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STAKEHOLDERS PARTICIPATION FOR URBAN CLIMATE RESILIENCE: A CASE OF INFORMAL SETTLEMENTS REGULARIZATION IN KHULNA CITY, BANGLADESH

*Sujit Kumar SIKDER**, *Asad ASADZADEH**, *Elias Danyi KUUSAANA**,
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Abstract: This study focuses on stakeholders' participation, perceptions and local contextualization in the Informal Settlement (IS) regularization processes in Khulna City. These processes are undertaken to address livelihood challenges of IS dwellers and to operationalize development initiatives in informal regularization projects. Adopting both a qualitative and quantitative approach, the research results show that IS formation in Khulna City started slowly with rural immigration. These immigrants remain vulnerable to climate change although some initiatives were undertaken since the last 20 years to improve their living conditions. The IS dwellers and local leaders initially participated in these settlement-upgrading initiatives due to accompanied incentives but they became adamant after the project period ended. It was also found that the city local government and NGOs do not have any permanent arrangement to sustain the IS regularization processes. The analysis of the interrelationships among the stakeholders revealed that the relevant public agencies are in conflict, and the role of the private sector is less recognized. The initiatives undertaken so far have limited success especially in granting tenure security, and the private landowners or local authorities that trespassed public spaces resort to forceful eviction. Amidst all these, there is the need for the formulation and implementation of climate resilience policies that address stakeholder participations in mitigating climate change consequences and enhance livelihood development.

Key Words: *informal settlements, urban resilience, stakeholder participation, Bangladesh*

Introduction

Rapid urbanization and population growth in hazard and risk-prone urban areas have jeopardized the sustainable development process in developing countries, and they contributed to the forming of one of the biggest urban challenges, differently called: informal, automobile, uncommon settlements; and the urban poor (Ravalion 2001). Most of these settlements are located in areas that are not deemed appropriate for residence (UN-Habitat 2003) while the residents have no legal claim to the land (Enemark and McLaren 2008). Moreover, regardless of their growing numbers and exclusion from the main and formal parts of the city, inadequate building materials, lack of public urban services and institutions, poor transportation networks, inappropriate power lines, inadequate hospitals, fire or police stations and poor sanitation have pre-disposed the vulnerability of the urban poor to climate change related disasters (Dodman and Satterthwaite 2008, Feiden 2011). According to Boshier et al. (2007), the severity of climate change in these settlements is related to poverty (low access to assets), marginalization (poor access to public facilities) and powerlessness (low access to political and social networks).

Nevertheless, the vulnerability of such communities to climate change is not simplified by focusing on their location and characteristics, but also by how they are managed, serviced and more importantly, to what extent communities and local organizations are capable to cope with climate change (Laukkonen et al. 2009). This is because the damages caused by climate

related disasters should not only be seen as natural events, but also as a failure of the urban management and institutions. Hence, there is a vigorous ongoing debate to demonstrate different ways to integrate climate risk and resilience in the informal settlements planning. For instance, Comfort (1999) emphasises collective learning and she argues that linking information technology and organizational learning presents an opportunity for the communities to be more resilient against shared risks. Therefore, by relying on institutional and community capacity dimensions in enhancing climate resilience, this paper intends to explore the dynamics of the stakeholders' participation in managing informal settlements; and the relevance of stakeholders' participation in informal settlements' regularization in the light of the emerging debates around building resilient cities.

Following the above introduction, the next section of the paper will review the literature on informal settlements and climate resilience. A brief overview on the informal settlement situation in Bangladesh is discussed in section three. The fourth section presents the study methodology and it is followed by section five which presents an empirical case study on Khulna city. The conclusion is presented in section six.

Informal Settlement (IS) and Climate Resilience

United Nations estimate that at least 900 million urban dwellers in low and middle-income countries live in poverty (UN-Habitat 2003) and 60% of the urban population by 2030 will fall into this social class (Cohen 2004). Over urbanization and the rapidly expanding urban informal settlements in developing countries will continue to face severe climate risks in the light of climate change (Tanner et al. 2009). Although Hardoy et al. (2001) argue that the concentration of people and enterprises also provides many opportunities including economies of scale, proximity or agglomeration of infrastructures to reduce risk, there are undeniable linkages between urban poverty and the vulnerability level to climate change. According to IPCC (2008) the poorest people in the least developed countries have lesser capacity to adapt and tolerate many effects of climate change. These effects are also widespread, interconnected and cumulative.

However, there is growing integration to address climate change risks by focusing on climate change adaptation and resilience (Jabeen et al. 2010). Climate change resilience is the capacity of an individual, community, or institution to dynamically and effectively respond to shifting climate impact circumstances while continuing to function at an acceptable level (Rockefeller Foundation 2014). The terms of capacity and adaption have become important issues in the international and domestic discussion on climate change resilience. Numerous definitions of adaptation are found in climate change resilience literature, mostly denoting on a common theme. Brooks (2003: 38) describes adaptation as "adjustments in a system's behaviour and characteristics that enhance its ability to cope with external stress". In the context of climate change, Smit et al. (2000: 225) refer to adaptation as "adjustments in ecological-socio-economic systems in response to actual or expected climatic stimuli, their effects or impacts". Satterthwaite (2007: 5) has tried to relate this definition to the urban scale, thus describing adaptive capacity as "the inherent capacity of a system, population or individual/household to undertake actions that can help avoid loss and speed recovery from any impact of climate change". To attain climate resilient cities, Jabeen et al. (2010: 430) emphasized that stakeholders should distinguish between "spontaneous" and "planned" adaptation. Planned adaptation is referenced to deal with hazards and to allow the local governments, stakeholders and planners to draw on scientific knowledge in order to map and to predict climate risks.

