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## ICT in Educational Inclusion in Regions with High Digital Gaps. The Case of Costa Rica and Online Platforms

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### ABSTRACT

Internet accessibility and other digital technology resources have meant a giant step in the ability of academic sectors to penetrate almost all social sectors and geographical areas. Simply have the appropriate devices from a cell phone to a complex multimedia computer, to access and use different platforms multitude of mediation tools and knowledge transfer. But all that entails have an adequate telecommunications platform with broad bands conducive to the needs of users and infrastructure repeaters and amplifiers digital signal equipment, among other technical requirements. Here awakens the dilemma of developing countries in particular: a digital gap that forsakes the inhabitants of remote corners of the capital and benefits overmuch, who resides in the GAM (Greater Metropolitan Area). This paper is to display the current state of the art in the field of Information Technology and Communications and the new educational environments in regions with high digital gaps and what are some interesting proposals that can be reviewed by the political and academic authorities and implement them be necessary.

### Introduction

Costa Rica has had for many years the privilege of being considered a country with a high literacy rate. According to the index mundi, the country's percentage is 96.3%. It is also considered a country with an important social and economic development; large public investments in technological infrastructure and education. Secondary and primary education enjoys high participation of technology in their academic plans. Many educational centers are committed to the generation of knowledge through the use of various computer techniques. They exist from platforms where asynchronous mediation is carried out, virtualized laboratories that implement the simulation of realities and even complex systems that interact systematically with the user. Networks are vitally important in the basis of this educational style and that is why there is a clear interest of the academic authorities of the country to exploit them to the fullest. With that vision, they invest important amounts of the public budget to install communication platforms that try to connect the whole country. However, there are population sectors to which these opportunities do not reach and it is necessary to

create measures to avoid differentiation of treatment by the government. That digital gap is then attacked with the implementation of new educational environments and training strategists.

### **Definition of the object or study problem:**

What is the role of the digital gap in educational inclusion in regions with high gaps, and the situation of Costa Rica in relation to that?

### **Justification:**

The digital gap is an issue of importance these days, because if the world is facilitated by the use of ICT, that benefit is not available to all the population of the planet, so it becomes part of discrimination, governed by the country of birth, residence or by social, economic or status. Later on, important data are presented regarding the subject and other countries are compared with Costa Rica.

### **Methodology**

The research is of a descriptive type that according to Hernández, Fernández and Baptista, (2016) "intend to measure or collect information independently or jointly on concepts or variables" (p.102), therefore, documents and studies were analyzed in this regard, in order to determine the position of Costa Rica in relation to the rest of the world and determine the role of the digital gap in educational inclusion.

The following are important historical data for this article:

### **The Information technologies**

According to Gil (2007) information technologies can be define "... as that technology or combination of technologies that allow man to carry out processes or products in which his intellectual capacity (brain) and his capacity for manipulation (hands) are replaced in part by physical systems that combine electronic technology with another or others such as mechanics, pneumatics, fluidics, etc." (p.181). This concept merely oriented to an industrial connotation correlates the computer area (hardware and software) and the processes that are carried out in this context: machines and processes being aided by hardware and software.

A concept much closer to our reality is provided by Seoane (2005) who states "By ICT, we understand the set of technologies and resources associated with information and communication systems. That is, the set of technologies that assure us the efficient management of the information generated in a company". (p. 2).

With this definition we approach the general knowledge that we have about ICT (Information and Communication Technologies), which conceives as computers and computer systems helping people, whether within a company or not, in the activities or tasks that require processing, generation, storage, extraction, replication, printing and information transfer. The information systems associated with ICT allow people to make transactions, prepare documents, control budgets, among other activities that have allowed them to accelerate and facilitate these processes.

Given that ICT is made up of Information and Communications, it is essential today to have some means that allows us to transfer information. With the advent of telecommunications networks this became possible and nowadays we can transfer information from one place to another at a great speed, without caring much about the geographical area of origin and the geographical area of destination. The communication speed is extremely high. However, computer technologies (hardware and software) and telecommunications networks are often not available to people or do not have enough training to use them.

This could be because in the country or region where they live there is no access to ICT or either because of socio-economic or political conditions or because they do not have the necessary literacy rates to use them. In this sense, the world entered an asymmetric cycle where, rather, the phenomenon of the expansion of ICT became more exponential every time and on the other side many people were relegated to not being part of that expansion. This is known as the phenomenon of the digital gap.

## What is the digital gap?

Serrano and Martínez (2003) define digital gap as "... the separation that exists between people (communities, states, countries ...) who use new information technologies as a routine part of their daily lives and those who do not have access to it, or if they have access to, do not know how to use them "(p.17). Interpreting Serrano and Martínez, it could be argued that the digital gap is defined in terms of the inequality of possibilities for citizens to access information, knowledge, resources and education through ICT. It is not exclusively an aspect of a technological nature, but rather involves socio-economic factors and, particularly, limitations and lack of telecommunications and information infrastructure. Finally, technological and socioeconomic development factors are correlated and manifest themselves in different ways in the world. To determine the magnitude of the digital gap, it is necessary to incorporate cultural, sociopolitical and demographic factors of each region or country.

Ortiz and Welp (2014) affirms that the digital gap is what separates those who have access to new technologies from those who do not. This distance can be measured according to each country, region and citizen. Even at the planetary level. These authors affirm that there is a digital gap at a global level constituted through the differentiation in access to information technologies between countries and geographical areas and a local digital gap constituted between groups of the same society. They agree that the three factors that produce the digital gap are the lack of connectivity, infrastructure and training.

## The digital gap in in the world

According to Fernández (2016) who published in the Costa Rican newspaper El Financiero, in the edition of April 5, citing figures from the World Bank's 2016 World Report, 60% of the world is disconnected. He points out that 4 billion people in the world do not have access to the internet; that the expansion of digital technology in the world and the widening of the digital gap are contributing significantly to the increase in the differences between rich and poor countries. This means questioning the supposed democratization of Internet access. Reviewing the data published in the World Bank Report 2016 on its website, it can be seen that of the approximately 7400 million people on the planet, only 2.4 billion are connected to the Internet and 4000 million are not. It also identifies the countries with the largest digital gap in the world, which are presented in table No.1

**Table no. 1: Countries with an important digital gap in the world, 2016**

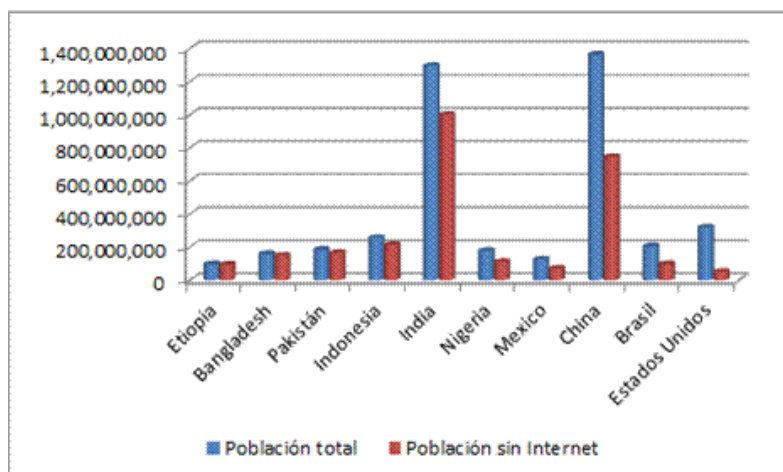
Country	Population	Population without Internet access	%
<b>Etiopía</b>	96,900,000	95,000,000	98
<b>Bangladesh</b>	159,100,000	148,000,000	93
<b>Pakistán</b>	185,000,000	165,000,000	89
<b>Indonesia</b>	254,500,000	213,000,000	84
<b>India</b>	1,295,000,000	1,000,000,000	77
<b>Nigeria</b>	177,500,000	111,000,000	63
<b>México</b>	125,400,000	70,000,000	56
<b>China</b>	1,364,000,000	745,000,000	55
<b>Brasil</b>	206,100,000	98,000,000	48
<b>Estados Unidos</b>	318,900,000	51,000,000	16

*Source: Prepared by the authors with data obtained from the annual report of the World Bank, 2017*

As we can see in table No.1, Ethiopia is the country with the highest digital gap with 98%, while the United States has the lowest with 16%.

Graphic No. 1 shows the graphical representation of table No. 1.

**Graphic no. 1: Countries with significant digital gap in the world, 2016**



Source: Prepared by the authors with data obtained from the annual report of the World Bank, 2017

The International Telecommunication Union (ITU), which is a specialized agency of the United Nations (UN) for Information and Communication Technologies (ICT), by means of a press release, published the annual global data on ICT and country rankings according to the ICT Development Index 2015, where it was recorded that, worldwide, 3200 million people are connected, representing 43.4% of the world population.

