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## DATA ANALYSIS AND STRUCTURAL EQUATION MODELLING FOR DIRECT FOREIGN INVESTMENT FROM LOCAL POPULATION

Aleksandar Krstev<sup>1</sup>, Dejan Krstev, Boris Krstev<sup>3</sup>, Sladzana Velinovska

<sup>1</sup>Faculty of Computer Science, Goce Delcev University, Stip, Macedonia

[aleksandar.krstev@ugd.edu.mk](mailto:aleksandar.krstev@ugd.edu.mk)

<sup>2</sup>Faculty of Natural and Technical Sciences, Goce Delcev University, Stip, Macedonia

[boris.krstev@ugd.edu.mk](mailto:boris.krstev@ugd.edu.mk)

**Abstract:** There is great interest around the world, and lately in our country and facilities associated with industrial heritage to promote direct foreign investment as an attraction for possibly development. It's very attractive possibility for full affirmation of its valuable heritage. The direct foreign investment (DFI) as a specific development segment mainly standardized diversify the economic offer of offering domestic possibilities a different experience aesthetics of the economy. The direct foreign investment has the potential to improve the social, economic and environmental elements of the local community, as well as to expand the development of state economy growth. Work study examines community support for that development in the context of sustainable development. This topic is interesting for processing because it deals with specific and so far in Macedonia untreated problems and aspects arising from the relationship between the local community and the state efforts for better conditions for development and higher standard.

**Key words:** investment, heritage, potential, sustainable development

### 1. Introduction

A unique feature of direct foreign investment (DFI) as an activity or moving element that shaped the local community and set of functions that are specific to many areas across the globe (Ballard and Banks, 2003). The most important characteristics of the economy and industry areas are geographic, economic and social isolation, modification of the natural environment, the presence of large facilities and infrastructure that affect the design of landscapes and a strong labor movement.

Direct foreign investment (DFI) or financial funds are constantly faced with the discontinuance of resource exploitation, which eventually leads to comprehensive social change and economic crisis. The possibility of providing development by means of foreign capitals for facilities and industrial plants become ruins leading to the decisive rejection in symbolic and material terms, but the area and its population look for other symbols and alternative economic activities. Therefore, it is necessary to provide viable alternatives that could be compared to the benefits generated faster development and better standard.

The industry heritage in the broader context of studying the development of dealing activities, buildings and landscapes that come from earlier periods of intensive industrialization. The local economy is part of a broader category, which deals with the history of settlements (Edwards and Llurdes 1996; Nuryanti 1996). The sense of pride and wonder of the engineering achievements of the industrial revolution, creates a special feeling with economics which is especially important in educational terms. Sustainable development in the context of the development of economy and new technologies as an activity does not call into question the long-term economic feasibility of extraction of resources, but focuses on the protection of the negative social and environmental consequences.

The aim of this paper is to examine the extent to which the local population agrees with the sentence and determine whether their perception of various aspects of sustainability affects support overall sustainability of the economy and industrial development. [1,2,3,4,5,6,7]



## **2. Social, environmental and economic sustainability**

In the social context of economy is associated with an uncompromising exploitation of workers and the hard life of their families according to the post communism period. For the development of the industry and economy, it is important to provide support and political factors, which should feel like a part of the project and to ensure the political and economic certainty of its further development. In this process, it is essential that local people participate in the decision-making process with the ability to selflessly share their experience, skills and knowledge. Many companies have interests that are accountable to local people and become aware of the need to reduce conflict with key stakeholders (Black, 2006; Kapelus, 2002). Limited regeneration of the natural environment is achieved publicity about the wider social engagement, promoting space that is radically changed as a result of human activities, and today again contains a visually attractive landscape that are completely contrast.

Economy with direct foreign investment, different industry and different advanced technologies provided higher employment, providing an alternative to living on welfare. The development of industry leads to the creation of a new image of local towns, villages, but the places in which it can achieve a higher quality of life, higher employment and active protection of natural and cultural values in service all kinds of development.

Since the development of communities must be based on diversification of the economy based on the development of economy projects to promote domestic industry. Local community planning and use tourism as an alternative means of stimulating economic development needs to develop sustainable tourism which can meet the needs and demands of its citizens.

## **3. Methodology and research results**

### **3.1. Data collection and sample**

The research was conducted in order to identify key aspects of sustainability of the direct foreign investment is perceived by locals. The questionnaire/survey includes statements that measure aspects of sustainability of the direct foreign investment: social, economic and environmental sustainability. The research model (Figure 1) that was used for the realization of empirical research includes four variables: social sustainability, economic viability and environmental sustainability and support for sustainable direct foreign investment and development of the economy and industry heritage. The independent variables are social, economic and environmental sustainability, and the dependent variable is to support sustainable development. [8,9]

The research was conducted on a sample of 600 respondents who makes the local population of the direct foreign investments (DFI) of Bitola, Shtip and Kavadarci, The Republic of Macedonia. When formulating a sampling strategy, was taken into account that the sample covers approximately equal number of men and women in the mentioned towns, with different education and different occupations, and that includes individuals of different age groups ranging from 18 to 60 years.