The central discussions on urban resilience focus on understanding the local response to climate change in the era of good governance and institutional approaches. Urban resilience applies to the social-institutional system, urban infrastructure and energy systems in urban areas (Aylett 2014). Therefore, there is the need to increase the ability of urban systems to

drive active stakeholders' collaborations along with innovations and new ideas. Notwithstanding the exposure to extreme unfavourable climatic conditions in urban informal settlements, about 1 billion people of the world's urban populations live in slums and the majority of them in the developing world. In addition, it is projected that in the next fifty years, two-thirds of the humanity will be living in towns and cities and a large part of this growth will take place in the form of informal settlements. This explains why the United Nations MDG-7 target 11 aimed to achieve a significant improvement in the lives of 100 million slum dwellers by 2010 through sustainable approaches on the complexity of informal urbanization. However, even if the MDG - 7 target 11 is achieved, the figure falls much below the population already living in informal settlements across the globe. Additionally, environmental degradation increases the people's mobility to cities and it contributes to intensifying the vulnerability of the victims (Renaud 2012, Resilience Alliance 2007). These poor people who are forced to migrate from the rural areas generally settle in the poorest and often most exposed neighbourhoods (i.e. informal settlements) in large cities (Aylett 2014, Revell 2010). UNFCCC was initiated to develop the adaptive capacity of poor people since the severe problems that emerged under climate change obviously made the poor people of the society more vulnerable (Oliver-Smith 2009). Therefore, the momentum for pragmatic changes may be realized by changing the situation at different levels in urban management as well. Warner (2010) contended that the current structures and organizations would not be enough to cope with the excessive immigration flows to the cities. Moreover, such human mobility due to climate change could become an issue for regional security. Hence, new modes of governance are needed to bridge the gaps in the protection and assistance of climate change migrants.

However, there are varied opinions about how to improve the situation as the number of informal settlers grows. According to Durand-Lasserve (1996) there will be 1.5 billion informal settlers by 2020 and hence they view the MDG-7 target as extremely inadequate. Besides, overall donor financing for achieving the MDG-7 target is very low. Hence, the UN and some partner agencies reported that the best way to address climate change impacts on the poor in suburban settlements is by integrating adaptation responses into development planning (World Bank 2010). There have been some attempts to identify the link between environmental change and migration (Mallick et al. 2011) as well as numerous studies (Warner 2010, Valkering et al. 2005) advanced to explore the stakeholders' behaviour. However, most of these studies did not focus on the urban informal settlements directly. Therefore, this paper contributes to the missing link between urban informal settlements and climate change and it shows how climate resilient cities can be promoted through enhancing the adaptive capacity of the urban poor at local scale.

The situation of Informal Settlements in Bangladesh

Bangladesh is already overwhelmed with many problems relating to high population density (953 per sq. km), land scarcity, human health and illiteracy (World Bank 2010). Consequently, informal urbanization has become a common phenomenon like other third world countries. About 5.5 million people are living in slum and informal settlements (Angeles et al. 2009). Tackling this situation has not yet adequately evolved due to inadequacies in the legal, institutional, economic and technical capabilities. Besides, Bangladesh is regarded as the most vulnerable country of the world in relation to climate change (IPCC 2008). Due to this, Bangladesh may see mass movements of people from the flood-prone areas to urban centres in search of non-agricultural jobs. For example, the worsening environmental situation in the Ganges delta could render migration as one of the most realistic options available for some Bangladeshi people (Warner et al. 2009).

There are two major factors that allow for the informal settlements development – a) the weakness of the statutory planning processes, and b) strong rural-urban migration (Vincent 2009). Roy and Abdullah (2005) have confirmed that the development of informal settlements

in Bangladesh is a consequence of migration. On their arrival in the urban areas, the poor migrants routinely turn to slums and squatter the settlements for affordable shelter. At present, approximately 35% of the population of the six major divisional cities lived in slum settlements, though they did so on only 4% of the land area of those cities. The total slum population across the cities was over 5.4 million as of 2006 (Angeles et al. 2009). About more than 90% of these settlements in different cities of Bangladesh are located on government and private land. Thereby living in these deprived neighbourhoods contributes to the social exclusion of the dwellers (Begum and Moinuddin 2010).

Considering how important it is to tackle the challenges of informal urban settlements, there have been several initiatives by the public sector for the informal settlement improvement since the 1980s (Siddique et al. 2002). However, most of these slum improvement initiatives were short-lived and with marginal impacts. The few projects that seemed to have recorded some impressive successful results begin to disappear at the end of the implementation periods. Patel (2013) argued that successful outcomes of formal changes are possible only if informal continuities (continuation of the power and influence of the local community development committee) after the project periods are established. Urban poor communities are still facing insecurity of land tenure, threat to eviction and inadequate services. Evictions have always characterised the urban management history of Bangladesh. The most recent massive eviction took place at the Korail slum in Dhaka, which was home to several thousands of people for over nearly two decades. According to the news report of the Daily Star (29th July 2009), the basic service infrastructures, under the provision of different NGOs and donor-supported programmes, were also demolished. This action was taken by two public agencies – the Bangladesh Telecommunication Company Limited (BTCL) and the Department of Public works, who owned these lands. These evictions were administered under the Ministries of Public Works as well as Science and Information Technology to free their lands from squatters (Alam and Akter 2012). These actions created an acute humanitarian crisis followed by massive demonstrations of by such homeless people. Finally, they created public sufferings and insecurity in the whole capital city. However, the divisional cities are now facing these kinds of problems due to the huge population displacement as a consequence of extreme event and climatic change consequences like cyclones and salinity (Mallick et al. 2011). This situation is also prominent in the coastal cities. In our view, there is a need to identify the critical actors, networks, agencies and institutional roles to address these problems within a practicable framework. Therefore, it is necessary to find out how to manage informal settlements with the active participation of the different actors and/or stakeholders in a coastal city like Khulna.