The Measuring report of Information Society (2015) of the UIT, considering the ICT Development Index (IDI), determined that, in Africa, Mauritius is a country that has an IDI value of above the 5.03 points that is the world average. Meanwhile, Seychelles, Republic of South Africa and Green Cape, with 4.12 points, surpass the average value of developing countries. Of 37 African countries 29 are placed in the fourth lower part of the IDI 2015, comprising the 11 countries that have the lowest rankings, meaning that it is necessary to reduce the digital gap in Africa and other regions.

In America, the United States, Canada and Barbados, according to their ICT Development Index (IDI), they occupy the privileged positions since they exceed 7.50 points and are classified among the top 30 countries in the world. With these values they surpass the rest of the countries America. Some 29 countries in the region are located in the upper half of the world ranking.

It is important to quote what the report on the Measure of the Society indicates on page 22: "Countries in the Americas region have experienced some of the most significant movements up and down in global IDI rankings between 2010 and 2015. The most dynamic improvement worldwide was achieved by Costa Rica, which raised 23 places in the global rankings, while other substantial improvements were achieved by Suriname, Brazil, Barbados and Colombia. "Literally we can translate what the ITU indicated as:" In the American countries some movements have been observed very important, in one sense or another, in the IDI world ranking between 2010 and 2015. The most dynamic advance, worldwide, was achieved by Costa Rica, which climbed 23 places in the world ranking, while Suriname, Brazil, Barbados and Colombia reached substantive progress."

It is worth mentioning that the IDI carried out by the ITU is recognized worldwide by countries, United Nations organizations and private companies, as the most accurate and impartial measurement that is made on the global development of national ICTs. It combines 11 indicators in a single measurement that includes number of cell phones, number of computers in the home, number of users that have Internet, subscribers to broadband service and basic literacy rates, among others. This index can be referenced on a global, regional or national scale.

## **Digital gap in Costa Rica**

The General Telecommunications and Strengthening Law No. 8642 in its Article 1 says: "The purpose of this Law is to establish the scope and regulatory mechanisms of telecommunications, which includes the use and exploitation of networks and the provision of telecommunications services." In its article 2, subsection b. notes: "Ensure the application of the principles of universality and solidarity of the telecommunications service". Also, in subsection c. indicates "Strengthen the mechanisms of universality and solidarity of telecommunications, guaranteeing access to the inhabitants that require it". This law was enacted on June 4, 2008 and signified the implementation of an aggressive program by the government to provide Costa Ricans with a telecommunications infrastructure appropriate to personal and business requirements. In May 2009, the First National Plan for Telecommunications 2009 - 2014 was issued by the Executive Branch, establishing a Digital Solidarity Agenda that promoted a series of actions aimed at carrying out a series of actions aimed at implementing telecommunications services to all sectors of the country, regardless of social, economic or geographical status. In short, what the government of the moment proclaimed that telecommunications were "an economic, social, digital and opportunities tool" This established the importance for the government what the expansion of the telecommunications network meant and the decrease in existing digital gap.

In 2009, the index was created that allowed measuring the dimensions of access, use, quality and education of telecommunications. With this, it was possible to design the First Advance of the Measurement of the Digital Gap in Costa Rica 2009, which showed the results of international statistics and total country, with respect to citizen access to telecommunications services in Costa Rica. In August 2010 the Progress Report of the Digital Gap Index was presented: use of Information and Communication Technologies, which contained information regarding the Digital Gap Index so far. This index for 2011 yielded interesting data such as that, for every 100 inhabitants, 80 had access to the Internet; for every 100 homes, 100% had at least one computer and Internet access. From this analysis it was concluded that, from a scale of 0 to 10, Costa Rica had a 4.11 digital gap, considering, according to international metrics, a level of Medium Gap Low.

## **Costas Rica's Connectivity and Access to technologies**

The United Nations Organization (UNO) declared access to the Internet as a highly protected human right, demanding its member countries to provide an accessible and accessible service for all and that it is a priority to ensure this right to citizens. The Internet for the UNO means allowing individuals to exercise their right of opinion and expression, constituting, at the same time, part of their human rights.

According to the newspaper La Nación, in its electronic edition of October 6, 2010, in Costa Rica, by judgment No.10627 of June 18, 2010, the Constitutional Chamber of Costa Rica declared that access to the Internet constituted a fundamental right because it is an indispensable and necessary means to travel in the information society. It is also indicated in this newspaper that, because it is a public service, it is subject to the constitutional principles of efficiency, effectiveness, equality, continuity and adaptability. It ends up affirming that the guiding principle of technological neutrality established in article 3 of the General Telecommunications Law prevents Internet service providers.

With this panorama, it can be affirmed that connectivity and access to technologies in Costa Rica is a constitutional mandate that guarantees the accessibility of all citizens, without discrimination of race, creed, geographic location or economic position.

It is for this same reason that inclusive education is determined in Costa Rica if it is more accessible to the population than in other countries. As will be seen in the next section, through new ICT-based educational environments, the spectrum of people who can receive education using the technologies available in the country is expanded.

## **New educational environments based on ICT in regions with high digital gap**

The modalities of e-learning can become digital gaps by themselves when they require specific training or discriminatory knowledge. Suppose that a training system is established for a specific region where a community scarcely has computer training. The appropriate



platform and the formative and evaluative instruments for the training are implemented. However, computer skills and use of the users' platform are not considered. With this, it is facing a gap that is also well known in the implementation of virtual teaching platforms.

In the learning in networks, two trends are presented: the systems that bet on the effort in aspects of human intervention: teachers, methods and pedagogical systems, forms of teaching and learning, among other elements and that tendency that focuses on the tool and its autonomy in front of the teaching intervention. In addition to the technological gap of not having teleinformatic platforms, Internet access is also added to the distance learning of both the teacher and the user. A teacher who does not know the technology and a student who does not know it really becomes another breach of the system. As stated by Segura and Rojas (2007), "Owning technology and access to it are not conditions per se, that reduce the digital gap, it is necessary to develop skills and competencies regarding the adoption and appropriation of these technologies "(P.75).

In spite of all that, at a global level it has been seen how virtual learning platforms have been developed in such a way that it has allowed the inclusion of many social sectors that were previously unattended by face-to-face training. With this, educational tools and strategies that are merely oriented towards virtual process have appeared.

As for the new educational environments, an important variety has been created to reach the vulnerable or most deprived population of access to academic training. Logically, the bases of this series of diverse environments are the ICT resources (networks, hardware and software). This has allowed many citizens who did not have access to face-to-face education today to enjoy the possibility of training academically.

An educational environment that strongly uses information technologies are virtual platforms. With these platforms you can reach many regions, however distant they may be. It is enough to have access to the Internet and the appropriate computer equipment. In Costa Rica, there have been the following known virtual platforms:

a. Blackboard: is a commercial online learning management system that means "Learning Management System (LMS)". It is considered to be the most widely used e-learning system provider in the world. In summary, it is a platform that integrates an environment that manages a series of resources that allow creating and managing online courses. The contents of the course can be presented in various formats (text, sound, and video); tools can be evaluated using rubrics that are developed on the platform, among other capabilities. A very detailed explanation of its functionalities can be found in <http://www.ecured.cu/Blackboard>. Many universities in Costa Rica use it, for example, the State Distance University (UNED).

Image number 1 shows the interface of this platform.

**Image no. 1:** Blackboard platform



Source: Taken from <https://lmsyweb20.wikispaces.com/12.+Proprietary+AlphaStudy+-+Angel+LMS>

b. WebCT: It is a commercial tool that allows creating online courses. It is known as Web Course Tools, for its acronym in English. It is similar to Blackboard. As in Blackboard in

WebCT can be added interactive tools such as discussion boards or forums, email, chat, documentary content, among others. This product was merged with Blackboard on February 28, 2006. Image number 2 shows the WebCT interface.

**Image no. 2:** WebCT platform



Source: Taken from <https://veronicaporras.wordpress.com/>

c. Sakai: is an open source education system that was born in the University of Michigan and the University of Indiana, United States. In addition, they obtained the contributions of the Massachusetts Institute of Technology and Stanford University. The Mellon Foundation was behind all project financing.

This project was created with the intention of creating a collaborative and online learning environment in higher education that could compete with proprietary and commercial platforms Blackboard and WebCT. More than 100 universities use this platform, among which are the fourteen most prestigious universities in the world according to the website: <http://www.20minutos.es/noticia/1104579/0/>. For more information and download this platform you can visit the website <https://sakaiproject.org/> Image number 3 shows the interface of Sakai.

