

**Българо-китайски форум**  
**„Международни клъстерни политики”**

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**Сборник с доклади от международна конференция**



# **Българо-китайски форум „Международни клъстерни политики“**

под патронажа на г-н Стоян Пасев,  
Областен управител на област Варна

Сборник с доклади от международна конференция

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## Увод

Глобализацията на световната икономика е обективна реалност, независимо че все още механизмът и последствията от този процес не са изяснени и на практика предизвикват диаметрално полюсни позиции. Пазарните пространства в световния бизнес непрекъснато търпят промени на фона на глобалните операции на сливания и поглъщания на крупни фирми в предходното десетилетие. Разширява се либерализацията на социално-политическата сфера, усъвършенствуват се пазарните отношения в икономиката, трансформира се производството и пазара на работна сила, реструктурира се икономиката към наукоемки и високотехнологични отрасли. Диверсификацията на външноикономическите връзки в зависимост от непрекъснато възникващите и отпадащи нови пазари, нови продукти и нови икономически субекти на основата на нарастваща глобална и регионална стандартизация, налага разнородни бизнес промени в глобален мащаб.

Глобализационните процеси „просмукват“ всички равнища на стопанската йерархия: макро, мезо и микро, което допълнително затруднява анализа на глобалните тенденции и тяхното прогнозиране. Няма съмнение, че глобализацията е факт и че тя ще продължи да оказва влияние върху международните организации и регионалните съюзи, държавите, индустриите, фирмите и техните маркетингови дейности, предоставяйки глобални пазарни възможности и/или създавайки глобални конкурентни заплахи. Комбинирана с глобалната пазарна несигурност, глобализацията може да бъде определена като глобален бизнес драйвер.

Промениящият се баланс на силите в световен мащаб се обозначава с прехода от Глобализация 2.0 (доминирана от Западния Свят) към Глобализация 3.0 (доминирана от Китай). Глобализация 3.0 се характеризира с факта, че Западът вече няма доминираща роля по отношение на световните спестявания и в резултат на това вече не доминира в областта на глобалните инвестиции и финанси. Ерозия-



та на силата на Запада се съпътства и от ерозия в авторитета на „гранд“ институциите<sup>1</sup> от Глобализация 2.0, които се опитват да запазят силата си, продължавайки да налагат имплицитните правила на Западната икономическа ортодоксалност. Горепосочената ситуация се потвърждава от данните на Индекса на доверие на ПЧИ (FDI Confidence Index), според който през 2015 и 2016 година САЩ и Китай запазват първо и второ място, докато през 2017 година второто място се заема от Германия (съответно 2.03, 1.86 и 1.83 от максимум 3.0)

Съвременният глобален свят, в който живеем, изисква от всички нас непрекъснато да се променяме, за да бъдем в синхрон с динамиката на живота. В тези условия дългосрочно успешни и конкурентни могат да бъдат само тези лица, компании и институции, които работят чрез изпреварващи стратегии по отношение на своите ключови компетентности.

Настоящият сборник включва доклади от международната конференция в рамките на Българо-китайския форум „Международни клъстерни политики“, която се проведе на 18 и 19 май 2018 г. Форумът се проведе във връзка с инициативата на Европейския съюз „ЕС-Китай 2018 – година на туризма“, китайската инициатива „Един пояс, един път“ и Инициативата за сътрудничество между страните от Централна и Източна Европа и Китай 16+1. Международната конференция се проведе с подкрепата на Институт „Конфуций“ при ВТУ „Св. св. Кирил и Методий“ и Черноморски клъстер Иновации и развитие в партньорство с Клъстер за информационно осигуряване на Черноморския туристически бизнес и Консултантски клъстер Веритас. Форумът се провежда под егидата на Областния управител на област с административен център Варна – г-н Стоян Пасев.

Лектори в пленарната сесия на международната конференция бяха Иван Тодоров, Председател на УС на „Български център за

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<sup>1</sup> Световна банка, Международен валутен фонд, Световна търговска организация.

развитие, инвестиции и туризъм с Китай“ и Ирина Белева, Генерален консул на България в Шанхай (2011-2015), съучредител и старши съветник в Българо-китайската асоциация за бизнес развитие.

Организаторите на международната конференция в рамките на Българо-китайския форум „Международни клъстерни политики“ изказват благодарност на участниците и партньорите и искрено се надяват тази инициатива да намери продължение в бъдещи мероприятия от този вид, които да стимулират сътрудничеството между бизнеса, университетите и административните структури за икономическия просперитет на България в глобалните пазари.

**Dear colleagues and friends,**

We are very pleased to organise the first of its kind Bulgarian-Chinese Forum (BCF 2018) on International Cluster Policies together with the Confucius Institute at *St Cyril and St Methodius* University of Veliko Tarnovo. The Forum is in line with the EU-China 2018 tourism initiative, China's One Belt One Road Initiative, and the 16 + 1 Initiative between CEE countries and China.

BCF 2018 marks the beginning of a series of events related to the development of the partnership relations between Bulgaria and China in the fields of tourism, information and communication technologies, quality of life and education policies. The main focus of the event is the cooperation between Bulgarian and Chinese companies, organisations and institutions through the establishment of international cluster links and collaborations.

In parallel with the good practices of cooperation between Bulgarian and Chinese companies which will be presented in the plenary session, the following three aspects I expect the panel discussions in Varna will address in particular:

First, how tourism cluster development models could contribute to the global competitiveness of the companies by providing vivid experiences for the tourists and local communities.

Second, which are the main digitisation trends in business and how to explore together the innovative solutions.

Third, how to meet the challenges ahead by inspiring creativity and collaboration in education. I do believe that meeting representatives from the academia, business, NGOs, and state administration will be an important opportunity to take stock of what has been achieved in cluster policies so far as well as laying out the directions for what remaining challenges need to be anticipated in global scale. BCF2018 aims to stimulate new investment opportunities both in the European Union and China and to serve as a platform for business, trade facilitation and investment to build reliable partnerships. This is reflected in the slogan of the event - From East to West via Bulgaria. You will find new initiatives to develop, new markets to exploit, and new contacts to help your business to grow.

I would like to thank you to our team, our partners, supporters, and enthusiasts for their devotion and hard work to make BCF 2018 happen.

Welcome to Varna!

Nasko Rafailov  
Chairman of BCF 2018 Steering Committee

## **Участници в Пленарната сесия**

### **Стоян Пасев**

Областен управител на област Варна

Стоян Пасев е инженер по технология на машиностроенето и металорежещите машини и магистър по право от Технически университет, Варна. Има магистратура по Икономика и управление на търговията от Икономически университет-Варна, както и следдипломна квалификация по международни икономически отношения в Стопанска академия „Димитър Ценов” - Свищов. Адвокат е към Варненската адвокатска колегия, а от 2012 г. е и член на нейния дисциплинарен съвет. През последните 10 години активно е участвал като консултант и експерт при разработването на проектни предложения и в реализирането на Европейски проекти към оперативните програми 2007-2013 г. на МОСВ, Програмата за транснационално сътрудничество Интеррег-V-Б „Балкани - Средиземно море“ 2014-2020 г., Програма LIFE и Програма за междурегионално сътрудничество „Интеррег Европа 2014-2020“. От май 2017 г. е Областен управител на област Варна.

### **Иван Тодоров**

Председател на УС на „Български център за развитие,  
инвестиции и туризъм с Китай“

Тема на презентацията: „Момчиловци – добри практики“

Български център за развитие, инвестиции и туризъм с Китай разработва редица проекти между Китай и България, като един от най-популярните е налагането на китайския пазар на продукта с български бранд „Momchilovtsi“, който е един от най-известните брандове за кисело мляко в Китай. Иван Тодоров е Изпълнителен директор и мажоритарен собственик в Тодоров АД. Компанията е

лидер в България за производство на бутикови вина. Марката „TODOROFF” е три пъти носител на престижната награда „Superbrands” на България /2009, 2010, 2012, години/ в категорията – марка за вино. Компанията е основана от Иван Тодоров през 2001 г. От 2002 г. заема водеща позиция, като най-престижна марка за качествено българско вино. През 2003 г. продуктите на компанията заемат престижно място в класацията 1000 вина на света, която е съставена от съюза на френските енолози, а през 2006г. влиза в класацията 100-те най - добри вина в САЩ, в класацията на списанието „Wine and Spirits”. Част от обществената му дейност включва: Председател на УС на Европейски рицарски орден на виното – Консулат България; Член на училищни и университетски настоятелствата - Национален учебен комплекс по култура – Лицей с изучаване на италиански език и култура, Национална музикална академия Проф. Панчо Владигеров гр. София, Академия за Музикално, Танцово и Изобразително Изкуство – Пловдив; Председател на УС на Сдружение „Местна инициативна група Тракийско-Родопска яка“ до 2015 г.

### **Ирина Белева**

Генерален консул на България в Шанхай (2011-2015),  
съучредител и старши съветник в Българо-китайската асоциация  
за бизнес развитие, икономист, китаист и дипломат.

Ирина Белева е завършила Английската езикова гимназия в Пловдив със златен медал и магистратура по международни икономически отношения в УНСС. Има следдипломни квалификации по китайски език за дипломати от Източнокитайския педагогически университет в Шанхай и по културна дипломация от Гьоте институт в Берлин. През 2011 г. в състезание с 95 кандидати печели конкурса за генерален консул в Шанхай. Периодът на нейното консулстване се характеризира с небивал подем на китайските инвестиции у нас и на бурен политически, културен и образователен обмен - двустран-

ни посещения на високо и най-високо ниво, побратимяване на Шанхай и София, на Пловдив и Шенджен, ненадминати по участие и по резултати инвестиционни форуми в Шанхай и в Пловдив.

След завръщането си в България през 2015 е координатор на събития от инициативата 16 +1, проведени у нас: срещата на кметовете на столични градове в София през 2016 г. и на губернаторите и местните власти в Пловдив през 2017 г.

## Дискуссионни панели и модератори

### Панел „ТУРИЗЪМ“

Китай е най-големият туристически пазар в света. Броят на изходящите пътувания достигна 130 милиона през 2017 г., което е с 7.0% повече от 122 милиона пътувания през 2016 г. През 2017 г. са изразходвани 115,29 милиарда щатски долара, което е ръст от 5% на годишна база. Китайските туристи все повече се фокусират върху своето благосъстояние и целта на изходящите пътувания се променя от разглеждане на забележителности и пазаруване до ползване на висококачествени услуги. Според данните на World Travel & Tourism Council за икономическия ефект от туризма, прекият принос на туризма към БВП в дългосрочен план (2017-2027) е с най-висок прогнозен ръст за Китай (7.2%).

**Тема на дискусия:** Модели за развитие на туристически клъстери в глобалния свят

**Модератор:** проф. д-р Стоян Маринов

Декан на Факултет „Управление“, Икономически университет-Варна

Проф. д-р Стоян Маринов е завършил Немската езикова гимназия в гр. Ловеч. Дипломиран икономист по туризъм от ВИНС „Димитър Благоев“, Варна. Професор по Икономика и управление на туризма. От 1992 г. е преподавател в катедра „Икономика и организация на туризма“ в Икономически университет-Варна. Преподава по дисциплините „Туристически пазари“, „Маркетинг в туризма“, „Управление на туризма“, „Съвременни видове туризъм“. Към момента е Декан на факултет „Управление“ в ИУ-Варна. Има професионален опит като екскурзовод, управител на спортно-анимационен център, икономически и изпълнителен директор на „Слънчев бряг“ ЕАД, изпълнителен директор на „Турекспо-Варна“ АД, директор на Колежа по туризъм-Варна. Член е на Управителния

съвет на Варненска туристическа камара и Зам.-председател на Сдружение „Култура и туризъм на Българския Североизток“. Автор е на над 130 публикации в областта на туризма.

### **Панел „ДИГИТАЛИЗАЦИЯ“**

Дигиталната трансформация е гореща тема през последните няколко години. Тя предполага интегриране на дигиталната технология във всички области на бизнеса, като фундаментално променя начина на функциониране на бизнес процесите и доставянето на стойност до потребителите. Дигиталната трансформация е свързана и с промяна на културната среда, която изисква организациите постоянно да провокират статуквото, да експериментират и да привикват към пазарните неуспехи.

**Тема на дискусия:** Иновативни решения в бизнеса

**Модератор:** доц. д-р Георги Ангелов

Ръководител на катедра „Микроелектроника“, Технически университет-София

Георги Ангелов получава магистърска степен по физика в Софийски университет „Св. Климент Охридски“ през 1999 г. и докторска степен по моделиране на полупроводникови устройства в Технически университет-София през 2008 г. Между 1999 и 2002 г. работи в Технологичния център-Институт по микроелектроника, София, където е ангажиран в проектирането на ИС и ПХБ и различни аспекти на моделирането на полупроводникови устройства. От 2007 до 2012 г. е асистент, а от 2013 г. е доцент в катедра „Микроелектроника“, ТУ-София. През 2015 г. е избран за ръководител на катедрата по микроелектроника. От 2016 г. е назначен за ръководител на MINOLab (MicroNanoLab) в Софийския технологичен парк. През 2016 г. става председател на Управителния съвет на Клъстер Микроелектроника и Индустриални Електронни Системи (mu-Cluster Silicon Bulgaria). Той има над 90 публикации в списания и конференции и 5 книги. Неговите изследователски интереси включ-



ват полупроводникови устройства и моделиране на схеми, нови полупроводникови устройства, обработка на сигнали, биоелектроника, възобновяеми енергийни източници, енергийна ефективност, развитие на бизнеса, трансфер на технологии.

### **Панел „ОБРАЗОВАНИЕ И НАУКА“**

Независимо от бързото проникване на технологиите във всеки аспект на живота ни, в центъра на образователния процес и образователната система трябва да бъде човекът и развитието на неговия потенциал за творчество, иновативност, екипна работа и предприемчивост. Технологиите трябва да бъдат средство, което да разшири възможностите за индивидуализирано обучение и интегрирано формално, неформално и информално образование.

**Тема на дискусия:** Творчество и колаборация в клъстерни мрежи

**Модератор:** Геновева Христова-Мъри

Председател на Управителния съвет на Асоциацията на бизнес клъстерите (ABK)

Геновева Христова-Мъри е международно признат експерт по клъстерно развитие и един от водещите експерти по темата в България. Нейната компания LIGNA GROUP се занимава с хотелско обзавеждане и реновиране и обществени сгради, работи с над 30 доставчици и в момента има 28 служители. Заедно с бизнес партньора си г-жа Анелия Касабова, през последните 10 години успява да наложи LIGNA сред 50 водещи компании в икономиката на България (класация на Българската търговско-промишлена палата през 2013 г. за най-бързо развиващите се компании в страната). През 2010 г. получава признанието „Предприемач на годината“ по време на Седмичата на малките и средните предприятия (МСП) в Брюксел - представяне на успешни практики за предприемачество в ЕС.

Геновева Христова-Мъри има магистърска степен по международна икономика, обхващаща международната търговия, предприе-

мачеството и стратегическото управление в Университета за национално и световно стопанство, София. От 2005 г. г-жа Христова-Мъри участва активно в живота на клъстерите в България. Тя бе първият избран председател на един от първите водещи клъстери в България - Троянския мебелен клъстер. През 2006 г. г-жа Христова-Мъри започва своята активна международна дейност и участва в няколко проекта за развитие на МСП в Югоизточна Европа: Гърция, Румъния, Турция и Сърбия. Тя е един от инициаторите и основателите на Асоциацията на бизнес клъстерите (АБК), с през 2009 г. в България. В момента г-жа Христова-Мъри е председател на Управителния съвет на Асоциацията на бизнес клъстерите (АБК), както и председател на българския мебелен клъстер. Г-жа Христова-Мъри активно участва в редица национални и международни събития, където често е канена да представя теми, свързани с предприемачество, малки и средни предприятия, клъстери и политики за клъстерите. Автор на многобройни проучвания и статии за конкурентоспособността и развитието на клъстерите

## **Панел „ТУРИЗЪМ“**

### **Tourism Cluster Development Models in the Arctic: The Opportunities for China to Participate**

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#### **Abstract**

The recent growth of the attractiveness of the Arctic is as a tourist destination has been determined by a number of competitive advantages of the region in the eyes of Chinese tourists: intact nature, environment, exoticism, and uncommonness of a travel. This paper defines the major opportunities along with the expected challenges of China's involvement in the exploration of the Arctic (circumpolar territories of Russia and Nordic countries of Europe) in the light of various cluster development models that already exist and may be potentially established in the region. Among the major findings are various interconnected solutions for the development of China-EU and China-Russia tourism clusters in the Arctic, particularly, establishment of modern and innovative infrastructure to provide services for tourists; development of new tourist products aimed at different target groups of tourists; creation of common Arctic information and reference system for natural and historical-and-cultural attractions, routes, tourism services, and an integrated baseline package of the relevant information and advertisement materials; development of tourism facilities, including those in specially protected areas; facilitation and maintenance of new environmental and wildlife demonstration routes; advertisement and information support, marketing, and promotion of tourist products at the national and international markets; establishment of partner relations between regions, towns, tour operators, nature reserves, tourist companies, and other stakeholders. The author concludes that clusters in the Arctic should promote the specific tourist attractions and a higher level of services to increase the number of incoming tourists from China, while at the same time should help to minimize negative effects of mass tourism on the environment and way of life of indigenous peoples. Development of cluster approach in the sphere of Arctic tourism will allow China and Nordic countries

developing several tourism branches simultaneously and will facilitate the comprehensive and sustainable development of the circumpolar territories

**Keywords:** Arctic, China, cluster, Nordic countries, Russia, tourism

**JEL classification:** L83; Z32; R10

## **Introduction**

The Arctic region is experiencing transformation due to climate change, generating both threats and opportunities to the sustainable development of the environment, territories, and local communities (Kajan, 2012). Despite its remoteness and strong seasonality as well as the historical dominance of intensive resource exploitation (Usenyuk and Gostyaeva, 2017), the Arctic is becoming a region where tourism industry shows consistent growth in terms of the number of tourists and the portion of income (Maher et al., 2014).

Russian High North has a great potential for tourism development and is attracting tourists from all over the world. In the recent years, the number of tourists from China has skyrocketed thus making China the major Russia's partner in terms of the development of Arctic tourism. However, Chinese tourists have experienced some problems which may soon turn to serious impediments to the growth Russian Arctic as tourism destination. According to Ilkevich and Stromberg (2016), the major problems are underdeveloped tourist resources, low competitiveness of Russia's regions in attraction of tourists compared to other Nordic countries, negative demographic situation in the Russian High North, insufficient investments to the development of tourism facilities, among others. Sevastyanov et al. (2015) also discuss the reasons behind the inadequate development of the tourism resources of Russia's Arctic sector, particularly, transport infrastructure.

Many authors have been looking for the ways to combat the existing impediments of Russia's Arctic as a tourist destination. Kharlampieva (2016) elaborated the approaches to the applied scientific research on studying the prospects of the Russian Arctic tourism,

creation of a regional innovation system of water resources in the Arctic zone of Russia, and developed a tourist recreational system in the Arctic as a model of the safe tourism. Usenyuk and Gostyaeva (2017) discussed the potential of design research and education practice to contribute to Arctic tourism studies and offered new ways of understanding and using design as a tool to respond to challenges and opportunities of the Arctic tourism.

Evidently, in the contemporary conditions of growing economic activity in the region with participation of Chinese companies and increasing pressure on the environment, development of Arctic tourism has to contribute to the sustainability of Arctic environment, biodiversity, territorial development, and local cultures. Such a shift from consumption to contribution requires an innovative approach to the cluster development of tourist destinations (Usenyuk, 2008). However, having been rather extensively explored in other spheres, primarily, in industrial production, cluster approach is still a novel theme in tourism. Hall and Williams (2008) were among the first to complete a comprehensive review of innovation in tourism, including cluster approach, while also considered how tourism itself contributed to innovative local, regional, and national development strategies. Usenyuk (2008) presented a hypothetical model of touristic cluster on the example of transport network developed by designers with the aim of exploring the touristic potential of the Western-Siberian north. Bystrowska et al. (2017) explored the use of information and communication technology as a management tool for Arctic tourism clusters to ensure their sustained quality and demonstrated that, through increased noticeability, the creation of artificial proximity and the development of new management practices, information, and communication technology could help to overcome the challenges for the development of tourist clusters posed by the Arctic environment. Dickinson et al. (2017) examined how sustainable tourism could be enhanced by mobile connectivity through new space-time practices and using ephemeral interpersonal relationships to harness niche groups to create bottom-up

social systems interested in sharing experiences, ideas, and resources. Fay and Karlsdottir (2011) discussed the critical need for the Arctic tourism observation system and attempted to develop a database that would serve to track social changes brought about by the expansion of the Arctic tourist clusters resulting from climate change.

In the sensitive Arctic areas, traditional approaches to the extensive development of tourism clusters are not applicable. Innovations represent a new concept of how tourism clusters can at the same time bring economic benefits to remote and peripheral Arctic areas and ensure sustainable development of a fragile environment.

### **Visiting an Arctic Destination**

The Arctic tourism industry is very diverse. It includes mass tourism, sports fishing and hunting, nature tourism, adventure tourism, and cultural tourism, among others. Currently, tourists are the single largest human presence in the Arctic; they even exceed their host populations at all tourist destinations in the region. In case of Chinese tourists in the Arctic, the majority of travels are made by cruise ships. Among the major perceptions of Chinese tourists are the response to scarcity (to see the Arctic and its wildlife before it is transformed by progressing environmental change and global warming), the exclusiveness of a trip compared to the mass tourist destinations, and an absence of terror threats in the Arctic. Among the major reasons for the tourists from China to choose the Arctic as a tourist destination are:

- peculiarities of the tourist natural, cultural, and historical potential of the circumpolar space and a wealth of cultural and natural heritage exclusive to the Arctic;
- the attractiveness of the Arctic as a region of adventure, most of which part remains unexplored even today;
- satisfaction of spiritual and other needs, motivation, the psychology of a person, seeking drive, strong impressions, a desire to purchase a special tourism product, radically different from the trips to traditional

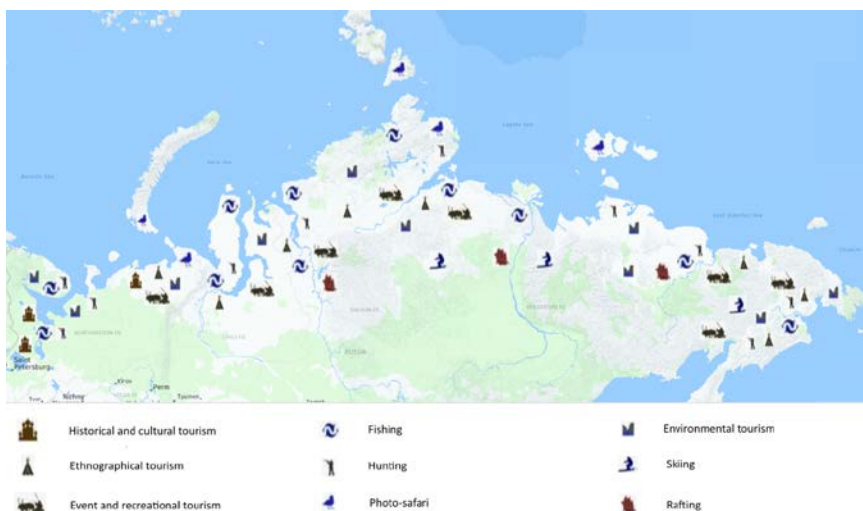
tourist destinations;

- active marketing promotion of tourist trips to the northern parts of the planet, an attractive brand of Arctic tourism established in China;
- the international significance of the northern type of tourism, which requires aggregation of resources and partnerships for its organization, safety, and coordination of efforts in the harsh, often extreme conditions of the Arctic region.

All this taken together, allows distinguishing Arctic tourism from other types of tourism as a unique tourist product demanded by consumers. Even during a sea cruise on a comfortable ship, Arctic tourism is considered extreme to some extent. Given the circumstances of the Arctic region, as an extreme destination, it is also important to take note of the fact that tourists' perceptions of security, risk, and safety likewise significantly impact destination image and tourist behavior (Boo et al., 2009).

### **Tourism in the Russian Arctic: Problems and Pull Factors**

The Russian Arctic includes the northern parts of several administrative regions of the country, namely, Arkhangelskaya Oblast, Magadanskaya Oblast, Murmanskaya Oblast, Republic of Karelia, Republic of Komi, Republic of Sakha (Yakutia), Chukotsky autonomous district, Khanty-Mansiysky autonomous district, Nenetsky autonomous district, Yamalo-Nenetsky autonomous district, and Krasnoyarsky Krai. There are many unique tourist attractions which exist in the northern part of Russia, including cultural and historical tourism (western part of Russia, primarily, Arkhangelskaya and Murmanskaya oblasts, Republic of Karelia), ethnographical tourism (republics of Karelia and Komi, Chukotsky, Khanty-Mansiysky, Nenetsky, and Yamalo-Nenetsky autonomous districts), environmental tourism and seal-watching tours (northern islands and the seas of the Arctic Ocean), event and recreational tourism (Republic of Yakutia, Chukotsky autonomous district, Krasnoyarsky Krai), hunting, fishing, skiing, and rafting (Fig. 1).



**Fig. 1. Major tourist attractions in the Russian Arctic**

Source: Author's development

Strategic opportunities for tourism development in the Russian Arctic include:

- the diversity of natural and cultural resources to meet the needs of different categories of visitors while creating tourist products, an organization of tours, cruises, and excursions;
- unique flora and fauna of the northern territories allow developing of attractive tourist destinations in the islands of the Arctic Ocean and sea cruises with watching of wild animals (seals, polar bears, walruses, and birds);
- world cultural and natural heritage and a network of national parks, nature reserves, and sanctuaries;
- growing interest in environmental, ethnographical, maritime, and other types of tourism in the northern parts of Russia among Russian and foreign tourists;
- establishment of the Arctic tourist cluster, which principal aims are the modernization of the existing tourism facilities, advertising, information support, marketing, and promotion of Arctic tourist



products;

- modernization of existing transport infrastructure, maritime and inland river transport facilities, ports and berths, railways and airports in Russia's High North;

- establishment of the Russian Arctic National Park, which offers natural, historical, and cultural sites, protected areas, tourist routes, sea cruises, maps, services, and advertisements.

In terms of available tourist attractions, Russian northern territories have a number of competitive advantages in the Arctic in comparison with other countries of the regions, particularly, Norway, Iceland, Finland, Sweden, and Denmark. Ilkevich and Stromberg (2016) emphasize the following existing and perspective competitive advantages from the point of view of available tourist resources and impressions of tourists:

- many tourist destinations are known worldwide and attract visitors by the opportunities of environmental, recreational, and adventure tourism (Novaya Zemlya, Vaigach, Pustozersk, and others);

- interest to the way of life, crafts, and traditions of indigenous people of Russian High North, particularly, reindeer husbandry; big reindeer herds are unique natural attractions by themselves (Ivanov, 2015);

- opportunities for a food tourism, exploration of life and cuisine of indigenous people of Russian High North (Kirichuk and Silin, 2013);

- polar hunting and fishing (big populations of whitefishes in the rivers and lakes of the Arctic zone of Russia);

- industrial tourism (the study of the specifics of oil and gas exploration in the severe climate conditions of the Arctic).

In the view of existing tourist attractions and competitive advantages of the Russian Arctic compared to neighbor countries, infrastructure and regional development of northern territories of Russia will likely attract more visitors to the region and promote the development of various kinds of Arctic tourism. However, to turn the region into an attractive tourist destination of international importance,

in the long run, it is necessary to consider varying specific wishes and expectations of foreign tourists, particularly, those from China. The Russian Arctic has been accumulating advantages and strengths in the eyes of tourists from China. However, there are many weaknesses that still exist, as well as the threats that have to be considered (Table 1).

**Table 1**

**SWOT-analysis of the Arctic as a destination for the tourists from China**

Strengths	Weaknesses
Unique nature	Lack of information and information
Culture of indigenous peoples completely different from that in China	Complicated and inconvenient transport routes
Polar wildlife	High cost of tourist product (air ticket, accommodation, excursions, etc.)
Fresh air and open space	Limited possibilities for buying souvenirs
Uncommonness of a travel	Communication challenges (even English is very rarely spoken in the High North of Russia, not to mention Chinese)
Opportunities	Threats
Growing demand for uncommon trips and impressions, particularly, among rich people	High competition for the tourists from China between Nordic countries
Interest to the Arctic region in general, many specialized exhibitions, including tourist ones	Dynamic tourist market (tourist agencies have to get adapted to rapid changes)
Tourist agencies are interested in diversification of tourist products by means of exotic tours to the northern regions of Russia	Significant cultural difference between the regions of the Russian Arctic and China
Growth of demand for individual tours to the Arctic	Complex and long visa process (visiting of many territories is prohibited or restricted)

Source: Author's development.

Ilikevich and Stromberg (2016) developed a competitiveness rating matrix of tourist destinations in the Russian Arctic, particularly, Nenetsky and Yamalo-Nenetsky autonomous districts with an account of the economic and geographic periphery of the region and impressions of tourists. The approach may be implemented in the entire Arctic zone of Russia to identify the existing competitive advantages and weaknesses in the light of attraction of the tourists from China (Table 2).

**Table 2**

**Competitiveness rating matrix of Russian Arctic as a tourist destination**

	Economic and geographic periphery	Tourists' impressions
Challenges	<p>Extreme climate conditions.</p> <p>The remoteness of tourist destinations.</p> <p>Restricted access to particular areas.</p> <p>Underdeveloped logistics.</p> <p>The absence of many services customary for tourists in other parts of the world.</p> <p>A limited amount of accommodation facilities.</p> <p>High seasonality of tourism.</p>	<p>Risks for tourists, restricted access to emergency aid (no access to any aid in some areas).</p> <p>Low standards of hospitality.</p> <p>The annoyance of local inhabitance, particularly, indigenous peoples.</p> <p>Excessive standardization and low authenticity in ethnographic tourism.</p>
Opportunities	<p>Undisturbed landscapes and environment.</p> <p>Isolation.</p> <p>Unique biodiversity.</p> <p>Climate change, including the opening of new maritime routes for tourist cruise ships.</p>	<p>Exclusiveness.</p> <p>Emotions of a pioneer explorer.</p> <p>Ethnographic authenticity.</p> <p>Unusual means of transportation.</p>

Source: Author's development.

There are many differences between the regions of Russia's Arctic zone not only in the sphere of tourist resources and destinations but also in the development of infrastructure, transport, regulatory frameworks, etc. To increase the efficiency of Russia's tourist complex in the High North, it is necessary to conduct the studies of comparative competi-

veness of all northern regions of the country. Major weaknesses of the Russian Arctic in the light of the effective development of tourism sector are the following:

- insufficient use of market mechanisms and management practices to convert the existing competitive advantages and available resources to a competitive tourist product;
- the absence of systematic approach to the development of tourism sector in the Arctic,
- lack of professionally trained specialists and low quality of tourism management on the regional and municipal levels;
- outdated cruise ships and icebreaker assistance vessels;
- inefficient promotion and marketing programs of tourist destinations, national parks, reserves, and other protected territories, including those recognized as the world natural and cultural heritage;
- low quality of tourist service, including underdeveloped tourist infrastructure (transport, accommodation, excursions, interpretation services for foreign tourists, etc.) and low support from local inhabitants who consider tourists as a threat to the environment and traditional way of life;
- complicated visa procedure for foreign tourists, bureaucracy;
- access to many territories in the Russian Arctic is restricted to foreigners and even for Russian citizens.

Underdeveloped infrastructure results in high prices and rather low quality of Russian Arctic tourism products. Those countries that are able to offer Arctic tours at a lower price and higher quality (most of the countries of Northern Europe, compared to Russia) win the competition. The factor of convenience is also very important. The countries that develop tourist infrastructure in the northern territories, implement innovative solutions and ease visa regulations become the centers of attraction for tourists in the Arctic.

## **Tourism Infrastructure of the Russian Arctic**

Development of tourist infrastructure in compliance with international standards and turning of Russian Arctic into an attractive international tourist destination require large-scale investments. The Russian government has been making certain efforts to increase the investment attractiveness of the northern territories of the country. In 2014, there were approved the Strategy of Development of the Arctic Zone of Russia till 2020 and the State Program for Social and Economic Development of the Arctic Zone of the Russian Federation for the period until 2020. The goal of the state program is the acceleration of economic and social development of Russia by means of the utilization of natural and resource potential of the Arctic zone based on the principles of resource efficiency and nature management. The tasks of the state program are:

- implementation of large-scale investment projects in the Arctic zone of Russia;
- coverage of the territories in the Russian Arctic by global systems of transport, energy, information, and communication infrastructure, life-support and emergency response systems, and innovative solutions of environmental protection and monitoring;
- establishment and development of local systems of life support;
- improvement of normative, organizational, technical, and research foundations for the development of the Arctic zone and public governance system.

The total amount of funds allocated to the implementation of the program in 2014-2020 is about \$30 billion, including \$10 billion of federal funds. The remaining part of the program is expected to be covered by foreign investments, primarily, from China.

In relation to the sphere of tourism, the goal of the Arctic policy of Russia is the creation of modern competitive tourism complex of all territories in the Arctic zone of the country (including nature reserves and specially protected nature territories) to ensure wide opportunities to

meet environmental-and-esthetic, educational, and recreational needs of Russian nationals and foreign citizens, and to make a contribution into development of a system for protection of natural complexes of the Arctic. During the initial period of Strategy development, a number of baseline proposals have been formulated for making an efficient document and mechanisms of its implementation, including:

- Arctic tourism has been regarded as one of the sectors of the national economy in the High North and one of the most promising development drivers of the Russian Arctic;
- legislation on the development of the Arctic zone is being revised and updated in compliance with the contemporary needs of the tourism sector;
- government support of the tourist sector in the northern territories of Russia is expected to be provided in the format of economic development zones in the Arctic, particularly, Kolskaya, Arkhangel'skaya, Nenetskaya, Vorkutinskaya, Yamalo-Nenetskaya, Taymyr-Turukhanskaya, North-Yakutian, and Chukotskaya.

The expected effect of the implementation of development projects in the sphere of Arctic tourism is the establishment of modern infrastructure facilities of expedition and cruise tourism. So far, among tourist destinations in the Russian Arctic, only one has received global recognition, i.e. Russian Arctic National Park established in 2009. The Russian government first established the Franz Joseph Land Conservation Area in 1994. Plans for a national park covering northern Novaya Zemlya and Franz Josef Land were launched in the 2000s. When Russian Arctic National Park was established in 2009, Franz Josef Land and Victoria Island were excluded. By 2011, the park had been expanded to also include Franz Josef Land in a move to better accommodate tourism in the archipelago. Russia commenced a \$25 million, three-year clean-up project starting in 2012 to remove more than 100,000 tons of waste which had accumulated during the Soviet era. These include a quarter million barrels of oil products, a million old barrels and dilapidated vehicles, radar installations and aircraft, among others.

Originally the territory of the Russian Arctic National Park included about 650,000 hectares of land and over 750,000 thousand hectares of the Arctic Ocean, including Severny Island on the Novaya Zemlya archipelago, part of the Barents Sea, and 191 islands of the Franz Joseph Land Federal Conservation Area. In 2016, by decree of the Government of the Russian Federation, the Franz Joseph Land Conservation Area was included into Russian Arctic National Park (Figure 2).

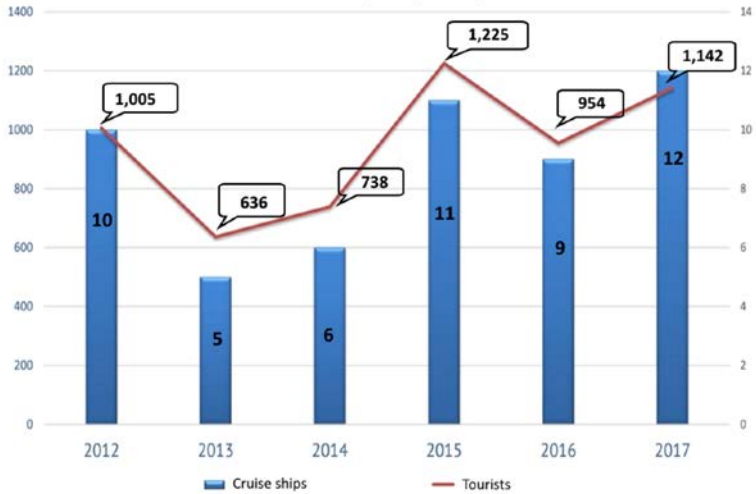


**Fig. 2. Territory of the Russian Arctic National Park**

Source: Author's development

Main activities of the Russian Arctic National Park are conservation of biological diversity and maintain the natural state of natural complexes and objects; research aimed at the development and application of scientific methods for biodiversity conservation; practical work on the conservation and breeding of rare and endangered species of animals and plants; identification and inventory of historical and cultural heritage, the organization of their protection and study, restoration, preservation and restoration of historical and cultural landscapes; conducting environmental monitoring; environmental and historical-

cultural education; creating conditions for the development of controlled environment and tourism; recreational construction and landscaping, creation and arrangement of nature trails and routes. The most popular islands in the park are Champa Island, where spheric concretions (round stones of various sizes, from fist-sized to several meters in diameter) are located, Gall Island with rock outcroppings on Cape Tegetgof, and Northbrook Island, where vegetation that is completely atypical for this region grows on Cape Flora. The area is the habitat of polar bears and bowhead whales. The area also includes one of the largest bird colonies in the Northern Hemisphere, as well as walrus and seal rookeries. On the sheer slopes of the unique Rubini Cliff geological monument in Silent Bay on Guker Island lies one of the largest bird colonies in the whole archipelago. The Russian Arctic National Park is home to many rare species, including the ivory gull and the brant (brent goose), which nest here. In addition to preserving natural habitats, the area of the national park is important for preserving the cultural heritage, which is related to the history of discovery and colonization of the vast Arctic territories.