Methodology

Study area

The coastal zone of Bangladesh is generally perceived to be a zone of multiple vulnerabilities. The government of Bangladesh has already identified the coastal zone as “vulnerable to adverse ecological processes” and as one of the three “neglected regions” (Mallick et al. 2011). Moreover, it is reported that Khulna is one of the vulnerable coastal cities prone to climate change risks (CLACC 2009). Khulna is the third largest city in Bangladesh and it has been known as an industrial city with a population of more than one million inhabitants. It has experienced an extremely rapid urbanization during the 1950s and 1960s due to industrial expansion and rural-urban migration. The recent statistics indicate that about 19.5% of the urban population is living in slums and informal settlements, while 538 clusters have been identified all over Khulna city alone (Fig. 1). Since the industrial growth of the early '60s, informal settlements of Khulna remain as a popular home for strange immigrants (Murtaza 2000). These huge numbers of urban citizens are living in very miserable conditions with limited basic services and threatened tenure security. Meanwhile Khulna city has benefited to some extent from all the public and private sector initiatives for the informal settlements

improvement so far undertaken in several urban areas in Bangladesh. Yet, it is a matter of concern that most of these settlement improvement initiatives have insignificant progress for providing sustainable tenure security for the urban community. It is assumed that the initiatives are undertaken on a temporary basis without the consideration of stakeholders' participation. It is necessary to find out how informal settlers can get better tenure security through the active participation of different actors and stakeholders in the regularization process. The momentum for change may be realized by changing the situation at different levels in the urban governance structure. Therefore, by considering the location dynamics, the objectives and research goal, Khulna city will be a potential case study area for better research outcomes.

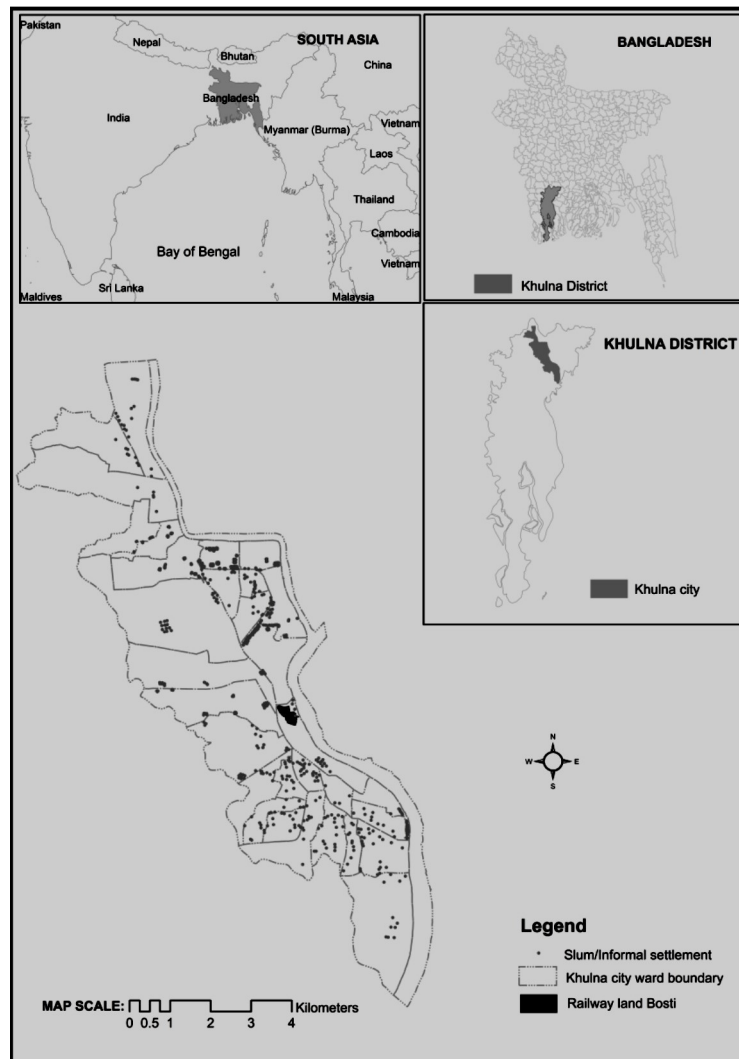


Fig. 1 – Location of Khulna city and Bosti railway land
 Source: ESRI world dataset, Khulna Development Authority (2001)

Informal settlements assessment

The study adopted a case base approach. At this point, a representative informal settlement was identified within Khulna city by formulating a set of pre-defined criteria. These criteria included land occupancy, the existence of improvement initiatives and significance in terms of population size, location and area (Table 1). After gathering all secondary information available on informal settlement clusters of Khulna city, we performed a preliminary desk based investigation and we also discussed with the local experts. As a result, the Bosti Railway land near Joragate was found relatively relevant as a case study. The area is located near the Central Business District (CBD) under the jurisdiction of Khulna city corporation ward Number 21. It is also known as 5 Number Ghat Bosti, Joraget Bosti (Fig. 2).

Table 1

Pre-defined criteria and their significance on Bosti Railway land

Pre-defined criteria	Criteria significance
1. The cluster settlement should be located on the illegally occupied public land.	1. The land belongs to the Bangladesh railway authority (public authority) and it is illegally occupied.
2. There should have some involvement of the public and / or private sector for improvement initiatives.	2. Past/ongoing improvement initiatives of LGED-UPPR (Public sector initiative), Nabolok-EECHO (Private sector initiatives).
3. It should be significant in terms of size of population, location, total area within all other competitive clusters.	3. Located nearby CBD, BIWTA Ghat, along the growth axis, 1 148 households, higher land value and densely populated.