**Image no. 3:** Sakai platform



Source: Taken from <http://www.tonybates.ca/tag/e-portfolios/>

d. Moodle: it is a platform for free use and is designed for the creation of online courses and virtual learning environments. It is one of the most used worldwide and, in Costa Rica, the most implemented in public and private universities. This platform is called Virtual

Learning Environments or virtual learning environments, by its acronym in English. Its name comes from the acronym Modular Object-Oriented Dynamic Learning Environment. It is designed thinking about the constructivist social pedagogy, where the communications between the actors of the platform are building knowledge through interaction and experience. Its main strength is that it is free software, which allows its use without payment of licensing. A community of developers is constantly updating the software.

Image number four allows to observe the interface of this LMS.

**Image no. 4:** Moodle Platform



Source: Taken from <http://queaprendemoshoj.com/conoce-moodle-i-e-learning-con-software-libre/>

In Costa Rica, the two most used platforms are Blackboard and Moodle. These platforms are present in the public universities of Costa Rica, to implement an alternative collaborative action to traditional education. In the case of the State University at a Distance they are of generalized use, appearing in the four schools in which the university is divided: education, social sciences, administration and exact and natural sciences. The website [www.softwareinsider.com](http://www.softwareinsider.com) makes a comparison of these two platforms, considering aspects such as instructions for use, course development, collaborative environments and administration. Image number five shows the comparison that is made of these two platforms.

**Image no. 5:** Comparison Blackboard and Moodle



Source: Taken from <http://lms.softwareinsider.com/compare/83-226/Blackboard-Learn-LMS-vs-Moodle>

From the image number 5 it can be seen that Blackboard is compared as Moodle in key aspects such as administration, collaboration, course development and instructional methods. The instructional methods of the two platforms are the same with a 67% rating. As soon as the development factor of course Moodle owns 75%, while Blackboard 88%. In collaborative aspects Moodle surpasses Blackboard by 78% and exceeds it in tools for course development. But the most important feature is that Moodle is open source while Blackboard is paid. With this situation Moodle is the most used virtual platform in public universities in Costa Rica.

a. But what are these new educational environments, based on ICT, that collaborate with training in regions that have a high digital gap? Following are some of the efforts to break the limitations of the digital gap that the Costa Rican government has driven.

b. The Omar Dengo Foundation, the Ministry of Public Education of Costa Rica and the National Program of Educational Informatics have created mobile e-learning, in order to reach the most distant communities and promote the learning of students through computer resources. This initiative focuses on young people ranging from 5 to 18 years.

c. The Distance State University is the main promoter in Costa Rica of education based on information technologies. It has virtual platforms that allow the access of any Costa Rican citizen to pursue a career. These platforms allow establishing knowledge dissemination mechanisms through various media strategies such as forums, videoconferences, blogs, and educational videos, among others. It also has a mobile laboratory with Internet access to be able to move to regions with high digital gap and provide training to these communities.

d. The government of Costa Rica has worked on the policy that primary and secondary students can enter the training through technology, facilitating the possibility of acquiring (or the government itself provides) a low-cost laptop under the initiative of One Laptop per Child <http://one.laptop.org/>

e. Mobile telephony has also become an element associated with technology, given that in Costa Rica the majority of the population has a telephone with Internet access facilities. With this type of devices it is easy to implement e-learning. Users can use these devices to participate in various training strategies.

As indicated by Segura (2007) about e-learning: "In our opinion, e-learning is configured as a powerful tool that can contribute to the training and acquisition of basic professional skills in situations where there are or are projects oriented to the reduction of the digital gap."

It has been cited as academic organizations and the government itself has been concerned with establishing mechanisms for the creation of new educational environments, based on ICT, to deal with regions with high digital gaps. This has been achieved through e-learning methodologies that range from online training through virtual platforms or through computer resources such as CD, DVD, and USB with digital material that is used in these training activities.

The Omar Dengo Foundation is a precursor of capacity building through the use of technology. It is projected to young people, adults, and people with some disability, among others. The methods of e-learning have allowed reaching corners of the whole country; mobile laboratories that allow knowledge to be taken to regions far from the center of the country, among other strategies make the FOD a governmental organization that implements educational environments in order to reduce the digital gap.

## **Conclusions**

A clear picture has been established about the digital gap in the world and in Costa Rica and how it generates a differentiation between the communities and regions of those who suffer it.

This digital gap is defined as the difference between those communities that have access to the benefits of the information society and those that do not. Such inequalities can also refer to ICT, the computer, telephony, broadband and other devices. This gap is based on differences prior to accessing technologies themselves. The latter refers to the differences that exist between groups according to their ability to use technology.

Many people do not have the adequate training to access the technology despite having it. As an example we can mention a person who has internet, computer and other suitable conditions to use the technology, however, does not have enough skills, abilities or knowledge to use it. This is also called the digital gap.

Another gap is that, having access to the information and the necessary capacities, the informative resources are not of quality. As a contribution to these digital gaps, ICT have allowed the creation of new ways or environments to transmit knowledge. Strategies such as

e-learning or the disconnected use of computer resources allow to bring the knowledge and technical training of people anywhere in the world, helping to reduce the digital gap and benefit more people.

That is to say, that necessarily the educational inclusion takes of the hand the diminution of the digital breach. The more people who receive education, using ICT, the less access discrimination there will be. This is a subject for which the country and the universities should focus their efforts, although in Costa Rica, as seen, the panorama is better than in other parts of the world, it can be reinforced with action plans and management to continue rising in the world ranking, make education have the characteristic of using ICT and that is accessible to the majority of the population, to say that all, and at the same time reduce the digital gap.

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## Experiences of Foreign Investors as the Factor of Creating Place Marketing of Bosnia and Herzegovina Aimed at Attracting Foreign Direct Investment

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### ABSTRACT

The paper analyzes the experiences of foreign investors in terms of their business activities in Bosnia and Herzegovina. The aim of the research is to identify the experiences of foreign investors in Bosnia and Herzegovina so as to contribute to the creation of place marketing of Bosnia and Herzegovina as the investment destination. The paper briefly highlights the importance of foreign direct investment for the economic growth and development of the countries recipients of capital and the role of place marketing as the factor in attracting foreign direct investment. The research results indicate that the most frequent motives for foreign investors' decisions to invest in Bosnia and Herzegovina are related to production input, labor force, market attractiveness, and state's stimulus measures. Foreign investors active in Bosnia and Herzegovina rate the business environment as insufficiently attractive for foreign investors. In addition, the research results indicate that these investors are on average satisfied with the business results they achieved.

### Introduction

Contemporary literature as well as business practice often mention foreign direct investment (FDI) and its importance for economic growth and development. Many countries (especially the developing ones) characteristically experience, among other things, the lack of financial resources, technologies, and know-how necessary for growth and development. These resources can be provided by FDI, which is why many countries see it as an important source of their economic growth and development. This is the reason why tough competition exists among the countries in terms of their creating favorable business environment aimed at attracting foreign investors. In order to win their position on the investment market, the governments of these countries aim their activities towards adapting their economic and legal environment to the requests of foreign investors on the one hand, and towards the promotion of their investment potential on the other.

When the activities in terms of country's promoting investment potential are considered, different approaches are evident. The emphasis is dominantly placed on the availability of natural resources, lower labor force cost, simplified legal procedures, tax, customs and other benefits, etc. The application of place marketing enables the integrated approach in presenting and positioning of a country (or one of its parts – region, city, etc.) in the international investment market as a desirable and attractive destination for investment

realization. In this way, potential investors are offered an integral "package of factors" stimulating investment at a specific, narrow or broad, geographic location.

The paper attempts to present the importance of specific motives for investors while they make decisions to invest into Bosnia and Herzegovina (BiH), the assessment of BiH business environment from the perspective of foreign investors, and their satisfaction by business results in BiH. Hence, the focus is on the presentation of experiences of foreign investors active in BiH and the possibilities for their experiences to be used as a factor in developing place marketing aimed at positioning BiH as a favorable destination in the international investment market.

## **Literature Overview**

Importance of FDI for economic growth and development of the countries recipients of the capital

Many authors have for a long time devoted their attention to the analysis of FDI influence of development performances of the countries that receive foreign capital. The governments of many countries, especially the developing ones, take steps in adapting their business environment in order to encourage foreign investors to select their country as the investment target. This is often made by providing numerous incentives for foreign investors. Frequently, this results in criticism made by domestic investors, particularly under the conditions when such incentives are not made available to domestic investors. This is especially evident in the developing countries where domestic investment is not sufficient to prompt the desired economic growth and development.