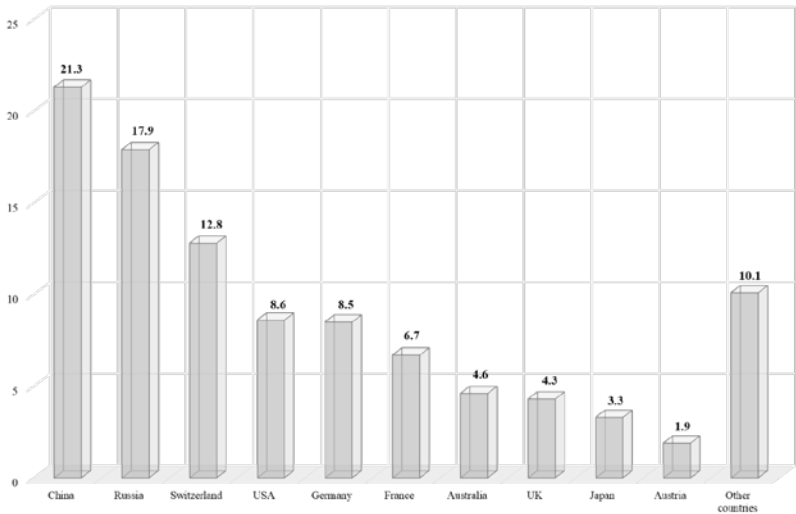


**Fig. 3. Number of tourists and cruise ships in the Russian Arctic National Park in 2012-2017.**

Source: Author’s development.



However, despite the unique tourist attractions, a number of tourists visiting the Russian Arctic National Park are very low compared to the tourist destinations of other Nordic countries. Over 1.2 thousand tourists during the 2015 season were the largest number of tourists the park ever had (Figure 3). It is almost nothing by the standards of other tourist destinations. Norwegian Svalbard that is located close to the Russian Arctic National Park has a markedly larger tourist flow, with about 80,000 tourists a year.



**Fig. 4. Number of tourists and cruise ships in the Russian Arctic National Park in 2012-2017**

Source: Author’s development.

Among the visitors of the park, tourists from China prevail (21.3% of a total number of visitors in 2017) (Figure 4). Until 2017, the share of tourists from Russia has been below 6%. In 2017, rapid growth in the number of tourists from Russia was provided by two specialized cruise programs facilitated by Russian nuclear icebreakers.

Although the Russian Arctic National Park attracts tourists from over 40 countries, development of tourism in the region is riddled with problems. Constraints include limitations to accessibility, costs, security

issues, lack of infrastructure, preservation of wildlife and the Arctic ecosystem, and competition with the energy and natural resources industry. Specific difficulties of the Russian Arctic National park are remoteness, high prices for all kinds of activities, border area regime and related restrictions and permits, harsh climate, limited tourist season, not developed tourist services, and lack of infrastructure. The Russian Arctic is one of the least accessible national parks in Russia. The main type of tourism is an expedition cruise tour. This, above all, Arctic cruises directly along the waters of the Franz Josef Land archipelago from Spitsbergen, cruises to the North Pole and cruises along the Northern Sea Route with a visit to the park territory. Tourists may visit the park for sightseeing only on organized landings along the shore. These places are not equipped with piers, so visitors are ferried ashore by the ship's helicopter, if available, or by Zodiac boats. The manner of landing depends as well on the weather, ice conditions, and the particularities of the shore and coastal areas.

The development of infrastructure is difficult in the Arctic due to long transport distances and difficult working conditions. Under-developed infrastructure along with the remoteness of the region cause extremely high prices – a visit to the Russian Arctic National Park as well as the North Pole can cost up to \$45,000. Russia would like to turn the park into an attractive and internationally competitive tourist destination; however, such plan requires large-scale investment in the accommodation, transport, and communications infrastructure, as well to the maintenance of the landscaping routes, development of services from the viewpoint of clients, improvement of the safety and comfort of tourists, and improvement of marketing and advertising. In view of the economic slowdown and restricted access to the international financial market due to the Western sanctions, Russia relies upon China for financial support. Currently, China's interests in the Arctic zone of Russia are centered on the exploitation of natural resources and export of hydrocarbons and minerals to China. However, Arctic tourism also attracts interest in China (Kiselyov, 2014) (particularly, taking into

account the prevalence of tourists from China among the visitors of the Russian Arctic National Park).

### **Tourism Clusters in the Russian Arctic: Innovation-Driven Solutions**

In terms of the competitiveness of tourist destinations in the Russian Arctic and attraction of tourists from either China or other countries of the world, not only available tourist resources and infrastructure matter, but also various economic, social, and environmental factors. An aggregation of those factors establish clusters. In the Arctic zone of Russia, development of tourism clusters should address sustainability issues (depopulation of the northern territories, environmental issues), transport remoteness of the region, internal and external price competitiveness of tourist destinations, an assortment of tourist products (Ilkevich and Stromberg, 2016).

Considering the facts that there are a fragile ecosystem in the Arctic and also undeveloped transport system, low level of economic development, and other complexities (Carayannis et al., 2017), it is necessary to look for the innovation-driven opportunities in the development of the Arctic tourism clusters. The development of the Russian Arctic zone is characterized by unique hydrocarbon and mineral resource potential. Natural resources of the Russian Arctic provide unique advantages for the implementation of innovation policy in tourism oriented to the transition to sustainable development, hence, to promoting economic and social potential of the northern territories of the country. Russia has particular strengths and opportunities to become a leader in consistent use of existing capacities of national parks, federal nature reserves, and other protected areas in the Arctic, successfully implementing a new agenda for Sustainable Development Goals (SDGs) of the United Nations (UN). Among other goals, two of the SDGs are primarily focused on the ensurance of the environmental sustainability and preservation and development of tourist-and-recreational potential of

the environment, particularly, conservation and sustainable use of oceans and marine resources for development, as well as the protection and recovery of terrestrial ecosystems, promotion of their sustainable use, sustainable forest management, and fight against land degradation and the loss of biodiversity.

In tourism clusters, a balance of economic development and sustainability is no less important than in other industries of the Arctic zone. Beyond the existing traditional approach to tourism as a kind of business activity, a complex range of environmental, social, political, and industrial problems caused by the increasing tourism activities has to be considered for the implementation of SDGs in the Arctic. Promotion of innovation in Arctic tourism is associated with six basic points:

- innovation and efficient marketing communication in tourism;
- public-private partnerships supporting innovations in tourism;
- innovations with acceptance of the way of life, traditions, and customs of the indigenous peoples, as well as the extreme seasonality of tourism in the Arctic;
- environmental focus of all tourist products;
- creation of the business concept, products, and tourist services that are competitive in the global market;
- improvement of the access to capital and finance in tourism.

To implement the existing potential to the establishment of tourism clusters, the efforts have to be primarily focused on the creation of innovative products, services, and concepts that are beneficial for the development of tourism. It is essential to extend the scope of development issues from tourist infrastructure, destinations, and products to the sustainable development of the entire region (Erokhin et al., 2016). Implementation of social, environmental, and other projects in the sphere of tourism will ensure a positive image of Arctic tourism. It is also important to promote international collaboration, including cross-border connections between Russia and other Nordic countries (countries of Northern Europe and north-western regions of Russia) and even non-

Arctic states (China, Japan, Republic of Korea and the regions of Russia's Far East). In Kamchatsky Krai, tourist and recreational spa complexes, skiing facilities, and centers of extreme tourism may be established. Chukotsky autonomous district and Magadanskaya oblast may develop reindeer farms and offer tourist products which include processing of reindeer products and traditional crafts of indigenous peoples. Tourist enterprises on production of leather articles and furs may be established in the northern parts of the Republic of Sakha (Yakutia) (Bai and Voronenko, 2016). To overcome the high seasonality of Arctic tourism, new winter tourist products may be developed by the regional tourist centers, for example, winter photo-safari, fishing, and snow expeditions (Zhuravleva, 2016).

Among the recommendations for the practical implementation of innovative approaches in the development of tourism clusters in the Arctic are:

- Development of handicrafts among the indigenous peoples of the High North and widening the range of souvenir products and traditional livelihoods of the indigenous peoples. Principal efforts have to be made in the spheres of territory-related product branding, development of local myths based on fairy-tales and songs of the indigenous peoples, as well as the launch of new cultural tourism products.
- Development of ethnographic tourism on the basis of existing and newly-established ethnic settlements. The activities may include guided tours and visits to the settlements of the indigenous peoples, familiarization with the local people's lifestyle, traditional cuisine, products of local craftsmen, participation in cultural traditions and rituals, the arrangement of festivals, round-table discussions, environmental and educational seminars.
- Design of new tourist products for different categories of active and extreme travelers (rafting, biking, skiing, and hiking tours).
- The launch of new intra-urban tourist products in the northern cities of Russia. Information tourist centers should be established in the

major cities of the Arctic zone of Russia. They are expected to provide information in the languages of major countries of origin of foreign tourists in the Arctic (English, Chinese, and others) about museums, cinemas, souvenir shops, food chains, tourist logistics and routes, traditions and legends of indigenous peoples.

- Elaboration of new educational and research tours targeted at the environmental enlightenment of travelers and the familiarization with the traditions of indigenous peoples.

- Primary focus on eco-tourism and environmental and wildlife tourist products. The routes most suitable for the recreation of tourist groups considering the maximum experience with nature, including rare animals, should be developed.

For the purpose of safety of tourists in the severe climate and natural conditions of the Arctic, an integrated telecommunication system has to be established. The system should facilitate the interaction of government authorities, sectors, and companies. Wireless satellite communication technologies have to be implemented to link coastal and mainland remote settlements in the Arctic zone of Russia into a common telecommunication network.

## **Conclusion**

The Arctic is an increasingly attractive tourist destination with a variety of available tours and programs, including cruises on the icebreakers, deep-sea fishing trips, excursions to the seabird colonies at sea cliffs and on small islands, environmental tourism, and ice-diving, among others. Despite the high interest to the Arctic, a number of tourists in the Russian part of the region, including those from China, has been extremely low compared to the neighbor tourist destinations of other Nordic countries, i.e. Norway, Denmark, Finland, and others. There are many problems in the sphere of development of tourism clusters in the North of Russia. The most critical ones are the underdeveloped tourist and transport infrastructure, lack of

accommodation facilities, high administrative barriers for foreign tourists, and high costs of accommodation and tourist products. Having competitive advantages, the Russian Arctic as a tourist destination is not able to exploit them in a full manner. Since the attraction of financial resources from the Western countries is restricted by the sanctions, Russia hopes for the investments from China to the development of tourist and transport infrastructure in the Arctic. So far, Chinese tourists have dominated among the visitors of the Russian Arctic. However, to attract and retain investments in the tourism clusters in the long-term perspective, the detailed study of existing strengths and weaknesses of tourist destinations is needed. Specific tourist attractions and a higher level of services have to be introduced to increase the number of incoming tourists, while the implementation of innovative solutions should minimize the negative effects of tourist activities on the environment and way of life of indigenous peoples and ensure sustainable development of the region. Introduction of innovative approaches to the Arctic tourist and recreational sector will allow developing several tourism clusters simultaneously and will facilitate the comprehensive development of the circumpolar territories.

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# **Responsible Tourism Initiatives: Comparative Study**

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## **Abstract**

Tourism is one of the world's largest and fastest growing economic sectors. In 2015 the number of international tourist arrivals surpassed 1.2 billion with a forecast to reach 1.8 billion in 2030 according to the UNWTO. Within this continuing growth of tourism there is a growing trend and a raising consumer awareness for sustainable and responsible tourism. Since more than 90% of tourism companies in EU are small businesses, individual entrepreneurs or family houses, they do not have a capacity to exploit the opportunities offered by these new 'green' markets. Present paper provides results from a transnational study among micro and small tourist companies in seven EU countries - the Netherlands, Italy, Spain, Portugal, Northern Ireland, Bulgaria, and Malta. The research is conducted online and focuses on the attitudes toward CSR, the effect of CSR on company strategy, including marketing and brand strategy. Based on research results several implications for responsible tourism initiatives launched by micro and small companies are presented.

**Key words:** responsible tourism, CSR, micro and small tourism companies

**JEL classification:** M31

## **1. Introduction**

Tourism is one of the world's largest and fastest growing economic sectors. In 2015 the number of international tourist arrivals surpassed 1.2 billion with a forecast to reach 1.8 billion in 2030 according to the UNWTO (2016). Within this continuing growth of tourism there is a growing trend and a raising consumer awareness for sustainable and responsible tourism. Since more than 90% of tourism companies in EU are small businesses, individual entrepreneurs or family houses, they do not have a capacity to exploit the opportunities offered by these new 'green' markets. Responsible tourism initiatives and/or projects could be

hindered in many ways. First, the complexity of the environment and the diversity of the local context require both a visionary and detailed operational thinking. It is quite difficult to simply transfer one good practice from one place to another. Second, successful entrepreneurial process depends on specific knowledge and skills acquired by the company which is willing to develop responsible tourism products.

The increasing importance of CSR at the corporate board level coincides with a growing interest among scholars in corporate marketing as a distinctive model of marketing in its own right. Balmer & Greyser (2006) call this the „corporate model” of marketing. The components of this model are strongly aligned with current conceptualizations of CSR: they include the ‘stakeholder’ orientation (including future as well as present stakeholders), ‘organizational support’ (coordinated organizational activities which support the stakeholder orientation); an ‘end-focus’ which goes beyond the profit motive and a ‘societal application’ which takes into account the future societal needs of stakeholders and sensitivity to „the organization’s inheritance where applicable” (Balmer, 2001). Taken as a whole, these components of corporate marketing are clearly an extension of CSR orientations. Although Balmer & Greyser (2006) do not explicitly describe the relationship between CSR and its impact on the corporate brand, their most recent adaptation of earlier work in this area strongly resonates with CSR debates.

This paper provides results from a transnational study among micro and small tourist companies in seven EU countries - the Netherlands, Italy, Spain, Portugal, Northern Ireland, Bulgaria, and Malta. The research is conducted online and focuses on the attitudes toward CSR, the effect of CSR on company strategy, including marketing and brand strategy. Based on research results several implications for responsible tourism initiatives launched by micro and small companies are presented.

## 2. Methodology

The study<sup>1</sup> consists of qualitative stage (desk research and in-depth interviews with experts) and quantitative stage (online survey with representatives of micro and small tourist companies). It covers seven EU countries - the Netherlands, Italy, Spain (Extremadura), Portugal, Northern Ireland, Bulgaria, and Malta. The questionnaire consists of four sections. The first section focuses on the attitudes toward Corporate Social Responsibility (CSR), including associations regarding responsible tourism, best examples of responsible tourist companies, the most important characteristics for a responsible tourism company, and the main benefits of applying CSR activities. The second section deals with the components of CSR activities and their effect on company strategy. The third section is devoted to the components of marketing and branding strategy of tourist companies. The fourth section contains questions aimed at assessing demographic profiles of respondents. The questionnaire was translated in the following languages: Bulgarian, Spanish, Portuguese, Italian. LimeSurvey platform was used to configure the questionnaires. The survey was administered online (June-July 2016). A total number of 127 respondents participated in this survey. Data were processed with SPSS 21.0.

The largest part of the respondents belong to private companies with municipal companies in second place. The majority (59%) belongs to micro-SMEs with up to 10 employees and 20% to organisations with up to 50 employees. The respondent has been with the company for several years, the majority more than 10 years, and a second large group between 5 and 9 years. One can thus assume they know their organisations and sector well. Almost half of the respondents are not capable of responding on what their market share is, the ones that did respond show

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<sup>1</sup> Data were collected as a part of the project entitled Community of Responsible Recreational Initiatives in Europe (CORRIE), Erasmus+, KA2 / Agreement n° 2015-1-BG01-KA202-014280.

that the share is quite small for many, in line with the small size of the companies.

More than half of the respondents could not state or didn't know their market share (62%), a few respondents (38%) confirmed their market share to be 1% - 5%.

### **3. Results and discussion**

#### **3.1. Associations regarding responsible tourism**

The main associations of Bulgarian respondents regarding responsible tourism are connected with preserving the nature, sustainability, restoring tourist resources, and focus on local communities. Some of the respondents made associations with particular forms of alternative tourism such as mountain tourism, guest houses in villages, and adventure tourism. The most complete answer defines responsible tourism as „type of tourism which except providing a profit for the hotel/premises owner contributes to the development of the whole region and the prosperity of its population.”

The words which are most mentioned by Dutch respondents are sustainable, green, environmentally friendly, responsible and care for nature. Striking is that almost no one answered the same answer as others. In Malta it resulted from the survey that most of the respondents have a different perception of responsible tourism. However, these are generally in line with what is being offered by responsible tourism establishments on a local level. Answers include: eco tourism, tourism based on sustainable behaviour...little waste, necessary energy consumption and transport use, etc, sustainable and damage minimisation, green/ low impact, sustainability, tourism that respects the environment, „involve the local people expose local traditions ensure least damage to the natural surroundings”, tourism that is ecological and sustainable, tourism activities that respect the society and environment they operate, promoting local heritage, trades and culture protection of natural assets, agrotourism, green tourism, Tourism that takes stock of it impact on the

environment, CO<sub>2</sub> neutral travel, tourism which is aware of its ecological footprint, and strives to diminish it, tourism that promotes rural communities, tourism supporting organic farmers and rural communities, tourism without impact on the environment.

Most Spanish respondents indicated that responsible tourism has elements related to the respect for the environment and nature, and that is committed to reduce CO<sub>2</sub> emissions (including energy efficiency). Many of the respondents also indicated that responsible tourism means not only respect for the environment but also for culture and locals of the destination and for the employees of the tourism establishment or company. Several respondents gave extensive definitions of the term, some of the most complete ones are highlighted below:

- *Tourism which implies respectful knowledge of the local communities and nature. Not only on behalf of the offer (companies, administrations and other stakeholder implicated in tourism) but also on the demand side (tourists that visit the destination).*

- *Tourism which is „responsible” in both economic and social aspects, not only environmental ones, a tourism which benefits its surrounding and has a long term strategy.*

- *Responsible tourism is the way in one which reduces the negative impact tourism as such can have on the local society and the different surroundings, responsibility on the side of the tourism company as well as on the side of the tourists.*

Each respondent from the Italian sample mentioned a different meaning for responsible tourism which means that some clarification and education is quite necessary: all over, they are all on the right track, since all definitions are commonly focused on nature and respect (for the nature itself, for the human and environmental resources).

### **3.2. The most important characteristics for a responsible tourism company**

The most important characteristics for a responsible tourism com-

pany are identified using a rank scale. The respondents were asked to rank the five most important characteristics for a responsible tourism company among ten which were provided. Data were processed in aggregated<sup>2</sup> (Table 1 and Table 2, overall rank) and individual<sup>3</sup> manner.

Almost every Dutch respondent (19 of 20 respondents) placed the characteristic ecological and social awareness in the most list of most important characteristics for a responsible tourism company (including 18 on rank 1 or 2). Another frequently ranked characteristic is environmental sustainability (17 out of 20 respondents ranked this one in the top 3). All the other characteristics are way less mentioned, and also more spread out on the lower ranks. Financial strength and adaptability/flexibility are seen as the least importance according to the respondents.

**Table 1**

**Importance of characteristics for a responsible tourism company, total % and overall rank, Bulgaria, Northern Ireland, The Netherlands**

Characteristics	Bulgaria		Northern Ireland		The Netherlands	
	Total %	Overall Rank	Total %	Overall Rank	Total %	Overall Rank
Successful, motivated, contented employees	71.42	2	34.78	6	20	5
Financial strength	23.80	8	8.70	8	10	7
Clear organisation strategy, vision, mission, goals, culture	66.67	3	65.22	4	35	3
Strong and distinctive corporate brand image	42.85	7	39.13	5	0	9
Good public relations	52.38	4	78.26	2	25	4

<sup>2</sup> The aggregated rank is determined based on total percentage of respondents who pointed the particular feature in their evaluation no matter of the place.

<sup>3</sup> The individual rank is determined based on the percentage of respondents who placed the particular feature on a 1st, 2nd, 3rd, 4th, or 5th place.

(customers, partners, shareholders)						
Strong reputation	42.86	6	69.57	3	15	6
Quality products	85.72	1	39.13	5	35	3
Ecological and social awareness	42.58	7	65.22	4	95	1
Environmental sustainability	52.37	5	82.61	1	85	2
Adaptability, flexibility	19.04	9	17.39	7	5	8

According to the aggregated rank the five most important characteristics for responsible tourism company pointed out by Bulgarian respondents are as follows:

1. Quality products;
2. Successful, motivated, contented employees;
3. Clear organisation strategy, vision, mission, goals, culture;
4. Good public relations (customers, partners, shareholders);
5. Environmental sustainability.

According to the results gathered by the respondents from Northern Ireland it is quite evident that environmental sustainability is the most important characteristic for a responsible tourism company. Second is Good public relations (customers, partners, shareholders). These top factors are understandable as they suggest an organisation that is run with clear environmental goals of sustainability are very likely to produce the desired type of company that adhere to the principals of responsible tourism.

Dutch respondents have rated most often ecological and social awareness (95% of the respondents) and environmental sustainability (85% of the respondents) as the most important characteristics for a responsible tourism company. Noteworthy is that none of the respondents indicated that strong and distinctive corporate brand image is important,



and also financial strength and adaptability/flexibility are not seen as very important in the Netherlands.

Portuguese respondents think that the most important characteristics (with more than 80% of the classifications) for a responsible tourism company are: quality products, ecological and social awareness and clear organisation strategy, vision, mission, goals, culture. The least voted characteristics are financial strength and strong and distinctive corporate brand image.

**Table 2**

**Importance of characteristics for a responsible tourism company,  
total % and overall rank, Portugal, Malta, Spain, Italy**

Characteristics	Portugal		Malta		Spain		Italy	
	To tal %	Ove rall Rank	To tal %	Ove rall Rank	To tal %	Ove rall Rank	To tal %	Ove rall Rank
Successful, motivated, contented employees	58.65	5	36.7	5	73.33	2	35	6
Financial strength	10.53	10	10	9	0.00	9	5	9
Clear organisation strategy, vision, mission, goals, culture	80.67	3	50	3	56.67	4	15	8
Strong and distinctive corporate brand image	11.01	9	13.2	7	23.33	6	35	6
Good public relations (customers, partners, shareholders)	37.80	6	13.3	6	16.67	8	30	7
Strong reputation	25.80	7	10	10	20.00	7	35	6
Quality products	98.43	1	46.6	4	66.67	3	80	3
Ecological and social awareness	84.43	2	60	1	83.33	1	95	2
Environmental sustainability	69.66	4	50.1	2	83.33	1	100	1
Adaptability, flexibility	23.03	8	36.7	5	33.33	5	65	4

Most Maltese respondents ranked ecological and social awareness and environmental sustainability as the most important characteristic for a responsible tourism company. Also important are a clear organisation strategy, quality products, as well as successful and motivated employees.

All Italian respondents (100%) top ranked environmental sustainability as the most important characteristic for a responsible tourism company. Following: „ecological and social awareness” (95%) and „Quality products” (80%), „Adaptability, Flexibility” (65%) and „Strong and distinctive corporate brand image” (40%). All other characteristics were not considered as relevant, as lower than both the mean (5,1) and the median (5,5) of ranked responses.

Regarding the individual rankings the respondents classifications’ are similar to the ones on the overall rank, with the most voted characteristics being the same or with slight differences. The most important feature for Bulgarian respondents is „Clear organisation strategy, vision, mission, goals, culture”, followed by „Quality products” and „Ecological and social awareness” (the same percentages), and „Strong and distinctive corporate brand image”. For Spanish respondents the most important feature is „Environmental sustainability”, followed by „Ecological and social awareness” (most names as rank 2) and „Successful, motivated, contented employees (most names as rank 3). What calls the attention is that „Ecological and social awareness” appears as the most named both in rank 2 as well as in rank 5.

### **3.3. Main benefits of applying CSR activities**

The main benefits of applying CSR activities are determined based on Mode and Mean values which are calculated for twelve benefits provided to respondents for assessment. The results are presented in Table 3 and Table 4.

**Table 3**

**Main benefits of applying CSR activities, Mode and Mean,  
Bulgaria, Northern Ireland, The Netherlands**

BENEFITS	Bulgaria		Northern Ireland		The Netherlands	
	Mode	Mean	Mode	Mean	Mode	Mean
Recognition by the public and stakeholders	3	3.19	5	4.73	4	4.00
Image and reputation enhancement	4	3.43	5	4.83	4	4.15
Contribution to societal issues	4	3.86	5	4.74	5	4.35
Staff motivation and loyalty	5	3.80	5	4.65	4	3.16
Financial efficiency	2	3.48	5	4.52	3	2.70
Influence on organisation values, culture, mission, goals	4	4.05	5	4.70	4	3.21
Product / brand support	4	3.95	5	4.68	3	3.55
Market position support	4	3.95	5	4.61	5	3.89
Customer satisfaction	5	4.20	5	4.64	4	4.11
Advertising / communications support	4	3.95	5	4.70	4	3.15
Staff recruitment and retention	4	3.76	5	4.61	4	2.75
Trust-building among stakeholders	5	4.24	5	4.70	4	3.20

*Note: The following measurement scale is used: 1 = Not benefit at all, 3 = Relative benefit, 5 = Strong benefit; Mode has the same values for all benefits because of the small sample size.*

As results from Table 3 suggest, the top five benefits of applying CSR activities for Bulgarian respondents are as follows:

1. Trust-building among stakeholders;
2. Customer satisfaction;
3. Influence on organisation values, culture, mission, goals;
4. Product / brand support;
5. Market position support.

Financial efficiency wasn't mentioned as a benefit of applying CSR by the predominant number of respondents (Mode = 2) while the mean suggests that it could be considered as a relative benefit. Such difference could be explained by the variation in respondents' perceptions (i.e. there are respondents with opposite attitudes).

For the Dutch respondents the top 5 benefits of applying CSR activities are:

1. Contribution to societal issues
2. Market position support
3. Image and reputation enhancement
4. Customer satisfaction
5. Recognition by the public and stakeholders

In Table 3 it can be seen that the Dutch respondents have rated financial efficiency, product / brand support and staff recruitment & retention as the relatively least important benefits of applying CSR activities.

In Italian sample the most frequently mentioned benefit of applying CSR activities is recognition by the public and stakeholders, followed by contribution to societal issues, customer satisfaction, advertising / communications support, staff recruitment and retention and trust-building among stakeholders.

**Table 4**

**Main benefits of applying CSR activities, Mode and Mean,  
Portugal, Malta, Spain, Italy**

Benefits	Portugal		Malta		Spain		Italy	
	Mode	Mean	Mode	Mean	Mode	Mean	Mode	Mean
Recognition by the public and stakeholders	4	4.24	4	4.18	5	4.14	5	4.65

Image and reputation enhancement	4	4.19	4	4.10	5	4.17	4	4.40
Contribution to societal issues	5	4.30	4	4.05	5	4.31	5	4.30
Staff motivation and loyalty	5	4.38	4	4.10	4	3.86	5	3.95
Financial efficiency	4	3.90	3	3.38	3	2.76	4	3.85
Influence on organisation values, culture, mission, goals	5	4.48	4	4.24	4	4.11	4	4.20
Product / brand support	4	4.10	4	3.86	4	3.83	4	4.16
Market position support	4	4.10	3	3.41	4	4.07	4	4.15
Customer satisfaction	5	4.90	5	4.52	4	4.18	5	4.55
Advertising / communications support	5	4.10	3	3.38	4	3.96	5	4.20
Staff recruitment and retention	4	4.05	3	3.21	3	3.31	5	4.00
Trust-building among stakeholders	5	4.52	4	4.05	5	4.14	5	4.55

*Note: The following measurement scale is used: 1 = Not benefit at all, 3 = Relative benefit, 5 = Strong benefit; Mode has the same values for all benefits because of the small sample size.*

The top five benefits of applying CSR activities according to Portuguese respondents are as follows:

- Customer satisfaction;
- Trust-building among stakeholders;
- Influence on organisation values, culture, mission, goals;

- Staff motivation and loyalty;
- Contribution to societal issues.

The finances of a company, as already stated on the previous two tables, are not viewed by the respondents as very important for CSR, as financial efficiency had the lowest mean among the possible answers to this question.

According to the Spanish respondents the top benefits of applying CSR activities are as follows:

1. Contribution to societal issues
2. Image and reputation enhancement
3. Recognition by the public and stakeholders
4. Trust-building among stakeholders;
5. Customer satisfaction

Only financial efficiency and staff recruitment and retention were considered to be a relative benefit. The top four benefits are considered to provide a strong benefit (Mode=5), but according to the Mean they seem to be closer to a good benefit. This difference can be explained by the fact that there are respondents with different perceptions and sometimes even opposite opinions.

## **4. Conclusion**

One of the main principles of the Small Business Act for Europe (Entrepreneurship 2020 Action Plan) states that ‘the EU and Member States should enable SMEs to turn environmental challenges into opportunities. They should provide more information, expertise and financial incentives for full exploitation of the opportunities for new ‘green’ markets and increased energy efficiency. Climate change, scarcity of energy supplies and sustainable development are key challenges for SMEs, which have to adopt more sustainable production and business models.’

The demand for environmentally friendly products and services opens the way for new business opportunities. Responsible tourism

initiatives represent such business opportunity. Based on the research results it is clear that many SMEs in tourist and hospitality industry face difficulties to allocate resources to implement CSR practices in their activities. The predominant number of them do not possess specific knowledge and skills which are necessary to develop and to implement a CSR policy and/or strategy. It is vital to increase tourism SME's efficiency and capacity to adapt to these challenges and to turn them into opportunities.

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# Социалните медии и интеркултурните комуникации в туризма

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## Резюме

Около една трета от населението в света в момента използва социални медии – фактор, допринасящ за фундаменталните промени в осъществяването на маркетинга на продукти, услуги и брандове, на информационен обмен между бизнес и потребители. Дигиталните мрежи предоставят нови канали и възможности за допир до крайния потребител и се очертават като едно от най-мощните средства за налагане на нови продукти и услуги на пазара. Прилагането на новите комуникационни канали, обаче, крие и редица предизвикателства в контекста на глобализация и свободния пренос на данни. Пред глобалните компании стои проблемът с управлението на межкултурното общуване и потенциалните конфликти, произтичащи от сблъсъка на идеи, култури и ценности. Особено актуални са тези предизвикателства в сектора на туристическите услуги, които се промотират масово на интернационален пазар и на много по-обхватни целеви аудитории. Докладът разглежда основните функции, ползи и предизвикателства пред социалните медии при тяхното приложение за туристическия сектор и представя добри практики при реализацията на нови туристически услуги.

**Ключови думи:** социални медии, интеркултурни комуникации, туризъм

**JEL classification:** M31

## 1. Същност и специфика на социалните медии

Маркетинговите комуникации са един от най-трудните за управление елементи на маркетинговия микс, но същевременно с това са от критично значение за успешната реализация на фирмения продукт или услуга във всеки бизнес сектор. През последното десетилетие предизвикателството пред маркетинговете придобива нови

измерения с интензивното навлизане на новите дигитални медии на пазара. В такава пъстра палитра от съвременни и традиционни комуникационни средства и различните варианти за комбинация помежду им при селекция на комуникационния микс, ефективните решения за маркетинговите комуникации се превръщат във все по-сериозно предизвикателство и изискват добро познаване на възможностите на различните комуникационни инструменти и на настъпващите промени във всеки компонент на комуникационната мрежа.

Социалните медии са сравнително скорошна иновация (Facebook се появява преди по-малко от 10 години), но възприемането им от потребителя и налагането на тяхната употреба в ежедневието се случва с невиджана досега скорост, особено при технически адаптивното поколение, наречено Millennials. Социалните медии могат да приемат различни форми като социални мрежи, блогове и микро-блогове, колаборативни сайтове, платформи за видео споделяне, виртуални игри и пр., често обобщавани с понятието социални мрежи (Social Networking Sites, Kaplan & Haenlein, 2010). Бизнес организациите използват тези средства за да инициират и участват в диалог с потребителите, да се свързват с тях в реално време чрез интерактивни приложения, публикувайки съдържание (снимки и видеоклипове), отговаряйки на коментари и отправяйки съобщения (Lipsman et al., 2012; Park et al., 2011).

Новата комуникационна среда, предлагана от дигиталните комуникационни канали, е силно интерактивна, особено в сравнение с традиционните медии, и предоставя значителен обем от информация за и на целевите аудитории, които вече не са само наблюдатели, а активни участници в процеса на комуникация. Споделяната информация от потребителите може да съдържа положителни или отрицателни становища, като липсата на цензура потвърждава контрола на потребителя, предоставя платформа за свободно споделяне на мнения и впечатления. (Kalampokis et al., 2013; Uitz, 2012). Тази динамична комуникационна среда е предпоставка и за неограничен

обем от достъпна информация за търсещия такава, което непременно влияе и изменя с процеса на покупка, потребление и оценка.

### 1.1. Социални мрежи и социални медии

Сред редица автори, изследователи и дори сред потребителите се отличават две основни понятия, описващи феномена на дигиталните платформи за споделяне на съдържание: социални мрежи и социални медии. Социалните медии се дефинират като употреба на уеб-базирани и мобилни технологии за поддържане на интерактивен диалог. От друга страна социалната мрежа се дефинира като социална структура, съставена от хора с общи интереси или идеи, или иначе казано тип социална медия.

Основните функции на социалната мрежа според Д. Бойд (Boyd & Ellison 2011) са три:

- Възможност за изграждане свой публичен или публично-частен профил в рамките на ограничена система;
- Създаване на списък с други потребители, с които те да споделят връзки;
- Преглеждане на списъка от връзки, създаден от други потребители в системата.

Въпреки тези дефиниции обаче, двата термина често се използват като взаимно заменяеми – факт, обуславян от мултуфункционалността на различните платформи и множеството функции, които те съчетават. Функциите на социалните медии и социалните мрежи според различни автори са обобщени в Таблица 1.

Таблица 1

Функции на социални мрежи и социални медии

Автор	Социални мрежи	Социални медии
Коен (Cohen 2009)	• Инструмент за свързване с други хора	• Стратегия за азпространение на съдържание

<b>Маккензи (McKenzie 2010)</b>	<ul style="list-style-type: none"> <li>• Изисква време, усилия и стратегия, за да се поддържа</li> <li>• Акт на ангажиране. Групи на хора със сходни интереси се свързват чрез сайта и/или изграждат връзки чрез общността</li> <li>• Комуникацията е двупосочна</li> <li>• Измерва се трафик или брой потребители</li> <li>• Комуникацията е по-бърза, мрежата се уголемява</li> </ul>	<ul style="list-style-type: none"> <li>• Средство за пренасяне на информация и споделяне с голяма аудитория</li> <li>• По-скоро комуникационен канал. Разпространява информация до другите</li> <li>• Измерването на възвращаемостта на инвестициите се определя от дълбочината на разговорите</li> </ul>
<b>Томс, Ж., 2011</b>	<ul style="list-style-type: none"> <li>• Комуникация между потребители и споделяне на съдържание</li> </ul>	<ul style="list-style-type: none"> <li>• Създаване на авторско съдържание</li> </ul>
<b>Петков, С., 2011</b>	<ul style="list-style-type: none"> <li>• Социални структури, състоящи се от отделни лица или организации</li> </ul>	<ul style="list-style-type: none"> <li>• Уеб-страници, които се зареждат със съдържание от самите потребители</li> <li>• Онлайн технологии, които позволяват на хората да публикуват, разговарят и споделят съдържание</li> </ul>
<b>Левин (Levine 2011)</b>	<ul style="list-style-type: none"> <li>• Позволяват на хората да се свържат и да споделят общи интереси</li> </ul>	<ul style="list-style-type: none"> <li>• Позволяват на всеки да излъчва съдържание, което някой друг може да открие, да сподели и коментира</li> </ul>
<b>Шаудър (Shauder 2015)</b>	<ul style="list-style-type: none"> <li>• Създаване и поддържане на лични и бизнес връзки онлайн</li> <li>• Двупосочна комуникация</li> <li>• По-лесно измерим ROI, в следствие на директни отговори</li> </ul>	<ul style="list-style-type: none"> <li>• Форми на онлайн комуникация (уебсайтове за социални мрежи и микроблогинг)</li> <li>• Еднопосочна комуникация</li> <li>• Контрол над информацията</li> </ul>

Общото между цитираните твърдения на различни автори е, че социалната мрежа се възприема като инструмент за комуникация по-ското между потребители, с еднаква роля и влияние в комуникационния процес, докато социалната мрежа изпълнява предимно информационна функция, като има ясен източник на информацията и притежава повече от особеностите на медийните канали за комуникация.