The structure of the sample makes 45.0% of male respondents and 55.0% of female respondents. The largest proportion of respondents in the age group of 21-25 years (35.0%), and respondents between 36-45 years (25.0%) and respondents between 26-35 (25%). The least numerous are those in the age group 46-50 years (7.0%), and less 20 years (4.0%) and over 60 (4.0%). If we analyze the level of education, 40.0% of respondents had completed high school, 30.0% have a college degree, and 30.0% of examinees had education at the primary level. When it comes to employment, the sample includes 55% of employees and 45% of the unemployed. Regarding marital status, 55.0% were married / married, and 45.0% were unmarried / unmarried. The sample mainly consists of respondents in various ways involved in direct foreign investments (DFI) as an activity (15%), while respondents who were not involved in direct foreign investments (DFI) accounted for 85%.

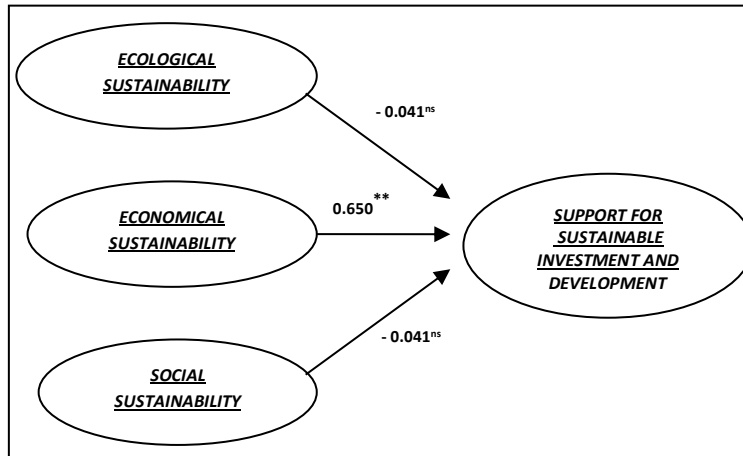


Figure 1. Research model

Notes for model:  $p < 0.05$  (\*\*), ns – not significant

Table 1. Demographic structure of the sample (n = 600)

	Number of sample (%)
Male	270 (45,0%)
Female	330 (55,0%)
<b>Age</b>	
<20	24 (4,0%)
21-25	210 (35,0%)
26-35	150 (25,0%)
36-45	150 (25,0%)
46-60	42 (7,0%)
>60	15 (4,0%)
<b>Education</b>	
Elementary school	120 (20,0%)
High school	240 (40,0%)
College	60 (10,0%)
Faculty	180 (30,0%)
<b>Marital status</b>	
Married/Married	330(55,0%)
Not married/Unmarried	270 (45,0%)
<b>Employment</b>	
Employed	330 (55,0%)
Unemployed	270 (45,0%)
<b>Involment in DFI</b>	
On	80 (15,0%)
Off	520 (85,0%)

To create a clear and concise questionnaire, organized focus groups (Bitola, Shtip and Kavadarci - each one with 200 respondents). For ease of use of the questionnaire/survey consisted of a printed page. After making questions, the survey pre-tested on a small sample of 20 randomly selected respondents. The results of this pilot survey we found that the allegations in the questionnaire clear and easy to understand and there was no need for any additional changes. Respondents who agreed to participate in the study provided sufficient time to consider their responses. It was agreed that interviewers contact respondents and collect questionnaires after three days. Of the 650 respondents, 600 of them returned the completed questionnaire interviewers. Subsequently, questionnaires were tested, and 10 of them were excluded from further analysis due to the fact that they are not adequately filled. [10,11]

### 3.2. Measures

Claims are chosen reviewing relevant literature. Social sustainability is measured by six statements which were selected based on the study of Chen and Chen (2010), Dyer et. al., (2007), Kuvan and Akan (2005), Vargas-Sánchez, et. al., (2009), Oviedo-Garcia et. al, (2008) and Choi and Sirakaya (2005). Economic viability is measured by two statements which were selected on the basis of studies, Chen and Chen (2010), Vargas-Sánchez, et. al., (2009), Kuvan and Akan (2005), Dyer et. al., (2007), Oviedo-Garcia et. al, (2008) and Choi and Sirakaya (2005). Four arguments are used for ecological sustainability and designed on the basis of allegations that use Kuvan and Akan (2005) and Choi and Sirakaya (2005). Support sustainable DFI of the economy heritage which is measured via two assertions on studies Lee (2013) and Dyer et. al., (2007). All claims are additionally adjusted for the purposes of this study. The research model is shown in Figure 1. All statements were measured by Likert scale of five points (1-I fully agree, 5-I completely agree).