The importance of FDI for the economic growth and development of capital recipient countries among other things lies in the fact that FDI does not include only the transfer of financial resources into the country but also the transfer of technology and know-how (primarily organizational and marketing know-how). This way, the improvement of market competitiveness of the companies that receive foreign capital also improves the performances of the entire country's economy.

Demonstrated technologies and managerial and marketing know-how are the resources particularly unavailable in developing countries. When the data are analyzed on the amount of savings deposits at banks in many developing countries, it is evident that domestic savings can be seen as an important financial potential for investment. However, such a potential is not used as one of the restrictive factors is the lack of managerial and marketing know-how in the field of internationalizing the business of domestic companies. The additional negative consequence is the fact that the increase in savings deposits, evident for a long time, along with the unequal distribution of income, significantly reduces the demand on the final consumption market. This is the factor resulting in the reproduction cycle within the national economy to unfold at lower growth rates.

Innovative business solutions with market competitiveness on the international market are an essential factor of more intensive economic growth and development. Creating such solutions on a larger scale is possible in developing countries only with FDI as domestic investment potential of these countries is mainly insufficient. Besides, more intensive economic growth and development, prompted by FDI, might create the prerequisites for a more complete usage of domestic investment potential and the direction of savings deposits into the investment cycle through the appropriate forms of business cooperation.

FDI lead to increased employment and average gross salary, which results in the increase in economic growth. The World Bank data indicate that the empirical tests of inter-dependence of foreign investment, capital accumulation and economic growth are encouraging but the same positive effects have not been reached in all parts of the world. The most important thing is that foreign investment affects the increase in aggregate domestic investment. It was felt earlier that foreign investment push domestic investment out, thus overtaking the major share of the market. However, the World Bank research showed that foreign investment has a significant and positive impact on domestic investment<sup>1</sup>. The effect of incoming foreign investment on foreign trade and employment depends on whether there is the prevalence of

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<sup>1</sup> World Bank, Global Development Finance, 2006, p. 143 and 159

complementarity or substitution of FDI and export or the prevalence of complementarity or substitution of FDI and import<sup>2</sup>.

Potential benefits which the recipient country may accomplish by FDI realization may be seen from the macro and micro aspects. When observed from the macro perspective, FDI benefits are primarily reflected in: improvement of country's trade balance and balance of payments, faster and more efficient inclusion of domestic economy on the world markets, improved supply of the domestic market, increased employment, etc. When observed from the micro perspective, recipient companies reap the following benefits: faster and cost-effective provision of modern technology, conditions to expand their business cooperation with foreign partners and on third markets, introduction of modern organization of work, and acquisition of knowledge in the field of market research<sup>3</sup>.

It is important to mention that many authors in their studies state that FDI influx may reduce domestic savings and investment in recipient countries and consequently cause slower economic growth<sup>4</sup>. Such criticism is mainly explained by the fact that often FDI does not transform into real investment. In addition, the criticism towards the governments for focusing on FDI might indicate a set of negative consequences for recipient countries:

- the problem of distributing the profit earned by foreign investors, partly created by using the host country resources, as the entire or the largest part of the newly created profit can be transferred abroad,
- the usage of the transfer prices system by foreign investors for allocating the newly created value into investor's branches abroad, which reduces the basis for collecting public revenues (income tax for example),
- the usage of home labor force with lower pays, which can consequently affect the development of final consumption market,
- foreign investors' insisting on the implementation of lower environmental standards in recipient countries than those implemented in developed countries or investors' home countries,
- increased influence of foreign economic subjects in making decisions on development goals and economic policies of recipient countries, i.e. lower economic sovereignty in the case of recipient country becoming too dependent on foreign investors,
- the creation of unfair competition in the case of foreign investors being provided with the benefits or incentives which domestic investors cannot use.

The justifiable criticism regarding potential negative consequences of FDI realization should not be neglected. Attention should be paid on the following:

- when realizing every individual foreign investment, one needs to assess its positive and negative effects and to establish whether the investment is justified or acceptable for the recipient,
- provided that the business cooperation agreement used for the realization of a specific foreign investment is made obeying the business ethics, potential negative consequences may be minimized,
- efficient monitoring is important in the realization of foreign and domestic investment, which should be carried by the regulatory bodies of the recipient country and serve as a guarantee for the functioning of the market framework under which all potential negative consequences shall be eliminated.

It is important to bear in mind that if FDI is realized in the sectors in which domestic companies are successful, on the one hand, FDI influx might result in increased competition and pushing domestic companies off the given market segment. On the other hand, if FDI influx is realized in the sectors in which domestic investment is not so widely present, growth and development of the host country might appear.

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<sup>2</sup> Konings, J., *The Effect of Foreign Direct Investment on Domestic Firms: Evidence from Firm Level Panel in Emerging Economies*, LICOS Discussion Paper no. 86, 1999, p. 27.

<sup>3</sup> Hadžović, M., *Direktna strana ulaganja*, Slovo, Mostar, 2002, p. 57

<sup>4</sup> Sarajčić, S., *Strane direktne investicije i tranzicija*, DES, Sarajevo, 2006, p. 221.



Hence, it is important to make a systematic approach to creating the policy of attracting FDI so as to identify potential investors whose business goals are compatible to the economic goals of the country, on the one hand, and to allocate the total investment capital (domestic and foreign) in a way which would enable the maximization of macroeconomic effects on the other hand. The prerequisite for this is the strategy of country's economic development and the strategy of attracting FDI<sup>5</sup>.

### **Place marketing as a factor in attracting FDI**

The question arises in terms of importance of the concept of place marketing for attracting FDI. Place marketing is the concept of marketing adapted to the characteristics of the location as the product one wants to position on a specific market segment. In other words, the application of place marketing enables differentiating and positioning certain location on the target markets in order to achieve the desired goals for the given destination. Rainisto<sup>6</sup> points out the views of some authors (Kotler et al.) that place marketing implies the creation of the ambience which would satisfy the needs of citizens and companies and fulfill the expectations of investors and visitors.

As previously stated, there is a significant competition among the countries in attracting foreign investors. This is why it is important for the countries to implement place marketing in their positioning on the foreign investment market so as to differentiate from the competitor countries and present themselves as destinations favorable for foreign investors.

Place marketing includes the following four basic components:<sup>7</sup>

- creating and realizing marketing mix of services and functions in a community,
- establishing and creating industrial and tourist attractions for attracting new investors and business to the target territory,
- providing services in an efficient and available way,
- promoting the values of location and image so that they enable market differentiation from their competitors (other cities, regions, states) and that all the potential users are fully aware of the values and risks characterizing their location, region or nation.

What is usually attempted to achieve is for locations to have a set of attributes through which they want to attract the attention of foreign investors. A set of basic conditions need to be satisfied, which foreign investors find as a precondition for even thinking about certain location. This set primarily includes:<sup>8</sup>

- political and economic stability – long-term oriented investment, the one providing the highest benefit for the location is never realized in the countries that are politically or economically unstable;
- regulated business environment – without the appropriate business environment there is definitely no increased influx of foreign investment. A successful program of attracting foreign investment requires undisturbed business activities of companies, without extensive and complicated administration and additional business costs;
- infrastructure – open market with established market institutions providing free market competition, developed legal infrastructure with good laws, encouraging measures, anti-corruption measures and rule of law, transport infrastructure, telecommunications and security infrastructure.

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<sup>5</sup> Čivić, B., Muratović, A., Petrović, A., *Ograničenja ekonomsko-pravnog ambijenta u Bosni i Hercegovini za realizaciju stranih direktnih investicija*, Zbornik radova Pravnog fakulteta u Tuzli, Year III, Number 1, 2017, p7

<sup>6</sup>Rainisto, S. K., *Success factors of place marketing: A study of place marketing in Northern Europe and the United States*, Helsinki University of Technology, 2003, p. 11.

<sup>7</sup>Kotler, P., Haider, D. H., Irving, R., *Marketing Places: Attracting Investment, Industry and Tourism to Cities State and Nations*, The Free Press, New York, 1993, p. 18.

<sup>8</sup> Graham, E.G., *Foreign Direct Investment in the World Economy*, IMF, Working Paper 59, 1995, Moran, T.H., *Foreign Direct Investment and Development*, Institute for International Economics, Washington, 1996, quoted in: Paliaga, M., Strunje, Ž., *Uloga urbanog marketinga u funkciji privlačenja direktnih stranih ulaganja u hrvatskim gradovima*, *Ekonomski misao i praksa*, no. 1, June 2011, p. 45.

In order to make certain location attractive for investment, the necessary measures need to be taken for the development of business environment that would be stimulating for foreign investors. The most frequent measures undertaken by state governments aimed at encouraging foreign investment are divided into three groups of incentives:<sup>9</sup>

- fiscal incentives,
- financial incentives, and
- other types of incentives.