В практиката понятието „социална медия“ играе ролята на обобщаващ термин, използван много често за всички Web 2.0 инст-

рументи и приложения, включващи сайтове за социални мрежи, платформи за съобщения, богове и др. По отношение на функционалността, социалният медия се приема като място за качване на снимки, коментари и видеоклипове, често придружено от възможност за обратна връзка, за открояване на „популярни“ теми (чрез хаштагове) (Rudelius, Kerin & Hartley 2012). Сред често приеманите дефиниции е, че социалните мрежи са насочени към общности, а социалните медии са изборът от тях метод за комуникация или иначе казано: социалните мрежи са „какво“ се говори, а социалните медии – „как“ ще се комуникира това съобщение (Goddart 2018).

От гледна точка на маркетинговата практика социалните медии позволяват недвусмислена употреба за рекламни и промоционални цели, докато употребата на социалните мрежи с подобни цели по-скоро разчита на инициативата на отделни потребители. Именно в тази особеност се крие и значението на т.нар. e-WOM (онлайн комуникация от уста на уста). Доброволният обмен на информация (в т.ч. и относно продукти и услуги) е изключително мощен инструмент, който различни бизнес организации се стремят да контролират с променлив успех. Една от успешните практики в тази насока е привличането на потребители, играещи роля на инфлуенсъри в определена социална мрежа – техните препоръки или мнение се считат за важни от останалите потребители, с който той поддържа контакт. Тази практика обаче крие и определени рискове – прекалено настоятелното промотиране на определен продукт или марка потенциално може да отблъсне останалите потребители и да предизвика крайно негативни ефекти.

## **1.2. Видове социални медии**

Социалните медии, като обобщаващо понятие, биват различни видове според функционалностите, които притежават и начините на тяхната употреба от потребителите, в т.ч. бизнес организациите (Таблица 2).

Таблица 2

## Характеристики на различните видове социални медии

	Категория	Примери
<b>Социални мрежи (Social Networking)</b>	Интерактивен многопотребителски сайт, чието съдържание (контент) се създава от потребителите на мрежата. Така се формира автоматизирана социална Web среда, където могат да общуват големи групи потребители, обединени от общи интереси и предпочитания. Връзката между потребителите се осъществява чрез Web сервиса на вътрешна поща или чрез програми за мигновен обмен на съобщения.	<b>Facebook Twitter LinkedIn Pinterest Google Plus+ Tumblr Instagram</b>
<b>Блог (Blogging sites)</b>	Вид сайт, публичен онлайн дневник с коментари в реално време. Освен средство за комуникация с приятелите, всеки блог представлява и медия, с чиято помощ популяризирането на нови проекти или идеи става много лесно и бързо. В повечето случаи този уебсайт се поддържа от един човек и е желателно, информацията да бъде обновявана регулярно, за да е актуален. Според предназначението могат да се обособят няколко типа блогове: Персонален блог, съдържащ записи за събития, свързани с автора блога; Професионален или специализиран блог; Имиджов блог, който се създава, за да се утвърждава и поддържа имиджа на компания, продукт или човек; Блог за новини; Корпоративен блог.	<b>WordPress Tumblr Blogger Medium Svbtle LiveJournal Weebly Postach.io Pen.io Ghost</b>
<b>Микроблог (Micro Blogging)</b>	Аналог на обикновения блог, но с кратки постове или съобщения (100—200 символа). Микроблоговете позволяват на потребителите си да разменят малки елементи от съдържанието на микроблога, като например къси изречения, собствени снимки или видеовръзки, да коментират записи на приятели, да се абонират за SMS известяване за нови записи на определени хора и т.н. Микроблоговете може да се разглеждат като допълнение към нормалните блогове, а честотата на обновяване по правило е по-голяма, отколкото при блоговете.	<b>Twitter FriendFeed Tumblr Plurk Qaiku Identi.ca Google Buzz BrightKite Meemi SpotJots</b>
<b>Wiki социални сай-</b>	Wiki е технология за създаване на Web сайтове, които дават възможност на посетителите да участ-	<b>Wikipedia Wikispaces</b>

<b>тoве (Wikis)</b>	ват в редактирането на тяхното съдържание (коригиране, допълване, добавяне на собствени материали), без използване на специални програми, регистрация на сървъра и познаване на езика HTML. Най-популярният Wiki проект е Wikipedia – свободно разпространявана енциклопедия, която се поддържа с колективния труд на доброволци – автори, използващи технологията Wiki.	<b>PBworks Zoho Wiki FreedomShare Wikia Wikispot Wiki-Site Weebly Google Sites</b>
<b>Социални сайтове за споделяне на снимки или видео споделяне (Social Photo and Video Sharing)</b>	Взаимодействие чрез споделяне на снимки или видеоклипове и коментиране на материали. Отнасят се към категорията „Медийни сайтове“ за организиране и споделяне на съдържание (снимки, музика, преживявания и др.). Като медия се възприемат следните неща - снимки и фотоалбуми, музика, видео клипове, блогове, форуми. Всеки потребител може да бъде и автор, като качва собствени и чужди (без да е носител на авторското им право) материали. Според съдържанието се формират няколко подкатегории медийни сайтове: фотохостинг (Flickr, Photobucket, Picasa, SmugMug), видеохостинг (YouTube, Viddler, Vimeo, ), музика (Last.fm, The Hype Machine) и др.	<b>Instagram Tumblr Imgur Flickr Photobucket DeviantArt YouTube Vbox7 Netflix Hulu Vimeo Snapchat Yahoo! Screen DailyMotion</b>
<b>Социални новини (Social News Sites)</b>	Всеки потребител може да бъде не само читател, но и автор, който публикува, чете и оценява чуждите материали. Всеки има възможност за лесно взаимодействие и отношение – гласуване за статии, добавяне на бележки и коментари по тях, образуване на дискусия въз основа на всяка статия. До голяма степен социалните новинарски сайтове стават алтернатива на масовите източници на новини, като дават възможност на обществеността от читатели да реши какво да се счита като „новина“ и да се улесняват културата на участие и колективната интелигентност в Web 2.0.	<b>Reddit Google News Hacker News Livestation Five Thirty Eight Al Jazeera Daily Rotation Newsvine</b>
<b>Форуми (Community Forums)</b>	Форумите са сайтове, в които всеки може да споделя мнение и да коментира даден въпрос. Няма граница потребител–автор и за да е активен потребител на един форум, той трябва да пише в него, тоест – да е автор. Тези интернет канали дават възможност, реципиентите да се информират от много различни комуникатори по даден въпрос,	<b>phpBB Simple Machines Forum ZetaBoards bbPress Vanilla Forums</b>

	тъй като всеки пише собствено мнение и анонимността допълнително провокира искреността на потребителите. Форумите, предвид бариерата за допускане до съдържанието и възможността за участие в дискусиите, могат да се разделят на отворени и затворени общности.	<b>PunBB</b> <b>Phorum</b> <b>MyBB</b> <b>vBulletin (vB)</b>
<b>Социални геоуслуги (GeoServices)</b>	Сайтове (мрежи), които позволяват намиране, отбелязване, коментиране, добавяне на снимки на различни обекти на Земята с висока географска точност. Потребителя регистрира данни за своето местонахождение, което позволява, лесно да се обединяват или координират действията му с други потребители според това, дали негови приятели се намират в отбелязаните места, или какви събития стават в конкретен момент от време в тези места.	<b>Maps.google</b> <b>Maps.yahoo</b> <b>Maps.live</b> <b>Foursquare</b> <b>AlterGeo</b> <b>Gowalla</b> <b>Google</b> <b>Latitude</b>
<b>Поточно предаване на мултимедиялен контент (Live Streaming)</b>	Онлайн услуга, която позволява безплатно предаване на видео от компютър, мобилни устройства или видеокамери чрез Интернет директно към потребителя. Обикновено Livestreaming технологията не предвижда обратна връзка за предаване на видео и аудио от отдалечени потребители. Има голям потенциал за МСП – оформление на корпоративни групи, ексклузивни рекламни материали и маркетинг, оформление на различни мероприятия.	<b>USTREAM</b> <b>Periscope</b> <b>Facebook (Live)</b> <b>YouTube (Live)</b> <b>Twitch</b> <b>Qik</b> <b>Stickam</b>

*Адаптирано по Върбанов. Р., 2015 г.*

Всяка платформа има свое специфично предназначение и в следствие на това следва да се приспособява и комуникационната стратегия за всяка отделна платформа (и от страна на потребителя, и от гледната точка на бизнеса). От представената таблица е видно, че част от социалните медии попадат по характеристики в повече от една категория – например Instagram е едновременно социална мрежа, платформа за споделяне на снимки, а след последните нововъведения в приложението изпълнява и функциите на микроблог и лайв стрийм платформа. Подобни тенденции не са изненадващи –



видимо огромната конкуренция и разнообразие от социални медии кара създателите им да обогатяват функционалностите им, за да задържат за по-дълго време своите потребители. Подобен подход води до постепенно заличаване на границите между отделните типове социални медии, а в по-дългосрочен план води до отпадане на определени патформи – например социалната мрежа MySpace, която на върха на своята популярност наброява 75.9 млн. потребители (Gillette 2011), но бързо избледнява в съзнанието им при появата на Facebook. Тези трансформации трябва да бъдат наблюдавани и следени от бизнес организациите, които разчитат на социалните медии за популяризиране на своята дейност и поддържане на контакт с потребителите, а комуникационната стратегия трябва непрекъснато да бъде адаптирана към динамичната среда.

Бъдещето на маркетинговите комуникационни стратегии непременно ще бъде белязано от разнообразни дигитални иновации, разширяващи възможностите за маркетинговете да прилагат различни стратегии и създават диференцирани комуникационни миксове според таргетираните аудитории. Включването на различни по вид комуникационни средства в микса на организацията предполага диференциране на съобщението и таргетиране на различни аудитории. Правилното „напасване“ на каналите за реализиране на съобщението са ключов фактор за успеха на кампанията и ефективните комуникационни ефекти. Различните платформи за предаване на съобщението реализират и различни ефекти. Съвременните изследвания показват, че директните комуникационни средства създават потенциално по-силни и трайни асоциации в сравнение с масовите инструменти (Smith and Swinyard 1983).

## **2. Социалните медии в инеркултурните комуникации**

Активното насърчаване на межкултурен диалог и комуникационните компетентности са гаранция за преодоляването на конфликти, насилие и противоречия в глобален мащаб и са от ключово

значение за постигането на хармония и разбиране. Социалните медии осигуряват виртуално пространство, където хора от цял свят могат да поддържат връзка помежду си, без значение от разстоянието, което ги разделя. Присъствието в социалните медии предоставя лесен начин за свързване на хората и обмен на знания, поведения и нагласи, създава чувство за принадлежност към по-голяма социална мрежа, различна от собствената местна общност. Социалните медии изграждат модел на поведение и комуникация, различен от класическата теория, предоставят възможност за пряко взаимодействие.

Културните различия влияят върху комуникационни процес, поведението на потребителите и ценностите, които изповядват клиенти и бизнес. Интеркултурното общуване е от критично значение в глобализирания свят, където различните култури ежедневно се срещат и преплитат, особено чрез социалните медии. Начина на общуване и поведението на хората в контекста на социалните медии (и мрежи) са съществено различни в зависимост не само от демографски критерии (пол, възраст и интереси), но и от националната идентичност и ценностната система на потребителя (Rosen, Stefanone & Lackaff 2010). Смисъла на тези различия може да бъде потърсен чрез разглеждането на методиката на Хофстеде за анализ на културни различия.

Според методиката на Хофстеде петте дименсии, чрез които могат да се оценят културните различия на нациите, са висока или ниска властова дистанция, индивидуализъм срещу колективизъм, мъжественост срещу женственост, избягване срещу толериране на несигурността и дългосрочна срещу краткосрочна времева ориентация. Дистанцията от властта е променливата, която описва доколко обществото приема и очаква властта да бъде неравномерно разпределена между отделните членове на обществото. Разпределението на ролите между половете очертава резултата по дименсията мъжественост срещу женственост. Избягването на несигурността се отнася до това доколко обществото е в състояние да понесе несигурността и неизвестността, а дългосрочната или краткосрочна ори-

ентация илюстрира фокуса и ценностите на една култура (Itim, 2009).

По отношение на съвременните социални медии, разликите в комуникационното поведение между представителите на индивидуалистични и колективистични култури са очевидни. Изследователите описват хората от индивидуалистични култури като фокусирани върху установяването на нови контакти и постигане на определена публичност сред максимално много хора – изявяване на собствената личност, за сметка на поддържане на вече съществуващите взаимоотношения. От друга страна, хората от колективистични култури използват социалните медии най-вече за поддържане на близки взаимоотношения с ограничен брой хора, а не за създаването на нови връзки.

Нациите с висока толерантност към несигурността, са значително по-отворени към иновации, нови продукти и нови форми на комуникация. Потребителите от такъв тип общества са отворени за дискусии, включително публични, илесно се адаптират към условията на социалните медии. Обратно, нациите с ниска толерантност към несигурността по-трудно се адаптират към отворена публична комуникация и използват най-вече функционалностите за лични съобщения.

Дименсията краткосрочна или дългосрочна ориентация отразява в най-голяма степен спецификите при комуникациите в обществената група. Нациите с краткосрочна ориентация са с предимно аналитично мислене, демонстрират свободно своя просперитет. Характерно при тези общества е общуването в нисък контекст: експлицитен, пряк, директен стил на изказа. Целта на общуването не е поддържането на хармония или на добри взаимоотношения, а формирането на яснота и постигането на резултат. Не се смята за неприлично да заявиш мнението си, дори то да не се хареса на отсрещната страна. При обществата с дългосрочна ориентация се наблюдава високо контекстуална комуникация, която по своята същност е кодирана, с висока доза неяснота и неизказаност. Главната функция

на този стил на комуникация е постигането или съхраняването на хармонията в отношенията. Особено разпространен е сред източноазиатските култури, в които не са приети директната конфронтация или категоричният отказ. Тези отличителни черти са и причината за различния тип социални медии, които се използват от източноазиатските общества – те са с голяма доза регулираност и потребителите сами осъществяват вътрешен контрол над съдържанието.

В зависимост от спецификите на различните националности, които се опитваме да достигнем чрез комуникацията в социалните медии, подходът при създаване и разпространението на съобщенията трябва да бъде внимателно прецезен. За да могат да постигнат действително глобално покритие и да се адаптират към съвременната пазарна икономика, най-важното умение за рекламисти и маркетинголози е да умеят да достигнат до голям брой потребители, включително такива на вече установени пазари и тепърва развиващи се икономики. Това умение пряко зависи от локализационната стратегия и създаването на съдържание, съобразено с културните специфики, езика и онлайн поведението на таргет аудиториите.

За глобалните организации и личности, които искат да развият едновременно локални и интернационални контактни мрежи, е важно да бъдат установени характеристиките на отделните нации и техният начин на интеракция в социалните медии. Основно могат да бъдат отчетени пет фактора, оказващи влияние върху избора на платформа и съдържание (Ergos 2018):

1. Цел на присъствието в социалната мрежа/медия;
2. Доколко обществените нагласи позволяват свободно споделяне на информация онлайн (от гл. т. на безопасността и защита на данните);
3. Поведението при закупуване на продукти или услуги онлайн;
4. Поддържани езици освен английски;
5. Брой и типове потребители на социалните медии на база общата популация;

Не на последно място трябва да бъде отчетено, че културните различия в социалните медии не зависят единствено от националните особености на потребителите и тяхната локализация. В интернет средата се създават многобройни виртуални общества, които носят своя специфична култура, идеали, поведение и не подлежат на класификация по споменатите вече критерии. Тези общества могат да бъдат създадени на база на общи интереси, политически възгледи (извън рамките на местната политика), принадлежност към специфични социални групи (напр. етнически, по полова ориентация, професионално направление, персонален социален статус и др.). Смыслът на тези общества е обменът на специфична информация, генериране на нови знания, общи преживявания. Разпространяването на информация до такъв тип общества може лесно да бъде постигнато чрез социалните медии – чрез специализирани групи, форуми или откриването на инфлуенсъри. При тагетирането на такива групи е важно освен споменатите културни специфики да бъдат съблюдавани и особеностите, произтичащи от участието в такова общество – например при комуникиране с фенове на определен жанр или форма на изкуство да бъдат вземани предвид особеностите на техния жаргон и начин на изразяване. Подобно съобразяване не само би ограничило потенциални конфликти и шум в комуникацията, но и би повишило ефективността на предаваното съобщение.

Разбирането на културните различия между потребителите от различни географски региони, нации или социални групи са ключов фактор при реализирането на комуникационни кампании за туристически услуги и продукти. Глобалният туристически пазар предполага, че дестинациите не се промотират на местно ниво, а информацията за тях не може да бъде ограничена само до определен сегмент от потребители. За да се постигнат положителни впечатления и да се предизвика е-WOM ефект, предлагателите на туристически услуги трябва внимателно да осмислят съдържанието на всяко публикувано в мрежите съобщение и да преценират и планират внима-

телно кналите за комуникация, за да постигнат оптимална ефективност и баланс.

### **3. Приложение на социалните медии при промотиране на алтернативни туристически услуги – добри практики**

Основните канали за информация по отношение на различните и алтернативни видове туризъм през последните години са социалните медии. Безплатните страници и профили за организации и съпътстващите ги опции са изключително ценни инструменти, особено ако целевата аудитория са млади и активни хора, търсещи нови възможности. За разлика от класическите медийни комуникационни инструменти, комуникациите в социалните медии са изключително ефективни на база много по-ограничени ресурси. За ефективното присъствие на даден организатор на туристическа услуга е необходимо да се реализира микс от различни инструменти, които да изпълняват няколко основни функции – да предоставят информация на потребителите, да дават възможност за диалог и отговаряне на въпроси, да разпространяват снимки и видеоклипове (за да визуализират естеството на услугата), да позволяват да бъдат споделяни и разпространявани и да имат продажбени опции (ако е необходимо).

Тази тенденция за използване на социалните медии като основни инструменти за комуникация е особено актуална и в България, особено чрез средствата на Facebook, която се оказва най-популярната и достъпна мрежа в България. Липсата на общ портал за алтернативен туризъм повишава стойността и на WOM комуникацията. Информацията, предоставена от приятели, роднини и колеги, се оказва от голямо значение в процеса на вземане на решение, а е-WOM комуникацията е особено актуална що се отнася до по-малко познати форми на туризъм или алтернативни дестинации.

В рамките на тази част са представени два примера за успешна комуникационна програма на алтернативен тип туристически услу-

ги и събития, реализирани изцяло благодарение на инструментите на социалните медии.

### **3.1. Фестивал на Боровинката, България**

През последните години в България популярност набират организациите на доброволни начала фестивали и събития, промотиращи алтернативния и отговорния туризъм и подкрепящи различни социални каузи. Част от по-успешните фестивали се организират ежегодно, като при реализацията си разчитат до голяма степен на помощта на посетителите от предходните издания, на доброволчески труд и споделени ресурси. Добър пример за такъв фестивал е ежегодния „Фестивал на Боровинките“, организиран през последните години с околностите на хижа Амбарица в Стара планина. Целта на събитието е в дните на фестивала да събере средства (основно чрез закупуването от посетителите на храна и напитки) за реновация на хижата. Фестивалът се провежда обикновено в края на месец юли, като единственият достъп до хижата е чрез пешеходен планински преход. През годините на провеждане организаторите канят различни изпълнители, кулинари, спортни инструктори, планински водачи, специалисти по оцеляване в дивата природа, които да забавляват гостите на фестивала чрез организирането на уъркшопи по различни теми.

Тъй като фестивалът се организира предимно на доброволни начала и цели да генерира средства за хижата, ресурсите за комуникационна кампания и популяризация са минимални. Въпреки това с всяко следващо издание организаторите успяват да привлекат все повече гости, участници и доброволци, разчитайки единствено на безплатните форми на комуникация, които социалните медии предлагат. Целевата аудитория на събитието са млади и активни хора, с приключенски дух и търсещи алтернативни туристически преживявания, като хората от този таргет са активни в социалните медии и имат навика да търсят и получават информация чрез електронни

канали и е-WOM (онлайн комуникация от уста на уста). Основните канали, чрез които организатори и потребители разпространяват информация за фестивала, са обобщени в Таблица 3.

**Таблица 3**

**Основни характеристиките на СМ на Фестивал на Боровинките**

	<b>Website</b>	<b>Facebook</b>	<b>YouTube</b>	<b>Instagram</b>
<b>Официален канал</b>	Да	Да	Не	Не
<b>Език на съдържание</b>	Български и английски	Български	Български и английски	Български и английски
<b>Целева аудитория</b>	Клиенти и партньори	Клиенти и партньори	Клиенти	Клиенти
<b>е-WOM функция</b>	Ограничена	Да, чрез споделяния	Да, чрез потребителски видеоматериали	Да, чрез потребителски снимки и хаштагове
<b>Комуникация с/между потребители (C2C / B2C)</b>	B2C, чрез съобщения	C2C / B2C, коментари и чат	C2C, чрез коментари	C2C, чрез коментари

От представената информация е видно, че официалните канали, чрез които организаторите промотират събитието, са два – уебсайт и Facebook страница. Уебсайтът има сравнително ограничена информационна функция, тъй като липсват средства за неговата поддръжка. За сметка на това обаче безплатната Facebook страница има около 5 000 последователи – двойно повече от капацитета на фестивала. Страницата се използва активно като своеобразен информационен портал, където посетителите споделят своят опит, преживяванията си от предходните години, снимки, клипчета и други лични материали, а организаторите успешно набират доброволци за реализацията на следващото събитие. Именно чрез страницата и съпътстващото събитие (Facebook Event) се обявява и допълва



програмата за дните на събитието, като се взимат предвид коментарите и идеите на последователите на страницата, дават се съвети и препоръки за екипировка, маршрути и поведение в дивата природа. Създава се усещането за общество, комуникацията протича естествено, а информацията не е натрапвана на последователите – напротив, тя често се изисква от тях поради големия интерес към фестивала. Именно този интерес обуславя и силното присъствие на информация за Фестивала на Боровинките и в други социални медии – основно YouTube и Instagram, но също и различни форуми и частни групи във Facebook. Потребителите са мотивирани от своите лични преживявания да споделят информация – видеоматериали, снимки, да използват посочените от организатора хаштагове, сами да отговарят на въпросите в коментарите към личните им материали и да разпространяват официалната Facebook страница. Тези e-WOM практики са основна част от комуникационната програма на фестивала и са ярък пример, че успехът на туристическите услуги, особено на алтернативните такива, зависи до голяма степен от опита на потребителите и тяхната мотивация да разпространят информацията до релевантни таргет групи, до които организатора иначе би достигнал трудно и с цената на големи финансови и времеви ресурси.

Интернет и социалните медии предоставят голямо количество информация за всички видове туризъм, включително отговорен туризъм и алтернативни места и практики за отдих. Проблем както за туристическите организации, така и за потенциалните посетители, е липсата на един единствен, лесно достъпен източник на информация за различни дестинации, възможности и места за настаняване. За туристите ентусиасти, които искат да експериментират и да посетят алтернативни места, е почти невъзможно да получат актуална информация. За планирането на ваканция е необходимо детайлно проучване чрез различни форуми, Facebook групи и останали сайтове. Хората, които търсят да изследват по-малко известни места, често се обръщат към блогове и форуми за информация. Мненията и коментарите на другите потребители изглеждат надеж-

ден източник на адекватна и актуална информация. От гледна точка на организаторите на събития и туристически услуги, тези практики в различните социални медии създават възможности за комуникационни кампании и достъп до голям брой потенциални потребители.

### **3.2. Международните събития на Legion Run**

Състезанията с преодоляване на препятствия (obstacle course racing) са сравнително нов тип събития, които попадат под класификацията на алтернативни и екстремни туристически или спортни организирани събития. Участниците в този тип събития се надпреварват сами или с отбор от познати и приятели, преодолявайки различни по вид и трудност физически предизвикателства. Целта на тези състезания е да предизвикат участниците да преодолеят своите страхове и слабости, тествайки своята физическа и психическа издръжливост. Препятствията включват катерене на стени, преминаване през водни препятствия, пълзене под подлива тел, прескачане на аогньове и др., като част от тези препятствия са взимствани от тренировките на професионалните военни.

Организацията, предлагаща състезания с преодоляване на препятствия в югоизточна Европа, е Legion Run. Основания през 2013г. бранд организира ежегодни събития на територията на Кипър, България, Гърция, Унгария, Румъния, с планове за екстензиране към страните от централна и източна Европа. Legion Run бързо набира популярност и верни последователи сред спортисти и почитатели на екстремни туристически преживявания. Маршрутът на Legion Run включва 5км трасе с поне 15 препятствия, като паралелно с надпреварата се организира и целодневен фестивал за участници и наблюдатели. Всички, които успешно завършат трасето, получават специална тениска с надпис „I am Legion” („Аз съм Легион“) и други мърчъндайз продукти. Събитието не класира участниците и не наг-

раждава победители – целта е да се провокира отборния дух и участниците заедно да се преборят с предизвикателствата.

Целевата аудитория на Legion Run включва основно млади хора между 18 и 40 годишна възраст, обичащи риска, алтернативните забавления и търсещи различни преживявания. Участниците са мъже и жени в различни културни профили, демографски характеристики и поведенчески особености, т.е. събитията не са ограничени единствено до практикуващи спорт или алтернативен туризъм. Въпреки, че основната част от участниците са в активна възраст, в трасето се включват и дора над 70 години. Локациите за провеждане на събитията са различни всяка година и обикновено се пазят в тайна до последния момент, като през 2017г. на българското издание се провежда в покрайнините на София, а участие в надпревата взимат над 400 човека.

Успехът и бързо нарастващата популярност на Legion Run се дължи на добре балансирана комуникационна програма, разчитаща почти изцяло на различни социални медии. Организацията активно поддържа уебсайт, Facebook профил, YouTube канал, Instagram и Twitter профили. Основните функции на профилите в отделните социални медии са обобщени в Таблица 4.

Уебсайтът на Legion Run изпълнява успешно всички функции на включените в комуникационния микс социални медии, като е отличен пример за балансирана комбинация между дизайн, информативност и изпълнение на продажбени функции. Уебсайтът е достъпен на 12 езика и се явява инфомрационен хъб както за клиенти, така и партньори. Сайтът предлага изчерпателна информация за предстоящите събития, локации и препятствията, които трасето би могло да включва, всяко от които придружено със съвети за успешното им преодоляване и кратък видеоклип с реални кадри от предходни издания. Билетите за участие се закупуват директно от уебсайта, като в допълнение съществува и онлайн магазин с различни видове мърчъндайз за лоялните потребители. Директната комуникация също е възможна чрез съобщения до организатора – включи-

телно запитвания за партньорство и спонсорство. Всички тези функции са балансирано разпределени в поддържаните страници в различните социални медии, както е илюстрирано и в Таблица 4.

**Таблица 4**

**Основни характеристиките на СМ на Legion Run**

	<b>Website</b>	<b>Facebook</b>	<b>YouTube</b>	<b>Instagram</b>	<b>Twitter</b>
<b>Брой последователи</b>	-*	108 881	5 324	3 695	371
<b>Съдържание на няколко езика</b>	Да	Да, основно на английски	Не	Не	Да, основно на английски
<b>Целева аудитория</b>	Клиенти и партньори	Клиенти и партньори	Клиенти	Клиенти	Клиенти
<b>Промоционални функции</b>	Фото и видео съдържание, продажба на билети, онлайн магазин	Платена реклама	Публикуване на професионално заснети клипове от проведените събития	Платена реклама	
<b>Комуникация с потребители</b>	Да, чрез съобщения	Да, чрез коментари и чат	Ограничена, чрез коментари	Ограничена, чрез коментари	Да, директна

*\*липсват данни*

Най-много потребители следват профила на Legion Run във Facebook, като информацията, споделяна в мрежата включва основно фото и видеоматериали от предходни събития, обявяване на предстоящи такива, предварителни снимки на локацията в дните преди събитието, препратки към официални сайт на организацията, където се продават билети имърчъндайз. Каналът активно се използва и от потребителите, котию споделят своето авторско съдържание

и споделят преживявания и впечатления чрез коментари. На страницата е включена и възможността за директен чат с представители на организацията, както и възможността за излъчване на живо от събитията. Основна част от последователите във Facebook са крайни потребители или заинтересовани от предлаганата услуга, но успешно се осъществява и комуникация с партньори и спонсори. Страницата публикува рекламна информация за партньорите си, популяризирайки по този начин и тяхната дейност. Страницата се възползва и от платените форми на Facebook реклама, генерирайки по този начин допълнителен трафик сред целевите аудитории.

В профила на Legion Run в Instagram и в канала в YouTube последователите са значително по-малък брой, а комуникацията с организатора е ограничена до коментари под различните публикации. Ролята и на двете медии обаче не бива да бъде подценява, поради спецификата на поддържаното съдържание – видео каналът е незаменен за всички, които за пръв път се запознват с естеството на този тип услуги, благодарение на добрите визуализации и примерните трасета, а Instagram предлага ежедневни фотоматериали, обикновено придружени с мотивационни текстове и призови за активност и тестване на собствените сили и способности – ценен източник намотивация за участие дори за лоялните потребители.

Най-малък брой потребители са ангажирани от Twitter канала за комуникация, което е обяснимо с трендовете за използване на социалната медия в югоизточна Европа. Въпреки това каналът е умело използван за директна комуникация с потребителите – особено в случая е, че тази комуникация е видна за всички заинтересовани потребители, което позволява отговарянето на въпроси или предоставянето на полезни съвети на няколко последователи едновременно.

Комуникационната програма на Legion Run умело съчетава различните функционалности на социалните медии за постигането на оптимален баланс в типа и начина на разпространяване на информацията за услугата, която организаторът предлага. Благодарение

ние на този микс от канали организацията набива все по-голяма популярност и всяка година привлича нови последователи. Предваните съобщения са неизменно съобразени и с културните специфики на целевите аудитории – като по отношение на езика (поддържането на профили на няколко езика едновременно), така и чрез спецификата на съобщенията – мотивация за повече активност, съвети за успешно преминаване на препятствията, споделяне на подобни инициативи. Различните канали също отговарят на принципа „за всекиго по нещо“, като задоволяват навиците на различните нации, които се таргетират от организатора. Всички тези характеристики очертават Legion Run като отличен пример за всеки организатор на алтернативен тип туристическа услуга.

В случая на двете описани практики за популяризиране на алтернативни туристически продукти чрез социални медии ключов фактор за успеха е разбирането на целевата аудитория. Организаторите са съобразили своите усилия и са подбрал инструментите си базирайки се (съзнателно или не) на демографския и поведенчески профил на своята целева аудитория. Разбирането на културните и поведенчески особености на таргет групите е явна предпоставка за реализирането на успешна комуникация в онлайн средата – описаните практики не биха работили толкова добре за различен таргет отописания. Освен изорът на канал, съдържанието на съобщенията е от изключително значение за постигане на внушения и ефект и трябва да бъде съобразено с езиковите (в т.ч. жаргонни) особености на аудиторията. При някои потребителски групи се наблюдава употребата на особени фрази, хумор и дори визуализации, които, ако бъдат правилно разбрани от организатора, за мощен инструмент за постигане на комуникационните цели. От друга страна при налагането на алтернативни туристически услуги организаторът е в позиция сам да създаде подобни фрази, които да обединят последователите и да създадат у тях усещането за принадлежност към общество и да провокират емоционална привързаност и пристрастие.

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# **Разпознаваемост на френски и италиански вина в България: уроци за местни винени клъстери**

## **Origin Distinctiveness of French and Italian Wines in Bulgaria: Lessons for Local Wine Clusters**

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### **Abstract**

In our study we explore how distinctive are French and Italian wines for Bulgarian residents. Our aim is to draw some lessons from the perceptions about foreign wines for the building of local wine clusters. We use an online survey, searching how recognizable are French and Italian wines for Bulgarian residents. We apply our research instrument twice - in May and in December 2018, with respondents aged 19-66, with questions about identification of wines and about pricing. Bulgarian residents distinguish fairly well French and Italian wines, yet the process depends on the availability of vine sorts in Bulgaria, as a base for Bulgarian wines.

Perceptions of prices widely differ from the reality in Bulgarian retail, and we consider this gap as a potential to exploit in the creation of wine clusters. From the point of view of cluster's fundament, clusters in the wine sector should be based primarily on the national or regional cultural identity and therefore transformed over wine sector identity.

**Keywords:** Wine clusters, Italian and French wines in Bulgaria, perceptions about wines in Bulgaria.

**JEL classification:** D12, M31, O13, Q17.

## **1. Въведение**

Целта, която преследваме с настоящето изследване е, да прове-

рим доколко българските потребители са в състояние да отдадат значение на винени клъстери.

От една страна, огромната част от продаденото в България вино е местно производство (вж. ИАВЛ, 2017), от друга страна все още няма изявени винени клъстери у нас. И въпреки че не липсват опити за създаването на такива, дори над 10 години по-късно те не успяват да добият достатъчно популярност, дори сред специализираната публика. Така или иначе, идеята за създаване на винени клъстери е налице у нас, подобни обединения се приемат за перспективни, и поради това се нуждаят от по-детайлно проучване. Тъй като една от най-важните характеристики на винения клъстер е разпознаваемостта, акцентираме върху нея.

Подходът, който използваме в изследването ни, е да проверим как респондентите у нас възприемат най-популярните чуждестранни вина - правим съпоставка между френските и италианските вина. Използваме инструмента, представен в Boshnakov and Marinov (2013), както и негова модифицирана версия. Стремехът ни е, на базата на съществуващата информация у хората у нас, отнасяща се до френските и италианските вина, да разкрием някои особености по функционирането на евентуални винени клъстери у нас.

В случая, френските и италианските вина могат да се разглеждат като произхождащи от „квази-клъстери” (съответните страни), тъй като е правдоподобно предположението, че българските потребители възприемат съответната страна като повече или по-малко единен регион, или поне място със сходни региони, а и най-вече откъм дела на съответните вина на българския пазар - те са съпоставими с дела, който би могъл да заеме евентуален български винарски клъстер на българския пазар.

## **2. Теоретичен преглед**

Съществуващите определения за клъстери са най-различни, но акцентът се движи основно около дефинирането им като географска

концентрация на специализирани фирми и мрежа от съвместни или кооперативни предприятия (Feldman, M., Francis, J. & Berkovitz, J., 2005). Клъстерите не са непозната концепция и у нас, понятията са вградени в редица стратегически планови документи, оценява се значението им както за конкурентоспособността, така и за икономическото развитие. Slavova & Bankova (2016) заключават в резултат от направено изследване, че у нас има изградена стратегическа рамка, както и работещи в областта на клъстерите институции. Фокус в националните програми обаче се поставя върху нововъзникнали фирми, няма и акцент върху жизнения цикъл на клъстерите. От друга страна, в съвременните понятия (Karlsson, 2008) клъстерите се считат за стимулатори за икономическия растеж и особено за регионалното развитие.

Съгласно данните от OIV (2018) световното производство на вино за 2018 г. (оценка) е 282 млн. хектолитра, като в България се произвежда по-малко от половин процент (1.1 млн. хектолитра). За сметка на това най-големите производители са в Европа - Италия (48.5 млн. хектолитра) и Франция (46.4 млн. хектолитра). Тези две държави са на водещите позиции, с разменящи се места, през последните десетилетия, и поради това следва да се очаква, че вината от тях са достатъчно известни сред населението у нас, а оттам и наблюденията относно тях биха могли да се транспонират като основна концепция и върху потенциални винени сектори у нас.

А създаването и поддържането на винени клъстери е в състояние и да допринесе за търсенето „по-равномерно териториално разпределение на туристопотока” (Marinov, 2011, с. 88), което се изтъква като желан ефект от културно-познавателния туризъм у нас. Винените клъстери биха могли и да се впишат в прилагането на визираните от Serafimova (2012) екологични социално отговорни практики у нас.

Допълнителен положителен фактор за българската икономика от формирането на винени клъстери е и фактът, че традиционно над 90% от заетите в селскостопанския сектор (вж. Ivanova, 2014) са

самозаети и семейни работници. В този аспект, формирането на винени клъстери е в състояние да подобри състоянието на малките и средните предприятия у нас, и оттам да подобри перспективите пред растежа в икономиката.