Source: Authors 2013

Table 2

Overview of survey tools, respondents and data sources

Survey Method	Type of respondents and organizations	Informal settlement/ Key respondents	Goals and objectives
HH survey (88)	Informal settlement dwellers	Bosti Railway land	Settlers' origin, land occupancy, socio-economic conditions, urban services, movement dynamics, participation, tenure security
Key Informant Interview (6)	Municipal corporation	Chief town planner, KCC	Initiatives so far, future plan, stakeholder participations, power relations, attitudes to the others, local dynamics, project experiences and suggestions
	City development authority	Chief planning officer, KDA	
	Public land owner	Property development officer, BRA	
	Public sector initiator	Town manager, UPPR Project	
	Private (e.g. NGO) initiator	Programme manager, Nabolok NGO	
	Local elected representative	KCC Ward-21 Councillor	

Source: Authors 2013



Fig. 2 – Detailed land use, housing structure in railway land Bosti and surroundings
Source: Authors 2013, Khulna Development Authority (2001), CUS (2005)

The settlement has an area of 21.67 acres and it is home to about 1148 urban poor households. Depending on different individual characteristics, the whole settlement can be divided into three parts – 1) Montu Colony, 2) Greenland Bosti, and 3) Sweeper Colony. The whole settlement formation process took about 100 years and it is still ongoing at different scales. It is evident that the Montu Colony settlement formation process had started in an unorganized way and it followed a slow progression. At the second and third part it became organized, and fast, due to support from different actors against the eviction actions of the railway authority.

Adopting both qualitative and quantitative approaches, semi-structured questionnaires and interview guides were used to collect data for the study. In total, eighty-eight (88) randomly selected informal settlers were interviewed using the semi-structured questionnaire. Six (6) key informant interviews were also conducted with institutional representatives and civil society representatives (Table 2).

Analytical tools

After raw data collection, both primary and secondary data were compiled manually. The descriptive opinions from key informants and unstructured materials from interviews, observation and other records were coded systematically for analysing the existing stories of the informal settlements regularization initiatives and mapping the stakeholder participation. The stakeholder mapping has partially followed the guidelines described in the stakeholder-mapping manual of Morris and Baddache (2012). The stakeholders were identified, analysed and mapped with the resulted facts and related codes that were extracted from the key informant interviews and published sources. The computer software packages: SPSS (Statistical Package for Social Sciences), Photoshop, ERDAS IMAGINE and ArcGIS were employed for household survey data analysis and visualizing physical status of the case study area.

Results and Discussion

Settlers' socio-economic condition: vulnerable and dependent

Lower incomes (54% less than 4000 BDT), higher expenditures (51% more than 4000 BDT), unsecured occupation and lack of land tenure security are major characteristics of the informal settlers' standard of living in the Bosti Railway land. From our informal settlers' interviews, informal settlers mostly migrated from the rural areas due to pushing factors such as unemployment (40%), landlessness (39%) and disaster events (21%). They occupy the public land because they access the land almost without any payments and middlemen supports. Since these occupations are unauthorized and not legally certified, informal settlements are prone to tenure insecurity. Under such unsecured tenure conditions, informal settlers (36%) have faced several threats of eviction incidents but they always return to the same place since they do not have other options. These settlers depend on the local political leaders for legitimacy and to secure their vulnerable land tenure. Consequently, they are not free to express their own opinions and to participate actively in the decision-making process. They hence become an isolated urban entity separated from the mainstream urban population. The study argues that the higher the socio-economic vulnerability of informal settlers, the more they are compelled to live at the mercy of local politicians and elites for protection. In our view this practice does not allow informal settlers to be self-confident and free from the vicious cycle of poverty. In addition, the formal planning system does not allow informal settlements to get any planned and legitimate supply of urban services although informal settlers are also formally recognized as part of the urban enclave. This may also explain why informal settlements are often associated with the illegal connection to public mains for water and electricity. This opens them up to further risks of water pollution and fire outbreaks.

Physical condition: poor and limited

From the field data, there is an ongoing demand for improvement of the physical conditions of urban settlements in Bangladesh. The basic urban services and facilities – water supply, toilet facilities, drainage and footpaths are partially provided through individual initiatives, and some few public and private sector initiatives. Most often, these services are over loaded due to the large amount of users (e.g. 15-20 households share per tube well and toilet). Consequently, these infrastructures collapse very fast and yet settlers cannot renovate or maintain them due to their endemic financial and technical limitations. During the rainy season, flooding is a common phenomenon and informal settlers have to face miserable circumstances. This also explains why the sustainability of physical improvement projects in informal settlements always comes under question after the end of the project period. The study found that the poor physical conditions of informal settlements are not only a problem for the informal settlements; it also has an adverse effect on the surroundings of the urban environment and it poses a dire public health risk. Fig. 3 and Fig. 4 below labelled are used to depict some of the deplorable conditions and indecent urban exposures that not only pose health risks to the immediate informal environment, but can become a source of serious health threat to urban lives as well.



Fig. 3 – Tubewell installed by LPUPAP project; Location: Greeland Bosti, Khulna city

Source: Authors, September 2013



Fig. 4 – Poor conditions of access road; Location: Montu Colony, Khulna city

Source: Authors, September 2013

Stakeholder identification

There are two types of stakeholders that are involved in the process of informal settlement upgrading and regularization. Following the UN-Habitat guidelines for pro-poor land management, the local stakeholders in the Bangladesh case study are identified in Table 3.

The key public sector stakeholders like Khulna City Corporation (KCC) have no updated database on informal settlement and direct improvement initiatives. In our view, the KCC only provides some indirect support to informal settlements in order to gain political capital. The Khulna Development Authority (KDA) is not involved in upgrading or regularization processes but it believes that the responsibility should be taken by the municipality and the concerned landowners.