Investor's decision on the selection of the location is a complicated process requiring the knowledge of a large number of information, their critical assessment, and the precise evaluation of the available options. Bearing in mind that certain locations are largely different by their cultural, social, political, legal, economic, demographic, technological, natural, and other characteristics, we can undoubtedly talk about the so called complex behavior of investors.<sup>10</sup> Investor's behavior in terms of selecting the location for investment shall primarily depend on the size of the market in which they invest, potential market, and investment climate (business ambiance) on that specific market.<sup>11</sup> There is a certain number of factors to be considered while selecting investment location, and they include<sup>12</sup>:

- legal and regulatory factors,
- human resources,
- infrastructural factors,
- market factors,
- political and government influence,
- factors affecting profit retention, and
- economic factors.

Attributes that are interesting for foreign investors and encourage them to decide on doing business in a certain region are treated depending on investors' primary motives. Table 1 present the link between foreign investors' motives and host country attributes important to investors while making decisions on the choice of location to which they would invest.

**Table 1:** Investment motives and host country attributes interesting to foreign investors

Investment motives	Host country attributes interesting for investors
<b>Resources or property</b>	- Raw materials and primary products
<b>Markets</b>	- Market size and per capita income, - Market growth, - Access to regional and third countries markets, - Preferences of customers, specific to the observed country, - Proximity of strategic clients, - Market structure.
<b>Efficiency</b>	- Low-cost labor force, - Qualified staff, - Cost of other inputs, - Membership in the regional integration appropriate for the agreement on the establishment of regional corporate network.
<b>Strategic property</b>	- Created property based on technology or innovations, - Created property in the form of individuals, companies, industrial clusters, etc. - Physical infrastructure (roads, ports, airports, electrical and telecommunications network)

Source: USAID, 2007, p. 11, quoted in Rakita, B., Šipragić, M., *Marketing lokacije u funkciji privlačenja resursa*, SEMA, Marketing no. 41. Belgrade, 2010, p. 224.

<sup>9</sup> Bilas, V., Franc, S., *Uloga inozemnih izravnih ulaganja i načini poticanja*, Serija članaka u nastajanju, Ekonomski fakultet Zagreb, Article no. 06-13, 2006, p. 6.

<sup>10</sup>Rakita, B., Šipragić, M., *Marketing lokacije u funkciji privlačenja resursa*, SEMA, Beograd, Marketing, no. 41., 2010, p. 223.

<sup>11</sup> Hornberg, K., Battat, J., Kusek, P., *Attracting FDI - How Much Does Investment Climate Matter?* The World Bank Group, Financial and Private Sector Development Vice President, August, 2011, p. 2-3.

<sup>12</sup> Cavusgil, S. T., Knight, G., Riesenberger, J. R., *International Business*, Prantice Hall, New Jersey, 2012, p. 407.

The application of place marketing is used in the identification of potential investors whose investment goals match those of the host country. It is important in this process to develop a set of activities by which investment potentials of certain location will be presented to potential investors such that investors would decide to realize their investment at a given location.

### **Research Methodology**

The research problem in this paper is to identify the experiences of foreign investors in order to improve the positioning of BiH as investment destination. The research questions postulated in this paper are:

- What are the motives of foreign investors to invest in BiH and how important these motives are to them?
- How foreign investors active in BiH assess its business environment?
- To what extent are foreign investors active in BiH satisfied with their business results?

The aim of the research is to define the experiences of foreign investors in BiH and the possibility for using their experiences in the development of place marketing of BiH and its presentation as a favorable investment destination.

The research hypothesis postulated in the paper is: *experiences of foreign investors in BiH are important knowledge in creating place marketing of BiH as the factor in attracting foreign investors.*

The data were collected through a primary research. We used the examination method, written examination technique, and the questionnaire as the form for collecting data. The participants were top managers in the companies' active in the real sector on the territory of BiH with the share of foreign ownership in their capital. The study was conducted in two periods: in 2013 and at the beginning of 2018, which enabled the comparative analysis of the data collected.

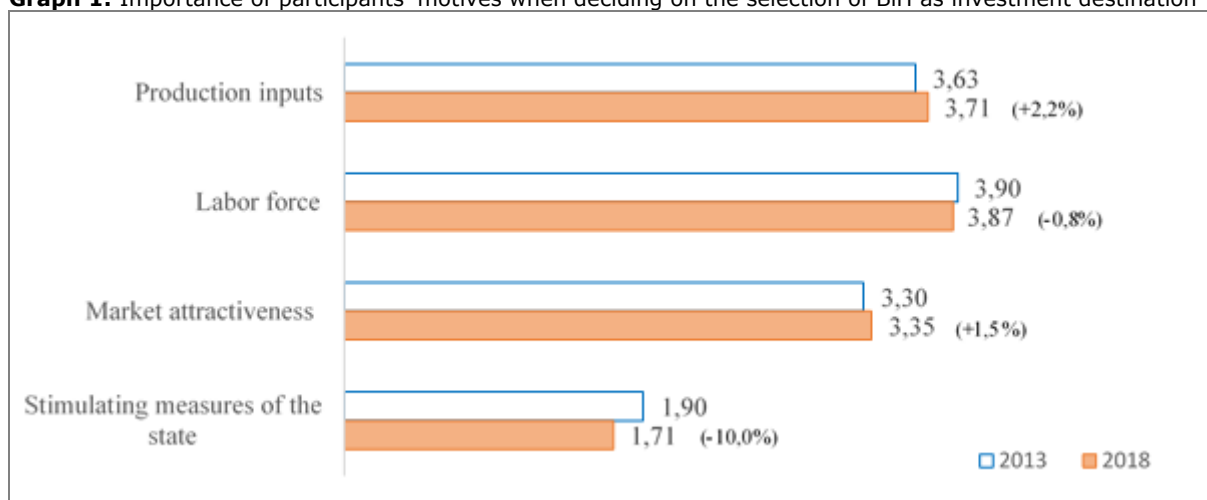
### **Result Analysis and Discussion**

In order for the activities in attracting FDI to be successful, it is important to understand the motives of foreign investors to invest in a specific country. The motives of foreign investors (included in this study) for investment in BiH are dominantly linked to the following four elements:

- production inputs (availability and acceptable price),
- labor force (highly qualified with lower labor costs),
- market attractiveness (domestic markets and privileged trade arrangements BiH has with other countries), and
- stimulating measures of the state.

The importance of these motives for the participants is given in Graph 1. The importance of the motives was assessed by a 1 (extremely low importance) to 5 (extremely high importance) scale. It is evident that for the first three motives there was no significant change in the average assessment of importance for the participants in 2018 when compared to 2013. The average grade of importance of the motives given in 2018 is in the interval 3.35 to 3.87. As the results show, the average grade of the importance of production input increased by 2.2% for the participants in 2018 when compared to those in 2013. The average grade for labor force as a motive for the participants in 2018 is by 0.8% lower when compared to the study conducted 5 years ago.

**Graph 1:** Importance of participants' motives when deciding on the selection of BiH as investment destination



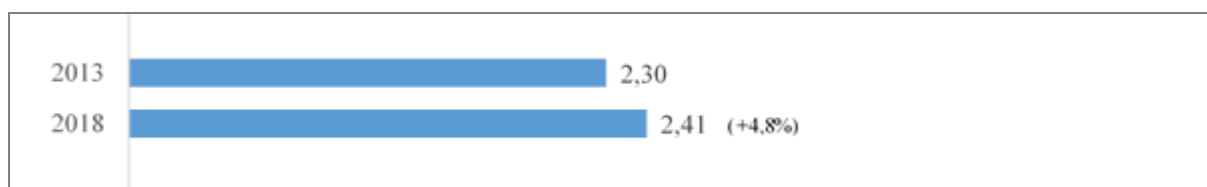
Source: Authors' research

What is important to mention here is that there is no factor that would be extremely important in motivating the participants to invest in BiH. This may be the limitation for positioning BiH as the investment destination, as we need to identify the elements by which this country should be extremely important to investors and consequently differentiate in comparison to competitor countries or investment destinations.

In order to successfully position BiH as a favorable and attractive investment destination, we need to start from the idea about how our country is seen by foreign investors operating in BiH. If their experiences are positive, the fact can certainly be used as a significant element of promotion within place marketing and successful positioning of BiH as investment destination. If the opposite is true, we need to take steps and perform activities for removing the causes that contribute to the creation of investors' negative experiences with the appropriate marketing communication towards potential investors, so as to minimize the potential negative effects.