### **3. Инструментариум на изследването**

Проведохме проучването на два пъти, с помощта на онлайн анкети - през май 2018 г. (236 валидни отговори, 144 жени и 92 мъже, на възраст между 19 и 66 години) и през декември 2018 г. (96 валидни отговори, 60 жени и 36 мъже, на възраст между 22 и 63 години), при целева аудитория - пълнолетни резиденти на трудоспособна възраст, живеещи в България, от двата пола. Изборът на целевата аудитория бе мотивиран от търсенето на потенциалните клиенти, които биха проявили интерес към клъстерите. При първото проучване директно използваме инструмента на Boshnakov and Marinov (2013), второто ни проучване е с модифицирана версия на анкетата, при която отпадат някои от въпросите, а се акцентира върху някои особености на клъстерите.

Въпросите (извън данните за респондентите) са разделени на две групи, отнасящи се до особеностите на френските, и съответно на италианските вина.

### **4. Резултати и дискусия**

Показателите за съгласуваност (използваме алфа на Cronbach, 1951, като правим изчисленията само за айтемите, които предполагат отговори под формата на скала) са съответно 0.8 за майското изследване и 0.74 за декемврийското изследване. Това са стандартизираните стойности на алфа, може да се приеме че съществува относително висока степен на вътрешна съгласуваност в анкетите.

Майското проучване започва с ориентиrowъчен въпрос „Какво е кианти?“, с намерението да отсеем респондентите, на които това, най-известно италианско вино, не им е познато. В действи-

телност, респондентите са до голяма степен наясно (69.9%) какво е кианти, делът на незнаещите е 22%.

На подобния, но реципрочно зададен, въпрос за френско вино, „Кое е най-известното Ви френско вино?” отговорите са твърде разпръснати, с водещи „Шардоне” (13.1%), „Каберне” (11%), „Шампанско” (9.7%), „Бургундско” (8.9%) и „Бордо” (8.5%).

Респондентите категорично отъждествяват Франция с виното - на въпроса „Какъв тип е най-френската алкохолна напитка с „вино” отговарят 88.6%. Сходна е и оценката по въпроса „Франция винарска страна ли е?” (1 - да, 5 - не), средната стойност е 1.8, т.е. „напълно да”, като при жените и при мъжете това твърдение е идентично - t-тестът има р-стойност 0.54.

На подобния въпрос за Италия, („Италия винарска страна ли е?”) отговорите са малко по-различни, въпреки че Италия е по-голям производител на вино от Франция - средно 2.14, като отново няма разлика между жени и мъже (р-стойност на t-теста 0.60).

Респондентите отдават по-голямо значение не на фактите, а на представянето им. Тази тенденция се запазва във времето - Boshnakov and Marinov (2013) достигат до сходни резултати. При това, върху възприятието на Италия като винарска страна не оказват влияние други променливи - образование, местожителство, познание за кианти (ANOVA тестовете показват статистически незначими резултати).

За Франция обаче възприятията са малко по-различни - оценката доколко е винарска тази страна не зависи от образованието, но зависи от местожителството (р-стойност на ANOVA 0.04) и от познанията за питейните навици на „най-френския” литературен герой, Д'Артанян (р-стойност на ANOVA 0.02). На въпроса, какво пие той, 66.1% от респондентите отговарят „вино”.

Асоциациите, които правят респондентите с френските вина са изцяло положителни, и в майското, и в декемврийското проучване („Като чуя френско вино ми хрумва... моля посочете първото хрумнало Ви нещо ЕДНА дума”: j.p. chenet аромат ароматно божоле

бордо бъчва бяло вино история каберне камембер катаржина качествено качество аромат класа класно любов маркетингов мароко не се сещам прованс разкош стил ривиера ризлинг розе от прованса романтика сирена сирене совиньон франзела хм... добро хубаво червено шабли шампанско шардоне шене).

Като общ извод от въпросите, отнасящи се до Франция, може да се приеме, че културният фактор играе много важна роля - респондентите са повлияни от предварителна информация за страната, която често се разминава с действителността.

**Таблица 1**

**Разпознаваемост на френски вина (процент респонденти, посочили съответното вино)**

Въпроси	Бордо	Божоле	Бургундско	Каберне	Мерло	Шампанско	Шардоне	Не/не знам	Пино	Шабли	Друго
Кое е най-известното Ви френско вино (май 2018 г.)	8.5	5.5	8.9	11.0	4.7	9.7	13.1	12.71	1.7	0.4	23.7
А какво френско вино сте опитвали наскоро (май 2018 г.)	7.2	5.1	5.5	10.2	5.9	6.4	12.7	16.52	2.5	3.0	25
Какво френско вино бихте желали да опитате (май 2018 г.)	2.1	7.2	6.4	7.2	3.8	8.1	3.8	16.1	3.8	2.5	39

Франция, Париж... вино... какво Ви идва на ум (затворен, 19.7% други отговори, май 2018 г.)	25.4	19.1	21.6	-	-	-	-	-	-	5.5	8.5
Кой е най-известният Ви френски сорт за вино (май 2018 г.)	6.4	1.7	2.5	10.2	7.2	-	12.3	23.7	5.9	0.4	29.7
Кой е най-известният Ви френски сорт за вино (декември 2018 г.)	9.4	6.3	0	28.1	10.4	2.1	11.5	10.4	10.4	0	11.5

Източник: собствени изчисления

Като общо впечатление, най-познати се оказват онези вина (и сортове грозде), които са популярни и у нас, като български вина - Шардоне, Каберне - вж. Таблица 1.

Хи-квадрат и Колмогоров - Смирнов тестовете върху разпределението на отговорите за вината (съответно сортовете) дават статистически незначими стойности. Респондентите дават сходни отговори по отношение както на вината, така и на сортовете, в т.ч. и като дял на „други” и на „не знам”.

Процентът непознаване е по-висок при сортовете грозде, отколкото при вината, което на пръв поглед е естествен резултат. Но наличната разлика между най-известното на респондентите вино, от една страна, и от друга страна почти липсата на разлика между резултатите за вино, което са опитвали и биха желали да опитат, можем да интерпретираме като подсказка, че асоциациите с вината се нуждаят от известно усилие да бъдат предизвикани, не се намират в най-използваната група понятия. При италианските вина разривът е дори по-силен (вж. Таблица 2).

Тези резултати са в синхрон с оценките за това, доколко „винарски” са страните.

Като цяло, респондентите оценяват италианските вина правдоподобно, като например в отговорите липсват „Шампанско”, „Божоле” и „Бургундско” (правилно са възприемани като френски), но пък слабо представени са и някои известни италиански вина, като „Валполичела”, „Марсала”, а същевременно има и отговори „Траминер”. В действителност, „Траминер” се прави в Италия, в северната част на страната, но не би следвало да се възприема като най-типичният за там сорт. Таблица 2 представя обобщените резултати по няколко от ключовите въпроси относно сортовете.

Както и в случая с Франция, асоциациите с Италия също са изцяло положителни, и то както в майското, така и в декемврийското проучване („Като чуя италианско вино ми хрумва... моля посочете първото хрумнало Ви нещо ЕДНА дума”: пица Венеция Тоскана паста любов качество спагети Рим хубаво розе сирене вкус Италия пиене пино просеко Сицилия скъпо слънце хубаво червено аромат бяло вино грозде добро меко море наслада отлежал пармезан пенливо природа прошуто романтика сладко тирамису).

На „Италия... вино от... какво Ви хрумва” (затворен въпрос) преобладават отговори, свързани с най-туристическите региони на страната - водят Тоскана (37.7%), Венеция (22.9%), Сицилия (14.4%), Флоренция (11%), останалите, Генуа, Лацио, Лигурия, Падуа, Неапол, са представени със стойности под 5%. В декемврийс-



кото проучване при същия въпрос отново водят Тоскана (49%), Венеция (37.5%) и Сицилия (10.4%). Тези резултати се потвърждават и от друг въпрос („Вино от Италия бихте свързали с...”), на който респондентите отдават предпочитания на Тоскана (90%) пред Напавали, Мингрели и Бордо.

**Таблица 2**

**Разпознаваемост на италиански вина (процент респонденти,  
посочили съответното вино)**

Въпроси	Тос- ка- на	Ба- роло	Ки- анти	Ка- берне	Мер- ло	Про- секо	Шар- - доне	Не/ не зна- м	Пи- но	Сан- джо- везе	Дру- го
Кое е най-известното Ви италианско вино (май 2018 г.)	0.9	6.4	8.9	3.8	1.3	4.7	5.1	28.8	4.2	2.1	33.9
А какво италианско вино сте опитвали наскоро (май 2018 г.)	1.3	4.7	6.4	5.5	1.3	1.7	4.2	32.6	5.1	0.4	36.9
Какво италианско вино бихте желали да опитате (май 2018 г.)	0.9	5.9	8.1	1.3	1.3	1.3	1.7	26.3	3.4	1.3	48.7
Кой е най-известни-	5.5 (Ита)	4.7 (Не-	2.1	3.8	3.4	1.3	4.2	26.3	2.5	7.6	38.6

ят Ви италианс- ки сорт за вино (май 2018 г.)	ли- анс- ки мус- кат)	би- оло)									
Кой е най- известни- ят Ви италианс- ки сорт за вино (декември 2018 г.)	3.1 (Ита- ли- анс- ки мус- кат)	3.1 (Не- би- оло)	2.1	1.0	1.0	4.2	2.1	31.3	9.4	24.0	18.8

Източник: собствени изчисления.

Монетизирането на потенциалните изгоди от клъстерите е много важен въпрос, засягащ самите основания за създаването им. Като рамка за разсъждения можем да приемем вижданията на респондентите за разликите в цените на съответните вина спрямо останалите вина (които са главно български).

На въпроса „Колко струва в момента една бутилка италианско вино у нас в супермаркета? (в лева, според Вашите представи, без значение каква е действителната цена)” отговорите са в диапазона 15-30 лв., което е значително над действителните оферти за този вид вина.

Резултатите от t-тестовите, проведени за разлика между майските и декемврийските оценки на процентната разлика в цените в супермаркетите са статистически незначими, както за френските ( $p\text{-value} = 0.37$ ), така и за италианските вина ( $p\text{-value} = 0.31$ ). При t-тестовите за номиналния размер на цените, резултатът е статистически незначим за италианските ( $p\text{-value} = 0.14$ ), но значим за френските вина ( $p\text{-value} = 0$ ).

Таблица 3

**Възприятия за цените на френските и италианските вина у нас**

Въпроси	Средна	Меди- ана	Стан- дартно откло- нение	Q1-Q3
„Колко струва в момента една бутилка френско вино у нас в супермаркета? (в лева, според Вашите представи, без значение каква е действителната цена)“ (май 2018 г.)	26.87	24	277.90	15.75-30
„Колко струва в момента една бутилка френско вино у нас в супермаркета? (в лева, според Вашите представи, без значение каква е действителната цена)“ (декември 2018 г.)	18.12	18	7.76	15-20
По-скъпо ли е от българското (колко, в проценти)? (май 2018 г., френско вино)	31.89	30	25.05	10-30
По-скъпо ли е от българското (колко, в проценти)? (декември 2018 г., френско вино)	36.45	27.50	37.20	10-50
„Колко струва в момента една бутилка италианско вино у нас в супермаркета? (в лв., според Вашите представи, без значение каква е действителната цена)“ (май 2018 г.)	34.84	25	129.44	15-30
„Колко струва в момента една бутилка италианско вино у нас в супермаркета? (в лева, според Вашите представи, без значение каква е действителната цена)“ (декември 2018 г.)	21.57	20	24.88	12.75- 21.25
По-скъпо ли е от българското (колко, в проценти)? (май 2018 г., италианско вино)	28.88	20	27.17	10-40
По-скъпо ли е от българското (колко, в проценти)? (декември 2018 г., италианско вино)	32.72	30	26.23	10-50

Източник: собствени изчисления.

## 5. Заключение

Резултатите ни като цяло показват, че разпознаваемостта на вината е в зависимост от наличието на сортовете им и като български вина. Същевременно асоциациите, предизвикани както от френските, така и от италианските вина са изцяло положителни - този факт би могъл да се използва при създаване на местни винени клъстери.

От друга страна, възприятието за цените значително се различава от действителността - българските граждани продължават да гледат на френските и италианските вина като твърде скъпи. Тази възприеманата разлика в цените може да се интерпретира като размер на ценовия потенциал, който съответно да се експлоатира при създаване на винени клъстери. А именно - създаването на винен клъстер би могло успешно да позволи поддържането на по-високи цени, което да позволи и предлаганите от клъстера вина да са с по-високо качество.

Данните показват също, че има силна взаимовръзка между културната идентичност и възприятието за винена идентичност. Оттук може да се направи заключението, че клъстерната обособеност във винения сектор следва да бъде базирана на национални или най-малко регионални културни особености, които да бъдат транспонирани върху възприятието за винена идентичност.

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## Панел „ДИГИТАЛИЗАЦИЯ“

### **Employers' Social Responsibility in the Context of Digitization**

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#### **Abstract**

The integration of material production processes with digital technologies creates opportunities for increased labor productivity and higher profits but at the same time it generates new non-standard forms of employment that break the conventional form of the „workplace“. Therefore, the purpose of this study is to demonstrate the increased need for socially responsible behavior of the employers to the employees under the changed conditions. The risks that digitization can cause for the employees in relation to different forms of non-standard employment, working conditions, working time, unclear employment status, and social security are being explored. Various social engagement options of the business are proposed to balance the drive for higher competitiveness and improved working environment. In this respect, the public sector can also support various measures to further ease the process of adaptation to new types and forms of work

**Keywords:** social responsibility, digitization, non-standard employment.

**JEL classification:** M14

### **1. Introduction**

Digital technologies are progressing at an ever-increasing pace in public life and are completely altering the established rules and ways of organizing businesses, private life and social policies around the world. Under the new conditions, the labor activities we know now will undergo a radical change. Some professions will be transformed, others will disappear, and in their place entirely new, nonexistent until now professions will emerge. Employees will face serious challenges preserving their jobs and the social rights they enjoy now.

Modern understanding of corporate social responsibility (CSR) is associated with the idea that success in business depends on the expectations and actions of all stakeholders (Serafimova, 2017). One of the earlier definitions of CSR presents it as an organization that covers all social needs of its internal and external stakeholders at some point in time (Carroll, 1979). Due to its diversity in terms of stakeholders, it can be integrated into four different categories: CSR to government, CSR to consumers, CSR to social and non-social stakeholders and CSR to employees (Turker, 2009). For the purposes of this study, the focus is specifically on the social responsibility of businesses to their employees within the European Union.

The purpose of this paper is to highlight the challenges that digitization puts to the labor market and the benefits of socially responsible business behavior to reduce the turmoil in the transition to greater digitization and job automation.

To accomplish this goal the following tasks are set:

1. To study the trends and the direction of impact of the digitization on the structure of employment - in a positive and negative aspect;
2. To identify the problems faced by a large proportion of employees from an economic and social point of view;
3. To identify the positive impact of social responsibility on employers to address a large part of the problems posed by digitization.

## **2. The challenges of digitization to the labor market**

As with any previous technological advancement, the penetration of digital technologies has changed the current forms of business activity organization. However, this time the impact is much faster, bigger and different. The new technology often disrupts, replacing older ways of doing things and rendering old skills and organizational approaches irrelevant (Manyika et al., 2013). From taxi drivers to television networks, from filmmakers to restaurants and banks, the ways in which individuals and companies do business is metamorphosing so quickly

that many companies find it hard to keep pace (Financial Times, 2015a). Digitization now creates opportunities for a global relationship between people and companies not only locally but also globally. By 2021, 70% of the world's population will use a mobile phone and 58% of the world's population will be Internet users (Cisco, 2017).

Changes are expected to cover all sectors, albeit with different intensity, bringing about three main phenomena: creation, transformation and replacement (CEDEFOP, 2017). Some jobs will be completely replaced (through robotics, automation and digital products) and others will be transformed. There will also be a host of currently non-existing professions that will be driven by new technologies. Considering these expectations and the aggressive rate of penetration of digitization, it is almost impossible to make surely reliable forecasts about the future state of the labor market and the organization of people's professional lives (Andreeva & Yolova, 2018b). But on the basis of information gathered and a survey of available opinions, Degryse (2016) attempts to predict the future jobs structure - which jobs will disappear, which are likely to be preserved (albeit with some changes) and what jobs might possibly be created (Table 1)

**Table 1**

**Jobs in the digital economy**

Jobs at greatest risk of automation/digitalisation	Jobs at least risk of automation/digitalisation	New jobs
Office work and clerical tasks Sales and commerce Transport, logistics Manufacturing industry Construction Some aspects of financial services Some types of services (translation, tax consultancy, etc.)	Education, arts and media Legal services Management, human resources management Business Some aspects of financial services	<b>‘Top of the scale’</b> Data analysts, data miners, data architects Software and application developers Specialists in networking, artificial intelligence, etc. Designers and producers of new intelligent machines, robots and



	Health service providers Computer workers, engineers and scientists Some types of services (social work, hairdressing, beauty care, etc.)	3D printers Digital marketing and e-commerce specialists  <b>'Bottom of the scale'</b> Digital 'galley slaves' (data entry or filter workers) and other 'mechanical Turks' working on the digital platforms Uber drivers, casual odd-jobbing (repairs, home improvement, pet care, etc.) in the 'collaborative' economy
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Source: Degryse, 2016, p. 23.

Digitization and robotics could bring enormous benefits to society, contributing to wider opportunities for participation in working life. Greater productivity of labor is important in an aging society. Robots carrying out heavy or dangerous work can reduce accidents and illness. Intelligent machines can facilitate easier employment for people with disabilities. Parents will be able to have more time to raise their children. A reduction in standard working time could also be achieved. Digital technologies can contribute to a more flexible working time management for both workers and their employers. But the realization of this ideal picture depends on how the business will distribute the higher realized GDP - whether to create new jobs or to gain more profits for shareholders.

According to some authors, society is moving towards an economy characterized by huge productivity gains, but requiring fewer workers (Ford 2015). Brynjolfsson and McAfee (2011) add that in a long series of cognitive tasks, computers are increasingly representing a challenge to human labor. Digitization and new technologies can lead to job creation but also to significant unemployment for people with low or medium qualifications due to their replacement with digital algorithms and robots

(Andreeva & Yolova, . Some authors even ask, „Who should address the issue and how to formulate new ethical principles and rules when computer algorithms replace the human factor?“ (Petrov, 2018, p. 508).

Some other authors, however, think that Brynjolfsson and McAfee see things too pessimistically, and the reality is different. Irani (2015) believes that human labor will remain necessary for configuring, calibrating and adapting automation technologies and adapting them to the changing world. According to her, behind the scenes of automated processes, there is specific human labor that makes digitization possible. „Google’s self-driving car doesn’t simply go anywhere its passengers please. For this car to drive „itself,” a human worker has to drive around, scan, and map the car’s world—including everything from curb heights to intersection angles.“ (Irani, 2015).

But in a longer term, more and more jobs will be replaced. The World Economic Forum predicts that around 5 million jobs will disappear in the 15 leading developed and emerging economies by 2020 and no replacement is currently foreseen. But as a result of technological progress, there will be 2 million new jobs (WEF, 2016). As a result of another study, 54% of jobs in the EU are at risk, with peripheral countries being most affected by computerization: Romania (61.93%), Portugal (58.94%), Bulgaria (56.56%) and Greece (56.47%). The least affected will be the countries in the central and northern part of the EU - Germany (51,12%), Belgium (50,38%), France (49.54%), the Netherlands (49.50%), Great Britain (47,17%), Sweden (46, 69%) (Degryse, 2016, p.24).

Along with the challenges, there are positive predictions. According to the European Center for the Development of Vocational Training, around 83 million new jobs (net employment growth of around 8 million and around 75 million jobs to be vacated by retired persons) will be opened in the EU by 2020 (CEDEFOP, 2012).

Digital technologies will certainly stimulate economic growth and create jobs, but the more complex issue is how they will affect the structure of employment itself. Some research suggests that demand for

highly skilled workers performing creative tasks will increase while a large number of low-skilled workers are likely to lose their jobs (so-called „moderate technological change“) (Walwei, 2016). Others, defending the polarization hypothesis (Goos, Manning & Salomons, 2014), consider that the risks are greater for middle-aged workers performing routine tasks than for low-skilled workers performing manual non-routine tasks.

In any case, hardware and software producers will gain in importance, as well as new forms of employment that are no longer geographically dependent, but dependent on platforms, network effects, and big data (Valenduc & Vendramin, 2016). For example, in Germany, more than 7 000 ICT companies start operating annually and already employ over one million people (BMAS, 2015, p. 16). An additional effect is the increase of non-standard employment in the form of freelance or crowdworking - work in the so-called platform economy (Uni Europa, 2015).

Digital platforms have a general positive impact on the economy, employment and innovation. They facilitate the rapid exchange of products and services, provide faster and more cost-effective access to a larger number of digitally equipped agents, and facilitate business activities management. At the same time, however, they significantly blur the employment boundaries by negotiating various non-standard forms of work - temporary contracts, recruitment for specific tasks (often one-off), part-time employment (which may be insignificant, accidental or on call), self-employment, etc.

Thus, a person can perform tasks on the digital platform while working elsewhere, or work on multiple platforms to secure the required income. Students, retirees and even housewives can engage in occasional tasks to secure additional income. A study in the UK (CIPD, 2017) among people working through electronic platforms found that 46% of respondents were satisfied and very satisfied with their work and 17% were very dissatisfied and dissatisfied. Answering the more profound

questions, 68% of those doing the activity as their main job said they were happy with it and 11% said they were not satisfied with their jobs.

Non-standard forms of employment and greater flexibility give employees greater freedom to choose their working time and place and to achieve a better balance with their personal lives. However, this flexibility is not always synonymous with greater freedom for the employee. Work is often paid in cash or illegally. Typically, the respective activities are characteristic of the informal economy and result in unequal rights and pay levels.

The currently regulated social rights, social dialogue and social protection systems are mainly linked to standard employment contracts. Under non-standard employment, they cannot function effectively or act to protect employees. Platform workers do not have minimum standards for remuneration, training, working time, health and safety or legal and social security (PES, 2017, p. 18). This makes employment more and more insecure, and competition between workers is getting bigger. The situation is particularly problematic in the work of digital platforms, where activities are broken down into small packages and advertised for a large number of potential workers. The platforms that approach them earn better and at the same time transfer more and more of their responsibilities to the employees themselves - to provide social protection, health and safety and working hours.

An example of such behavior is provided by Uber<sup>1</sup> (a transport services platform) or Airbnb<sup>2</sup> (an accommodation platform). For a short time, they have become the largest service providers, although Uber does not have its own fleet, and Airbnb does not own even one home, that is the costs of maintenance, operation and depreciation of assets are fully transferred to the persons working for them. Despite the huge profits

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<sup>1</sup> Uber was established in San Francisco in 2009 and already operates in 53 countries. In 2014 its sales exceeded 1 billion USD and its value was estimated at 40 billion USD (The Economist, 2015).

<sup>2</sup> Airbnb was established in San Francisco in 2007 and already has over 5 million lodging listings in 81,000 cities and 191 countries and has facilitated over 300 million check-ins. (<https://press.airbnb.com/fast-facts/>).

earned by the work of workers registered on their platforms, these companies identify themselves as intermediaries and not as employers. They do not enter into employment contracts in any form or assume any legal responsibility or commitment to insurance, social security payments or any other duties. All responsibility (including pension or health insurance, tax burden, etc.) is borne by the registered workers.

Remote employment exempts employers from the need to provide the necessary facilities, quality plant and equipment, insurance payments, and so on. As a result of the transfer of labor costs to remote workers, they may worsen their health by working intensively in front of the monitor in an inappropriate environment and at different times of the day (at the expense of their leisure time) using non-ergonomic furniture or obsolete material base and without a standard contract to provide pay according to their qualifications and social protection. Particularly problematic is the situation where the employee must be at the employer's disposal at all times. The inability to plan personal time (as it is not clear when an employer may need the employee) leads to significant stress and deterioration in the employee's health. The unpredictability of the job itself can prevent the reconciliation of work and private life.

### **3. Significance of the employer's social responsibility**

In an ideal world, the core values of the companies of the future are related to the use of economic and social innovation, supporting talent, ideas and initiatives of employees, and working together to achieve the common goals. Although the reality is often different, there are examples of socially responsible employers who have realized the mutual benefits of supporting their employees.

In 2004, Netflix (a US company for on-line streaming services on demand) employees asked the question: Since the company does not take into account how many hours we have to spend on the Internet at home after working hours, writing and replying to emails, why should there be

restrictions on working time in the company premises? With the advances in technology, people can now work wherever needed, wherever they are. The management considered that they were right and since then employees have the right to determine how many days of leave to take, when to go to work and for how long. As a result of adopting this policy, by 2016, the company's value rose to \$ 51 billion (Bradberry, 2016).

Netflix's policy is not an isolated case. The STW Communications Group<sup>3</sup> offers its employees unlimited paid annual leave. The only requirement is that they coordinate with their immediate managers so that the work is done. Since November 2015, LinkedIn has implemented a new approach called „Discretionary Time Off“ (DTO), which seeks to provide employees with more flexibility and a sense of empowerment. The freedom to define their own time for work and rest protects employees from stress in the workplace and helps them become more responsible and more useful in the performance of their tasks<sup>4</sup>. The CEB Global consultancy has estimated that about 9% of companies around the world offer such arrangements<sup>5</sup>.

Corporate Social Responsibility (CSR) practices often take the form of companies events that provide some form of welfare for their employees or other external stakeholders. Thus, CSR can be seen as the production of an additional form of prosperity by non-state producers (Blagoycheva, 2018). A definition for CSR by the World Bank states that CSR is „the commitment of business to contribute to sustainable economic development, working with the employees, their families, the local community and society at large to improve the quality of life, in ways that are both good for business and good for development „(World Bank, 2011).

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<sup>3</sup> <https://www.investing.com/equities/stw-comms-group-company-profile>.

<sup>4</sup> <https://www.linkedin.com/pulse/acting-like-owner-when-comes-taking-time-off-pat-wadors/>

<sup>5</sup> <https://www.cebglobal.com/global-locations/ceb-australia.html>.

There are many examples from the practice of how voluntary social responsibility on the part of employers can help to achieve social welfare of employees and higher productivity for the company itself. It is related to various actions to ensure a good working environment, to provide career opportunities, and various skills upgrading activities and other policies to encourage workers' commitment to the firm they are employed in. Some of the ways to establish co-operation with employees and increase benefits in the company are higher pay, additional training opportunities, good health care, etc. Thus, given the company's good will, the conflict of interest can be reduced to an internal level and can lead to mutual benefit in the long run (Lyon and Maxwell, 2007). A worker who feels they get better working conditions than they could get in another company in the sector has an incentive for loyalty and cooperation to maintain their long-term relationship with the employer.

It can be said that the social responsibility of employers is a strong prerequisite for employee commitment and identification with the company's goals. Public attitudes are increasingly concerned with the social effects of business. The predominant perceptions are that businesses' goals should not only focus on profit for shareholders but also on benefits to society and the environment. A study found that only 6% of the world population believed that a company should focus only on profit (Cisco, 2015, p. 8). Moreover, the application of CSR nowadays is a serious prerequisite for the competitive advantage of an organization in terms of attracting and retaining quality workforce.

The perception of a socially responsible behavior on the part of employers creates positive trends for employees' satisfaction with their work, as well as for enhancing positive feedback from their families, friends and social groups (Riordan, Gatewood & Bill, 1997). Numerous studies have shown that the millennium generation already chooses their workplace based on the reputation of the respective organization. And in today's digital era, significant information is available in this respect.

A study by Nielsen in 2015 among graduating students and young working professionals raised the question of what they were looking for

when choosing an employer. 85% of respondents in 15 countries said that treatment is more important than many other factors, including workforce diversity, physical disposition, work-life balance, and day-to-day work activities (Nielsen, 2015). A study of millennials from 30 countries carried out in 2017 (Deloitte, 2017, p. 12) found that they intended to stay longer with those employers dealing with social problems. Obviously, the workplace of the future poses new challenges for employers. And those who fail to adapt to the demands of new workers are threatened by the loss of some of their highly-qualified staff.

Corporate social responsibility includes also the strategic sharing of employees. In order to retain skilled workers, several companies can join an „employer group“, acting as a formal employer for one or more individuals. Thus, the worker can work in several different companies, with full-time employment. The associated employers are jointly responsible for the shared workers who otherwise would have to adopt more precarious forms of employment (EUROFOUND, 2018, p. 28)

The processes of deploying and using new technologies require people with special skills to manage them. The importance of good qualifications is growing. A very interesting and telling paradox is the situation in the United States. In April 2018 there were 6.3 million unemployed in the United States (US Bureau of Labor Statistics, 2018a). At the same time, 6.6 million jobs remained vacant due to a lack of workers with the required qualification (US Bureau of Labor Statistics, 2018b). The need for additional training and retraining of employees is obvious. To this end, employers can give them equal access to vocational training, which is beneficial to both parties. Moreover, many forms of online training are already available. The use of this form, however, should be consistent with workers' working and leisure time provisions. In some European countries, the right to paid leave for education is also a standard practice.

An even more serious solution to the problem is for employers to have close links with universities or other training organizations to provide trained staff. Employers can pay scholarships to students who



have shown good results in their training, against the commitment to join the company after their graduation.

The human element in the workforce will not disappear. On the contrary, managing the processes of digitization and automation may in all likelihood require an increase in employment in the coming years. In July 2016, ManpowerGroup, through Infocore, conducted a global survey of 18,000 employers in 43 countries (ManpowerGroup, 2016) in six industrial sectors (information technology, human resources, customer service, administration and office operations, manufacturing, finance and accounting). The survey found that no serious turmoil in the global labor market is expected in the next few years. 12% of respondents say that the automation of the activity will replace some of their staff, which will lead to cutbacks in their workforce. At the same time, 83% of the interviewed employers are planning to maintain or even increase the number of employees in the next few years, and in order to prepare them for the expected changes, they will focus on their training and retraining.

#### **4. The additional answers**

The rapid pace of innovation and digitization make it necessary to adopt matching adaptation rates, both in terms of limiting threats to jobs and using the new opportunities that are emerging. Technological changes can greatly improve welfare, but in most cases they do not distribute it evenly. Without concerted interference from society, the benefits are usually left to those with capital, knowledge and education in high technology. Therefore, coordinated action and efforts by all stakeholders - businesses, social partners, civil society and the public sector - are needed to tackle the social risks posed by digitization and automation.

First of all, support for lifelong learning - from schools to universities, with emphasis on specialized disciplines that are compatible with the new requirements of digitization. It is necessary to develop

different incentives for investment in both the business and the public sector to encourage investment in vocational training.

Experts have already begun to emphasize that the digitization of the economy makes it increasingly difficult to determine the boundaries between dependent employment and self-employment (Eurofound, 2018). Governments are also aware of the problem and are looking for respective measures. The Work 4.0 White Paper published by the German Ministry of Labor and Social Policy (BMAS, 2017) includes proposals on negotiating working conditions and ensuring adequate financial and social protection for workers, including self-employed persons.

In 2017, the European Social Policy Network produced a report outlining the issues of non-standard employment (including in the conditions of digitization) and pointed out that many of the problems are related to the lack of sufficiently robust legal measures with regard to clarity, income, status, working time and provision of this type of employment (ESPN, 2017). On this basis, the European Commission has developed the European Pillar of Social Rights, which proposes certain principles and rights in support of fairly functioning labor markets. In 2018, the European Foundation for the Improvement of Living and Working Conditions' report called for serious attention to be paid to social protection, income, working hours and the unclear status of people working on non-standard contracts (Eurofound, 2018).

There is a clear need to build a new regulatory framework that sets formal rules and responsibilities for employers on digital platforms with regard to their workforce that is not classified as employees. For this purpose, a code of ethics can be developed to protect non-standard employees. There is a need for social dialogue at European and regional level on the need to further protect the health and privacy of workers on digital platforms by observing certain provisions on working time and reconciling work and family life. What is more, it is necessary to extend collective agreements to broader categories of workers so that those working on digital platforms can also be involved. The platforms

themselves must accept their social responsibility and participate in the social dialogue of the stakeholders.

## **Conclusion**

Digitization and globalization are developing at a rapid pace. We can not slow down their progress to protect the workforce, but we can invest in training and developing staff skills. Employers' social responsibility is therefore more important than ever. In order for their employees to respond to the changing reality and to have the skills they need in the future, they must be encouraged to improve and retrain, to be prepared to take new jobs and a new way of working. The achieved results will also benefit the company itself - to increase its competitiveness and sustainability.

It is also not important to support the public sector in terms of establishing different rules for the organization of the activities of persons employed in the digital economy and their social protection.

After all, digitization and automation can even improve lifestyles and working conditions, but to do so, they must be accompanied by policies for social innovation and inclusive sustainable growth.

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# **Specific Nature of the New Profession "Data Protection Officer" in the Context of Digitalization**

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## **Abstract**

Due to the complexity of the processing of personal data caused by globalization and the increase of information flows in both the public and the private sector, it is necessary to study the specifics of the new profession of Data Protection Officer in order to ensure effective implementation of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016. Based on the policy of information security and protection of personal data provided by the Regulation, requirements for defining the Data Protection Officer are analyzed, as well as his or her basic duties and responsibilities. In conclusion, conclusions and recommendations on application and compliance with the rules of Community law are made in the context of confidentiality and reliability of personal data of individuals.

**Keywords:** Data Protection Officer, personal data, obligations, responsibility.

**JEL classification:** K 39, J 23".

## **1. Introduction**

The new Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (GDPR) enters the figure of the „data protection officer“. According to the mentioned act, it is an employee of a personal data controller or an external controller for the organization of an individual charged having advisory functions in the field of personal data protection, monitoring compliance with the regulation in the organization of the controller and raising awareness and training of the



personnel. Generally, the concept of an official is not new. Although Directive 95/46 / EC does not require organizations to appoint a data protection officer, but the practice in this regard has developed in recent years. Only a few EU Member States currently require a mandatory appointment of a data protection officer under certain conditions (see Nevin Feti, Personal Data Protection Officer, 2017, p. 75). It should be noted that in Bulgaria there is still a legal possibility to appoint a person for data protection, arising from Ordinance № 1 of 30.01.2013 on the minimum level of technical and organizational measures and the acceptable type of protection of personal data. However, at present, the definition of such a person is explicitly governed by the Regulation and will be mandatory in cases expressly defined in it.

Due to the complexity of the processing of personal data caused by globalization and the increase of information flows both in the public and private sectors and taking into account the latest European standards, it is necessary to study the specifics of the new profession „data protection officer“. Explaining it, on one hand, is essential for the implementation of Regulation (EU) 2016/679 since it addresses the requirements and tasks of the person who will be ensuring for meeting compliance with the data protection rules by the controller. On the other hand, it is important for the controller's personnel, because thus, they will be informed and familiar with the scope of the GDPR, and will be trained in the lawful processing of personal data of individuals. Taking into account the objectives of this paper, the terms of appointment of the data protection officer, his or her tasks and responsibilities will be examined in order to ensure the effective implementation and enforcement of the GDPR.

## **2. Requirements for the designation of a data protection officer**

The primary role of a data protection officer is to ensure that the controller (see Andreeva & Mateeva, Employers as personal data

administrators – specifics and requirements in the context of the information society, 2018) processes the personal data of their employees, clients, suppliers or other individuals in accordance with the applicable data protection rules. On the basis of this key role of the person in charge of the respective controller, the GDPR sets out certain requirements for data protection officers. In this case, positive and negative prerequisites for the appointment of a data protection officer can be distinguished.

**Positive prerequisites** are listed in Art. 37, par. 5 of the GDPR, where it is provided that the data protection officer shall be designated on the basis of professional qualities and, in particular, expert knowledge of data protection law and practices and the ability to fulfil the tasks referred to in Article 39. The rule provides for two essential prerequisites which are closely related to each other.

**First of all**, the professional qualities of the person and relevant practical skills stands as an imperative prerequisite for carrying out the activity. The need for specific knowledge in the field of personal data protection legislation and practices is undoubtedly related to the competent fulfillment of the core tasks of the data protection officer.

The person who will be in charge of this position, besides having a very extensive knowledge of national and European legislation in the field of personal data protection, needs also to know how to apply requirements of legislation regarding data protection. Accordingly, in order to assess on what basis the data should be processed by the controller, how much time they should be stored and who should have access to them, the official must have relevant practical skills in the area of risk assessment methodology, and have good technical knowledge. This means that the data protection officer should know the sector and the organization of the controller well. The level of expertise knowledge will depend on the complexity of the processing, the sensitivity and the amount of data (see Consideration 97 of the GDPR). This is where the key role of the newly introduced figure is expressed, which should give details to the controller / processor in the processing of personal data

connection with the requirements of the GDPR and the internal legislation concerning their compliance.