Table 3

List of stakeholders

A. Primary Stakeholders	
1. Informal Settlement Dwellers	Those who are living in informal settlements with many fold informality
2. Land Owners	Agencies or individuals hold the legal land rights, where informal settlements take place (i.e. Bangladesh Railway Authority)
3. Municipal Local Governments	Agencies responsible for city administration, basic services provision, urban development planning and management (i.e. Khulna City Corporation).
4. Regional Development Agencies	Agencies responsible for planning as well as development control (i.e. Khulna District Assembly).
5. Local Elected Representatives	The elected representatives by the public voting process (i.e. Ward Councillor).
B. Secondary Stakeholder	
1. Working NGOs	The indivisible part of any type of development as a private sector.
2. The Public Agencies under Central Government	The responsible government departments that have no direct interest in informal settlement regularization process but they have indirect roles for facilitating the whole process.
3. Local Politician	Leaders of different parties and their followers who take informal settlement as a political agenda during the crisis period.
4. Local Elites	Those are getting indirect benefits by providing some illegal or informal services i.e. electricity; and also benefiting through social crimes i.e. drag trading.
5. Donor	Agencies that are providing funds and technical support i.e. UN agencies, DFID.

Source: Authors, (2013) and UN-Habitat, (2003)

It was observed that the public sector agencies could influence and support the regularization process for the informal settlements because of their rich local experiences and expertise. The public (e.g. Urban Partnership for Poverty Reduction) and private sector (e.g. Enhancing Environmental Health by Community Organizations) project teams only update their database concerning their specific project sites but not the general information on all informal settlements. They have better connection with the informal communities and donor agencies. These private and public sector stakeholders also coordinate well with one another to avoid functional overlaps. The private sector capacity to make valuable impact in informal settlement upgrading is higher than the public sector because they are free to make their own decisions.

The landowner (i.e. Bangladesh Railway Authority) considers the informal occupancy of informal settlers as temporary squatting. Therefore they do not maintain any database and they have no legal provision or interest to work in the favour of informal settlers. On the contrary, they initiate eviction measures to clear their land from illegal occupancy and want to lease the land for commercial or agricultural purposes. They have the possibility to share or lease their additional vacant land with the settlers or development agencies. The local leader (i.e. Ward Councillor) plays an important role due to the persistence in their local political interests. The local councillor maintains updated information on informal households in the informal settlements, installs infrastructures from his personal budgetary allocations, and leads protests against forced evictions. The local leaders have the potential to smoothen the way forward due to the structure of local power and better linkage with essential public-private sector actors. The

settlers mostly participate in community groups and also take initiatives for land filling and maintenance of infrastructures. Among other stakeholders, the private sector agency faced intense difficulties at earlier stages to motivate the settlers to participate in different regularization initiatives. The settlers however feel stressed and they lack confidence due to tenure insecurity and frequent threats of eviction. The majority of informal settlements are highly dependent on the local political (Ward Councillor) leaders for their future improvement.

Stakeholders mapping

Stakeholder mapping (Fig. 5) is a strategic tool that identifies and assesses the effectiveness of the different individuals or group of stakeholders to solve a particular problem area (Morris and Baddache 2012). It examines the stakeholder's power, level of interest and internal relationship among them.

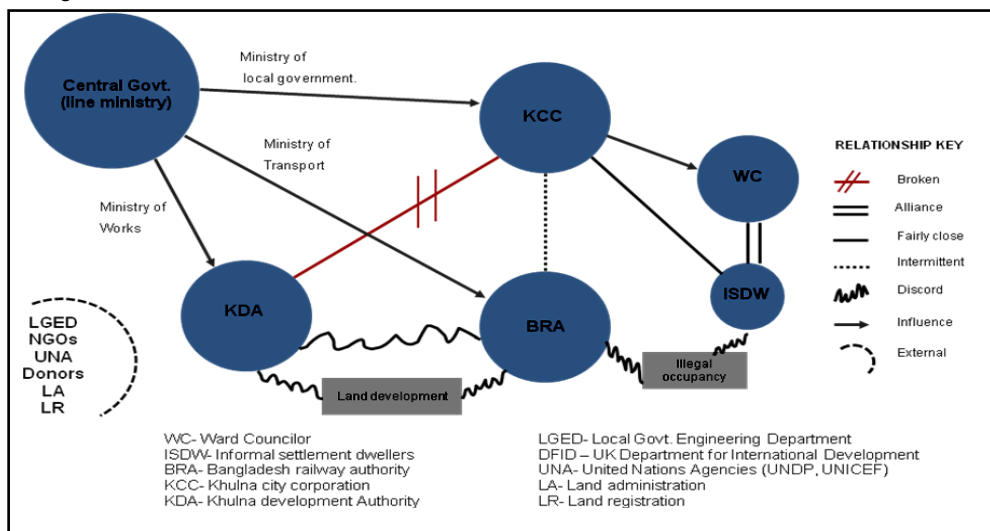


Fig. 5 – Stakeholder map to regularize the Railway land Bosti

Source: Authors own Illustration with field survey data (2013) by following Morris and Baddache (2012)

The Khulna Development Authority and Khulna City Councillor have a broken relationship between them. They blame each other and compete for supremacy. They have no common platform for co-ordination and co-operations for regularising informal settlements and urban development in general.

The Khulna Development Authority has a discordant relation with the BRA authority regarding the land development issue. The Bangladesh Railway Authority officials confirmed that the Khulna Development Authority unnecessarily delays when they ask for land use clearance certificates for the new railway station construction project.

The Khulna City Councillor and Bangladesh Railway Authority related intermittently as they have some ongoing negotiations regarding local taxations, informal occupations, commercial activities and urban basic service provisions.

Consequently, the informal settlement dwellers and Ward Councillor are in an alliance for a better future. Mutual benefits are the major motivations – because informal settlers need

political shelter, similarly, the Ward Councillor need continuous public support to retain political power and legitimacy.