Graph 2 shows summarized average grades of attractiveness of the investment climate in BiH. The grades are given on a scale from 1 (extremely negative/unfavorable investment climate) to 5 (extremely positive/favorable investment climate). The foreign investors that participated in the study in 2018 were slightly more satisfied by the investment climate in BiH than those in 2013, but the total average grade is still rather low, 2.41. The results indicate that in the period 2013-2018 the business environment was not significantly improved, as seen from the perspective of foreign investors. The research results show that another restrictive factor in positioning BiH as an attractive investment destination might be the former experiences of foreign investors.

**Graph 2:** Assessment of business ambience in BiH from the perspective of foreign investors

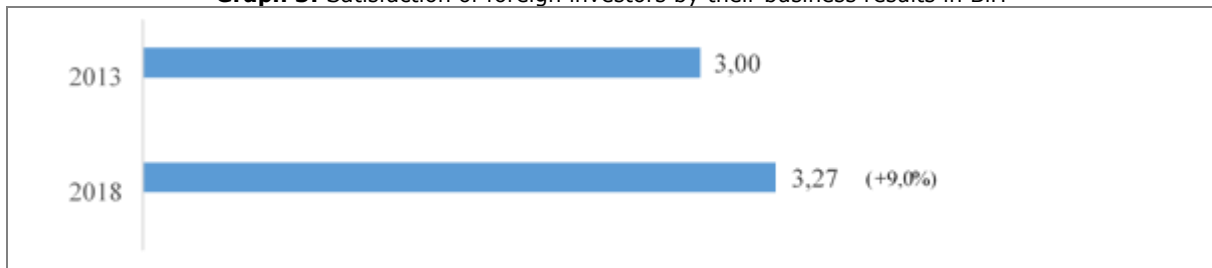


Source: Authors' research

Although the participants perceive that the investment ambience might be much better, it is important to examine to what extent the participants are satisfied by their business results in BiH. The average grades of participants' satisfaction (at a scale from 1 – extremely dissatisfied to 5 – extremely satisfied) by their business results in BiH are given in Graph 3. The foreign investors examined in 2018 were slightly more satisfied with their business results

(the average grade 3.27) compared to those that participated in the research in 2013 (the average grade 3.0). However, as the results show, generally speaking, the participants are not particularly satisfied with their business results.

**Graph 3:** Satisfaction of foreign investors by their business results in BiH



Source: Authors' research

Comparing the data in graphs 2 and 3, we can conclude that regarding the business ambience in which they realize their investment, the participants are partially satisfied with their results, which is largely encouraging bearing in mind the conditions in which they operate. Besides, the following facts may be used as the elements for creating place marketing and positioning BiH as investment destination:

- investment climate, as seen from the perspective of foreign investors, is gradually improving. The processes are slow but improvements exist (Graph 2);
- foreign investors show partial satisfaction with their business results, with the gradual improvement of the satisfaction level in the observed period (Graph 3);
- the motives which the participants had when they decided to invest in BiH mainly remained at the same level of significance. This may be an indicator of continuity of significance for the motives that foreign investors had when they came to BiH, which can serve as the good basis for keeping these investors in the country.

Certainly, these results also show significant limitations that BiH has in its positioning as a favorable investment destination. These limitations can be seen in the following:

- as the research results show that there are no factors identified as particularly significant motives for foreign investors, it is necessary to examine and identify the factors by which BiH would be recognizable on the investment market and use them to shape promotional and other activities within the development of place marketing. Investors' requests are indeed heterogeneous, regarding the nature of their investment and they are usually individual for every single investor. However, it is important to emphasize the factors that might particularly motivate foreign investors to opt for investment in BiH;
- as foreign investors give low grades for the attractiveness of the business ambience for investment, it is necessary to further examine the causes for such a situation. It is particularly important that following such analysis, credible measures are taken for removing these causes, which would positively affect place marketing;
- the participants are partially satisfied with the results of their business activities in BiH, which can largely be the consequence of system limitations in the business environment. It is therefore important to examine whether and to what extent their business results were affected by market relations and investors' competitiveness or by system solutions within the economic and legal as well as political environment. If the system solutions within the economic and legal as well as political environment are identified as being significant limitations for the realization of better business results of investors, credible measures need to be taken for the improvement of these solutions.

BiH has so far taken a series of activities in order to present itself as a favorable investment destination. BiH is the member of the *Multilateral Investment Guarantee Agency (MIGA)* and the signatory to the *Convention on the Settlement of Investment Disputes between States and Nationals of Other States*. In addition, the state Foreign Investment Promotion Agency has been established. A special *Law on the Policy of Foreign Direct Investment in Bosnia and Herzegovina* was adopted, in efforts to regulate the issue of support to foreign investment.

However, it seems that the past activities did not yield the expected results as the perception of the business ambiance in BiH by foreign investors is not at a high level.

## **Conclusions**

*Summary of the findings:* Place marketing may be a significant determinant in attracting FDI. Indeed, appropriate preconditions need to exist so as the concept of place marketing to be appropriately implemented or to result in the realization of the objectives set. The assumptions for a successful application of the concept of place marketing in attracting FDI are reflected in: a) creating the recognizable characteristics of the location that would enable the location to be differentiated in comparison to its competitors while at the same time these characteristics need to be relevant for foreign investors, b) creating the measures with the implementation plan so as to remove the identified drawbacks of the location and make the location more attractive to foreign investors, c) constantly developing communication with foreign investors so as to fully and timely inform them on investment potentials of the given location. A significant affirmative argument in communicating with potential investors may be the presentation of positive experiences of the existing investors and their recommendations. It is important to mention that the application of place marketing aimed at attracting FDI is not an ad hoc activity. It requires constant systematic work on the following: a) identification of trends on investment markets and the needs of individual investors in terms of the development of their investment, b) improvement of the business ambiance at the location, c) creation of the network between the location and other complementary locations, and d) communication with the existing and potential foreign investors.

The research goal was reached – the experiences of foreign investors in BiH have been identified and the elements have been suggested that might be used in creating place marketing and positioning BiH as an investment destination. Besides, certain limitations have been identified that BiH has in its positioning as a favorable investment destination. That is why the research hypothesis may be accepted which states that foreign investors' experiences are important knowledge for creating place marketing of BiH as the factor in attracting foreign investors. In other words, the experiences of foreign investors related to the motives they had when opting for investment into BiH may be used through place marketing as the affirmative element in keeping the existing foreign investors and attracting the new ones. On the other hand, the experiences of foreign investors related to their satisfaction with the business ambiance and business results might be used as the guidelines for the improvement of place marketing of BiH and attracting new foreign investors.

*Managerial implications/management knowledge:* The foreign investors that participated in their research indicate that their motives for investing in BiH are mainly related to: the availability and acceptable price of production inputs, labor force, and privileged trade agreements that BiH has with other countries, and stimulating measures of the state. These factors have the average significance for the participants and they mainly characterize the countries that are usually seen as our competitors in attracting FDI. This is a great challenge for the authorities in BiH as they should create a set of characteristics that would differentiate this country from other competitors in attracting foreign investors. Naturally, these characteristics need to be those that are also important to potential investors. Another challenge for the development of place marketing aimed at positioning BiH as an attractive investment destination is the fact that the existing investors do not give high grades for the attractiveness of the business ambiance in the country. For example, in 2013, the participants graded the business ambiance in BiH with 2.30 on average, while those in 2018 graded it with 2.41 on average. The authorities in BiH need to create an urgent set of measures and the plan for their realization so as to improve the opinion that foreign investors have about the business climate in the country.

It is also necessary to speed up the process of Euro-Atlantic integrations in order to stabilize the political environment in the country and create the feeling of security among foreign investors. This trend would encourage various level of authority (entities, cantons, and district) to act more efficiently in harmonizing the measures of economic policy and consequently reduce the negative consequences of high decentralization and reaching consensus among these levels of authority, which affect the economic development.

*Research limitations:* The research results presented are seen as an important input for decision makers in BiH in terms of development of place marketing so as to improve the influx of FDI. However, the research also has certain limitations, related to the analysis of the causes of low satisfaction of the participants with the business ambiance. The causes for such a situation need to be identified in detail, so as to create the appropriate measures for improving place marketing. Another limitation is related to the fact that the research did not analyze the ways in which foreign investors make their decisions to choose the investment destination.

*Recommendation for further research:* Future research should focus on two fields. First, the research into the image of BiH on the investment market (among potential investors) would identify the positive and negative aspects of the perception that potential investors have about BiH as an investment destination. Second, the research into the process foreign investors' decision making regarding their selection of the investment location might identify the basic and additional criteria which investors use to select the location. In this way, we would get significant inputs for the development of place location of BiH aimed at its successful positioning among foreign investors.