The question whether the person possesses the relevant professional skills and knowledge, necessary for his or her appointment, is subject exclusively and only at the discretion of the controller / processor of personal data. There are no requirements in the GDPR regarding special education, qualification, completed training, etc. to take up the position, which means that the controller has the right to choose when designating the data protection officer. In this regard, the normative solution of this issue in the original Draft Act on Amendment and Supplement to the Personal Data Protection Act (ASDP) (1) is of interest. There it was stipulated that the persons appointed by the controllers / processors should undergo training in the Commission for the Protection of Personal Data (CPPD) as a mandatory condition for the acquisition of the status of data protection officer.

According to Art. 15, para. 1 and 2 of ASDP, the Commission may organize and conduct training for the persons designated to take up the position of „data protection officer“ or individuals willing to be trained to hold this position. The training under para 1, at the request of the controllers, the processors or the trainees, is at his own expense and is paid at a rate determined by the Minister of Finance. The content of this provision provided additional requirements for the individuals to apply for the position, compared to the rules of the Regulation, as at the same time it did not provide any clarification on the training provided by the Commission. After numerous criticisms (2) of the said text, on 18.07.2018 the Council of Ministers submitted to the National Assembly the final draft for the adoption of the Law on amendment and supplement to the LPDP (3), in which the provision of Art. 15 of the project had been removed. The deletion of the text should be welcomed, since it introduced an unequal treatment among the persons who have been trained by the CPPD and the other data protection officers. Despite the fact that currently in our country there is a serious problem associated with applying for the position, as there are not enough

experienced data protection specialists, the provision of such regulation concerning the status of the data protection officer in Bulgarian law will lead to the restriction of exercising the activity.

At this stage, when introducing the rules of the GDPR into national legislation, does not require the establishment of specific requirements for persons associated with the acquisition of a qualification that will be an absolute prerequisite for taking up the position in order to fulfill the tasks assigned to them by the Regulation. It should be noted that the existence of higher education in this field as well as work experience in the specialty do not guarantee the appropriate knowledge and skills to exercise the activity of the data protection officer.

**Secondly**, it is the person's ability to perform the tasks specified in Art. 39 of the GDPR. The ability to perform the tasks incumbent on the data protection officer should be interpreted as both referring to their personal qualities and knowledge, but also to their position within the organization. Accordingly, in order to be able to fulfill its role in promoting the data protection culture and to help implement the core elements of data protection rules within an organization, the individual's personal qualities should include integrity and high professional ethics (Guidelines on Data Protection Officers ('DPOs'), WP 243 rev.01, Adopted on 13 December 2016, as last revised and adopted on 5 April 2017, p. 12).

**The negative prerequisite** for the implementation of the profession of „data protection officer“, which the regulation takes into account, is the conflict of interests on the basis of other duties and tasks performed by the person. This condition is closely linked to the independence of the data protection officer in relation to his position within the organization. Therefore, in the provision of Art. Article 38 (6) of the GDPR introduces the requirement for the controller / processor to ensure that these tasks and obligations do not lead to a conflict of interests. The existence of a circumstance, such as holding a senior management position responsible for defining the purposes and means of processing personal data in the organization, raises suspicion of conflict of interests and prevents the

individual from exercising/her his functions as a data protection officer. The senior management positions referred to in the Data Protection Officers Guidelines (4) adopted by the Working Party on Art. 29 (5) as incompatible with the tasks of a data protection officer are, are, for example, the Chief Executive Officer, the Chief Operating Officer, the Chief Financial Officer, the Head of the Human Resources Department or the Head of the IT Department. Undoubtedly, the conclusion of the Working Party on art. 29 about thesenior management positions should be shared because if there is a merger of legal qualities between a controller and the data protection officer, it would not make sense to identify such a person (Nevin Feti, Determination, Status and Tasks of the Data Protection Official, 2017, p. 83)

A conflict of interests may also arise in cases in which an external, for the structure of the controller or processor, person is designated as a data protection officer for the controller or processor is required to represent the controller or the personal data processor in courts on matters related to the protection of personal data.

As a conclusion to the independence requirements of the data protection officer, some basic points are addressed to controllers and personal data processors. In particular, the requirement contained in the provision of Art. 38 (3) of the GDPR, points that the official does not receive any instructions in connection with the performance of his or her duties. This means that not only the controller / processor, but all their employees, should refrain from giving guidance on solving a given issue in order for the data protection officer to perform his or her tasks independently. An important manifestation of independence is also the direct reporting of the official to the highest management level of the controller or the personal data processor. It should be noted that the independence of the data protection officer does not mean that he or she has the power to make decisions beyond tasks defined in Article 39 of the GDPR.

### 3. Tasks of the data protection officer

The GDPR provides a certain minimum of duties and powers, in the implementation of which the official must take into account the risk associated with processing operations, the nature, scope and purposes of processing

The main tasks of the data protection officer, regulated in Art. 39 of the GDPR are:

- **to inform and advise** the controller / processor and the employees who carry out processing of personal data, which has the purpose to explain to those persons their obligations arising from the Regulation and other data protection provisions in the European Union or a Member State, as well as advises to fulfill their obligations in the specific case. This task, related to the advisory functions of the official in the field of personal data protection, is of particular importance for achieving a high degree of data protection and minimize the risks of adverse impact on the privacy of individuals.

- **to monitor compliance with this Regulation** in the organization of the controller - this task does not negate the obligation of the controller / processor to control compliance with the GDPR. It is essential because, through monitoring, the official carries out a supporting function consisting, expressed in his or her right to provide specific recommendations to the controller or the data processor on personal data protection, as well as to raise awareness and training of personnel involved in the processing operations. It should be noted that training to work with personal data is an essential element of their protection measures and plays a significant role for the correct and effective application of the rules for dealing with them.

- **participation in the impact assessment on data protection**, which is expressed in the form of an opinion by the data protection officer, but only on the request of the controller. In this regard, the Working Party on Art. 29 recommends that the controller shall seek the advice from the data protection officer on the following issues: whether

or not the evaluation is to be carried out, what methodology should be followed when carrying it out, whether it shall to be performed by the organization of the controller or to be outsourced, which safeguards (including technical and organizational measures) to apply to minimize any risks to the rights and interests of data subjects, whether the impact assessment on data protection has been properly carried out and whether its conclusions are in compliance with the GDPR. It should be noted that in addition to this task in Art. 39, para. 1 (c) the possibility of monitoring the evaluation process is also provided. In this respect, the data protection officer can play a very important and useful role in assisting the controller.

- **cooperation with the supervisory authority** - this task relates to the role of the data protection officer as a mediator between the relevant stakeholders (eg supervisory authorities, data subjects and departments within the organization). Of particular importance to this general obligation is the additional requirement that the data protection officer acts as a point of contact with the supervisory authority on various issues. In this regard, it is the responsibility of the controller or the personal data processor to publish the contact details of the data protection officer and to notify them to the supervisory authority in accordance with Art. 37 para.7 of the GDPR. The contact details of the data protection officer may include a postal address, telephone number and / or a dedicated e-mail address, and there is no legal regulation on the publication of the name of the data protection officer. The objective of these requirements, on the one hand, is to ensure that data subjects and the supervisory authorities can very easily and directly contact the official, without having to contact the controller or the data processor. On the other hand, the access of the supervisory authority to documents and information on the implementation of the tasks referred to in Article 57 as well as carry out its investigative, corrective, permissive and advisory powers as referred to in Article 58 of the GDPR shall be facilitated.

To assist the data protection officer in the performance of his or her tasks, the provision of Art. 38 para 2 of the GDPR lays down the following obligations for the controller responsible for the lawful processing of personal data:

- providing resources necessary to carry out his or her tasks - the data protection officer should be provided in terms of financial resources, infrastructure (premises, facilities, equipment) and, where appropriate, staff to the official;
- access to personal data and processing operations - access to the various units in the structure of the controller or the personal data processor (eg Human Resources, security and information services, etc.) should be provided in order to obtain the necessary support from them;
- the opportunity to stay up to date - the data protection officer should be encouraged to participate in training courses on personal data protection, thus ensuring a greater degree of qualification and professionalism, as well as enhancing public confidence in the profession.

A particularly important aspect in supporting the data protection officer's functions is to provide him / her with active support by senior management and to provide sufficient time for DPOs to fulfill his / her tasks, especially when he or she is not working on a full-time basis.

Typical of the data protection officer is his or her autonomy, which is ensured not only by his or her independence in the performance of his or her tasks but also by the prohibitions of dismissal and penalty provided for in the provision of Art. 38 para. 3 of the GDPR. For example, the controller's disagreement with the impact assessment given by the data protection officer for a particular data processing operation is not a reason for dismissing or penalising the individual. This means that the person enjoys sufficient protection in performing their data protection tasks. It should be noted that the prohibition of dismissal is not absolute, since the data protection officer may be dismissed on the grounds provided for in the Labor or Criminal Law, which differ from



the performance of his or her duties related to the protection of personal data.

## **Conclusion**

In general, the analysis of the specific nature of the new profession „data protection officer“ shows that the duties and powers of the person who holds the position are quite extensive, that is why the GDPR provides for guarantees of his or her independence and autonomy. Consequently, the performance of the activity of the data protection officer is not subject to a certain regulatory regime, which should be combined with both the general requirements laid down in the GDPR with the persons exercising that activity and the selection process carried out through training for acquiring the qualification of an official. It follows that the choice of controller when appointing the data protection officer is the first step in implementing the requirements of the GDPR, but sufficient autonomy and resources should also be provided for individuals to carry out their tasks effectively.

## **Notes**

1. Public consultation of the Draft Act on Amendment and Supplement to the Personal Data Protection Act: <http://www.strategy.bg/PublicConsultations/View.aspx?lang=bg-BG&Id=3467>

2. <http://www.strategy.bg/PublicConsultations/View.aspx?lang=bg-BG&Id=3467>, Opinion of the Supreme Bar Council: file:///D:/Downloads/Stanovishte\_ZZLD\_VAdvS.pdf,

Opinion of the Confederation of Employers and Industrialists in Bulgaria: file:///D:/Downloads/KRIB\_ZID%20na%20ZZLD.pdf,

Summary Opinion of the Union of Bulgarian Lawyers: file:///D:/Downloads/Statement\_SUB.pdf

3. Bill on amendment and supplement to the Personal Data Protection Act (802-01-27), <http://www.parliament.bg/bg/bills/ID/78179>

4. Guidelines on Data Protection Officers ('DPOs'), WP 243 rev.01, Adopted on 13 December 2016, As last Revised and Adopted on 5 April 2017

5. The Working Party group was established on the basis of Art. 29 of Directive 95/46 / EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

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# **The Right to Work in a Digital Society: Evolution and Trends**

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## **Abstract**

This paper presents the evolution of the legal doctrine and philosophy regarding the right to work, its transformation, differentiation and protection. The issues are also examined in the context of the new forms of employment in the digital society. Based on the trends in the development and exercise of the right to work, the authors have drawn conclusions, made generalizations and outlined the need for regulation of processes related to the challenges facing labour law in the technological society.

**Keywords:** digital society, social rights, protection of rights.

**JEL classification:** K31.

## **1. Introduction**

Socio-economic rights in general and the right to work in particular make possible the satisfaction of the material and spiritual needs of individuals. Given their importance, they have been enshrined in various international instruments, e.g. the Universal Declaration of Human Rights and the Covenant on Economic, Social and Cultural Rights. At the level of national legislation, they are governed by the basic law: articles 47 to 52 of the Constitution of the Republic of Bulgaria (CRB).

At each stage of social development these rights evolve in line with the economic developments and advancements. New technologies and digitization have given rise to new economic models<sup>1</sup>, their corresponding new forms of employment and the ensuing need to adapt

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<sup>1</sup> Sharing economy, circular economy, etc.

the organizational models of the labour market and transform social protection. The impact of digitization has different intensity in the various sectors of the economy. On the one hand we see the potential for improved working conditions and productivity, on the other hand are the risks for loss of jobs. According to the European Centre for the Development of Vocational Training (CEDEFOP), all sectors are marked by three phenomena: creation, transformation and replacement<sup>2</sup>.

All this necessitates the rethinking of social rights, and in particular the right to work and especially its adaptation to changed realities at international level.

**The aim of this paper** is to trace the evolution of the doctrine and philosophy of law with respect to the right to work and its protection. The issues are viewed in the context of the evolution of legal and philosophical doctrines to new trends in the forms of employment in a digital society. It also examines the attempt of European institutions to present a package of measures to adapt national laws to the challenges of modern times on the basis of forecasts and analysis of the digitization processes.

To achieve this aim the authors have pursued **the following objectives**:

1. Trace the evolution of the philosophical and legal concept of the right to work;
2. Explore and analyse new challenges and trends at European and national level, and draw conclusions, make generalisations and put forward recommendations based on that analysis.

**The methodological basis** of the study involves the application of various methods, such as comparative legal research, formal and legal logic, and the general scientific methods of knowledge: induction, deduction, analysis and synthesis.

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<sup>2</sup> According to the report of the European Centre for the Development of Vocational Training (CEDEFOP). See CEDEFOP (2017). People, machines, robots and skills. Information document.

## **2. Evolution of the concept of the right to work**

The doctrine of constitutionalism, its origin and further development in the jurisprudence and philosophy of law schools have always placed at the core of the citizen's status its inherent rights and freedoms. Describing this status as a system of rules defining the position of the individual in social aspect and in view of its relationship with the State, they have always regarded the rights and freedoms and the scope of state intervention in them as an indicator and a corrective of justice in state governance (Andreeva, A., Yolova, G., 2015, p. 73).

The Constitution defines rights and freedoms in their essence, as the fundamentals of social existence, without excluding – rather stipulating – their elaboration in ordinary laws. The Constitution determines that the objects of these rights are clearly defined interests of the individual person and legally permissible satisfaction of his/her material and spiritual needs, and outlines the main characteristics of these rights at the level of the supreme law: inalienability, uniformity in their application and exercise, without allowing privileges or restrictions, except for the prohibition to exercise them to the detriment of other personal or public interests – a fact characterizing the purpose of the society of individuals established in the country, ensuring a balance between the rights and freedoms of its members.<sup>3</sup>

While the personal rights of citizens are constitutionally enshrined as priority rights which set certain limits on the intervention by the state authorities in self-determination and choice of social behaviour, the social rights constitute the part of the status of the individual which ensures the basis necessary for the realization of socially acceptable behaviour and legally permissible forms of satisfaction of individual material inter-

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<sup>3</sup> In this regard, even the old theory of public law emphasized the need to distinguish between the concepts of civic equality and individual freedom. It is suggested that civic equality comprises four components, namely: equality before the law, equality before justice, equality in employment and equality in taxation. Individual freedoms in turn break down into two groups according to whether they primarily concern material or moral interests of the individual.

ests and needs.<sup>4</sup> The right to work as a basic social right of the individual is guaranteed by modern constitutionalism through the State's obligation to create conditions for its adequate exercise, protected by the laws and the legal system in general (Article 48 CRB). In parallel to this, there is an elaborate system of norms and mechanisms governing the accompanying rights which make possible the exercise of the right to work, namely rights to free career choices, healthy and safe working conditions, minimum wage, rest, leave and holidays, and the right to non-discriminatory, non-humiliating and unbiased treatment (Andreeva, A., Yolova, G., 2014, pp. 82-83).

In evolutionary terms, the understanding of the right to work as an absolute freedom of an independent person boils down to the theory established and maintained as early as in the time of the old-school European constitutionalists, which distinguishes the right to work from labour law. In that sense, the right to work is built up around the individual's right to work for private and public benefit within the legally permissible scope, and given its nature of a right-obligation dichotomy, it is regarded as a contribution to the welfare of society and community. In turn, labour law is limited to regulatory frameworks and constitutional mechanisms of protecting and prioritizing the interests of the individual, in particular the right to physical and moral development and the right to transform the environment in the service of human endeavours (Balamezov, 1993, pp. 360-361). Thus the difference is defined between the will of the individual on the one hand and the guarantees of a modern legal framework on the other hand. In this sense, the starting point is the right of the individual, i.e. from the passive guaranteeing of the right to work as self-determination and choice to provide workforce, to the provision of adequate, timely and sufficient legal protection as an active

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<sup>4</sup> Along with the right to work, the Bulgarian Constitution envisages other social rights, such as the right to hold strikes in defence of collective economic and social interests, the right to social security and health insurance, affordable medical care and free medical treatment, the right to education, the right to inheritance and private property, and the right to establish trade unions to protect labour and social security interests.

government intervention.<sup>5</sup> Thus the right to supreme freedom as a basis for satisfaction of the interests of the individual is established as a direct obligation of the state, which introduces in its laws and enforces the mechanism of protection and non-discrimination. In summary and in evolutionary terms these trends can be divided into several **major periods of legal development**:

1) Period of establishing a general framework and principles recognizing the individual's right to meet their needs in a legally permissible manner, not yet directly enshrining the right to work as a constitutional right: for the first time in the first French constitution of 1791 and the provisions of its Chapter One, which prescribe that „liberty consists only in the power to do anything that is not injurious to the rights of others or to the public security“, and stipulate the creation of a public relief establishment to „provide work for the able-bodied poor.“

2) Period of concrete and detailed norms protecting and prioritizing the right to work as a basic social right: the first effort was in the Girondin Constitution of 1793, which contained specific regulation of individual freedoms, in particular Article 19 („No kind of labour, commerce ... can be forbidden to the skill of man“) and Article 20 („Every man can contract his services and his time, but he cannot sell himself nor be sold“).

3) Period of introduction and permanent establishment of constitutional guarantees for the exercise of the right to work: the Constitution of France of 1848, where the foundation of the Republic is proclaimed as „family, labour, property and public order“, and Article 13 states that the Constitution „guarantees to citizens the freedom of labour and of industry“.

4) Period of development and improvement of the State's active protection through a comprehensive system of international norms and a directly correlative relationship between the right to work as individual

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<sup>5</sup> The first case concerns the individual and their relations to labour, and the second – the rights, obligations and privileges which the state creates in favour of the working person (Balamezov, St., s.360).

higher good and the irrevocable and primary obligation of the sovereign (the State) to protect it – this philosophy was introduced by the League of Nations (1919), and entailed a radical rethinking of welfare and labour compared to previous periods. As the declaration goes, „universal peace cannot be based on anything other than social justice, given that there are working conditions that create injustice, disaster and hardship for a large number of persons, which causes such dissatisfaction that peace and global harmony are put in danger“ (Balamezov, 1993, p. 358). Here the focus is on the priority role the state in terms of „the rule of law based on social solidarity to prevent by suitable arrangements the hired from being crushed by the hirer“ (Duguit, 1925, tV, p. 154), evolving into the concepts of the modern legal conscience, according to which the issue of legislative intervention has been replaced by the question „how labour and people will resolve the contradiction between misery and sovereignty.“<sup>6</sup>

5) Period of close interrelation between the right to work and the industrial mechanisms. Interestingly, the concept of industry, closely related to the exerciser of the right to work in postmodern times, initially was perceived as having skills and intelligence, later as a profession or production, and only in later times was attributed the meaning of processes modifying primary matter into wealth (Balamezov, 1993, p. 352). Today, modern legal framework concerns mainly Industrie 4.0.<sup>7</sup> The term Industrie 4.0 was defined first by the Federal Government of Germany as a major initiative for the adoption of a high-tech strategy for development of the German industry in 2011 (part of the High-Tech

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<sup>6</sup> The limited volume and the subject of this paper require that the authors skip an analysis of the achievements of international instruments in the field of labour, e.g. the Covenant on Economic, Social and Cultural Rights and ILO instruments.

<sup>7</sup> The fourth industrial transformation is a natural continuation of the digitization and automation of production and includes Internet connectivity and interaction of cyber-physical systems without human intervention; processing and analysis of large data sets and decision-making by artificial intelligence, robotics; use of digital clouds, numerical modelling and simulation of production processes through virtual reality; intelligent automation, mass production of customized products, the emergence of new technologies, and the creation of new business models.



Strategy 2020 for Germany<sup>8</sup>, and in recent years the term has appears in several specific strategies within individual policies. The elaborated concepts of Industry 4.0 are used in the name of 8 out of 13 national policies in the EU on the digitization of production processes. In the USA, the concept of Industrie 4.0 has gained popularity through the Industrial Internet Consortium (IIC), which defines it as „the integration of complex physical machinery and devices with networked sensors and software, used to predict, control and plan for better business and societal outcomes (Industrial Internet Consortium, 2013).<sup>9</sup>

Modern development of the right to work, from its enshrinement at the constitutional level to it taking its place in legally acknowledged and guaranteed international instruments reveals several main trends:

1/ the constitutional guarantees of individual rights are becoming oriented towards collectivity in the exercise and protection, solidarity and shared social responsibility<sup>10</sup>; 2/ priority has shifted towards the public interest in the exercise of basic individual rights and freedoms; 3/ the direct exercise of individual rights ever more often collides with the interests, abilities and mechanisms of influence of employers in the labour market; 4/ the enhanced and well-established digitization processes which impose and make permanent new forms of employment and transform in various aspects the ancient right of choice in the exercise of labour; 5/ there is a permanent shift in the concept of the holder of the right to work, with view to the worker being replacement by cyber-physical and autonomous systems and intelligent autonomous robots. The legal personality and the tendencies in the development of

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<sup>8</sup> The basic ideas for the development of Industrie 4.0 were first published by Dr. Henning Kagermann in 2011, becoming the basis for the Manifesto for Industrie 4.0, released in 2013 by the German National Academy of Science and Engineering (Acatech).

<sup>9</sup> [www.strategy.bg/FileHandler.ashx?fileId=9962](http://www.strategy.bg/FileHandler.ashx?fileId=9962)

<sup>10</sup> Society and the business have already accepted that the social benefits of corporate social responsibility are indisputable; however, unless they are integrated into broad national strategies, these benefits remain limited. Such integration can only be achieved with the help of the public sector (Blagoycheva, 2018, p. 119).

the concept of the subject of the legal relationship acquire different characteristics in the new type of industrial relations, with typical activities being taken over by artificial intelligence and robotics, in particular autonomous machines capable of learning and taking decisions independently. This brings about economic advantage, but also gives rise to a number of concerns in terms of their direct and indirect impact on society as a whole. Thus the phenomenology of the subject becomes a theoretical problem transforming the philosophy of law and the understanding of classical doctrinal jurisprudence (Andreeva, A. Yolova, G., 2018). In this regard, we ought to mention the report of the Committee on Legal Affairs of 27 January 2017, PE 582.443v03-00A8-0005/2017, which contains recommendations to the Commission on Civil Law Rules on Robotics (2015/2103 (INL)), in the form of proposal for a European Parliament resolution. This is clearly a trend of protecting the rights of individuals in an environment where industrial and labour relations inherent to people are being taken over by automated systems.

6) At the national level, in view of Industrie 4.0, and in particular the vision for development of the system by 2030, the goal is for Bulgaria to be recognized as a regional centre of the digital economy through the implementation of products, technologies, business models and processes under Industrie 4.0. The same direction is followed in measure 3/6.1.3. Building Human, Scientific, Organizational and Institutional Capacity for Development under Industrie 4.0 in Bulgaria, where there is a permanent trend of closely linking the right to work to lifelong learning, in particular organizing the labour process in a manner that promotes training and provides an opportunity for lifelong learning and education near the workplace.

### **3. Trends and challenges facing the right to work**

Technological innovation and the widespread penetration of digital communications in the production process undoubtedly impact positively the improvement of the quality of labour. Along with this, however, we

must not forget to account for the risks that accompany the new forms of employment<sup>11</sup>.

In Bulgaria, labour productivity is low, as indicated by the low ranking of the country: 47th in the world and last place (27th) in the EU. The European Commission (EC) defines the business in Bulgaria as insufficiently innovative compared to other EU countries.<sup>12</sup>

Bulgaria has its traditions in the exercise of the right to work and the implementation of the respective mechanisms for its protection and efficiency, corresponding to each stage of social development. In the modern period, and given the globalization processes, Bulgaria is not well positioned among the other EU Member States. The reasons for this negative trend are complex and should not be pointed out offhand. In the context of the subject of this study and the interconnection between the right to work and the digitization process, we can infer the relationship between performance and resources. The advent of technology in the everyday life is a process that has long been part of the life of Bulgarians: use of Internet, online trading, social networking and other online activities. Unfortunately, the level of competent and targeted skills for handling new technologies is low among Bulgarian employees.

The EU has developed a methodology to measure the progress of EU Member States towards digital economy and digital society, which is based on five major indicators: „Connectivity“, „Human Capital“, „Use of Internet“, „Integration of Digital Technology“ and „Digital Public Services“<sup>13</sup>.

The impact of digitization on the economy, labour market and social life is enormous, but this impact affects also the individual employee. The right to work is a fundamental and basic right, but it also

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<sup>11</sup> For example, remote employees or homeworkers are placed under conditions where the deviation from the traditional working process may generate new pathologies.

<sup>12</sup> According to data from the Concept of digital transformation of the Bulgarian economy (industrie 4.0), p. 13

<sup>13</sup> <https://ec.europa.eu/digital-single-market/en/european-digital-progress-report>

experiences the influence of such processes and requires adequate mechanisms of protection.

New forms of employment become reality, to which the legislature responds through appropriate legislative amendments. After their introduction in sources of labour law, the successful implementation of these forms requires complex actions by social partners, institutions and non-governmental organizations.

Along with the generally positive trend, digitization is accompanied by a number of negative factors affecting with different intensity the parties to the employment relationship.

From the point of view of employees it is associated with fear of the rapid pace of automation of jobs, and the ensuing uncertainty of the job position, instability in skills and competences, etc.

Employers too are facing risks related to the challenges of quick-paced technological processes which are not always subject to long-term forecasts and thus cause uncertainty in the managers of workflows.

The right to work is fundamentally linked to the employee's right to security. The employee provides their workforce in the labour process in favour of the employer, but a stable employment relationship requires conditions for both parties to exercise their rights and fulfil their obligations in a normal working environment. In today's dynamic and globalized society this is impossible to achieve without the joint efforts of individual actors, or only locally and within one country.

In labour law the specifics of sources suggests the involvement of various actors in the establishment of rights and measures for their protection. In this regard, it is imperative to strengthen the social dialogue at various levels - European, national and sectoral, with a view to identify the needs of additional protection and propose specific measures to counteract any negative impacts. A good example of social partnership is the experience of Germany<sup>14</sup>. Although Germany is among

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<sup>14</sup> The start of the social dialogue in Germany in the context of new needs and the challenges of the digital society was in 2015.

the countries with the highest rate of economic activity in the world, it also has the lowest unemployment rate. All applicable mechanisms are harnessed in order to achieve this, with a prominent role of German social partners who accept the challenge of innovation and have already begun negotiations to respond to the challenges facing the labour market<sup>15</sup>.

The challenges of digitization require measures to ensure the right to work, for it to be worthily exercised by employees. This requires stepwise actions and involvement of a wider range of actors in the process. Undoubtedly, one of the first and most important measures at the beginning of this process is the fostering of skills and competencies in individuals, with a view to ensure their security in the labour market. Future skills will have to meet the needs of society and the demand of the labour market. This can only be achieved through close cooperation between public and private educational institutions and all other interested groups, including social partners and companies<sup>16</sup>.

## **Conclusion**

The rapid technological development of society and the mass digitization of labour process require comprehensive, timely and adequate measures. New forms of employment not only transform the labour market but also affect the traditional labour rights, and hence their legal framework and guarantees for protection. This requires coordinated measures to maintain high levels of social protection at both national and international level. In this regard, this paper is an attempt to present the right to work in its evolution and the aspects of its contemporary

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<sup>15</sup> Opinion of the European Economic and Social Committee. Future of labour - acquisition of appropriate knowledge and skills to meet the needs of future jobs, adopted at the plenary session held on 15.3.2018.

<sup>16</sup> See Opinion of the European Economic and Social Committee on the "Provision and development of skills, including digital skills, in the context of new forms of work: new policies and changing roles and responsibilities" (2017/C 434/06).

dynamics, in order to identify some of the challenges that modern digital society poses to all participants in the labour process.

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# On the Some Ideals and Their Bourgain Algebras

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## Abstract

Let  $B$  be a finite Blaschke product and let  $I$  be a principal ideal in  $H^\infty$  generated by  $B$ . In this paper is shown that the Bourgain algebra of  $I$  relative to  $L^\infty$  coincides with Sarason algebra  $H^\infty + C$ , i.e.  $(I, L^\infty)_b = H^\infty + C$

**Keywords:** Bounded analytic functions; Bourgain algebras; Blaschke products; Ideals; Finitely generated ideals.

**JEL classification:** C00, C02, C60, C69

## 1. Introduction and preliminaries

Let  $H^\infty$  be the algebra of bounded analytic functions in the open unit disk  $D$  (with pointwise operations and the supremum norm) and  $L^\infty(T)$  be the algebra of all essentially bounded, Lebesgue measurable functions on the unit circle  $\partial D = T$ . Taking the boundary values of the functions on  $T$  we can consider  $H^\infty$  as a closed subalgebra of  $L^\infty(T)$ . Its spectrum, or maximal ideal space, is the space  $M(H^\infty)$  of all nonzero multiplicative linear functionals on  $H^\infty(D)$  endowed with the weak\*-topology. Then  $M(H^\infty)$  is a compact Hausdorff space and the corona theorem says that  $D$  is dense in  $M(H^\infty)$  [1]. We denote the space of continuous functions on  $T$  by  $C = C(T)$ . Let  $z$  belongs to  $D$  and  $\varphi_z(f) = f(z)$  for every  $f \in H^\infty$ . Then  $\varphi_z$  is a complex homomorphism “evaluation at the point  $z$ ”, i.e.  $\varphi_z \in M(H^\infty) \subset (H^\infty)^*$ .

A sequence  $\{z_n\}_n$  in  $D$  is called interpolating if for every bounded sequence  $\{a_n\}_n$  of complex numbers there is a function  $f \in H^\infty$  such

that  $f(z_n) = a_n$  for all  $n$ .

For a sequence  $\{z_n\}_n$  in  $D$  with  $\sum_{n=1}^{\infty} (1 - |z_n|) < \infty$ , the function:

$$B(z) = \prod_{n=1}^{\infty} \frac{\overline{z_n}}{|z_n|} \frac{z - z_n}{1 - \overline{z_n} z}, \quad z \in D,$$

is called a Blaschke product with zeros  $\{z_n\}_n$ . If  $\{z_n\}_n$  is an interpolating sequence, then  $B(z)$  is also called interpolating. The study of interpolating sequences is useful in many areas of function theory and operator theory. Interpolating sequences can be applied for obtaining new scalar solutions of nonlinear differential equations using results in [2] and [3].

A closed subalgebra between  $H^\infty$  and  $L^\infty$  is called a Douglas algebra. By the Chang Marshall theorem [1], every Douglas algebra  $A$  coincides with the closed subalgebra generated by  $H^\infty$  and complex conjugate of interpolating Blaschke products  $B$  with  $\overline{B} \in A$ . The Sarason algebra  $H^\infty + C$  is a typical Douglas algebra and  $H^\infty + C = [H^\infty, \overline{z}]$ .

If  $X$  is any commutative algebra, we denote by

$$I = I(f_1, f_2, \dots, f_N) = \left\{ \sum_{i=1}^N h_i f_i : h_i \in X \right\}$$

the ideal generated by the  $f_i$ . If  $N$  can be chosen to be one, then  $I$  is called a principal ideal. We will say that  $I$  is a radical ideal if  $f \in I$  whenever some power  $f^n$  of  $f \in X$  belongs to  $I$ .

In [4] it was shown that in  $H^\infty$  a radical ideal  $I \neq (0)$  is finitely generated if and only if  $I$  is a principal ideal generated by a Blaschke product having simple zeros.

Let  $Y$  be a Banach algebra and  $X$  be a linear subspace of  $Y$ . The Bourgain algebra  $X_b$  or  $(X, Y)_b$  of  $X$  relative to  $Y$  is defined to be the set of all  $f \in Y$  such that:



if  $f_n \rightarrow 0$  weakly in  $X$ , then  $\text{dist}(f.f_n, X) \rightarrow 0$ .

The distance,  $\text{dist}(f.f_n, X)$  between  $f.f_n$  and  $X$  is the quotient norm of the coset  $f.f_n + X$  in the space  $Y/X$ . J. Cima and R. Timony [5] proved that:  $X_b$  is a closed subalgebra of  $Y$  and contains the constant functions; if  $X$  is an algebra then  $X \subset X_b$ . In [6] J. Cima, Sv. Janson and K. Yale showed that the Bourgain algebra of  $H^\infty$  relative  $L^\infty(T)$  is  $H^\infty + C$ . P. Gorkin, K. Izuchi and R. Mortini [7] present another proof. They also prove many properties of the Bourgain algebras in the case  $Y = L^\infty(T)$  and  $X$  - closed subalgebra between  $H^\infty$  and  $L^\infty(T)$ .

In this paper we prove that Bourgain algebra of  $I$  relative to  $L^\infty$ , contains the Sarason algebra i.e.  $(I, L^\infty)_b \supset H^\infty + C$ , where  $I$  is principal ideal in  $H^\infty$  generated by Blaschke product, having simple zeros.

## 2. The main result

**Theorem 2.1.** Let  $I$  be a principal ideal in  $H^\infty$  generated by Blaschke product  $B$  having simple zeros. The Bourgain algebra of  $I$  relative to  $L^\infty$  contains the Sarason algebra  $H^\infty + C$ , i.e.  $(I, L^\infty)_b \supset H^\infty + C$ .

Proof: Since  $I = BH^\infty$  is an algebra, the space  $(I, L^\infty)_b$  is a closed subalgebra of  $L^\infty$  and  $I \subset (I, L^\infty)_b$ . If  $f \in H^\infty$  then  $f.Bg \in H^\infty$  for every  $g \in H^\infty$  and we obtain that  $H^\infty \subset (I, L^\infty)_b$ .

(i) First we will look at the case when  $B(0) \neq 0$ .

Let  $f_n \rightarrow 0$  weakly in  $I = BH^\infty$ . Since  $BH^\infty$  is contains in  $H^\infty$  therefore  $f_n \rightarrow 0$  weakly in  $H^\infty$ , i.e.  $\varphi(f_n) \rightarrow 0$  for all  $\varphi$  in  $(H^\infty)^*$ .

For  $\varphi = \varphi_0$  we have  $\varphi_0(f_n) = f_n(0) \rightarrow 0$ . If  $f_n = Bg_n$  where  $g_n \in H^\infty$  then  $f_n(0) = B(0)g_n(0)$ . But  $B(0) \neq 0$  and we obtain  $g_n(0) \rightarrow 0$ .

Put  $t_n(z) = g_n(z) - g(0)$ . Since

$$\bar{z}t_n = (g_n(z) - g_n(\bar{z})).\bar{z} = (g_n(z) - g_n(\bar{z}))/z$$

for  $z \in T$  and  $(g_n(z) - g_n(\bar{z}))/z \in H^\infty$  then  $\bar{z}t_n \in H^\infty$ . Hence  
 $dist(\bar{z}f_n, I) = dist(\bar{z}Bg_n, BH^\infty) = dist(\bar{z}g_n, H^\infty) = dist(\bar{z}t_n + \bar{z}g_n(0), H^\infty) =$   
 $dist(\bar{z}g_n(0), H^\infty) = \inf \{\|h\|_\infty : h \in [\bar{z}g_n(0)]\} \leq \|\bar{z}g_n(0)\| = |g_n(0)| \rightarrow 0$   
 and  $\bar{z}$  belongs to  $(I, L^\infty)_b$ .

(ii) Now let  $B(0) = 0$ . Since  $B$  is a Blaschke product having simple zeros we may consider that  $B = zb$  and  $b$  is a Blaschke product such that  $b(0) \neq 0$ . If  $f_n \rightarrow 0$  weakly in  $I = BH^\infty$ , then  $f_n \rightarrow 0$  weakly in  $bH^\infty$ , because  $I = BH^\infty = zbH^\infty \subset bH^\infty$ . If  $f_n = Bg_n$  where  $g_n \in H^\infty$  we have:

$$dist(\bar{z}f_n, I) = dist(\bar{z}Bg_n, I) = dist(\bar{z}Bg_n, zbH^\infty) = dist(\bar{z}^2Bg_n, bH^\infty) \xrightarrow{n \rightarrow \infty} 0$$

as using the case (i)  $\bar{z}^2$  belongs in  $(bH^\infty, L^\infty)_b$ . Therefore  $\bar{z}$  belongs to  $(I, L^\infty)_b$ .

Since  $z$  and  $\bar{z}$  belong to the closed subalgebra  $(I, L^\infty)_b$  of  $L^\infty$ , then by the Weierstrass theorem we have  $C \subset (I, L^\infty)_b$ . The theorem is proved.

**Corollary 2.2.** Let  $I \neq (0)$  be a finitely generated radical ideal in  $H^\infty$ . Then  $(I, L^\infty)_b \supset H^\infty + C$

Proof: By [3]  $I$  is a principal ideal generated by a Blaschke product having simple zeros and we can apply **Theorem 2.1**.

In the case where  $I$  is a principal ideal in  $H^\infty$  generated by a finite

Blaschke product it can be proven that  $(I, L^\infty)_b \supset H^\infty + C$ .

