's relationship with its environment, it also influences relationships among employees within an organization. "Members within a cultural community often develop a set of shared meanings and co-constitution processes of what as proper or improper behaviours in a given social situation" (Ting-Toomey, 2009, p. 227). Employees or members from two different organizations from two or more contrastive cultural communities may assign different meanings to verbal and/or nonverbal activities, to status identities, in-group and out-group identities (Ting-Toomey, 2009). Managers of various companies will continue to encounter different cultural issues, whether

they are national, organizational and occupational. They will need to understand the cultural dynamics and use the appropriate tools and approaches to decipher any given situation and thus manage it (Schein, 2009).

Based on the outlined considerations and the set objectives a hypothesis was defined in the introductory part entitled: "cultural traits and nationality of logistics managers and other employees influence the level of internal integration of logistics and marketing functions" with the objective to identify a connection between the level of integration and cultural characteristics of employees in a logistics function. The hypothesis was tested using Pearson's correlation coefficient (0.479). Despite the fact that due to the small sample of data, they are not statistically significant, the hypothesis can, nevertheless, be confirmed. One-Way analysis was conducted with the aim to investigate the level of internal integration in relation to culture. The highest level of integration between the logistics and marketing functions, in relation to culture, was identified for Macedonians and the lowest for Serbs. In total, the level of internal integration shows high level of integration, regardless of nationality. Therefore, the level of integration within a company may have implications for interpersonal as well as intercultural communication. To date, studies have only focused on how cultural values influence organizational communication and not vice versa. As already mentioned, valuable characteristics of Slovenians are said to be adaptability, knowledge of foreign languages, or curiosity, but the somewhat lower level of internal integration, compared to other nationalities in question, may imply that their behaviour may be less collaborative, what may have (negative) implications for intra- and intercultural communication, i.e. communication between departments or functions within the same company as well as communication between foreign subsidiaries and the headquarters.

The aim of this paper was to identify a link between the level of internal integration between the marketing and logistics function and cultural characteristics of employees of international middle-sized companies. Despite the fact that the focus in the following research was on internal integration between logistics and marketing functions, several unanswered questions remain that refer to this area. Further research could be conducted on a larger sample that would be based on a large international company. In the future, a similar research could be conducted by including all employees in such a study. Finally, further research is also needed to flesh out the potential differences in different cultural dimensions, i.e. power-distance, individualism/collectivism, or differences in communication using different communication modes (computer-mediated etc.) and to design new guidelines to support intra- and intercultural communication between the aforementioned companies and cultures.

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BIOGRAPHICAL NOTES

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