### 3.3. Data analysis

Data analysis was performed through the **Statistical Package for Social Sciences** (version 12.0) and the **AMOS** (version 18.0). The following statistical analyzes: **correlation analysis, confirmative factor (CFA) and structural equation modeling (SEM)**.

### 3.4. Results

In the first step, based on the value of the coefficient Cronbach's alpha was estimated reliability and internal consistency of the statements through which the measured latent variable models (Table 1). All variables have an adequate level of reliability, as the coefficient of Cronbach's alpha over the required threshold is 0.6. The results show that the highest degree of reliability is reflected in variables Environmental sustainability (Cronbach's alpha = 0.896), whereas in the case of variable support sustainable DFI present a slightly lower level of internal consistency of the statements which have been used for its measurement (Cronbach's alpha = 0.615). The condition of convergent validity was met by the fact that the AVE of all constructions was greater than the minimal threshold of 0.5. Through comparison of AVE and squared correlations between constructs, discriminant validity was also analyzed. Given that the value of AVE for each individual construct is greater than the squared correlations between the given construct and other constructs, discriminatory validity was assured for model variables. Composite reliabilities (CR) of all variables were 40.8 suggested that composite reliability should be great than 0.6.

Table 2: Construct inter-correlation matrix, AVE, CR and Cronbach's alpha

	Economical sustainability	Environmental sustainability	Social sustainability	Support for DFI sustainability development
Economical sustainability	1.00			
Environmental sustainability	0.50 <sup>***</sup>	1.00		
Social sustainability	0.75 <sup>***</sup>	0.65 <sup>***</sup>	1.00	
Support for DFI sustainability development	0.60 <sup>***</sup>	0.25 <sup>***</sup>	0.40 <sup>**</sup>	1.00
AVE	0.75	0.70	0.50	0.50
CR	0.85	0.90	0.85	0.70
Cronbach's alpha	0.85	0.90	0.85	0.60

Table 3: Fit indices

Fit indices	X <sup>2</sup> /df	CFI	TLI	IFI	RMSEA
Recommended values	< 3	> 0.90	> 0.90	> 0.90	< 0.1
Model values	1.75	0.95	0.95	0.95	0.08

In order to test the influence of the independent variable on the dependent model, we used SEM (**structural equation modeling**). We looked at the impacts of social, environmental and economic sustainability in support of sustainable development. In this case, the only variable is the economic viability showed a statistically significant effect on the support that the local population has when it comes to sustainable **DFI** development of the **DFI** heritage ( $\beta = 0.647$ ,  $p > 0.05$ ). The other two variables do not show a statistically significant effect on the local population support the sustainable development of **DFI**. The above research findings clearly indicate that the local population believes that the economic benefits of **DFI** development provide their full support for the sustainable development of the **DFI** heritage, especially if **took** into account that the municipalities (**above mentioned towns**) one of underdeveloped in **Macedonia**.

Table 4: Results of SEM analysis

Parameter	B	p
Social sustainability → Support for tourism sustainability development	-0.041 <sup>ns</sup>	0.85
Environmental sustainability → Support for tourism sustainability development	-0.041 <sup>ns</sup>	0.75
Economical sustainability → Support for tourism sustainability development	0.650 <sup>**</sup>	0.01

\*\* Correlation is significant at the 0.05 level

## 5. Conclusion

By encouraging a lifestyle that is characteristic of the **industrial and economical** community will keep a written record of their existence and attributes that otherwise may have disappeared. One of the ways that **industrial and economical** communities benefit from their **DFI** heritage, and also by the protection and the development of **economy**. Achieving sustainability is possible if the local **industrial and economical** community is involved in the formation of the image of **the local places**, because only in this way can ensure the authenticity of the **DFI** heritage. Given the specific and unique challenges of development of the **DFI** heritage, it is recommended to cooperation at national and international level in order to identify good practices and utilize their experience to achieve sustainability.

The research provides a significant contribution to the existing literature by highlighting the links between various aspects of sustainability and support the sustainable development of **DFI** heritage in the specific environment of the local **industrial and economical** community. Similar studies were implemented in a very small number of studies in the field of **industry and economy**, so in that sense, the proposed research model has a certain amount of innovation, primarily because of its specific composition. The resulting research findings confirm that there is a significant correlation between perceptions of economic sustainability and support the sustainable development, primarily as a result of the high expectations of the potential benefits when it comes to the future economic development of local communities that could potentially arise from the development of the **industry and economy**. This result arises because of the negative impact of the global economic crisis, primarily due to the fact that the study was escorted to the **industry and economy** community that is largely dependent on the development of this one, which recently was faced with serious problems.

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