We need two lemmas.

**Lemma 2.3.**[1]. If  $\{z_n\} \subset D$  is interpolating sequence, then there exist functions  $\{f_n\} \subset H^\infty$  and positive number  $M$  such that  $f_n(z_n) = 1$  for

$$\text{all } n, f_n(z_k) = 0 \text{ for } n \neq k \text{ and } \sum_{n=1}^{\infty} |f_n(z)| \leq M \text{ for all } z \in D.$$

**Lemma 2.4.** [6]. Suppose that  $\{f_n\}$  is a sequence in  $H^\infty$  such that  $\sum_{n=1}^{\infty} |f_n(z)| \leq M$  for all  $z \in D$ . Then  $f_n \rightarrow 0$  weakly in  $H^\infty$ .

**Theorem 2.5.** Let  $I$  be a principal ideal in  $H^\infty$  generated by a finite Blaschke product  $B$ . Then  $(I, L^\infty)_b = H^\infty + C = (H^\infty, L^\infty)_b$ .

Proof: Since  $B$  is a finite Blaschke product, then  $zB$  and  $\overline{zB}$  belongs to  $H^\infty + C = (H^\infty, L^\infty)_b$  [1]. If  $f_n \rightarrow 0$  weakly in  $BH^\infty \subset H^\infty$  then  $f_n \rightarrow 0$  weakly in  $H^\infty$  and we obtain:

$$\text{dist}(\overline{zf_n}, I) = \text{dist}(\overline{zf_n}, BH^\infty) = \text{dist}(\overline{zB} \cdot f_n, H^\infty) \rightarrow 0, \text{ i.e.}$$

$$\overline{z} \in (I, L^\infty)_b.$$

Since  $H^\infty \subset (I, L^\infty)_b$  this means  $H^\infty + C = (H^\infty, L^\infty)_b \subset (I, L^\infty)_b$ .

Hence  $(I, L^\infty)_b$  is a Douglas algebra which contains  $[H^\infty, \overline{z}]$ . By the Chang Marshall theorem every Douglas algebra  $A$  such that  $[H^\infty, \overline{z}] \subsetneq A$  is generated by  $H^\infty$  and complex conjugate of infinite interpolating Blaschke products. To show equality is sufficiently to prove that  $(I, L^\infty)_b$  does not contain the complex conjugate of any infinite interpolating Blaschke product.

Let  $q$  be an interpolating Blaschke product and let  $\{z_n\} \subset D$  denote the zero sequence of  $q$ . According to lemma 1.1 there exist functions  $\{f_n\} \subset H^\infty$  and positive number  $M$  such that  $f_n(z_n) = 1$  for all  $n$ ,  $f_n(z_k) = 0$  for  $n \neq k$  and  $\sum_{n=1}^{\infty} |f_n(z)| \leq M$  for all  $z \in D$ . Then for functions  $g_n(z) = B(z)f_n(z)$  we obtain:

$$g_n \in BH^\infty = I ; g(z_n) = B(z_n)f_n(z_n) = B(z_n) \text{ for all } n;$$

$$g_n(z_k) = 0 \text{ for } n \neq k \text{ and } \sum_{n=1}^{\infty} |g_n(z)| \leq M \text{ for all } z \in D.$$

By lemma 1.2 (with  $BH^\infty$  instead of  $H^\infty$ ) we have  $g_n \rightarrow 0$  weakly in  $BH^\infty = I$  but:

$$\begin{aligned} \text{dist}(\bar{q}.g_n, I) &= \text{dist}(g_n, q.I) = \inf \left\{ \sup_{z \in D} |g_n(z) - q(z).y(z)| : y \in I \right\} \geq \\ &\geq \inf_{z \in D} \left\{ |g_n(z_n) - q(z_n)y(z_n)| : y \in I \right\} = |B(z_n)| \end{aligned}$$

and  $|B(z_n)|$  do not turn to zero, because  $B$  is a finite Blaschke product.

Thus  $\bar{q} \notin (I, L^\infty)_b$ , and the theorem is proved.

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# Върху PROFINET: промишлена автоматизация и интернет

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## *Резюме*

В статията е направен анализ на един от новите комуникационни стандарти Profinet (IEC 61158), който значително разширява функционалните възможности на обмяна на данни и отговаря на широк спектър от изисквания за използване на интернет мрежите за автоматизация на производството. Разгледани са различните механизми на връзки между модулите и различните инструментални средства за проектиране и автоматизация на производството. Направен е анализ на мрежовите компоненти на системата, комуникационно-програмното обезпечение, инвестиционната привлекателност и други показатели на системата, като и кратко сравнение с подобни системи. Направено е обобщение на силните и слабите страни на Profinet.

**Ключови думи:** автоматизация на производството, интернет, Profinet

**JEL classification:** L23 L86, M11

## 1. Въведение

Зараждането на Profinet е от преди повече от четиринадесет години. Те включват инсталационни технологии, комуникация в реално време, мрежово управление и функции за Web интеграция. От тогава до днешно време Profinet търпи бурно развитие и здраво се налага на пазара, като фаворит в областта на „Индустриалните Интернет Комуникации“.

Тази технология е разработена от **Siemens Corporation** и от дружествата-членове на потребителската организация на PROFIBUS (PNO). Profinet е насочена към организиране на обмен на данни между всички йерархични нива на управление на предп-

риятието. Той значително опростява дизайна на индустриалните комуникационни системи, разширява използването на ИТ стандартите до ниво управление, позволява използването на съществуващи комуникационни канали и мрежови компоненти на Ethernet, както и допълва тези мрежи със специализирани компоненти. Profinet осигурява поддръжка на всички съществуващи стандартни механизми за обмен на данни чрез Ethernet успоредно с обмена на данни между автоматизирани системи в реално време[1].

Популярността на Profinet все още не е разрешила всички проблеми свързани с прилагането му на практика. Profinet със своята гъвкавост, както значително превъзхожда наложените се до момента полски комуникационни системи, така и изостава в някои по специфични отношения, свързани основно с работата в реално време.

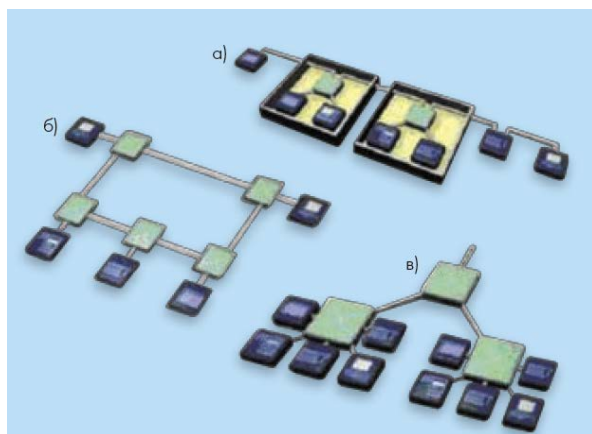
## **2. Как работи Profinet**

Profinet представлява стандарт, който решава всички задачи свързани с използването на масово популярния Ethernet в индустриалните комуникации. Той покрива комуникациите на ниско ниво между контролери и сензори, комуникации на ниво контролери, използва се даже и за управление на задвижвания в реално време. Profinet позволява пряк достъп до разпределени полски устройства от Ethernet мрежата. Всички устройства, участващи в автоматизирания процес са свързани в унифицирана мрежова структура, което води до стандартна комуникация разпростираща се в цялото производство.

За да поддържа различни класове на ефективност, PROFINET използва принципа „производител / потребител“ с различни протоколи и услуги. Полесна информация с висок приоритет се предава директно чрез Ethernet протокола в Ethernet рамки с приоритет VLAN, и данните за диагностика и конфигурация се предават през UDP / IP. Това позволява на системата да постигне

време за цикъл от около 10 ms за I / O приложения. PROFINET IRT предлага цикли със синхронизиращ период, по-малък от 1 ms, както се изисква от приложенията за управление на движението. Това се изпълнява, използвайки режима за мултиплексиране на времето, базиран на специално контролирани хардуерно-синхронизирани превключватели [2]. В бъдеще, използвайки така нареченото DFP (Dynamic Frame Packing), потребителите ще получат нова версия на PROFINET с оптимизирано време за цикъл, благодарение на прилагането на принципа на общата рамка към конкретен набор от мрежови устройства.

Изграждането на индустриална Ethernet мрежа се различава от създаването на офис комуникации, тъй като изборът на топология зависи от изискванията на дадено приложение и условията за разполагане на устройствата. На практика мрежите се използват както върху медни двойки, така и върху оптични влакна, от комбинации от типични топологии: пръстен, дърво и линейни (фиг.1).



**Фиг. 1. Топологията на Profinet а) линейна; б) пръстен; в) дърво**

В случай на линейна структура комутаторът е свързан близо до устройството или е инсталиран в самия терминал. Всъщност всяко устройство има свой собствен ключ. Такива комуникации са удобни



за контролиране на конвейера, свързване на независими производствени сегменти и т.н. Структурата на пръстена е подобна на линейната, но по-надеждна и устойчива на грешки. Крайът на комуникационната линия е свързан, така че в случай на прекъсване, мрежата остава в експлоатация. Ако ключът е свързан едновременно с всички мрежови терминали, например в помещения, където плътността на такива устройства е висока, се използва топология със звезда. Дървовата структура може да бъде изградена от няколко такива мрежи, които обикновено се използват за комбиниране на подсистеми от сложни машинни комплекси. При изграждането на PROFINET мрежа клиентът, в зависимост от конкретните оперативни условия, предпочита традиционната за топологията на „ИТ решения“ („звезда“) или линейните структури на PROFIBUS системи.

Особеностите за полагане на кабели в индустриални условия са пряко свързани със специфично оборудване. Кабели могат да бъдат подложени на изключителен стрес. В PROFINET за предаване на данни използват две усукани медни двойки (само екранирани!) с характерно съпротивление 100 ома. Те съответстват на Ethernet 100 Base TX и осигуряват скорост до 100 Mbps. Допускат се кабели не по ниски от 5-та категория и клас D стандартизирани по ISO/IEC11801-Information technology. Архитектурата на PROFINET позволява максималната дължина на кабела да е 100 м. Двата края на кабела са снабдени с конектори. По препоръка на PROFINET трябва да се използват сваляеми такива RJ45 и M12. Всяко отдалечено устройство се свързва чрез активния мрежов компонент. С това кабелът за данни се дефинира по същия начин като отстрани на устройството и неговия контролер. В случай устройството използва връзката не само за обмен на данни, но и за консумация на енергия (24V) се използва хибриден кабел, той съдържа четири медни жила за хранящо устройство и за предаване на данни – или два оптични кабела или четири медни екранирани кабели. Освен това, PROFINET поддържа един режим multimode на оптични връзки със

скорост от 100 Mbit/s. Интерфейсите на устройствата съответстват на ISO/IEC9314-3 и ISO/IEC 9314-3. С това се постига по-голямо мрежово покритие, отколкото със симетрично медни кабели. Повишава се и електромагнитната устойчивост. За употреба извън разпределителните шкафове и канали оптичните кабели също трябва да отговарят на външните условия (химични, механични, температурни) в дадена мрежова зона (таб. 1) ([4]).

**Таблица 1**

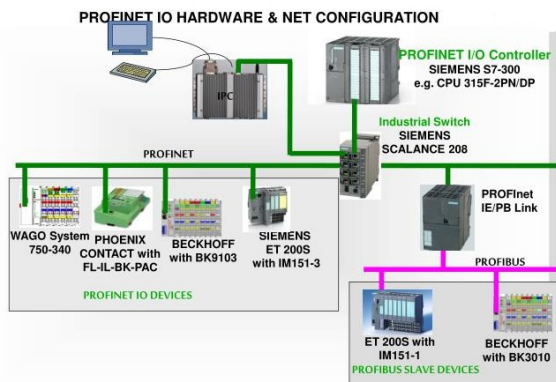
Характеристика	Вътре	Вън
Сфера на приложение	Проследяващи системи, комутационни системи, системи за управление	Производство (леарски системи, системи за пускане и спиране, преносимо оборудване)
Ниво на защита от замърсяване	IEC 625-1 степен 2 (VDE 0110)	IEC 625-1 степен 3 (VDE 0110)
Степен на защита	IP20	IP6/IP675
Ударно въздействие	IEC 60512-4, тест 6с, 20g/11ms, по 3 оси във всяко направление	IEC 60512-4, тест 6с, 20g/11ms, по 3 оси във всяко направление
Вибрации 10-500GHz	IEC 60512-4, тест 6d 0,35 мм при 5g	IEC 60512-4, тест 6d 0,35 мм при 5g
Температурен диапазон	0 <sup>0</sup> ...60 <sup>0</sup>	-20 <sup>0</sup> ...70 <sup>0</sup>

### 3. Архитектура

С цел да се постигне оптимална поддръжка за различни практически приложения и задачи, PROFINET предлага 2 основни възможности:

- Profinet IO за изграждане на разпределени входно/изходни периферии.
- Profinet CBA за създаване на разпределена модулна автоматизация на заводи;

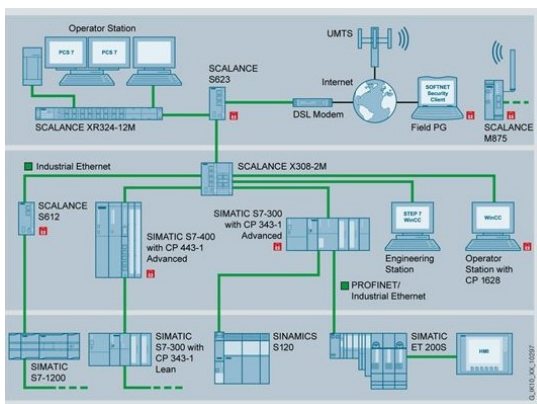
В системите PROFINET IO, устройствата са свързани директно към Industrial Ethernet и се обслужват от I/O S7-200-300 контролер на PROFINET. Високоскоростният обмен на данни е с цикличен характер и работи със скорост 100 Mbit / s. В зависимост от състава на компонентите, използвани в такава мрежа, се поддържа обмен на данни в реално време (Real Time - RT) и използването на часовникова синхронизация (Isochronous RT - IRT). Същевременно семейството превключватели SCALANCE X100 / 200 / X300 / X400 може да се използва като активни мрежови компоненти за поддържане на RT режим, само фамилните превключватели SCALANCE X200IRT / XF200IRT поддържат IRT режим. Поддържа се възможността за интегриране на съществуващи PROFIBUS DP мрежи в системите PROFINET IO. Същевременно главното устройство е свързано към мрежата PROFINET и комуникира с подчинените PROFIBUS DP чрез PROFINET Proxy. В системите за разпределена аварийна реакция за защита и безопасност (F-системи), базирани на PROFINET за обмен на данни между компонентите на F-системите, се предоставя поддръжка PROFI-safe профил (фиг 2).



**Фиг. 2. Примерна конфигурация на PROFINET IO система**

Технологията CBA е предназначена да опрости организацията на индустриалните комуникации чрез PROFINET между оборудва-

нето на различни производители. В този случай операциите на трудоемко програмиране на комуникационни системи се заменят от операциите по графичен дизайн на такива системи. Основният производствен модул в системите за анализ на качеството е технологичен компонент, представляващ всички механични, електрически и електронни части на конкретна машина или инсталация, както и съответния софтуер за приложения. На всеки технологичен компонент се възлага софтуерен модул, който съдържа пълно описание на интерфейса на този компонент в съответствие с изискванията на стандарта PROFINET [3]. В бъдеще тези софтуерни модули се използват за проектиране на комуникационни връзки. Примерна архитектура на PROFINET CBA е представена на фигура 3.



**Фиг. 3. Примерна архитектура на PROFINET CBA**

Програмирането на системите за анализ на риска се осъществява на три етапа:

- ✓ Конфигуриране на хардуер и разработване на приложния софтуер на модула за обработка в инструменталната среда на съответния производител. За системите, базирани на компонентите SIMATIC, на този етап може да се използва пакета STEP 7 (LAD, FBD, STL), както и целия спектър от инструменти за проектиране (S7-GRAPH, S7-SCL, CFC и др.).

✓ Създаване на софтуерни модули на технологични компоненти, като се използват инструментите на съответния производител и тяхното запазване във формат на XML файлове. За системите, базирани на SIMATIC компоненти, пакетът STEP 7 се използва на този етап.

✓ Зареждане на XML файлове (включително тези от други производители) във визуалната редакторна библиотека на PROFINET и графичен дизайн на комуникационните връзки. SIEMENS предлага използването на пакета SIMATIC iMAP за тази цел.

След като завърши определената работа, SIMATIC iMAP автоматично генерира всички данни, необходими за организиране на връзка. В същото време е възможно да се извършват операции за интерактивно тестване и диагностика на всички компоненти, без да се засяга приложението на отделните технологични компоненти.

Като част от системите PROFINET CBA се използват:

- Станции на PROFINET, чиито функции могат да се извършват от цялото оборудване, описано за I / O контролерите на PROFINET. В същото време компютрите с Ethernet интерфейс трябва да бъдат оборудвани със софтуер PN CBA OPC сървър.

- PROFINET CBA прокси като CPU 31x-2 PN / DP и CPU 31xF-2 PN / DP

- Мрежово оборудване PROFIBUS DP:

- Станции ET 200S с интелигентни IM151-7 CPU / IM151-7 F-CPU / IM151 PN интерфейсни модули, ET200PRO станции с IM154-8 интелигентни интерфейсни модули на CPU;

- Централизиран процесор S7-300 / S7-300C с вграден PROFIBUS DP интерфейс, работещ в режим на устройство на подчинено устройство DP;

- Системи за визуализация (WinCC, WinCC flexible,) поддържащи OPC клиентски функции и достъп до PROFINET данни на компонентите чрез PROFINET OPC сървър.

## 4. Кратък анализ

По настоящем съществуват над 30 вида системи за промишлен интернет, като всяка от тях има своите преимущества и недостатъци. Един от основните недостатъци на Индустриалните Интернет комуникационни системи и особено за Profinet, е бавно стартиране на интелигентните устройства при отпадане на захранването. Времената за стартиране до нормален режим на работа на Profinet са в рамките на секунди, докато наложилите се стандартни полеве комуникационни системи, като Profibus, Powerlink, EtherCAT и SERCOS III например, постигат стартови времена до 100 милисекунди. Profinet, има относително високи производствени разходи, поради използването на комутатори от висок клас Scalance X300/400 и контролери IM 154.

EtherCAT и SERCOS III мрежите винаги формират логически пръстен. Този пръстен може физически да изолира главното устройство в случай на „счупване“ на връзката, с обратна връзка в последния възел на физическата линия. EtherCAT ви позволява да разклонявате линиите, чрез специални възли, по цялата система са разположени такива клонове, т.е. мрежата като цяло отново образува логически пръстен. Само POWERLINK констукцията, предвижда резервно главно устройство и дублиращ кабел, който е реализиран в реални проекти. За PROFINET и EtherNet, това е възможно при използването на специални комутатори. Поради спецификата на изграждането на системите, прякото сравнение на производителността на системите е невъзможно.

## Заклучение

Бавният старт на Profinet устройства, може да бъде коригиран, чрез конфигуриране на устройства имащи интерфейс за управление не асинхронни съобщения при натоварени комутатори и поддържащи функционалността за бърз стат FSU. Комутаторите от сериите Scalance X200 поддържат конфигурационен интерфейс,

което означава че конкретни конфигурационни опции биха могли да повлияят на времената на предаване на асинхронни съобщения, евтините и практични контролери IM 151 с интерфейс ET 200, също са подходящи за целта. С тази функционалност времето на старт се намалява от няколко секунди до 500 милисекунди, което е повече от значително. По този начин построена цялата система има две основни предимства, по-бърз старт и значително по ниски производствени разходи. Необходимо е опитно да се установи, кои опции биха повлияли на предварителните времена, при натоварване на обекти времево-некритични данни, което ще бъде обект на следващата разработка на автора.

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## Панел „ОБРАЗОВАНИЕ И НАУКА“

### Actual Legal Aspects of the Referencing and Indexing of Scientific Publications in Bulgaria

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#### *Abstract*

This paper examines the indexation of scientific publications in the context of the requirements of the digital society. The process is examined in terms of the interconnection development of the academic staff and the necessity of dissemination of scientific works through publication in referenced and indexed editions. The emphasis is on legal publications, which are examined in comparison to other scientific publications. On the basis of this analysis the author makes conclusions, generalisations and practical recommendations.

**Key words:** indexation; scientific publications; academic development.

**JEL:** K 39, I 23, I 25

## 1. Introduction

Scientific publications are the result of scientific research, most of which in Bulgaria is carried out in universities and in a number of scientific institutions. Universities not only produce educated professionals but also foster science, culture and innovation (Art. 6, Para. 1 of the Higher Education Act (HEA)). To date Bulgaria has 51 universities and 13 research institutions accredited by the National Evaluation and Accreditation Agency (1). Although the country established its universities relatively late, the Bulgarian higher education and science have their deep historical traditions (Dimitrova, 2016).

The modern development of higher education is directly linked to scientific research and this is recognized by the Bulgarian legislature in special laws – (2) and the Development of the Academic Staff in the Republic of Bulgaria Act (DASRBA) (3). The latest amendments to



DASRBA of 3 April 2018 concern the minimum national requirements for candidates for scientific degrees and academic positions in the respective scientific field, such as: 1) scientometric indicators reflecting scientific results and the response they evoke in the scientific literature; 2) the number of publications in referenced and indexed editions; 3) the number of citations in referenced and indexed publications by other authors, etc.

Furthermore, the Bulgarian National Assembly adopted a Strategy for Higher Education Development (4) whose goal is the promotion of research in universities. Two important results are expected from the implementation of this strategy. On the one hand, increase in the quantity and quality of all types of research. On the other hand, increase in the number of publications in scientific journals included in the global system for referencing, indexing and evaluation.

Achieving these results is only possible through synchronization of Bulgarian higher education and research with those in the rest of Europe, taking into account the trends of science development worldwide. The increasing global competition has made necessary the adoption of a series of measures at European level aimed at improving the competitiveness of higher education and science. This was manifested in the setting of common objectives to achieve compatibility and harmonization of European higher education systems and to establish a European Higher Education Area, a European Research Area, etc. These trends in global and European education and science have had an impact also on Bulgaria, especially after the country's accession to the EU in 2007. At the same time, Bulgaria has its specific domestic issues, which have an adverse impact on the modernization of higher education and the development of university science in accordance with global criteria and European standards.

The development of science and the advancement of the academic staff are interrelated and follow the evolutionary processes in society. Moreover, the technological society inevitably affects all spheres of public life, and this requires the study of these processes using scientific

methods. Bulgarian society and particularly the legislature set requirements to the academic staff related to the quality of scientific publications. In this regard, the author's **aim** is to study the referencing and indexing of scientific publications in two main aspects: first, in the context of the digitization of scientific journals, and second, in the context of academic advancement, considering the requirement for publications in editions included in international evaluation systems.

This aim is accomplished through the following specific **objectives**: 1) clarifying the nature of referencing and indexing of scientific publications; 2) analysing academic advancement from the point of view of the minimum national requirements to the publishing activity of candidates for academic positions. Special emphasis is placed on the legal publications and the possibility for their inclusion in referenced and indexed editions, as compared to other scientific fields.

This paper is a continuation of the author's research interest in the problems of universities, higher education and science, pursued both independently and in co-authorship (Andreeva, Yolova, & Dimitrova, 2017) (Andreeva, Dimitrova, & Dimitrova, 2018). This paper is in line with the existing legislation in Bulgaria as of July 2018.

## **2. The nature of referencing and indexing of scientific publications.**

It is not only the modern everyday life that is unthinkable without computers, the Internet and other digital technologies; this also applies to modern science. Almost all spheres of public activity now experience the digitalization of documents, which means converting paper documents into electronic images. In many areas of public life documents are being digitized, i.e. transformed into electronic form for the purposes of convenience, publicity and access to a range of public and administrative services. These processes affect scientific research too, but in the latter case it is not only a matter of digitizing, but also of referencing and indexing scientific journals and the publications they contain.

The Bulgarian legislators provide legal definitions of „referenced“ and „indexed“ editions, in § 1, item 9 of the Supplementary Provisions of DASRBA. Within the meaning of this provision, these are „editions in which papers are published after blind peer-review and which constitute a part of the international research area, by being referenced and indexed in global scientific databases." This legal definition highlights three significant features of the referenced and indexed editions: 1) the papers published in them are subject to blind peer-review; 2) these editions are part of the international research area, and 3) they are referenced and indexed, i.e. included in global scientific databases.

**The first of these features – the blind peer-review**, means that the publication of manuscripts sent to the editorial office takes place only after there are evaluated by independent and anonymous reviewers. This evaluation may be conducted in two ways: first, an evaluation by two to six independent and anonymous reviewers, or second, a double-blind peer-review. In the case of the second possibility the manuscript is evaluated by anonymous and independent reviewers and all information about the author/s of the paper sent to the editorial office is removed, i.e. the authors also remain anonymous and unknown to the reviewers. Along with the blind peer-review, such editions should have an international editorial board and not be regionally oriented, although they usually are published in a particular country.

**The second feature** of referenced and indexed editions is that they are **part of the international research area**. This is a specially designed research environment, defined as a global (international) system for referencing, indexing and evaluation. Under this system, after a blind and independent review papers appear in full text in primary literature (mostly periodic scientific journals), and then are presented and classified in abbreviated form (abstracted) in secondary literature, where the primary literature is included after a professional review under certain scientific and publishing criteria. The two-tier structure of the global system of referencing, indexing and evaluation ensures macro-sustainability of science in its entirety. Therefore, those countries which have a larger

number of representatives publishing in the international system of referencing, indexing and evaluation determine the global scientific trends. Other countries and their academics are of secondary importance in science.

The publication of scientific results in international scientific journals aims at: 1) creating, disseminating and exchanging scientific knowledge; 2) grading the studies based on the significance of the results obtained; 3) promoting academic development and advancement of academics. To ensure the achievement of these goals, an international system of referencing, indexing and evaluation has been established. The second level of this system (secondary literature) is considered a guarantee that what has been published in the primary literature bears the marks of credibility and can be adopted as the basis for further scientific studies by other researchers.

**The third feature** of the referenced and indexed editions is that they are included in **global scientific databases**, the so-called secondary literature. It should be borne in mind that publishing in international scientific journals does not yet constitute a claim for original scientific contribution on the part of the author. This claim is made only when the published paper is indexed and referenced, i.e. included in one of the secondary literature sources (e.g. Scopus, Thomson Reuters, Web of Science, CEEOL, **ERIH PLUS**, **RePEc**, etc.) (6). The basic requirements for inclusion of research journals in global scientific databases are: first, they must apply the system for blind peer-review of submitted manuscripts; second, the journal must have an international editorial board, with reviewers who make their assessments based on pre-defined and standardized forms (e.g. the journal has developed a model form for review). Review and discussion of the submitted manuscripts within the editorial board is not allowed.

Besides research papers in periodicals (scientific journals), there are other types of scientific publications: monographs, collections of papers, edited collective volumes. It is common practice to index collections of papers presented at scientific conferences in international scientific data-

bases. It is believed that a certain guarantee of credibility and scholarly integrity of the studies published in the collection of papers or the monograph can only be achieved if they were published by a specialized scientific publishing house with established and respected editors (7).

Unfortunately, the scientometric requirements to scientific publications are not known well enough in Bulgaria, and there are not many publishers who follow and fully implement them, especially in the field of social sciences and humanities. This problem is largely due to the government policy in the field of universities, higher education and science. Only in recent years the legislature adopted regulations governing scientometric indicators used to evaluate not only the individual scholars, but also the universities and scientific institutions where they work and teach. Examples for such regulations include: 1) Decision on the adoption of an updated national strategy for the promotion of scientific research in the Republic of Bulgaria 2017 – 2030 (8); 2) Promotion of Scientific Research Act (9); 3) Rules for monitoring and evaluation of research undertaken by universities and scientific institutions and of the activities of the Scientific Research Fund (10).

The terms „referencing“ and „indexing“ of scientific publications entered relatively recently the vocabulary of Bulgarian academics. Although there are some publications about the nature of these terms and their use is gaining popularity, their meaning and significance is unclear to many, including academics. Even in laws the terms referencing and indexing are not always used with the necessary accuracy. In the above-mentioned laws the Bulgarian legislators use these two terms interchangeably, which is not accurate. Although there is some overlap, these are different processes of dissemination and evaluation of scientific papers (11).

**Indexing** means the inclusion of publications in global scientific databases through a set of specific elements: title of the publication; keywords; information about the author, the edition, the publisher, the field of the published research; synchronization of the publication with a dictionary of the relevant scientific field for easier identification. In the

case of **referencing**, a global scientific database (secondary literature) uses short texts (abstracts) to announce that a scientific publication in the primary literature (mostly scientific journals) has been accepted for presentation in this secondary literature. Some scientific databases also include the full text of the publication in the form of pdf-file.

Despite some inaccuracies in the use of these terms, recent legislative changes in Bulgaria can be deemed positive, given that they aim to promote the publishing in scientific journals included in the global system of referencing, indexing and evaluation.

### **3. Analysis of academic advancement in terms of the minimum national requirements to the publishing activity of candidates for academic positions.**

Academics are already commenting on the recent amendments to DASRBA. A large part of these amendments concern the introduction of minimum national requirements to the research and lecturing activity of candidates for academic positions (Art. 2b, Art. 4 DASRBA).

Employment at an academic position is the result of a combination of facts and acts governed by different branches of the law, which together form the basis for establishing an employment relationship with the successful candidate: competition, selection and entry into employment contract. This is a complicated and comprehensive process which combines labour and administrative law matters and in this sense the hiring procedure constitutes a combination of heterogeneous factual elements.

As a specific administrative procedure, the procedure for occupying the academic positions „assistant professor“, „associate professor“ and „professor“ is regulated by special laws (HEA, DASRBA). In this sense, it is part of the general concept of administrative proceedings as a construct of administrative law and procedure (Дерменджиев, Костов, & Хрусанов, 2010) (Костов & Хрусанов, 2011) (Андрејева & Йолова, Основи на публичното право, 2016). This procedure, being an admin-

istrative procedure, constitutes a set of substantive and procedural provisions. The substantive provisions govern the requirements and prerequisites for occupying academic positions. The purpose of these provisions is to define the conditions to be met by academics, i.e. to establish standards ensuring that the relevant candidate for an academic position has academic degree, teaching experience and scientific publications. In turn, the purpose of procedural provisions is to regulate the procedure for assessment of candidates for the relevant academic position, but they are not the subject of this study.

Until recently Bulgaria lacked uniform state standards for the academic positions „assistant professor“, „associate professor“ and „professor“. This fact was recognized by the Bulgarian legislature as a significant problem, and the recent amendments to DASRBA (SG No. 30 of 3 April 2018) introduced minimum national requirements to applicants for academic positions. These requirements constitute a set of **scientometric indicators** that reflect scientific results and the response they have evoked in the scientific literature. These scientometric indicators include the requirement that the candidate's papers be published in **referenced and indexed editions and cited in referenced and indexed editions** by other authors (Art. 2b, Para. 2 DASRBA). The particular minimum number of publications and citations in referenced and indexed editions is defined by scientific and professional fields in the Implementing Regulations to DASRBA (12). Universities and scientific institutions are allowed to set additional requirements to candidates for academic positions (Art. 2b, Para. 5 DASRBA).

On the one hand, the adoption and implementation of uniform state standards for academic positions, tailored to the different scientific and professional fields, can be viewed as a positive step towards improving the legislation in this area. On the other hand, the rather questionable new amendments to DASRBA created tension in the academic community.

The introduction of the requirement for publication in referenced and indexed editions as one of the main substantive law preconditions in

the procedures for academic advancement cannot be accepted unequivocally and uncritically. First, it creates a favourable environment for natural, technical and medical sciences at the expense of pedagogical and social sciences and humanities, blocking the development of the latter. Second, individual universities and scientific institutions are placed at a disadvantage. In a large number of scientific fields the access to referenced and indexed editions is severely limited due to their specificity and lack of publications in these fields. Furthermore, global databases of referenced and indexed publications require paid subscription. Not all universities (scientific institutions) have the necessary financial resources to include their scientific publications in these international systems. In their turn, professors at universities are prevented from publishing their scientific work in foreign referenced and indexed editions, as this also requires high fees. Thus the above-mentioned legislative decision leads to discrimination on the grounds of wealth.

In all fields of science it is important to publish in journals included in the global system of referencing, indexing and evaluation. Such publications make academics and their research recognizable, which ensures verifiability of the achievements and raises the prestige of universities with a larger number of publications and citations.

The Strategy for Development of Higher Education in the Republic of Bulgaria in the period 2014 - 2020 acknowledged that the number of Bulgarian publications in scientific journals included in the global system of referencing, indexing and evaluation in the field of natural sciences, mathematics and medicine is relatively large, but the number of publications in the field of social sciences and humanities is very low. The reasons for this are of varied nature: on the one hand, in Bulgaria there is no tradition in this respect; on the other hand, until recently there was no access to referenced and indexed editions, and thirdly, research in many scientific fields is relevant mainly at the national level.

For instance, in the professional field of law, which belongs to social sciences, publishing papers in international journals included in the system of referencing and indexing is virtually impossible. Jurisprudence



is based mainly on the domestic (national) law of the relevant country. The issues examined in Bulgarian legal literature concern mainly Bulgarian society and therefore cannot fit thematically in scientific topics dealt with in foreign periodicals. To be able to publish in international referenced and indexed journals, Bulgarian legal scholars need to author papers in the field of either international or European Union law, or engage in interdisciplinary studies with other scholars, mostly economists. This is undoubtedly damaging to the legal science, as it restricts its opportunities for development outside the state and narrows the number of legal sectors in which legal scholars can create and publish. At the same time the requirement for publications in referenced and indexed editions are an objective obstacle to the academic advancement of not only lawyers but also other scholars in the field of social sciences and humanities.

## **Conclusion**

Overall, the analysis of the publishing activity of Bulgarian scientists and scholars shows that in recent years it has remained at the same level, which is in contrast to the global trend of increase in scientific publications (13). On the one hand, the reason for this is that not all scientific fields create conditions for the internationalization of Bulgarian science. On the other hand, the promotion of publishing in international referenced and indexed scientific journals cannot be implemented just by mechanically define and enshrine in legislation the scientometric indicators to be complied with Bulgarian scientists. The inclusion of Bulgarian scientists and their publications in the international research area is a process that is not very well developed yet, especially in the field of social sciences and humanities. This process requires serious analyses and adequate measures on the part of the legislative and executive branches, by adopting laws and regulations governing academic advancement, with a view to secure a worthy place for Bulgaria in the international research area.

Bulgaria makes efforts to modernize its system of administration of higher education in line with European models and recommendations of the European Commission. This has been manifested mainly in changes in the laws governing higher education and science. However, this should not be achieved by exercising administrative pressure on universities. Such endeavours require well thought-out measures and adoption of good European and international practices of promoting publications in referenced and indexed international journals, which will result in the development of science in Bulgaria as a whole.

## Notes

1. <https://neaa.government.bg/>
2. Prom. State Gazette (SG) No. 112 of 27 December 1995, latest amend. and suppl. SG No. 30 of 3 April 2018.
3. Prom. SG No. 38 of 21 May 2010, latest amend. and suppl. SG No. 30 of 3 April 2018.
4. Strategy for Development of Higher Education in the Republic of Bulgaria in the period 2014–2020, prom. SG No. 18 of 10 March 2015.
5. For example, the journal „Izvestiya“ is an academic scientific journal issued by the University of Economics in Varna, which applies the principle of double-blind review of received papers, and besides has an international editorial board: <http://journal.ue-varna.bg/bg/home>
6. For example, the „Izvestiya“ journal of the University of Economics in Varna is referenced and indexed in RePEc (Research Papers in Economics), CEEOL (Central and East European Online Library), ERIH PLUS (European Reference Index for the Humanities and Social Sciences), Scientific Indexing Services, Google Scholar and Academic Resource Index.
7. For example, the publishing house „Nauka i iekonomika“ („Science and Economics“), established at the University of Economics in Varna publishes: 1) Periodicals: the Yearbook of the University of Economics in Varna, and the „Izvestiya“ journal; 2) monographs published in "Tsani Kalyandzhiev Library" with an editorial board whose members include widely recognized scholars with academic ranks; 3) collections of papers from scientific roundtables and conferences with a board of recognized representatives of the relevant scientific field.
8. Adopted by the National Assembly, prom. SG No. 47 of 13 June 2017.
9. Prom. SG No. 92 of 17 October 2003, latest amend. SG No. 58 of 18 July 2017.
10. Issued by the Minister of Education and Science, prom. SG No. 54 of 29 June 2018.
11. The author holds a PhD degree in Law and teaches at the Legal Studies Department of the University of Economics in Varna, and has over 20 years of teaching experience. In recent years the author has been engaged in the indexing of collections of papers presented at scientific forums arranged by the Department.
12. Prom. SG No. 75 of 24 September 2010, latest amend. and suppl. SG No. 56 of 6 July 2018.
13. Decision on the adoption of an updated national strategy for the promotion of scientific research in the Republic of Bulgaria 2017 – 2030, taken by the National Assembly, prom. SG No. 47 of 13 June 2017.