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## Is Flipped Classroom Effective on Higher Education for the Case of Economics?

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### ABSTRACT

Flipped classroom has received much attention as it might increase learning effectiveness and improve learning outcomes in higher education as well as in elementary, secondary education, and business education. In the author's classes on economics, a blended class constitutes of flipped classroom and lecture, questionnaires and studying data, and outcome data were collected to evaluate the learners' studies and to make a learning analytics system. This paper shows that a flipped classroom promotes the effectiveness of education, but it is difficult to promote active learning such as spontaneous incentives for study in some cases. Class planning and much more investigation are necessary and important.

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### Introduction

Recently, universities and postgraduate researchers have provided questions about the effectiveness of traditional lecture-based teaching styles (Barr & Tagg, 1995; Moreno & Mayer, 2002). Despite innovations in ICT (information, communication, and technology) enabling new techniques valuable for pedagogy, traditional lectures are still the main and central teaching style. The reason may not be that some educators are not familiar with the ICT. Also, the word active learning has received much attention to promote studying.

On the other hand, many educators have seemed to worry about the complexities of teaching and learning for understanding as opposed to knowledge-based education. An increasing rate of university learners in newly industrializing economies and Japan may be one reason. Educators in universities are struggling to discover new strategies that enable learners to increase the effectiveness and incentives of the learning process. Active learning may be one solution, but introducing active learning may not lead to active study for students.

According to Prince (2014), active learning is an umbrella for pedagogies that focus on student activity and student engagement in the learning process. It enables learners to learn more effectively in learning activities as reading, writing, discussion, or problem solving that promotes analysis, synthesis, and evaluation skills. If the goal of teaching is to engender understanding, educators must move from memorization of knowledge and facts, known as surface learning, to deep learning in which understanding is promoted from active and constructive processes (Kurihara, 2016).



Flipped classrooms have recently been introduced in education. The flipped classroom is a reversed way of traditional teaching in which learners use materials outside of class, such as at home, usually in the form of videos or books, then perform their additional work, such as problem-solving, discussion, or debates, in the classroom (see, for example, Schmidt, Stancy, & Ralph, 2016; Strayer, 2012). Usually, video is used for preparing the class.

Flipped classroom expansion increases opportunities for educators to produce more high-quality online content, so classroom time can be used to engage learners or group learning. Learning management systems (LMS) and some related hardware and software improvements have been enhanced to assist educators to establish these classrooms (Bates, 2005).

As flipped classrooms have received much attention, many studies have begun to be published. Nicholas (2008) estimated that 92.3% of students felt that problem-solving in flipped classrooms is useful. Prensky (2001) and Bergmann and Sams (2012) indicated that learners can develop skills and gain more understanding of the subjects being taught. Fitzpatrick (2012) discovered that flipped classrooms make a student-centered learning environment that increases technology usage and emphasizes collaboration among students. Milman (2012); Steed (2012); and Louhab, Ayoub, and Talea (2018) showed that learners can study at their own pace rather than listen to a video lecture on a subject that they already understand. Learners can view lectures on a PC but also on mobile devices whenever it is convenient to do so. Goodwin and Miller (2013) indicated that most educators who challenged this method found it useful, especially for educators with special needs and for learners in advanced levels. McLaughlin, Griffin, and Davidson (2013) showed that flipped classrooms encourage student empowerment, development, and engagement. Schneider, Wallace, Blikstein, and Pea (2013) indicated that learners who engage in open-ended exploration first demonstrated better performance than those who used traditional textbook materials first. Steen-Utheim and Foldnes (2018) found that students show a more positive learning experience and higher engagement in the flipped classroom than with only traditional lectures.

The peer effect among learners is also expected. Positive learners can participate in classroom activities amid interactions with other learners. Mok (2014) reported the pros of flipped classrooms as learners may develop their opinions by seeing classroom videos as many times as required to prepare for class. Gilboy, Heinerichs, and Pazzaglia (2015) showed that most of the learners who completed the evaluation preferred flipped classrooms compared with traditional pedagogical strategies.

Flipped classrooms should relate to active learning. Active learning classrooms include individual activities, paired activities, informal small groups, and cooperative student projects; however, the classrooms include many group activities such as conceptual mapping, brainstorming, collaborative writing, case-based instruction, cooperative learning, peer work, role-playing, simulation, project-based learning, and peer teaching. Teaching others is sometimes an effective way to learn. Steed (2012) found that moving away from lectures to more active learning methods may be beneficial to student outcomes. Bosch et al. (2008) showed that active learning methods, including collaboration and cooperation on the flipped classroom paradigm, are hallmarks of existing learner-centered teaching methods.

However, Ash (2012) indicated that this method emphasizes an antiquated aspect of lecture. Goodwin and Miller (2013) showed that little rigorous research has been performed when evaluating the effects of this style of pedagogy. Findlay-Thompson and Mombourquette (2013) indicated that learners in flipped classrooms and those participating in traditional lecture classes have the same outcomes. Talbert (2012) showed that pitfalls of the flipped classroom include educators' preparation time, learner resistance to taking on increased responsibilities for learning, and culture shock for learners who are accustomed to lecture-style learning. Atteberry (2013) found that flipped classrooms may not result in any differences in learning outcomes; the study found no grade (outcome) differences in a comparison of the flipped classroom with the two other traditional-lecture style classes. Missildine, Fountain, Summers, and Gosselin (2013) discovered that flipped classrooms can result in improved learning but not necessarily improved learner satisfaction. Strayer (2007, 2012) indicated that learners who participated in flipped classrooms were less satisfied with the learning method than learners in the traditional classroom. Some learners were uncomfortable with group learning activities, and others were accustomed to the traditional

method of doing assignments on their own. Some Japanese students feel the same way. Despite interest in the flipped classroom approach, no robust framework has been provided for the design (Chung, 2018).

A blended class, which is half-flipped and half-lecture classroom, is used in my class. The use of the primary sources includes a bimodal collaborative teaching method as learners collaborate by sharing their thoughts prior to the class, and the beginning of the class incorporates a student-centered collaboration based on the primary sources. One possibility is a blended course that combines face-to-face interaction work with educational content delivery online (Garrison & Kanuka, 2004). This collaborative discussion on the primary sources may serve as the gateway to the meaningful topics discussion (Westermann, 2014). Crews and Butterfield (2014) indicated that the most positive impacts of learning are interaction in class discussions, group problems, and other types of active learning. Van Wyk (2018) revealed that flipped classroom digital pedagogy improved economics students' academic performance and perceptions in an online open distance learning environment. One of the benefits of this alternative approach to flipped learning compared with the traditional classroom is that it relies on a deal of collaboration, but it still allows the use of significant class time for lectures and Socratic discussion, which is a critical element in the classic humanities canon of instruction. Davenport (2018) indicated that flipped classrooms improved students' critical thinking skills. Also, in flipped classrooms, mandated study is emphasized over spontaneous study, so it seems dangerous to rely heavily on a flipped classroom.

In some cases, it seems that mature learners are opposed to the flipped classroom as the other students' attitude are not possible ones. Some students are quite passive. The instructor giving a quiz or checking notes at the start of the class is sometimes efficient and important.

## **Theoretical Analysis**

Considering the above section, one of my classes is conducted with the following syllabus:

*Subject:* International Financial Markets (2 units)

*Theme:* International Financial Markets: Theory and Reality

*General explanation:* International finance includes financial markets, exchange rates, international balance of payments, monetary and fiscal policies under the global economy, and so on. This class focuses on markets in the field of international finance. Theories of international financial markets are the main topic of this class; however, realistic aspects related to these theories are also examined. In every class, real phenomena are checked and discussed.

*Goal:* Understanding basic theories of international finance and the real conditions of international financial markets

*Method of class:* Blended class that uses a flipped classroom and lectures. Lectures include peer review, group work, practice by doing group discussion and demonstration, and teaching others. Class will become the place to solve problems, advance concepts, and engage in collaborative learning. Of course, you have to ask and answer many questions in this class for participation. Traditional lectures are provided using Socratic discussion.

*Content and schedule:*

1. Introduction, guidance
2. Foreign exchange markets: Nominal exchange rate, real exchange rate, foreign exchange markets all over the world, trade volume, globalization of the yen
3. Financial markets: Japanese financial markets, international financial markets, capital flows, commodity markets, theory of intertemporal money allocation
4. Financial institutions 1: Japanese financial institutions, US financial institutions, central bonds and stocks, credit creation
5. Financial institutions 2: Bonds and stocks, price and yield, portfolio theory

6. Exchange rate determination 1: Purchasing power parity theorem, monetary approach
7. Exchange rate determination 2: Uncovered interest parity, covered interest parity, portfolio approach, quiz
8. Monetary system and intervention: History, monetary systems around the world, intervention
9. Financial crisis: Theory of financial crisis, Asian financial crisis, Lehman shock, role of the IMF
10. International balance of payments 1: What is international balance of payments, elasticity approach, J-curve effect?
11. International balance of payments 2: Absorption approach, saving-investment approach, quiz
12. Open macroeconomics 1: Financial and fiscal policy, financial and fiscal policy under open macro economy
13. Open macroeconomics 2: IS-LM analysis
14. Financial derivatives 1: forward/future, option
15. Financial derivatives 2: swap, quiz.