Lastly, the Khulna Development Authority does not have any kind of connection with the informal settlers although the informal settlements on the Bangladesh Railway Authority land are located just opposite to Khulna Development Authority administrative building.

Position of key stakeholders

The current position of stakeholders in informal settlement improvement projects depends on their level of participation in the project. This is because the stakeholder participation in informal land management can vary from passive dissemination of information to active engagement in decision-making. It can be very varied depending on the local context (Masum 2009, United Nations 2009). In the case of our studied informal settlement, the Urban Partnership for Poverty Reduction (UPPR) project team and NGO-Nabolok, somehow, reached partnership at the level of citizen-power according to the project documents. It is however evident that the partnership is working properly in very few cases. For instance, the Municipality (i.e. Khulna City Corporation) shows negative attitudes to the private sectors' activities (i.e. NGO-Nabolok). In addition, both of these stakeholders are temporary workers on short-term projects. Their participation will not be sustained in the future if the other related conditions such as elected political leadership and donor supports change. In addition, it is needful to know that the administrative activities of public sector initiatives (e.g. UPPR) are somehow bypassing the mainstreams of local public agencies like Khulna Development Authority and Khulna City Corporation. They want to formalize the Community Based Organizations (CBOs) with better capacity, voice and negotiation powers.

The study found that the Khulna Municipality, Ward Councillors and informal settlers' positions are also varied within the second level of participation and it is more of placation, consultation and information. It mostly depends on the targeted informal settlement clusters because the Municipal Authority and local leaders are mindful of their maximum political benefits. All informal settlers do not have equal capacity to participate in the regularization process. Development authorities, landowners, and other related public-private agencies somehow remain in the lower part of the participation ladder. Their level of participation is less supportive and they rather put obstacles within the improvement process.

Regularization process: Limited focus on land tenure security

It has been found that the initiatives undertaken so far by both the public and private sector for improving the condition of informal settlements in Khulna city have somehow ignored the land tenure security. They mostly focus on physical improvement as a part of improving the upgrading mechanism. Consequently, at the end of the day all efforts of physical improvement become zero since the tenure of their stay itself is insecure and there is no sustainable solution to the vulnerable socio-economic and poor physical condition of the settlements. For instance, after the installation of basic infrastructures, there is still a chance for the authority or landowner to enforce eviction measures if there are no pre-ensured means of creating land tenure security. In our view the regularization of informal settlements is more appropriate and effective on the basis of assured tenure security compared to just an upgrading process. However, political factors, poor roles of stakeholder participation and limited awareness among the settlers are major barriers. The political interest is geared in favour of upgrading processes as the infrastructure installation takes less time and it is more visible to win political capital especially in the election years.

The poor stakeholder participation in informal settlement upgrading or regularization process is

simply a part of the limitedness of participation in most development practices in the developing countries. The practice of participatory development is limited in Bangladesh and without participatory development it would be difficult to convince stakeholders for re-development and guided development (Roy and Sowgat 2005). The research presents that the informal settlement improvement process in Khulna city is non-effective due to poor stakeholder participation in the regularization process.

The key stakeholders such as the Municipal government have no legal provision, administrative section and funding for informal settlement improvement. The Regional Planning and Development Agencies are also somehow avoiding the preparations of land use plans for informal settlements. The spatial development plans seldom include schemes to improve the condition of the urban poor and these plans are never implemented. The KDA is also very reluctant to support any kind of public and private sector initiatives that do not promise any direct benefit. The private sector participation is also very limited due to limited resources and political support. Moreover, the landowners are not properly involved within the improvement process. The land administration and registration department have no involvement at all like other related public and private agencies.

Conclusion

The comprehensive and sustainable solutions for informal settlements must take account of both local contexts and include ways to mobilize the resources available at the local level. The regularization initiatives through efficient stakeholder participation will help to realize the urban climate resilience propositions (e.g. transformation, adaptation and implementation). The solutions of emerging urban problems must be part of the broader urban and national development strategies supported by relevant institutional and legal frameworks (United Nations 2009). It is not totally possible to predict the future of urban and national development strategies because of diverse unknown factors and variables that come into play. Surely, the understanding of informal settlements and its improvement by adopting regularization processes, which put more focus on climate vulnerability and stakeholders' participation, may help to formulate strategies for the future sustainable urban land management. However, if the present trends continue, the informal settlements will remain a red spot on the city map and will challenge the resilience urban future of Khulna. Last but not the least, in the era of climate change, migration from rural to urban areas is obviously not a sustainable option; besides, the whole urban community will be at risk. Therefore, it is necessary to find out innovative mechanisms of socio-spatial planning in the context of Bangladesh with comprehensive livelihood risk analysis especially for the suburban rural areas.

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SUBURBAN VS. URBAN FRINGES ENTITIES' WILLINGNESS TO PAY FOR AMENITIES: EMPIRICAL RESEARCH IN CRACOW CITY, POLAND

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Abstract: The aim of this paper is to estimate the value of selected amenities of infrastructure, space and public services on both sides of the cities' administrative borders and its territorial implications. The used method is the estimation of WTP. The method was addressed to households and companies located in the district adjoining areas which are administratively not part of the city, and that are judged to be strongly characterized by the processes of suburbanization. The conclusions of the study indicate that the administrative border of the city is polarized in terms of a household economic profile. Residents of both regions express their needs for amenities and suburban residents generally estimate their value higher. While firms from both areas are not interested in improvements, the administrative border of the city does not really differentiate businesses (size, employment, wages).

Key Words: *WTP, amenities, valuation, public services, space, infrastructure*

Introduction

Strong social and economic transformation in cities of development and developing countries involve the need of urban policy in an efficient manner to stimulate further development (Parysek 2010). Therefore, despite the existing land development in cities and their surroundings, policy makers are forced to seek paths of wider improvement of amenities for businesses as well as population. These amenities are understood both as physical elements such as: space, roads, parking lots, schools, but also as desirable from the standpoint of the development of such phenomena as: higher public safety, improved environmental quality, shorter travel time to a selected destination (Deller et al. 2001, Green 2001).