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# **Developing a Research-driven Cluster: A Conceptual Model**

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## **Abstract**

The importance of innovation management and clusters is growing both in practice and in academia. This paper provides a current overview of the existing body of the literature in the field of innovative clusters. The main objective of the paper is to provide a conceptual model of Varna It cluster as a research-driven cluster. The aim of the model is to help businesses to develop innovative clusters to approach change confidently. Detailed situational analysis of Northeastern planning region in terms of clusters development is provided. Several implications for cluster policies at national and European level are provided.

**Keywords:** research-driven cluster, innovation, cluster policies

**JEL classification:** M10, M20

## **1. Introduction**

The concept is developed as a framework which could help to overcome the phenomenon which is called the „missing link” and which describes the situation where small firms cannot cope with the IT requirements for their business and they risk exclusion from the value network and from the market. The DG Enterprise and Industry Report „Innovation Clusters in Europe: A statistical analysis and overview of current policy support” (2007) pointed out that Europe’s innovation performance is relatively weak and as such has been the topic of many recent analyses and reports. Despite the positive results achieved in terms of high level of ICT penetration the „digital divide” between large and small companies is still very pronounced, for example in the food & beverage, pulp & paper and shipbuilding & repair industries as it is

indicated in the 5<sup>th</sup> Synthesis Report of the e-Business W@tch „A portrait of e-business in 10 sectors of the EU economy 2006/07”, published in January 2007.

In international comparisons, EU enterprises are – on average – level with their counterparts in other advanced economies in their use of ICT. There are differences within the EU, however, particularly with regard to the average ICT maturity of smaller companies. The situation is more complex since it affects the future development of the large companies, clusters and regions which depend on small suppliers and participants in their value chains. Another distinction in IT adoption is geographically based. In general, firms in Northern European countries are more advanced than companies in Southern European countries and from most of the new Member States in linking their business processes internally and with business partners.

One of the key actions for improving the IT-related competence and e-skills of SMEs is through networking and cooperation especially through participation in business networks and clusters. Clusters can be considered as „reduced scale innovation systems”. In the process of globalisation, clusters tend to become increasingly specialised and increasingly connected with other clusters providing complementary activities. Regions that do not specialise may be in danger of falling behind. Therefore all of them need to be provided with the conditions and opportunities to participate successfully in this process. Unfortunately, a number of recent studies (such as the work published in conjunction with the EU KLEMS project (<http://www.euklems.net/>) and the sectoral e-Business-watch Observatory (<http://www.ebusiness-watch.org/>) have indicated that Europe lags behind significantly in regional concentration of IT cluster activities. The IT clusters across Europe performs below the average line of 32% calculated as a share of employment in clusters with  $LQ > 2$  with the actual number of only 18% geographic concentration. This lag in knowledge-intensive sector development is more obvious when compared to US industrial structure.

## **2. Situational analysis**

The situation in Northeastern (North-East) region in Bulgaria is proved to be the same as the abovementioned situation in Europe. There are 34 000 registered companies (16% of the total number in Bulgaria) where the SMEs consist 85%. There are 6 universities, business incubator and an agency for regional development. The region is a member of the IRE network. The high technology business incubator (HTBI) is engaged now in developing a regional innovation strategy. Northeastern region is next to the last region (there are six regions in Bulgaria according to NUTS) in terms of cluster performance. But the total number of stars for the region are 7 compared to 18 stars for South Central region which holds the first position in the ranking. The share of employment in clusters with stars in Northeastern region is only 59.47% which is the lowest level among all other Bulgarian regions.

The best performer in Northeastern region is the clothing cluster with 14 741 employees, specialisation value of 4.44 and two stars. There is no IT cluster presented among the top-15 Bulgarian clusters ranked by stars. A formal IT cluster hasn't been established in Varna district.

Only 9 to 28% of SMEs compared to 41% of large enterprises provide regular IT training of employees. The share of companies using e-learning for SMEs is 11 to 19% compared to 35% for the large companies. That is why one of the EU policy objective as well as Bulgarian National Cluster Strategy is to improve the skills base in SMEs and ensure supply of e-skills in the market (the 5<sup>th</sup> Synthesis Report of the e-Business W@tch). The suggested actions include providing unbiased information on how to assess cost-benefits of e-business, e.g.

- by benchmarking IT solutions for SMEs,
- promoting multi-stakeholder partnerships in IT training programmes,
- facilitating knowledge transfer between research centres and enterprises,

- creating opportunities for dialogue between SMEs and IT service providers.

Although all Bulgarian enterprises, except for micro businesses, have computers, most of them use them only as a means to reduce costs and for information search (60 % of the enterprises) rather than for the introduction of innovative management and administrative solutions (10%). The most innovative are the Bulgarian enterprises using IT for management and marketing. In 2008, 90% of the computers in 90% of the enterprises will have access to the Internet, which is an important prerequisite for making these companies more innovative. The most active is the market for online services, where numerous micro- and small enterprises are entering. They will pave the way and make conventional businesses follow suit. This will increase marketing and organisational innovation.

The specialisation value of Bulgarian IT clusters is 0.44 which confirms our proposition that further activities in developing the IT sector are needed. Moreover, by supporting the future growth of the IT clusters, especially in terms of innovativeness could in turn improve the competitiveness of the other clusters by providing applied IT solutions and e-knowledge to fit to their particular needs. As it was mentioned above the share of employment in clusters with stars in Northeastern region is only 59.47 % which is the lowest level among all other Bulgarian regions. Ten years ago a pilot IT cluster was initiated in Sofia because all big ICT companies, incl. foreign ICT companies have their headquarters established there when entering Bulgarian market. That is why a great number of qualified specialists left there workplaces in smaller towns and went to Sofia. Development of a research-driven IT cluster in Varna will provide opportunities for the qualified IT specialists to develop their professional careers in Northeastern region thus fostering its economic development.

During the last 1-2 years there is a tendency for the big companies to expand their business to Varna. Varna is the fastest growing city in Bulgaria both as a population and as a business centre. It is also a part

of the Black Sea Economic Cooperation Region which provides good opportunities for future economic development. It is estimated that export potential for Bulgaria in the field of computer and information services to the Black Sea Economic Cooperation Region is 31 989 000 USD. According to the managers of some of the leading IT companies operating in Varna, the town provides excellent opportunities in terms of qualified workforce educated at the university level, enough office space at reasonable prices, well-developed infrastructure, excellent communication connectedness and perspective economy. By now there are more than 200 IT companies operating only in town of Varna which is the major city of the Northeastern region.

One of the main obstacles toward the implementation of IT in the business practice of the SMEs is the lack of IT-related competencies and e-skills. Smaller firms often lack a coherent IT investment strategy or the related skills - partly because most SMEs cannot afford to employ IT practitioners. According to the e-Business Survey 2015, only about 15% of small firms and 30% of medium-sized firms employ IT practitioners, i.e. have their own IT department. Thus, implementation of IT solutions critically depends on respective skills of the SMEs management. The main barriers to apply advanced IT solutions as perceived by companies could be summarised as follows:

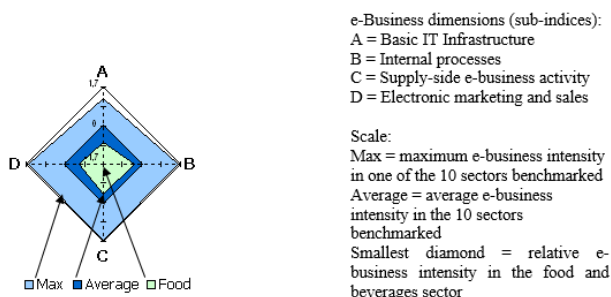
- „company is too small”,
- „technology is too expensive”,
- „technology is too complicated”,
- „systems are not compatible”,
- „there is a lack of reliable IT suppliers”.

Concerning the S&T needs of the food and textile and clothing clusters they are mainly related with the challenges of their transformation process to become knowledge-intensive clusters.

Companies from the food and beverages industry (Figure 1) are confronted with several business challenges where IT could play an important role in the future:



- Firstly, this includes control over raw material supply, quality assurance, and an increasing demand for new and diversified products.
- Secondly, production in the food and beverages industry is characterized by small batch processes that are hard to consolidate and integrate. Despite high investments in plant automation, many operations are still labour intensive or only partially automated. However, e-business applications could rise in importance.

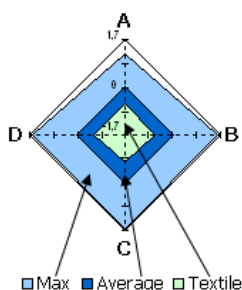


**Fig. 1. The food and beverage industry positioning by e-business intensity**

Cost-efficiency and regulation drive the trend toward integration and automation of internal processes in the food industry. System integration with suppliers and customers is mostly driven by pressure from the large retail chains.

- Third, supply chain management is likely to remain a key point of focus. While SCM was previously focused mainly on cost reduction and logistics, today the issues of food supply safety and traceability are added as new links in the supply chain.

However, diverse IT systems, integration costs and the lack of information standards continue to hamper external integration. Many manufacturers and retailers are devoting considerable efforts to integrate their information systems.



e-Business dimensions (sub-indices):  
 A = Basic ICT Infrastructure  
 B = Internal processes  
 C = Supply-side e-business activity  
 D = Electronic marketing and sales

Scale:  
 Max = maximum e-business intensity in one of the 10 sectors benchmarked  
 Average = average e-business intensity in the 10 sectors benchmarked  
 Smallest diamond = relative e-business intensity in the textile and clothing industry

**Fig. 2. The textile and clothing industry positioning by e-business intensity**

Among large companies from the textile and clothing industry (Figure 2), e-business activity has increased. However, the economic crisis in the sector hampers innovation among small firms. There are signs that the use of advanced IT systems in large textile companies is quite in line with adoption rates among large companies from the most advanced manufacturing sectors. Examples are Enterprise Resource Planning (ERP) and Supply Chain Management (SCM) systems. In marketing and sales, though, e-business has not yet a significant role. Many companies expect that IT will have a „high impact“ in the future for various business functions, in particular (i) for management and accounting, and (ii) for marketing and customer service.

### **3. Conceptual model of Varna IT cluster as a research-driven cluster**

The core of the conceptual model comprises the advanced research centre (ARC) (Figure 3) which role is to provide advanced IT solutions to the companies from the IT cluster, food cluster and textile and clothing clusters to fit to their S&T needs during the process of their transformation from labour-intensive to knowledge-intensive clusters. In

order to be able to fulfill its goal the ARC will consist of three units: ITLab which will develop advanced IT solutions, e-learning platform aimed at improving the e-competencies of the SMEs and e-support platform which will facilitate the efforts of SMEs during the process of implementation of the advanced IT solutions in their business. The ARC will be supported by the Expert Hub and Benchmarking Lab which will run by the projec partners which have an experience and expertise in this field.

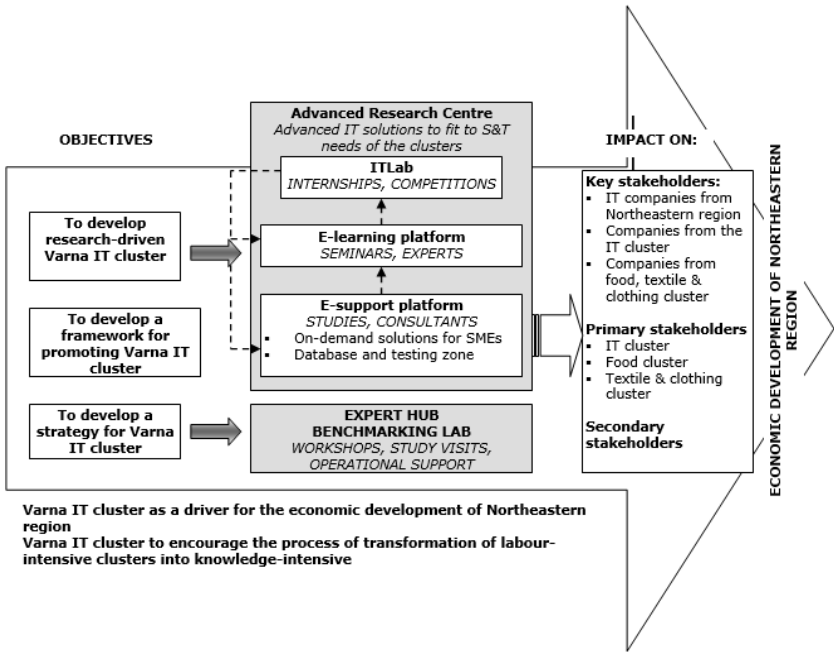


Fig. 3. Conceptual model of Varna IT cluster

By mutual sharing of information, knowledge, skills and know-how the ARC will foster the developmnet of Varna IT cluster into research-driven cluster which in turn will facilitate the transforming process of food and textile and clothing clusters by providing them advanced IT solutions. As a whole the development of these clusters and the cross-

sectoral collaboration between them will stimulate the economic development of Northeastern region.

The development and use of advanced IT tools would be expected also to facilitate the interactions between partners within the IT cluster as well as between IT clusters and non-IT clusters. There are few initiatives launched at European level to cope with this problem such as The Network of Innovating Regions in Europe (IRE Network), ERRIN, ERIK – European Regions Knowledge-based Innovation Network, European Cluster Observatory, etc. All these initiatives incorporate as part of them working groups or other units which focus on ICT or IT cluster development. What is missing from their agendas is the convergence of the IT clusters to the needs of other clusters or industry sectors which could improve the total level of innovativeness and competitiveness of the regions and Europe as a whole. That is why there is a need to change the focus from mainly technological to more applied one which will enhance cross-sectoral cooperation, will facilitate the mutual exchange of information and will foster the transformation of labour-intensive clusters into knowledge-intensive.

The cross-sectoral knowledge transfer could easily be done through the means of IT and its applied solutions and services at regional level. This matches one of the roles of the European Commission in support of the development of strong clusters in Europe, namely „...Fourth, to stimulate ... sharing strategic information as a key characteristic of successful cluster initiatives.” The cooperation between clusters facilitates information exchange between them. This is particularly useful for SMEs that do not have the necessary human and financial resources to conduct expensive market analyses and surveys. Cluster cooperation facilitates mutual learning and the exchange of good practice as well as helping joint business opportunities to be explored and the development of common strategies. In a similar way, cooperation can facilitate the exchange of qualified staff and the mobility of firms by sharing incubation facilities between clusters. Furthermore, cooperation between clusters allows mutually sharing access to networks and

international partnerships developed by other clusters. This facilitates access to international markets and business development in new markets, particularly where clusters operate in different sectors. Cooperation allows clusters to mutually exchange technical competences and to share research infrastructure and production facilities, making possible economies of scale.

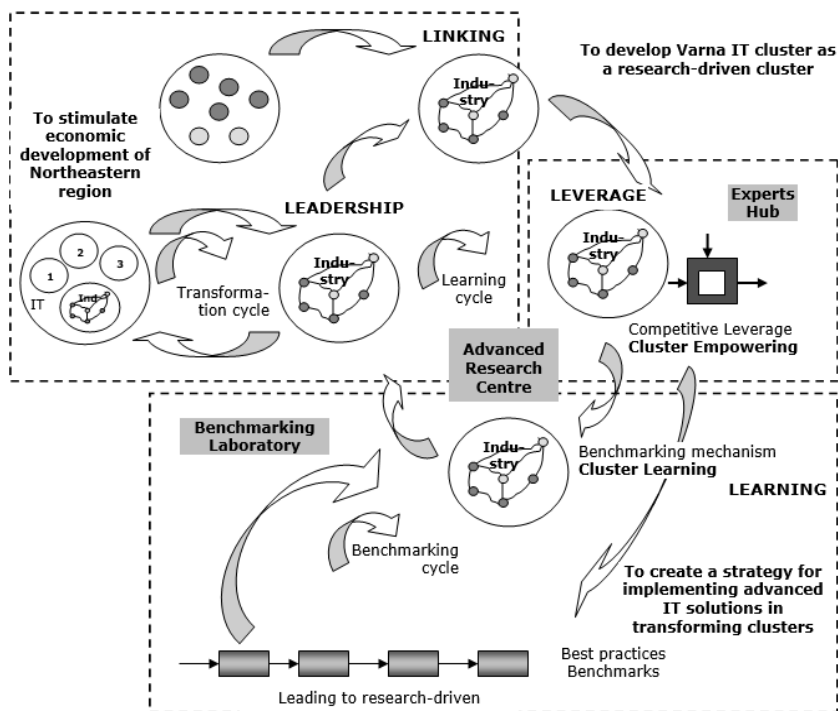
The concept of the proposed research-driven cluster focuses not only on the IT sector alone but on developing opportunities for cross-sectoral collaboration with other regional clusters such as food and textile and clothing which now are in a process of transformation from labour-intensive to the knowledge-based industries. The concept will be realised by transferring the knowledge and experience from benchmark clusters and other clusters supported by expert advices and benchmarking activities which will be performed through the Expert Hub and the Benchmarking Lab. These activities will support Varna IT cluster through the learning cycle of transforming itself to research-driven cluster and will be developed as a benchmarking mechanism. This benchmarking mechanism will be promoted further to be used as a tool to overcome the „missing link” at European level. By series of workshops, study visits and seminars a strategy for developing Varna IT cluster in a research-driven cluster will be developed (Figure 4).

According to the Bulgarian National Cluster Strategy in the field of e-business, several important challenges are identified in the medium term:

**First**, a structural change, in which the enterprises migrate from segments with lower value added to segments with a higher one;

**Second**, increase of the general technological intensity of business;

**Third**, the creation of niches of demand for high IT-intensive products and services.



*Legend:*

- IT sector enterprises
- Complimentary enterprises
- TI Traditional industries (food, textile and clothing)
- 1 Government
- 2 Academy
- 3 Research

**Fig. 4. The process of developing the Varna IT cluster as a research-driven cluster**

The abovementioned policy directions at national level closely correspond to the project third objective which is focused on developing a framework for promoting Varna IT cluster as a driver for economic

development of Northeastern region by providing advanced IT solutions for transforming clusters at European level.

The advanced research centre as a core of Varna IT cluster is committed to create an innovative system and methodologies that enable the following breakthroughs:

- Empowering the managers from SMEs with more confidence to embark on implementation of IT solutions in the „real world”, thus transforming the labour-intensive clusters into knowledge-intensive.
- Learning environment for the students where they can experiment new ideas for implementation of the IT solutions in real business
- Allowing tests of IT solutions without the associated risks in real business
- Increasing the adaptability and flexibility of the SMEs in a multidisciplinary, multi-stakeholder collaborative environment
- Fostering Industry-Academia networking to support the implementation of IT solutions for transforming clusters.

## **Conclusion**

As a conclusion regarding the three most important factors in cluster development as follows: 1/ networking partnership, 2/ innovative technology and 3/ human capital, we could say that there are attitudes toward cluster-like working in Bulgaria but these are not enough because of the lack of expertise and skills how to manage them successfully and efficiently. There is qualified workforce but with a rather broad background which needs further improvement in terms of gaining specific skills and applied knowledge. What is really missing is the innovation and research capacity in the IT sector. Moreover, the analysts expect that some of the problems in IT sector will deepen especially the lack of qualified workforce, the pricing mechanism of IT services, comparatively low margins, intercompany overindebtedness and unfair competition which will affect the economic development of the regions.

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# **The Challenges of the Fourth Industrial Revolution Faced by the Labour Market: European and National Processes and Trends**

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## **Abstract**

This paper studies and analyses the expected impact of the Fourth Industrial Revolution on the future development of the labour market and, particularly, on employment relationships. The employment reality, labour markets and the occupation and absorption of jobs at a global, European and national scale have been subject to dynamic change and challenges faced by the legal systems. The policy of introduction of information and communication technologies and digitisation of the economy, as a sectoral policy, has resulted in modernisation of the forms of employment in line with the dominating trends of digitisation of manufacturing and smart automation of the industry. Thus, based on the study of the new situation, the paper conducts analyses, deduces general conclusions and provides recommendations with respect to the new challenges, suggests some necessary and adequate actions that should be undertaken by the institutions and discusses the most recent legal provisions.

**Keywords:** digital society, labour market, new forms of employment, industrial revolution.

**JEL classification:** K31

## **1. Introduction**

The digital revolution is also known as the Fourth Industrial Revolution<sup>1</sup>. Based on the scientific and technical discoveries, each

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<sup>1</sup> The sequence of industrial revolutions is associated with the discovery of the steam engine, the electrification and the discovery and introduction of the computer. Each of those revolutions has had its impact, both directly on the economic processes, and on the legal regulations and public relations as a whole.

revolution has impacted manufacturing and, respectively, employment.

During each stage of their industrial development, the scientific and technological discoveries have gone beyond the territorial borders of the country where they first took place and extended to the entire humanity. These processes are not only sophisticated, but they are also characterised by the multiple layers of impact covering all spheres. The latest Industrial Revolution – the fourth one, has exceeded all expectations and prospects made by analysts in previous periods. Its impact has affected the public relations because of changes in the economic and social environment and, respectively, the legal framework governing those processes, but it is also reflected in the blurring boundaries between the real and the digital world.

All this provokes researchers' interest in studying the process of how the Fourth Industrial Revolution impacts the labour market in general and on a national scale. In this sense, the topicality of the subject is predetermined both by the exceptional dynamics of the development of digital society and mass digitisation, and by the impact of the latter, which is difficult to be predicted in one aspect or another.

**The objective of this paper** is to study and analyse the expected impact of the Fourth Industrial Revolution on the future development of the labour market and, more particularly, on employment relations, through an analysis of the legal frameworks and policies at European and national level. Based on the study, the new challenges are analysed and proposals are made for the necessary and adequate actions that should be undertaken by the institutions and civil society.

In accomplishing this objective, the authors have **set the following tasks**:

3. To study and analyse the nature and trends in the establishment of the Fourth Industrial Revolution at European and national level and in view of the future development of the labour market;

4. To analyse its impact on the development of employment relations.

5. Based on the analyses, conclusions and generalisations will be

made and the need for regulation of the processes associated with the challenges faced by employment legislation in the technological society will be justified.

**The methodological basis** of the study is associated with the application of different approaches, such as: comparative legal research, formal logical and legal approach and general knowledge-based research methods, such as induction, deduction, analysis and synthesis.

## **1. Policies and aspects of the Fourth Industrial Revolution associated with the future development of the labour market.**

The Fourth Industrial Transformation, as a permanently established consequence of the digitisation of manufacturing, covers internet connectivity and interaction of cyber-physical systems, processing and analysis of big data, artificial intelligence, robotics, use of digital clouds, digital modelling and simulation of the manufacturing processes through virtual reality, as well as creation of new business models.<sup>2</sup> Transformation influences production at two main levels. On the one hand, the foundation on which the industrial revolution rests, as laid down in Industrie 4.0, are smart, connected, embedded and digitally integrated systems that largely support automation and automated operation of the manufacturing processes.<sup>3</sup> On the other hand, this is

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<sup>2</sup> [www.strategy.bg/FileHandler.ashx?fileId=9962](http://www.strategy.bg/FileHandler.ashx?fileId=9962)

<sup>3</sup> Industrial strategies have initially identified the following key technologies that predetermine the development of Industrie 4.0: Industrial Internet of Things – IIoT, simulations, augmented/virtual reality (VR/AR), autonomous robots, cloud computing, cyber security, three-dimensional/adaptive printing (3D printing), horizontal and vertical system integration and analyses in Big Data. This list is also complemented by new technological solutions, which will play a leading role: artificial intelligence and cognitive systems, machine self-learning, smart mobile applications, blockchain technologies, digital platforms and others. The list of technologies which will significantly affect the development of society, economy and industrial manufacturing over the next 5 to 10 years cannot be exhaustive at the current level and dynamics of technological innovations.

about the development of interrelated systems, which combine human, intellectual and technological products, through which the manufacturing and logistic connections, by using direct cooperation, can even achieve smart integration with a shared purpose - effective, adaptive and flexible manufacturing. This generally includes cyber-physical systems, internet of things and cloud computing (Hermann, 2016) (Jasperneite, 2012) (Kagermann, 2013).

The introduction and permanent establishment of technological and production relationships as a policy, process and regulations means that the fourth industrial revolution is linked to a strict legal framework of synchronised policies and has established itself at three main levels.

**First – on a global economy scale**, the concepts of Industrie 4.0 have become popular through the Industrial Internet Consortium (ICC), which defines it as „integration of complex physical machinery and embedded systems and devices with network sensors and software, which are used to improve the predictive, control and planning processes for better business and public performance (Industrial Internet Consortium, 2013).<sup>4</sup>

**Second – development in the framework of the Common European policies**, which, as the foundation of the ideology and policy, originates from Henning Kagermann, PhD in 2011. This is when the main ideas about the development of Industrie 4.0 were published for the first time and became the basis for a Manifesto for Industrie 4.0, which was presented in 2013 by the German National Academy of Science and Engineering (Acatech). As a new step in the organisation and management of the value added chain within the full manufacturing cycle (Plattform Industrie 4.0, 2014), the term Industrie 4.0 was first defined by the German Federal Government as a major initiative for the adoption of a high-tech strategy for development of the German industry in 2011 (part of the High-Tech Strategy 2020 for Germany). The trends were further developed within the Union with the „Europe 2020”

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<sup>4</sup> See <https://www.iiconsortium.org/>

strategy, published in March 2010 by the European Commission <sup>5</sup> to „exit the crisis and prepare the EU economy for the challenges of the next decade”. The latter proposes a vision for accomplishment of high levels of employment, productivity and social cohesion through concrete actions at EU and national level with a shared goal - to get Europe on track for smart, sustainable and inclusive growth. The latter is assumed to be related to the use of digital technologies, which concept is supported by the Digital Agenda for Europe programme, which is one of the seven leading initiatives of the „Europe 2020” strategy. <sup>6</sup>

Thus, the Digital Single Market Strategy of 2015, the main objective of which is digital economy expansion and increasing the competitiveness of the EU in the field of digital technologies, further develops the Europe 2020 Strategy. The accomplishment of the target will take place through a set of legislative and other measures divided into three „pillars”: better access to online products and services; better conditions for development and flourishing of the digital networks and services, and maximising the growth potential of the digital economy. The third pillar covers the most important and founding measures and mechanisms for enhancing digitisation in the industry based on the internet of things, cloud computing and electronic management.

Projects that are currently being implemented further develop the general principles, such as the European project iDev40 (Integrated Development 4.0)<sup>7</sup>, which started in July 2018 in Austria. The project presents in practice the development of „smart” network connections that support the creation of virtual digital factories, combining research and manufacturing centres into one organism, irrespective of their actual geographic location. As a secondary project in the transition to the so-called Industrie 4.0, it aims to develop smart networks for the digital

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<sup>5</sup> EUROPE 2020 — A strategy for smart, sustainable and inclusive growth, COM(2010) 2020.

<sup>6</sup> The concept of Industrie 4.0 has been used in the titles of 8 out of 13 national policies within the EU for digitisation of the manufacturing processes.

<sup>7</sup> <https://technews.bg/article-108912.html>

economy across the Continent, particularly smart manufacturing with sensors and devices with internet connection installed everywhere, under the control of algorithms with elements of artificial intelligence. An important focus at the project startup was that the project also aims to illustrate the set of skills, occupations and jobs which will be necessary for the future application of Industrie 4.0, which means that the project presents a miniature model of the forthcoming development of the employment legal relations and relationships in the field of labour.

**Third - at national level and considering the harmonisation with the common European policies,** in 2014 Bulgaria adopted a Strategy for Development of Electronic Governance 2014-2020, as well as a roadmap for implementation of the strategy for the period 2016-2020, which was followed by a Strategy for introduction of electronic governance and electronic justice in 2014-2020 with the objective to improve performance in the electronic justice sector in the country and to create a dedicated agency for electronic governance within the public administration.

The underlying ideas were also supported by the developed Bulgarian Industry Digital Transformation Concept (Industrie 4.0), adopted with Decision No. 37 of 30 August 2017 of the Council of Ministers, the objective of which is to create prerequisites and a common vision about the modernisation, automation and competitive positioning of the Bulgarian economy in the medium to long term (2017 - 2030), so that Bulgaria could be recognised as a regional digital economy centre by 2030 (as envisaged) through the introduction of products, technologies, business models and processes from Industrie 4.0.

The process was also further developed with the adoption of the **Innovation Strategy for Smart Specialisation 2014-2020 (ISSS)**, accompanied by the understanding that digitisation and the adoption of elements of Industrie 4.0 is directly related to the „Responsive Administration”, „State Aid and Public Procurement”, „Skills and Innovations” and „Environment” priority areas.

We can outline the following aspects of the impact of policies and

compliance with them with respect to the application of the industrial revolution to employment relations at different levels, outside the context of the economic framework:

1) there is a steady and increasing trend of a direct link between labour and digital literacy and the change in the requirements for the contribution of labour by increasing the level of digital knowledge;

2) the workforce is bound to follow continuous and uninterrupted lifelong learning processes and the old framework assuming that knowledge and competences are permanent is abandoned;

3) the possibility for the jobs to be taken by automated systems and smart products outside the context of expected unemployment dramatically changes the content, processes and work environment and moves the focus on the human factor in the legal employment relationship;

4) expected justified disturbance in the balance of rights of employees and employers and vulnerability with respect to the protection of the employees' social rights.

## **2. Impact of the Fourth Industrial Revolution on employment relations**

The discussed complexity of the policy, processes and regulations of the technological and manufacturing relations has undoubtedly shown direct impact on employment relations. The popular and traditional model of interrelation between the two main types of individual and collective employment relations regulated by the law is subjected to transformation. In some developed countries with sharp technological progress this impact is already a fact. In other countries, including Bulgaria, the processes are yet to enter a scale capable of impacting the current legal structure.

According to an Opinion of the European Economic and Social Committee on the impact of business services in industry (2015/C



012/04),<sup>8</sup> „the human factor is decisive. New value-added chains and business models generate new alliances and interrelationships between companies, and this has a tremendous impact on work organisation.”<sup>9</sup>

Several important conclusions may be made based on this opinion.

On the one hand, it is necessary to re-define the traditional concept of the employer, defined by the Bulgarian employment law and thus - the doctrinal significance of the concept of employers' capacity should be re-defined with a view to expanding it. On the other hand, the need to create new mechanisms for cooperation between enterprises, both on a legal and practical level, is increasing, for the purpose of creating adequate employers' organisations capable of responding to the dynamics of the digital society.

There is an increasing need for the government to give up its position of a centralised regulator of employment relations and to enhance the interaction between the stakeholders – employers, workers and employees.

The labour market is changing in the context of the industrial revolution and this has direct impact on the industry and sectors, such as business services. The new forms of employment transgress the national borders of countries. National legislations are not always prepared for a timely response and adequate integration of norms applicable to the local work environment in their internal systems. The right legal solution requires sophisticated studies based on scientific research in order to promote favourable conditions and mitigate any adverse impacts.

At the same time, the fact that in Bulgarian legislation social dialogue is basic for the sector should also be accounted for. It has had its ups and downs over the different historical periods and in the current context of the new challenges of digital society, a solid framework for

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<sup>8</sup> <https://eur-lex.europa.eu/legal-content/BG/TXT/?uri=CELEX%3A52014IE0493>

<sup>9</sup> Also considering the creation of shared value. The business should create economic value in a way that gives rise to the creation of social value for society at the same time (Blagoycheva, 2016).

social dialogue and active involvement of the stakeholders in it should be created.

In the context of the increasing dynamics of digitisation, the role of education should not be ignored; on the contrary, it should be highlighted, with a view to the adequacy of the workforce when included in the work process, with relevant competences to respond to the dynamics of the international labour market. In this sense, traditional educational models should undergo their transformation and innovative centres for education and learning at different levels (corporate, sectoral, national and European level) should be created. Lifelong learning is the model that should be applied to all stakeholders in order to overcome the huge social challenge that comes with the Fourth Industrial Revolution.

There is still a lack of sufficient and in-depth analysis on the impact of the industrial revolution on the labour market, employment relations and the individual worker. The foundations for analysing the impact of processes are laid by individual studies among the research communities or by the undertaking of local measures at individual enterprise level. Unfortunately, these efforts are insufficient to study and predict the magnitude of the consequences resulting from the Fourth Industrial Revolution.

Economic processes have already gained momentum and new perspectives are yet to be discovered. Ensuring the smoothness of this process as much as possible, is what requires wide discussions, both at national and EU level.

In addition to the impact on the work life of individual workers and employees, on the labour market and unemployment and on employment levels in the different regions, it may be concluded that the process also influences the social and cultural life of people. It is this complexity of the impact that requires timely research on the influence of industrial revolution on the rapid changes on the labour market. As we already highlighted, it is difficult to provide clear forecasts regarding the measures and mechanisms that will be necessary for ensuring adaptation of the workers to the dynamics in the employment relations. One thing is

certain, however - the basis for this is education and learning. At the same time, from a technological point of view, the individual countries are moving at a different pace and this is also related to the educational models. Bulgarian education, which until recently used to be conservative, has made some efforts over the past few years, both through adjustment of legislation and through the transposition of good international models and practices for adapting the content studied and the teaching methods to the new needs. The process is not complete yet; on the contrary - these foundations have yet to be built upon, particularly with respect to the education - business aspect. At the same time, the connection between education and businesses needs to be transformed so that it moves forward at a pace that corresponds to the industrial changes.

## **Conclusion**

The trends presented and the outlined impact of the Fourth Industrial Revolution on employment relations are just one part of the problems that are yet to be the subject of scientific, legislative and public study and analysis. Putting the focus on each of the process aspects will benefit the doctrine, practice and analysis, considering the fact that each person is a direct stakeholder in it and therefore is subjected to its influence. One of the possible perspectives will be to ensure social dialogue at the different levels of the multi-layered hierarchical system. Employment law is characterised by the multitude of resources that reflect the specifics at each level and the details of the individual work process. This is why movement from company and sectoral level to national and European level shall be planned and implemented. The methods and resources are diverse and they should reflect the national specifics, the level of penetration of the digitisation processes, etc., but the purpose is common, i.e. adequate preparation of the work force. Thus, while we should remember that we are in the course of improving the work mechanisms and processes for creation of public goods, all this

is ultimately about one of the most vulnerable spheres of social life, particularly - the right to work and the equal and non-discriminatory exercising of this right.

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# **Customer Engagement: a New Framework for Customer Management**

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## **Abstract**

Customers are becoming increasingly demanding with respect to corporate performance. In this context, the concept of customer engagement presents a new viewpoint on maintaining customer relations and integrating the consumer as a participant in the development of the business. The objective of this report is to present this concept and the benefits from using it for the organisations and to outline the metrics that can be used to measure the value contributed by customers. By applying analytical methods, the main trends for analysis and management of the company customer database have been distinguished.

**Keywords:** customer engagement, CRM, social media, CLV, brand.

**JEL classification:** D1, D2, D4.

## **1. Introduction**

Companies always seek opportunities to improve their Customer Relationship Management strategies and practices. The issue whether the actions undertaken with respect to CRM bring financial benefits to the company is also important. The main focus in customer relationship management is the selection of customers that bring profits and interacting with the company's customer base. The purpose of CRM is to optimise the current and future value of customers for the company. The estimation and management of customer profitability, on the other hand, leads to continuous development of the customer base management theory. Companies are intentionally shifting their focus from product-

centric business philosophy to the formation of an engaged customer base.

The main principle in product-centric philosophy is to perform more transactions, irrespective of who the buyers are. Companies that apply this philosophy organise their business processes so that they can resolve consumers' problems and satisfy the consumers' needs by supplying suitable products. Managers in such companies usually focus on the following questions: 1) How many consumers would buy our product? 2) How could we improve our product to increase our market share? 3) What new features would the consumer demand from the product and how should we present the product advantages on the market? 4) How can we increase the profitability of our products and thus improve company performance? The author of this report does not deny the application of such an approach; however, this approach is associated with the risk of neglecting some specific customer needs. It is the satisfaction of those needs that brings long-term relationships to the company. When a company does not meet the customer's expectations, the customer usually shifts to a competitor. In another marketing approach, namely - network marketing, income is linked to the results achieved (personal direct sales and commercial revenues of the structure that has been developed) and the development opportunities are assumed to be unlimited (Stefanov, 2017, 354-362).

The philosophy of customer engagement, on the other hand, is based on the idea about the development of a portfolio of customers and maintaining the relationships with them. Companies that apply this philosophy focus on the following questions: 1) How many products can we sell to these customers? 2) How to highlight the benefits of our products to our customers, which have been developed in order to satisfy their needs? 3) What segment should we focus our efforts on and how can we maintain relationships with these customers? 4) Which customer metrics should we apply to measure company performance? An important part of the application of the customer engagement philosophy is the management of the relationships with profitable and unprofitable

customers. Companies which have data about the profitability of their customer base are often prone to end their relationships with the unprofitable segments. That decision is often wrong.