*Pre-study and after study:* Pre-study is to listen the video and read textbooks. After study is to study materials presented during the class.

*Evaluation:* Examination: 65%; Quiz: 15%; Report: 10%; class activity: 10%.

*Message:* (1) If you are not competent in communication skills, never mind. Such skill is not related directly to evaluation. (2) There is some possibility for using a clicker (or your smart device); however, your private information is not necessary to enroll. (3) In every class, at least four newspaper articles are used.

Next, this paper mainly analyzes the effectiveness of the flipped classroom and the effect on the students' ability.

## **Empirical Analysis**

### 1. Method

The philosophy behind the flipped classroom method may be that it allows all instructors to teach both content and process in the class. My class includes flipped classroom and lecture settings. In both of them, active learning is performed. Learning includes some important step processes including transfer of information, making sense of that information by connecting it to learners' own experiences and organizing the information in the mind, and inspiring continuous (lifelong) learning. Via active leaning and lecture, learners may not only increase their studying time but also improve problem-solving and skill development and may gain more understanding of the issues. Online videos and ICT resources help understand the theory ahead of class meetings, and collaborative study fosters deep learning of the theories and enables students to apply the theories to case studies and solve problems.

The following questions were asked of class participants:

- (1) How many times did you use video pre-class per each class?
- (2) Which was more effective: pre- or post-study?
- (3) How long did you listen to the video (minutes)?
- (4) Did it help your understanding?
- (5) Did it change your method and quality of your learning?
- (6) Did it make you challenge spontaneous study?
- (7) Did you feel growth as a learner?

The number of the answers is 112 (three different kinds of classes, 2 universities).

## 2. Results

The results of Question (4), (5), (6), and (7) are shown in Table 1.

**Table 1:** Descriptive Statistics

	Question(4)	Question(5)	Question(6)	Question(7)
Average	4.692	4.635	4.281	4.198
Standard error	0.130	0.125	0.234	0.154
Standard deviation	0.789	0.785	0.998	0.705
Variance	0.632	0.619	1.001	0.468
Kurtosis	2.340	0.788	1.829	1.505
Skewness	-1.348	-0.756	-1.009	-0.716

The results are clear, and almost all of them are as expected. However, at least one important thing is left to improve the classes. All of the video material were undated before the classes (several days before), but they were deleted one day later after class. In general, flipped classroom using video continues to upload the videos, and students use them after the class. Also, students who cannot attend the classes would like to use them in the future, and, in general, students would like to use them repeatedly. The reason why my class adopts such a method (deleting each material (video) one day's later) is to increase the pre-study and improve problem-solving skill. Thinking time and opportunities should also be increased.

If the videos are uploaded for a long time and are made for after-study, some students would feel better, and there would some possibility of the improving the scores of questions (4) and (5). Surely, it would be better for some subjects or some materials to take such elements into accounts, but there would cause large sacrifices as mentioned before. Kurihara (2016) showed that the effects of my flipped classroom are clearly divided into: (a) challenge and growth and (b) understanding and quality. Also, (a) and (b) are not attained at the same time. Flipped classrooms can promote the effects of education. Also, it may be difficult to combine a flipped classroom and active learning. If the mandated study is emphasized instead of spontaneous study in flipped classroom, it seems dangerous to rely heavily on a flipped classroom. Spontaneous study is very important, so it is important to avoid interruptions to spontaneous study. There are some cautions about the need for both educators and learners to be properly trained in how to use and teach in a flipped class. In my class, active learning of lectures is introduced to promote the quality of the class; however, active learning sometimes can dampen the quality as spontaneous study may be damaged. Flipped classroom is very effective for mastery studying, so sometimes spontaneous or active studying can be a sacrifice.

Viewing the recorded videos outside of class time is not enough to make the flipped classroom successful; the way teachers integrate instructional videos into an overall approach makes an important difference. It would be very difficult to achieve significant positive effects in my class by introducing a flipped classroom and active learning at the same time; however, it would not be impossible. It is possible that a blended class that combines the flipped classroom with lectures may be one key issue or solution. It should be noted that both flipped classrooms and active learning themselves are not objectives to be introduced but just methods to promote class quality and understanding of learners and to spur incentives to study. Flipped classrooms are not the goal.

Finally, equation (1) is regressed based on the learning analytics system.

$$\text{Final result} = \alpha + \beta \text{present} + \gamma \text{Times of seeing the video} + \zeta \text{Small test} + \varepsilon \quad (1)$$

This includes my learning management system (LMS) and can be used by learners. Learning analytics system is for educators and for learners. Learners also know the other students' study (sparring time, times of seeing the video, and so on) during the semester.

**Table 2:** Descriptive Statistics

	Final result (0-100)	Present (0-15)	Times of seeing the video (0-)	Report (0-10)	Small test (0-15)	Exam at the end of the semester (0-65)
Mean	80.75	13.93	38.18	8.81	9.12	53.75
Median	83.00	15.00	32.50	9.00	10.00	57.50
Maximum	100.00	15.00	97.00	14.00	15.00	64.00
Minimum	7.00	12.00	24.00	7.00	4.00	25.00
Std.Dev.	17.87	1.43	18.71	1.32	3.50	14.92
Skewness	-0.67	-0.58	2.28	0.53	-0.16	-0.69
Kurtosis	2.41	1.40	7.40	1.55	1.49	2.40
Jarque-Bera	1.45	2.61	26.83	2.14	1.59	1.50
Probability	0.48	0.27	0.00	0.34	0.45	0.47

**Table 3:** Regression Analysis

Method	OLS	Robust squared estimation	OLS	Robust squared estimation
C	-19.993 (-0.488)	-28.714 (-0.601)	-29.198 (-1.011)	-29.322 (-0.845)
Present	6.997** (2.24)	7.628 (2.095)	6.378*** (2.807)	6.430*** (2.555)
Times of seeing the video	0.107 (0.45)	0.094 (0.337)	0.060 (0.354)	0.043 (0.214)
Small test	-	-	1.751** (2.195)	1.800* (1.878)
Adj.2/adj.Rw2	0.260	0.445	0.590	0.704
F-statistic/Rn- squared statistic	3.462	5.826	8.214	17.285
Prob(F-statistic/ Rn-squared statistic)	0.064	0.054	0.003	0.0006
D.W.	1.220	-	1.467	-

Note: Parentheses are t-value (LS) and z-value (robust squared estimation). \*\*\*, \*\*, \* denotes significant at 1%, 5%, 10% respectively.

The results are almost as expected. Viewing video many times is not necessarily related with the high scores of the final result. It is, of course, reasonable to improve the scores of (4)-(7), but too much independence on mandatory study, for example, is sometimes meaningless for higher education.

## Conclusions

This study was informative in that it confirmed that flipped classrooms have yielded both positive and negative outcomes. Flipped classrooms have received much attention as they may increase learning outcomes and effectiveness. On the other hand, this method also

includes some cons. My international finance (economics) class blends a flipped classroom and lecture; a questionnaire for learners provided the data used herein.

It appears that for the flipped classroom to be an effective teaching methodology, a number of processes must be in place. However, there are some cons at least for my classes. The most important thing is that active learning and flipped classrooms cannot always coincide. It is a serious problem. Bonwell and Eison (1991) showed that active learning methods require learners to utilize higher-order thinking skills such as analysis, synthesis, and evaluation. For example, additional video clips and optional study that cover advanced topics can be prepared to cater to top-tier learners who may want to explore beyond the syllabus. As these, spontaneous study should not be interpreted. Instead, it should be promoted if the good outcome does not appear soon. Educators, including me, should be instructors who have knowledge about how learners learn. Davenport (2018) found that the availability of resources, including the textbook, online videos, and classroom collaboration, is important as a key component of students being able to succeed. Also, learners must come prepared for each session by watching the assigned video lectures or studying. Learners should also understand the purpose of the flipped classroom and should communicate. Bergmann et al. (2011) showed that it is important to create a situation in which learners take responsibility for their own learning. Reflection is important for learners to think and work through an idea to make the necessary connections before they discuss it with others. Class planning and much more investigation are necessary and important.

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