Evaluations of impact on the development of local amenities have been present in the literature for forty years. By the end of the 1990s the study of effects on the development of local amenities were limited to the analysis of individual measures, e.g. water and air pollution. In the 1990s empirical research began to explore the roles of a wider range of amenities (Waltert and Schläpfer 2010). At this time suburban amenities gained interests in public policy as a factor of life quality and business location decision (Beyers and Lindahl 1996, Cavailhes et al. 2004, Gottlieb 1995, Johnson and Rasker 1993). In rural areas, local authorities have begun to support the development of amenities which may result in several studies conclusion that amenities (eg. Environmental amenities) are a factor of rural development (Green 2001, Deller et al. 2001, Feinerman and Komen 2003, Fuller et al. 2005).

Wider impact of local amenities on the local economy today is discernible in many studies. Waltert and Schläpfer (2010) have made extensive review of the literature on the role of the amenities in economic change. They identified that amenities affect the economy through the impact on: demography, employment, income, rents, wages and property values. They conclude that economies of amenity-rich areas tend to grow faster in terms of population and

property values than other areas while the link between amenities, employment and income is inconsistent: some research showed positive and significant impact, some non-significant and a few negative impact (Waltert and Schläpfer 2010). However, there are studies showing the positive effects of the amenities occur more frequently in the suburban and urban rather than rural areas (Chay and Greenstone 2005, Redfearn 2009). Parallel to positive effects of amenities occurring in the suburban areas there are also some perceived negatives: there have been proven important links between the existing local amenities and spatial development patterns in both size of cities: urban and rural (Wu and Gopinath 2008). They proved amenities as determinates of phenomena like urban sprawl and leapfrog effect. The explanation of defects amenities are represented by the consumer preferences for large plots of land, open spaces which are attracted by the suburbia rich in such spatial amenities (Chen et al. 2009).

Economic research has focused on the monetary valuation of amenities through surveys - using the willingness to pay method (Bergstrom and Ready 2009). A lot of research contributes to understanding the impact of amenities for local development (Matsuoka and Kaplan 2008, Banzhaf 2010, Milburn et al. 2010). However, many studies related to the willingness to pay for amenities show that it is not affiliated with the needs of policy makers in land planning (Banzhaf 2010). Therefore, in the literature we recognize the need for further study using approaches that take political responses to amenity into account (Chen et al. 2009, Nelson et al. 2007, Walsh 2007).

Since we know that the existing amenities are important in economic development on the one hand, on the other hand we are facing economic downturn while an improvement of the amenities is inextricably linked to the occurrence of this development at a higher level. So for the urban policy makers the question is: what are the values of the improvement of existing amenities and the legitimacy of these improvements? While the valuation of certain physical features of space can be related easily from the supply side, e.g. the ease of construction of a new road pricing by the office of the municipality, on the demand side, this valuation can be problematic. An even greater challenge holds the pricing phenomena, e.g. reduction of travel time between points in the city or improved air quality.

With this in mind, the aim of the present study is to show an attempt to estimate the value of the selected amenities from the point of view of the major actors of the real economy on both sides of the administrative border of the city using the example of Cracow. At the same time the assessment of the valuation amenities will be carried out in terms of their usefulness for policy makers or taking into account the territorial implications. The study presents in itself an inference on amenities in the spatially close areas, neighboring metropolitan areas within the administrative boundary but being separated by the central city. The choice of the study area was dictated by the fact that: a) modern urban development is inextricably linked with the process of suburbanization (Parysek 2010); b) there are city areas that have been neglected by the planning processes and by academic research and these areas are represented by the urban fringes (Gilhespy 2013).

Materials and Methods

The Contingent Valuation Method (CVM) next to the Travel Cost Method and the Hedonic Prices Methods is the most common approach in estimating the values of the various elements of space, infrastructure or public services. While the hedonic pricing method and travel costs are based on the observation of market prices of goods associated with the rated good, CVM is based on a hypothetical market (Żylicz 2004). This feature is important for estimating the value of the amenities in respect to the area that could potentially arise and which are the subject of the article.

CVM has a long tradition and its origins date back 40 years of the last century (Carson 2007).

CVM strongly developed in the seventies and eighties, particularly in relation to the valuation of valuable natural areas and a variety of environmental values (Green and Blair 1995). This method is well adapted to estimate the value of other non-market goods. The use of CVM also valued environmental damage caused by natural disasters or the realization of certain projects (Johansson 1990, Winpenny 1995). CVM is also used to estimate the ex-ante evaluation of the benefits of the infrastructure investments financed by the European Union.

The development of CVM increases its applications in various fields, e.g.: evaluation of public services, the evaluation of the environmental, cultural activities, recreational services, valuation of monuments and works of art, people's landscape needs and preferences, locations decisions (Huhtala 2004, Noonan 2004, Matsuoka and Kaplan 2008, Banzhaf 2010, Milburn et al. 2010).