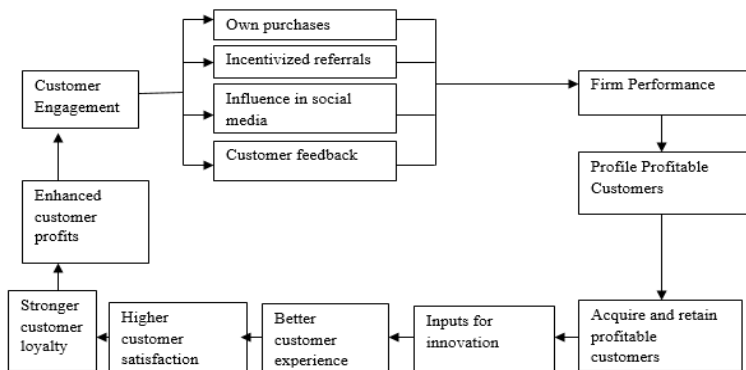
This report presents the nature and significance of the concept of customer engagement, as well as the metrics that can be used for its application.

## **2. Understanding the concept of customer engagement**

The concept of customer engagement is related to the public sharing of the customer's experience with the company provoked by the consumer's or company's two-way communication efforts (Kumar, 2013, p. 4). Customer experience with the company covers the following actions: interaction with the brand's offers, response to the company's advertising activities, involvement in the company's communication efforts, engagement by word-of-mouth referrals in social media, recommendations to the company. These actions result in a number of benefits for the business, however, they also give rise to questions about how to measure them and derive the specific instruments for this purpose. This, on the other hand, creates opportunities for identifying and maximising customer engagement.

There are four possible methods to engage the customer base with the company: as buyers of the company products, through recommendation of the company to potential customers, through reviews and promoting the company in social media and through recommendations toward the company. The possibility to perform a quantitative measurement of the customer engagement based on the abovementioned four methods helps managers select specific actions to maximise customer engagement. From a conceptual point of view, the value of customer engagement is the sum of the value of customer actions related to the brand and the customers' interactions with the brand.

Furthermore, the customers' profitability and, respectively, their level of engagement, is determined based on their purchases. Customers that are profitable for the company have the following characteristics: they often make purchases over a continuous period of time, they buy products from the entire company portfolio, they respond to the company's marketing activities and participate in the loyalty programmes. Whereas, on the other hand, customers that are not profitable for the company are often ignored. However, the author of this report believes that they are a good „teacher” for the company. In this case it is assumed that the buyer maintains relationships with the company, however, he or she does not generate enough sales. Such consumers can be used for adjusting the company's activities in this case. They are a valuable source of information about how the business could improve its operations and products so that it can fully satisfy consumer needs and demands. Customers that are not profitable to the company are able to also generate some intangible benefits. Their involvement as company associates in programmes for making referrals puts them in the role of company „employees”.



**Fig. 1. Customer Engagement Approach to Profitability**

Source: Kumar, 2013, p. 13.



The basis of the concept of customer engagement is not just to stimulate customers to make regular and extra purchases, but also to form a positive attitude toward the company that extends to actions that attract prospective customers, to disseminate positive information or generate ideas related to the company. Fig. 1 presents the significance of the approach for improving company performance.

This report focuses on presenting customer engagement as an approach for increasing the company's financial results and reveals the possibilities for customer engagement.

Based on the concept presented on fig. 1 above, we can summarise that the company puts efforts to track and measure both the purchasing behaviour of customers and all their actions related to the organisation, other than making a purchase. Tracking consumer behaviour is performed by using various channels. Managers understand that they can achieve customer engagement by using databases of customer behaviour. Traditionally, companies strive to stimulate customers to buy more in order to increase their sales. The new market trends, however, made companies focus on the active communication with the customers and on encouraging them to recommend the brand, share information about it and provide feedback. The concept of customer engagement constitutes a set of values brought to the company by the customer. Each of these values is measurable by using the developed set of instruments.

## **2. Metrics for engaging customers**

Identification of the customers that bring value to the company is a crucial factor for the success of the business. The presented framework for customer engagement is an approach that could support the business in the evaluation of the customer base, identification of the key customers for the company and in maintaining long-term relationships with them. The discussed concept analyses customers by using four types of metrics. The concept reflects the modern trends related to the presence of the business and the customers in social networks and their

influence on the company's marketing strategy. Each element of customer engagement can be applied both in the relationships with the end customers and in the business-to-business relationships. The metrics are presented on fig. 2.

Customer engagement value – it is managed through a set of metrics that estimate the values that customers bring to the company			
Customer Lifetime Value – the present value of future cash flows from a customer over the time of the customer's relationship with the company	Customer Referral Value – the monetary value associated with the future profit from each new customer attracted through referral	Customer Influence Value – the monetary value obtained from the customer's influence on prospective customers	Customer Knowledge Value – the monetary value added by the customer to the company through their feedback

**Fig.2. Customer Engagement Value Framework**

Source: Kumar, 2013, p. 21.

Companies function in an environment where they and their customers are mutually dependent. The actions of customers associated with their behaviour, attitude and online presence have impact on the organisation's decisions. Managers perform monitoring and often change the marketing strategies based on consumer responses to the product offered. Similarly, the actions of the business have impact on customers through: the quality of the product offered; the company's marketing activities, such as awareness campaigns, advertisements, promotions, etc. Consumers respond to these impacts by taking part in the company's activities and by engaging with the company through their purchasing or non-purchasing behaviour, which influences company decisions. This illustrates the cycle and the relationships between the company and the customers.

Customer perceptions are important for each consumer-brand relationship. They are the result of numerous efforts – the actions by the

company, the actions by competitors or the influence and opinions of people in a close relationship with the consumer. By forming perceptions, the customer can become engaged with the company in various ways. All these are covered by the customer engagement concept. Purchasing is the most important activity for the organisation and it is reflected in the customer lifetime value metrics. This metric has direct contribution to the company profits. By using this indicator, the organisation can track and analyse the value of each customer for the company and the quality of the interactions. The metrics of customer referral value, customer influence value and customer knowledge reveal additional opportunities for customer engagement and also measure the customer's contribution to the company profit, however, they do so indirectly.

In conclusion, it can be summarised that the concept of customer engagement is of significant importance for preserving the customer base and for maintaining competitive market positions. In addition, the presented conceptual framework makes an overview of customer engagement as a result of the purchasing and non-purchasing behaviour of the customer, expressed in referrals, feedback and influence on prospective consumers. It is important to note that engagement is the result of consumer actions in the abovementioned aspects, however, it is not necessary for the individual customer to perform all actions mentioned above in order to be identified as an engaged customer. The discussed metrics support the measurement of the value brought by each customer to the company and help identify how each customer contributes to the company profit. Based on this, the company can select an appropriate strategy for maintaining customer relationships and for encouraging their actions based on their contribution for the company.

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# **Cultivating Applied Competences Through Mission-Based Learning**

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## **Abstract**

The aim of this paper is to explore the implementation of a business-oriented and experience-based learning environment and its effects on cultivating responsibility among students in the field of economics. The main proposition states that by providing students the opportunity to experience different professional skills as data collectors, researchers and decision-makers could establish a solid background for raising their responsibility. Our intention is to offer a coherent framework that is student-oriented and makes use of active-based learning with implementation of research methods to support academics in encouraging student active participation. To meet these goals, a longitudinal study was conducted. The results were used to identify the layers and the structure of the Reference Framework for Applied Competences (REFRAC). The background layer which corresponds to career-sustaining curriculum planning level was tested using different learning methodologies.

**Key words:** *higher education, responsibility, applied competences, REFRAC*

**JEL classification:** M31

## **1. Introduction**

The field of academic education has undergone changes that reflect the dynamic factors in the business world and the turbulent environment surrounding it. Learning is now defined as a competitive strategy in the global workplace. In our learning societies, knowledge and skills become increasingly central issues, either from an individual or organisational standpoint (Kalika, 1998). However, the results of several studies show that „... almost two-thirds of all employers, and more than three-fourths of all professors do not believe that a diploma is a guarantee that a student has learned the basics...” (Halperin, 1998). This problem has

been studied by Border (1998) who founded that parents and students are equally concerned about what students are achieving through education that will prepare them for the „real world” after college or university. Moreover, students feel disassociated with the learning process in which they have little input or understanding of the relationship of achievement and assessment. Denison and McDonald (1995) pointed out that besides the changing environment, many disciplines in the field of economics are subject of criticism because of their poor image, complacency, poor integration and lack of secure knowledge base. Students who attend universities nowadays will work in situations of rapid change and only those who are flexible, adaptive and productive will survive. This raise question about the relevance of curriculum content, the balance between theoretical knowledge and practical skills of graduates required by the business, the appropriateness of different means of assessment, and how best to develop in students critical and analytical thinking, problem-solving skills and team capabilities.

This paper begins by outlining the importance of development education through experience-based learning environment within Higher Education (HE). The author’s primary goal is to develop a methodological business-oriented and evidence-based learning environment which will provide students the opportunity to experience different professional skills as data collectors, researchers and decision-makers. The overall intention is to offer a coherent framework that is student-oriented and makes use of active-based learning with research methods implementation to support academics in encouraging student active participation. To meet these goals, a longitudinal study was conducted. The results were used to identify the layers and the structure of the Reference Framework for Applied Competences (REFRAC). The background layer which correspondes to carrer-sustaining curriculum planning level was tested using different learning methodologies.

## **2. Competences, responsibility and learning: is it possible to integrate them in a coherent framework?**

### **2.1. Defining competence and competency**

There are many definitions of competence and competency depending on how the concepts are used and the context where they are used. Indeed, early on in the defining of competence, it was believed that clearly defined competences would systematically insure effective performance (Berge and Verneil, 2002). In fact, many different definitions have been proposed resulting in a wide range of frameworks and definitions in the literature of various fields. For instance, Mirabile (1997, p. 74) defined competency as „a knowledge, skill, ability, or characteristic associated with high performance on a job, such as problem solving, analytical thinking, or leadership”. Some definitions of competency include motives, beliefs, and values. Competencies that reflect motives, beliefs, and values can turn into a list made up of personality traits and deeply held values, and imply a selection strategy, not an education strategy (Dalton, 1997). Parry (1998) expanded on this by stating that identifying certain traits and characteristics might be helpful to recruiters and interviewers, but it is not the trainer’s job to assess or develop them. The debate around competence vs competency continues but it is out of the scope of present paper.

As a result of a previous research work (Vassileva and McGettrick, 2005) the author defines „applied competences” as a synergetic combinations of 1/ socially responsible market behaviour of the managers 2/ based on the implementation of professional knowledge, skills and experience which are 3/ affected by social relationships, values and attitudes.

### **2.2. Responsible learning.**

In terms of education, there is increasing consensus (Jurse and Mulej, 2011; OECD, 2014; Biggs and Tang, 2007) that beyond knowledge and skills training, learning process should emphasise on the

following: (1) developing a mindset which is global; (2) working through a model of cross-cultural reconciliation; and (3) emphasizing „relational” skills. This involves, in the field of economics education: (1) providing knowledge about other cultures and the value assumptions which underlie their business practices; (2) concentrating on the context of business today, which is the pressures, constraints, and opportunities of doing business in global markets; (3) at the individual level, assessing the extent to which the individual is sufficiently flexible, adaptable, and open to „other ways of doing things” besides those of his own culture. Under these conditions teaching is not merely a way of „covering the curriculum” or transferring the knowledge directly from the ‘expert’ to the learner but a way of encouraging innovative thinking, creativity and responsibility for the decisions which are taken.

During the years several learning methodologies have been developed to support more student centered way of teaching. They have different names but in fact are based on a similar approaches such as participative learning methodology (PLM), peer teaching, active learning, group work, co-operative and collaborative learning to mention a few (Horgan and O’Rourke, 2014). Active involvement of the student in almost every activity of the education process could be outlined as their common feature. These methodologies share core values and approaches such as equalitative and inclusive learning, student centered methods, development of critical thinking and interpersonal skills, linking of concepts and ideas with ‘real life’ situations and independent and life-long learning.

However, students are not keen to be actively involved into the learning process as participants. Many of them prefer to be viewers. Cutts et. al (2004) report that students often share the ‘Didactic Mindset’ with their teachers expecting that „in-lecture material simply needs to be covered by the teacher and their role is one of transcription”. This situation reflects the traditional teaching model which has positioned students as passive receptors into which teachers deposit concepts and information.



Research however, suggests that students must do more than just listen: They must read, write, discuss or be engaged in solving problems (Chickering and Gamson, 1987). Further, students must be engaged in such higher-order thinking tasks as analysis, synthesis, and evaluation, to be actively involved. Thus strategies promoting activities that involve students in doing things and thinking about what they are doing may be called active learning. Performing these activities especially in a team environment forces students to take a responsibility for their decisions.

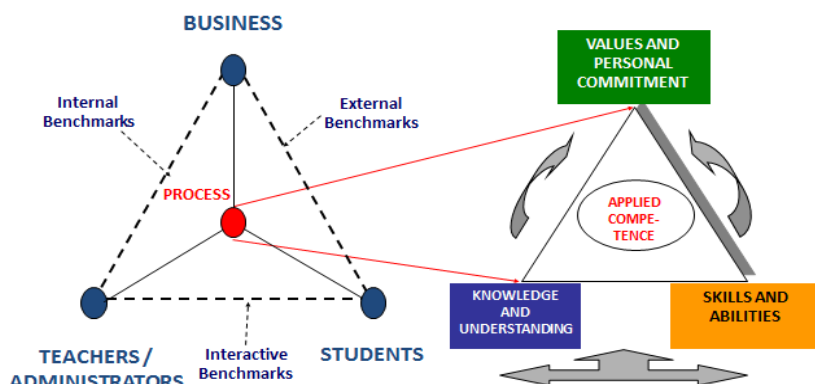
The distinguishing feature of experience-based learning (or experiential learning) is that the experience of the learner occupies central place in all considerations of teaching and learning. This experience may comprise earlier events in the life of the learner, current life events, or those arising from the learner's participation in activities implemented by teachers and facilitators. A key element of experience-based learning (EBL) is that learners analyse their experience by reflecting, evaluating and reconstructing it (sometimes individually, sometimes collectively, sometimes both) in order to draw meaning from it in the light of prior experience (Andresen et al., 2001). This review of their experience may lead to further action. Boud, Cohen and Walker (1993) identified the following set of assumptions which are fundamental for EBL:

- Experience is the foundation of, and the stimulus for, learning;
- Learners actively construct their own experience;
- Learning is a holistic process;
- Learning is socially and culturally constructed;
- Learning is influenced by the socio-emotional context in which it occurs.

EBL appears to demand that the following three factors must be operating at some level. First, the involvement of the whole person, incl. his/her intellect, feelings and senses. Second, recognition and active use of all the learner's relevant life experiences and learning experiences. Third, continued reflection upon earlier experiences in order to add to and transform them into deeper understanding.

### 2.3. The concept of Reference Framework of Applied Competences (REFRAC)

The author started to develop REFRAC (Reference Framework of Applied Competences) based on the following concepts and models: learning through relationships, experience-based learning, education as a transformational system and the paradigm for educational quality as a professional-creative process. The concept of REFRAC was built on the assumption of education as a transformative process with its three particular outputs (knowledge, skills and values) which, when linked together, lead to sustainable competence in any professional setting. None is independent of the others, and it is the interaction among these that leads to sustainability of learning within the profession and competence development. Each domain is, of course, a major field of professional enquiry and action, and its details and form vary from profession to profession.

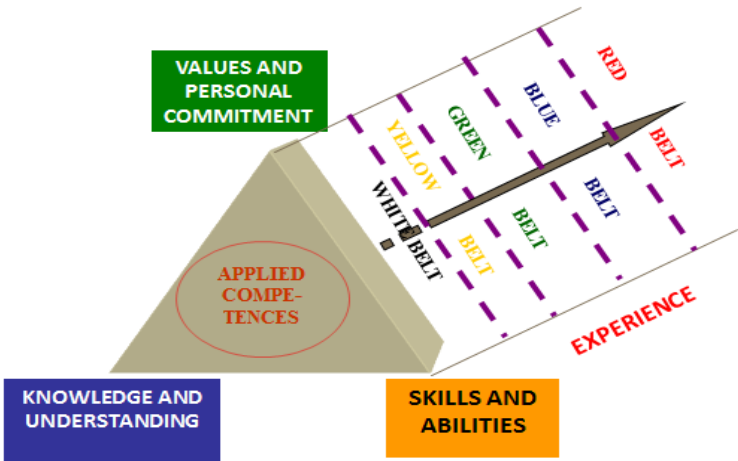


**Fig. 1. REFRAC conceptual model: static view**

Author's work

As a whole system the three different perspectives on the learning process (teachers and administrators, students, and audience such as policymakers, parents, communities) have their own benefits and standings and also interact with one other continuously. The three major com-

ponents of this transformative process (presented by the red spot in the middle of the pyramid on Figure 1) are (i) inputs to the system, (ii) the system itself, and (iii) the outputs to the system.



**Fig. 2. REFRAC conceptual model: dynamic view**

Author’s work.

The inputs to the system are the students, faculty and staff, funding, facilities and the goals of the university. These could be grouped further as human, physical, and financial resources. The system itself is created and controlled entirely by the elements that compose the system, regardless of the inputs, with some measurable points within; namely, training of personnel, teaching methods, learning, advising, counseling, tutoring, evaluations, infrastructure, etc. The system outputs refer to the product that is generated within the system which include tangible outcomes, intangible outcomes and values.

REFRAC architecture consists of a background level and four layers which are named following the 6 sigma approach as: white belt, yellow belt, green belt, blue belt and red belt (Table 1).

**Table 1****REFRAC structure**

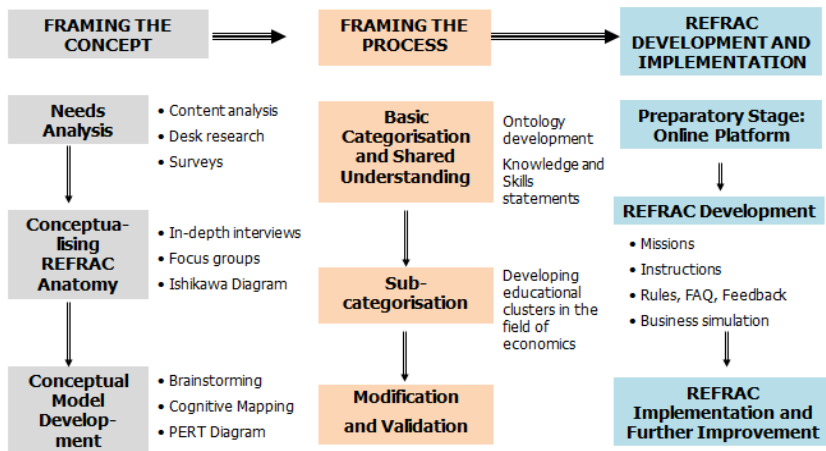
<b>Lay- er</b>	<b>Marketing tiers</b>	<b>Knowledge and skills statement</b>	<b>Curriculum- planning levels*</b>
White belt	Marketing core: Part 1	To develops skills and knowledge needed for continued employment in the field of marketing based on the application of basic academics and marketing skills.	Career-sustaining
Yellow belt	Marketing core: Part 2	Content provides in-depth, solid understanding and skill development in all marketing functions.	Specialist
Green belt	Marketing pathways* *: Part 1	Content provides the same in-depth, solid understanding and skill development in all marketing functions as in the marketing-specialist curriculum, and in addition, incorporates content that addresses the supervision of people.	Supervisor
Blue belt	Marketing pathways: Part 2	Content develops strategic decision- making skills in all marketing functions needed to manage a business or department within an organization	Manager
Red belt	Marketing Specialties	Content develops strategic decision- making skills in all aspects of marketing that are needed to own and operate a business	Owner

Author's work \*According to Marketing Career Cluster Status Report 2007, Marketing Education Resource Center, p. 8, 2008.

\*\* Marketing Research, Marketing Communications, Marketing Management, Merchandising and Professional Selling.

### **3. Research methodology**

The research is longitudinal by its nature. It is conducted every academic year starting from 2009 using similar research tools but in a broader scope. Both qualitative and quantitative methods were employed. The field work for present study was done for the North-Eastern Planning Region in Bulgaria both for companies and for the HEIs.



**Fig.3. Research methodology**

*Author's work*

### 3.1. Qualitative stage

The qualitative analysis is based on the law of requisite holism (Jurse and Mulej, 2011; Mulej, 2006) and the Senge's concept for learning organisation (2000). Dialectical systems theory was applied to REFRAC in order to find out the interrelations between different actors and stakeholders in education process in the field of economics as well as to identify their contribution to the learning process. TQM tools such as 6 sigma approach and 5S method were applied during the process of REFRAC development and validation.

The qualitative study involved in-depth interviews with experts, marketing managers and CEOs, focus group discussions with students, and content analysis to identify the key areas for professional capacity building. Ten in-depth interviews were conducted with experts the National Network for Competencies Evaluation. Five in-depth interviews with marketing managers and CEOs were conducted followed by two sessions of brainstorming. Four focus groups were undertaken with students. Two groups were used for students participating in the Market-

ing Bachelor programme at the University of Economics-Varna, and the other two groups were facilitated with Master students at the same university. Content analysis was performed for job announcements in specialised press and online job market. As a result a draft conceptual model in a form of Ishikawa diagram was constructed. The model has been „fine-tuned” during a series of workshops with academic teachers, students, business representatives from different industries and experts (Labour Associations, Industry Associations, etc.). During the workshops it became clear that one of the major obstacles to the integration of experience-based and business-oriented education into the higher education curricula was the issue of passive reflection-based teaching approach.

### **3.2. Quantitative stage**

The longitudinal study was planned as a 3-staged research process with a goal to develop a completed QMS framework for the University of Economics-Varna. The accomplishment of the first two stages gave as a result a draft of the university QMS. The research goal of the stage next to the last was to provide a framework which permits to embed research and business activities within learning outcomes as well as to test it for the students studying marketing speciality. Two types of questionnaires were developed. The goal of the pre-measurement stage was to evaluate students' expectations and attitudes toward learning process. The aim of post-measurement stage was two-fold depending of the year of study. For the 2<sup>nd</sup> and 3<sup>rd</sup> year students we wanted to evaluate their perception and satisfaction from the teaching tools and assessment methods as well. The research goal for the graduates was to determine the perceived importance of achieved marketing competences and the level of acquired marketing knowledge and skills (Vassileva, 2010). The last stage included two surveys conducted in the North-Eastern Planning Region in Bulgaria both for companies and for the higher education institutions (HEIs). A quota sampling method was used. The 'business'

sample size included 107 companies. The ‘HEIs’ sample size included 511 students. The study was administered as an online survey.

## 4. Results and discussion

### 4.1. Perceived importance and perceived possession of knowlegde, skills and personal traits

The qualification of the personnel is considered to be a key factor for business development by 84.8% of the respondents (answers from 7 to 10, the scale range is from 0=unimportant to 10=extremely important). When hiring their personnel managers require certain skills, followed by knowledge, and evidences for educational level (Table 2).

**Table 2**

#### Hiring requirements

Requirements for job specifications	%	Rank
Specific skills	89.4	1
Specific knowledge	86.4	2
Particular educational level	80.3	3
Specific certificates	47.0	4

Criteria sought in graduating students by business and students’ perceptions about their possession are slightly different. The criteria which were assessed during the study were divided into three groups: knowledge, skills and personal traits and values (Table 3).

**Table 3**

#### Perceived importance of knowlegde, skills and personal traits vs their perceived possession

Knowledge / Skills	Managers			Students		
	Mode	%	Rank	Mode	%	Rank
<b>KNOWLEDGE</b>						
Basic knowledge in economics	5; 6	23.6	15	7	24.5	12

Knowledge in specific area of economics	7	25.8	14	8	23.7	10
Knowledge about specific industry / industry sector	8	22.5	12	8	21.1	11
Knowledge about Bulgarian market	6	19.1	16	7	20.5	14
Knowledge about international markets	3	14.6	18	5	19.1	15
Specific knowledge (metrics, formulas, etc.)	5	19.1	17	5	16.4	16
<b>SKILLS</b>						
Communication skills	10	29.2	7	10	37.4	3
Analytical skills	9	27.0	11	7	22.7	13
Organisational skills	9; 10	28.1	9	10	21.3	8
Leadership	7	27.0	13	8	21.7	11
Skills for problem identification and solving	10	25.8	9	8	23.1	10
Technology skills	10	40.4	2	10	28.6	6
Written and spoken English language proficiency	10	36.0	5	10	27.2	7
<b>PERSONAL TRAITS AND VALUES</b>						
Self-esteem	7	27.0	13	8	26.2	9
Ability for realistic self-assessment	10	31.5	6	10	36.6	4
Willingness for continuous self-development	10	42.7	1	10	33.1	5
Creativity	9	31.5	8	7	22.5	13
Discipline	10	42.7	1	10	39.7	2
Ethics	10	39.3	3	10	51.1	1
Capability for adaptation	10	38.2	4	10	37.2	3

*Note: COMPANIES: The scale range is from 0=unimportant to 10=extremely important. Sample size = 89 respondents. STUDENTS: The scale range is from 0=low level to 10=high level. Sample size = 511 respondents.*

The importance given by business to discipline, self-development, ethics, communication skills, analytical thinking, the capacity to make decisions and to solve problems raises questions as to how well equipped



graduates are to fulfil these expectations. Need for graduates who are fluent in English could be explained with specifics of Bulgarian market which, on one hand, is quite small and companies are mainly export-oriented. On the other hand, many Western companies target Bulgaria as an outsourcing opportunity because of the cheap labour. The vast majority of Bulgarian companies are micro- and small enterprises. They need managers who are multiskilled and capable of taking greater responsibility and initiative. Additionally, graduate students are expected to enter the workplace equipped not only with the necessary functional knowledge and skills but, also, with adequate communication, interpersonal and team capabilities. Similar conclusions and recommendations can be found in related work of Walker et al. (1998).

#### **4.2. Internship programmes: how well are prepared students for the business?**

The key elements of the REFRAC were tested during the internship programmes. The first internship programme started at the end of 2009. Its main goal was to introduce students to the real business environment of marketing research industry and to build basic knowledge and work skills which are a prerequisite for a successful career in any business. During the programme interns were guided and supervised by a mentor who also facilitated their work adaptation. The requirements toward the interns were set at a high level corresponding to the world standards (ESOMAR). Tasks were daily scheduled through a project management system. Interns were obliged to report daily to their mentor about tasks accomplishment. Students entered the internship programme after a successful completion of a set of standardised tests and an interview. Unfortunately, almost half of the candidates drop out at the entry of the internship programme: 44.68% (2010) and 45.28% (2011). Surprisingly, the results of Bulgarian language proficiency test for the studied period were more than 10% below the results of the English language proficiency test. This could be explained with the tendency in Bulgarian HEIs to-

ward using tests as a tool for assessment. Moreover, students prefer to communicate with their mobile phones and over Internet using latin alphabet instead of cyrillic alphabet. It was decided to check if the entry results of the candidates depend on the year of study, their gender and the HEI of their study. Nine hypotheses were tested using one-way ANOVA and four of them were confirmed (Table 4).

**Table 4**

**Internship programme: confirmed hypotheses**

<b>Dependent variable</b>	<b>Factor variable</b>	<b>Levene Statistics (Significance)</b>	<b>F (empirical value)</b>	<b>Significance</b>
Bulgarian language proficiency test	Year of study	0.786	2.233	0.053
IQ test	HEI	0.038	3.708	0.014
English language proficiency test	Gender	0.819	15.398	0.000
English language proficiency test	HEI	0.024	4.508	0.005

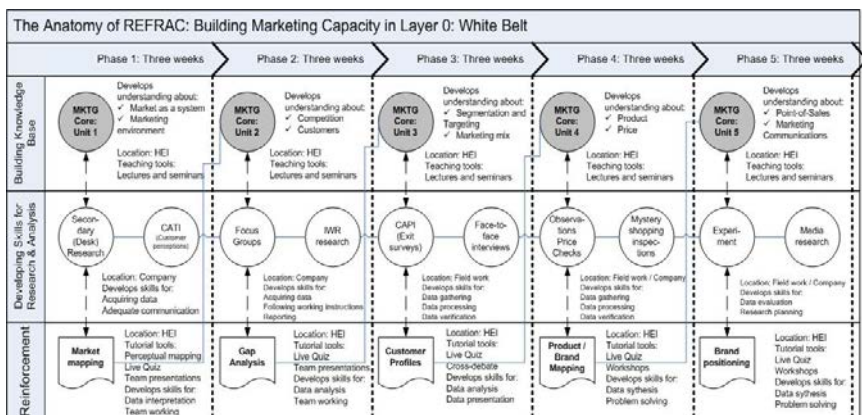
The success rate of the internship programme was moderate: 65.38% (2010) and 51.72% (2011). The author concluded that students are not prepared to work in an intensive business environment. It was suggested that some of the possible reasons are rooted in students' passive position as viewers and leasteners in HE education process. In the currently predominant teaching model, students typically undertake a course of study in which, semester by semester, they gain knowledge in a sequential subject by subject manner. However, this process results in compartmentalised, if any, comprehension of what is taught.

### **4.3. The anatomy of REFRAC**

When developing the anatomy of REFRAC, the author applied established design elements known to influence high-quality learning, such as active-based learning, cross-debate, research activities, perceptu-

al mapping, field work. REFRAC is designed as a multilayered process-based system. The structure of each level is similar and it is divided into several missions (from five to seven) depending on the content of the course. Mission is defined as an assignment which requires a practical completion of a task or a sequence of tasks based on a certain knowledge. Missions must be accompanied by clear instructions and a feedback form. The feedback form is used for validation and it serves as an assessment tool thus providing transparency and creating a competitive environment among students. Depending on the level of formalisation missions could be divided into CAM (computer-assisted missions) and HAM (human-assisted missions). Missions are logically incorporated to fit to the course content.

The proposed design is scheduled for a semester of 15 weeks. We tried to create a coherent and consistent combination of traditional teaching methods and evidence-based research interventions performed by students in business environment. As many authors suggest, success in learning relates as much to the design of individual components as it does to the consistency and fit of those components within the course as a whole (Webster and Kenney, 2011; Biggs and Tang, 2007).



**Fig. 4. The anatomy of REFRAC: white belt layer**

Two layers of REFRAC has been already developed and tested. The first layer (Figure 4) emphasizes on data collection and research methods. To respond to the need for students to feel independent to make his/her own decisions, research tasks were developed to be flexible for modifications. All activities provide some level of choice thus stimulating students to assess alternatives, to take risk and to be responsible for his/her decisions.

The focus of second layer (yellow belt) of REFRAC is placed on innovative and creative thinking development. It is implemented through the so called academic accelerator „Brand Idea”. Students are stimulated to plan and to implement a communication or social campaign targeted at different audiences. The assignments are provided by different companies, organisations or institutions. The education process is split into separate missions as described above. Students participate as virtual agencies and compete between each other since one assignment is given to three or up to five teams. The final assessment consists of two parts. The first part is the result of independent survey among university students which measures the awareness level and attitude toward virtual agencies and their projects. The second part is a presentation which is evaluated by a jury (mainly business representatives). Brand Idea competition was launched in 2011 as a part of the education of the students who study Marketing. Now it is open for everyone ([www.brand-idea.net](http://www.brand-idea.net)). For the next year „Brand Idea” is planned to be transformed into a start-up accelerator.

The internship programme forms the REFRAC prerequisite level which main goal is to develop employability and job-survival skills and concepts, including discipline, work ethics, personal appearance, and general business behavior.

## **5. Conclusions and implications for future research**

The proposed framework of applied competences in the field of economics (REFRAC) provide an opportunity for the HEIs to transform

the education process into experience-based learning which stimulates active participation of students. Its main objectives include: 1/ stimulating creative and innovative (out-of-the-box) thinking, 2/ developing business-related skills at different levels (the basic level comprises business survival skills), 3/ stimulating entrepreneurial attitudes and activities of students by small projects implementation, incl. social innovations.

REFRAC could be used as a tool to re-engineer the process of higher education using as a background the concept of business models. When applying REFRAC in a constant and systematic manner in higher education process students can gain personal experience through engaging in various business and research activities related to the theoretical background of the disciplines and academic curricula. These experiences were designed to provide students with additional tools stimulating them to learn and reflect on their study.

The main barriers during the process of REFFRAC development could be summarised as follows:

- Administrative barriers due to the restrictive internal rules of the HEI.
- Misunderstanding of the concept both from the management body of the HEI and lecturers (teachers). Such kind of activities require different type of management and high level of engagement of the teaching staff.
- Bureaucratic procedures embedded within the educational system which prolong the process of changes and modifications of teaching materials and the process of learning.
- Extremely low level of administrative flexibility.

The author will continue to develop the next layers of REFRAC in order to accomplish it as a business simulator, incl. to be applied for distance learning.

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## **Competitiveness Of Enterprises By The Bulgarian Defense Industry**

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### **Abstract**

The market conditions require a new approach in solving the problem of corporate competitiveness - developing its own strategy for boosting the competitiveness and sustainable economic growth. The well-founded competitive strategy of the company determines the promising directions of its activity, determines the type of competitive advantages and ensures resource availability for its implementation. The advantages held by the defence industry companies are one of the determining factors essential to achieve higher and long-term competitiveness of the Bulgarian industry and economy as a whole.

For the success in the competitive struggle, it is particularly important to have a good knowledge of the theoretical and methodological aspects of competition that reveal its economic nature as a basis for the market economy and a driving force for the development of business entities.

**Keywords:** competition; competitiveness; defence industry

## **Recent Changes in Chinese International Tourist Behavior**

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### **Abstract**

Chinese international tourism forms more than 20% of world tourist consumption, which determines Chinese tourists as a perspective consumer segment in world tourist industry. The purpose of the current article is to investigate the recent changes in Chinese international tourist behavior in terms to give steady foundation for destinations to form product, meeting the consumer requirements. The empirical study includes investigation of the

Chinese international tourists' performance worldwide. Data was further analyzed with descriptive statistics such as summary, univariate analysis including central tendency and simple forms of inferential methods. For the purposes of the study main economic indicators of Chinese international tourism are also analyzed. In addition, the basic development tendencies are highlighted and long-term goals are defined. The Chinese international tourist is observed at three main levels – economic, psychological and behavioral. There is also short retrospective overview to indicate the up-to-date changes. Generally, through last years dynamic increase in main economic indicators has been observed, which resulted in positioning of Chinese tourism on a brand new level. Chinese international tourists make no exception. In addition to raising solvency, over the last decade Chinese tourists changed their behavior and habits considerably. They are more individual in all aspects of their international holiday. Chinese tourists are more open-minded and interested in exploring the local way of life, culture and habits. They also have changed their demographic profile significantly, as also their behavior during holiday. In conclusion, knowing the wide profile of the Chinese tourist is essential for success, especially considering the fact that generally tourist destinations are now pointing their efforts to attract more Chinese tourists through different activities and marketing practices. The key findings of the current survey would help destinations and companies to get winning position on the world tourist market and build their product effectively.

**Keywords:** International tourism, tourist behavior, China, Bulgaria.

**JEL classification:** L83; Z32

## **Application of Space Syntax in the strategic planning of the tourist infrastructure and sustainable urban environment**

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### **Abstract**

Space Syntax can be used to predict, qualify and quantify aspects of human behavior of different design proposals. Therefore some design projects already incorporate Space Syntax during the design process stage by proposing

different design alternatives and continually testing and adopting them. In recent years, it has become increasingly common to use physical characteristics like the wind, solar exposure or sound, as driving forces behind a generative design approach. Similar to the various physical models, Space Syntax analysis can be also, some simplifications assumed, processed automatically. Such an approach can be referred to as „inverse design”, design by intents, used as constraints to a form and not as form by itself. Preliminary findings and relationships in the spatial structure of the urban environment, based on Space Syntax's computer analytical methods, are the basis for designing and implementing sustainable, integrated interventions in today's urban environment, creating tourism clusters and improving the tourist infrastructure both locally and globally.

The study is focused on the application of the method of urban analysis - Space Syntax and a detailed study of the conclusions and results through their implementation on a physical urban structure. This is achieved by two analytical methods used during the evaluation process. The first method is the theoretical application of the spatial syntax to measure the spatial configuration of urban fabric. The second method is a detailed study of the results and an objective study of the characteristics of each street segment in terms of its physical characteristics. The aim is to offer optimal solutions that facilitate the navigation of tourists in the area and provide appropriate perception and shading of the cultural and natural heritage. Thanks to the method, it is possible to recreate the natural behavior of tourists and to assess in advance possible interventions. This will improve the quality, accessibility and functionality of the offered tourism cluster. The application of the innovative methodology is suitable for addressing accessibility issues at the local level and at the global level - integrated urban structures and their cluster relations.

**Keywords:** space syntax, urban innovation, touristic infrastructure, navigation of tourists, accessibility

**JEL classification:** R

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