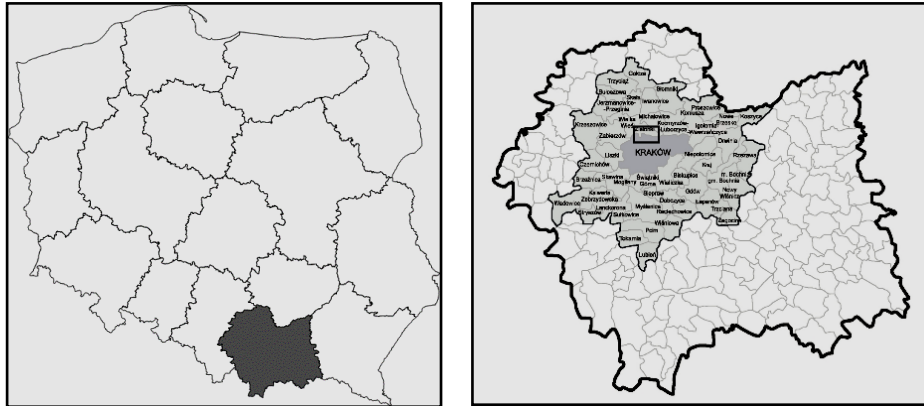
CVM is a method based on the results of a survey. The survey questions are formulated in the form of a hypothetical desire by the respondent to indicate which payment for the selected good or service (WTP – called Willingness to Pay). This method is referred to as “conditional” because the good or service, in fact, will not necessarily be delivered. Answers to such questions can be formulated either in the form of specific amounts or an answer “yes/no”, where the search for the WTP amount shall be an econometric analysis (Diamond and Hausman 1994, Bateman and Langford 1997, Pearce 1993).

The subject of this study accounts the selected types of amenities gathered in three groups: infrastructure, space and public services. In the first group, i.e. infrastructure, amenities include the shortening distance to destinations, increasing the number of roads in the area, accessibility or improvement of an infrastructure element. The second group, i.e. the space, amenities such as enlarged functional area (residential or business), access to public spaces, access to natural open space, an environment of higher quality (e.g. air). The third group of amenities, i.e. public services, is associated with: better education and health care, higher public safety. It should be noted that these amenities are on the one hand close to the respondents, and on the other hand they refer to the range of CVM application areas indicated in the literature. From this perspective, it seems that the WTP method of estimating the proper amenity is undertaken in the present study.

The study subjects were addressed to businesses and households. The area of study includes the selected districts of the City of Cracow (Poland), which is located on the administrative borders of the City (two districts: Prądnik Czerwony and Prądnik Biały) and the area directly across the border of the City, which belongs to the Municipality Zielonki. This area is one of the Cracow Metropolitan Area (CMA). Thus, the analysis area includes the land and space on both sides of the border city. The area covered by the analysis is shown in Fig. 1.

Estimating the value of these amenities reveals the balance of the needs of both level and potential value. In contrast, the types of adopted amenities were collected in three groups that arise from the urge to identify the needs of stakeholders on both sides of the border of the city and to identify the similarities and differences of these two adjacent areas.

The test results are based on the two types of surveys carried out in the indicated area. The first type of the survey was addressed to residents on both sides of the border of Cracow, while the second type of the survey was addressed to businesses in the same area. Surveys include questions with open answers – they are not a set of answer options provided for the respondents. The details of the respondents' profiles are given in Table 1.



a) b)
Fig. 1 – The area covered by the analysis

a) Poland and Malopolska Region; b) City of Cracow in the Cracow Metropolitan Area and the Malopolska Region

Table 1

Characteristics of the surveyed residents and businesses

Households	Cracow	Zielonki (suburbs)	Businesses	Cracow City	Zielonki (suburbs)
Number of surveyed residents [pp.]	764	578	Number of surveyed businesses [unit]	185	96
Number of responses [pp.]	154	127	Number of responses [unit]	75	37
Age			Form of economic activity		
average [years]	40	42	manufacturing [%]	0	14
Q1 [years]	32	35	services and retail [%]	100	86
Q2 [years]	41	40	Trade		
Q3 [years]	58	48	food [%]	29	14
Marital Status			clothing [%]	10	0
married [%]	73	95	car service [%]	10	19
single [%]	27	5	medical and cosmetic [%]	10	6
Number of children			household goods [%]	13	8
average [pp.]	1	2	legal and financial [%]	4	17
median [pp.]	1	2	construction [%]	4	6
0 [%]	20	14	restaurants [%]	4	6
1 [%]	33	24	gardening [%]	2	6
2 [%]	41	40	educational [%]	0	8
3 [%]	4	20	other [%]	13	11
4 [%]	2	2	Employees		
Occupation			average [pp.]	3	4
lawyers [%]	2	2	min. [pp.]	1	1
doctors [%]	3	8	max. [pp.]	15	12
business owners [%]	4	18	Salary		
officials [%]	13	11	average [€]	470	522

Table 1

Characteristics of the surveyed residents and businesses

Households	Cracow	Zielonki (suburbs)	Businesses	Cracow City	Zielonki (suburbs)
specialists [%]	28	25	min.[€]	202	289
workers [%]	30	19	max.[€]	723	771
pensioners [%]	15	3	M [€]	482	482
unemployed [%]	5	14			
Monthly earnings					
average [€]	1320	1984			
M [€]	1084	1928			

Results and Discussion

Results of the survey are presented in Tables 2 and 3.

Table 2

Willingness to pay for amenities expressed by the households

Amenities	N	n	Share "No"	Share WTP	\bar{X}	M	σ	D
Cracow City								
1. Reduced travel time	57	37%	39%	61%	€39	€19	€85	€24
<i>The value of time spent in traffic jams in min.</i>	28	18%	0%	100%	€0.06	€0.02	€0.07	€0.04
<i>Reduced in relation to monthly earnings</i>	18	12%	0%	100%	1.44%	0.95%	1.29%	0.50%
<i>Reduced in relation to expenditure on fuel and tickets</i>	33	21%	0%	100%	28%	19%	30%	100%
2. More roads in the area	70	45%	23%	77%	€13	€12	€11	€12
<i>More roads in relation to earnings</i>	27	18%	0%	100%	1.12%	0.91%	0.84%	2.50%
3. Larger homes	55	36%	53%	47%	€109	€12	€314	€12
<i>Larger homes in relation to earnings</i>	12	8%	0%	100%	2.18%	1.43%	2.17%	0.83%
4. Access to public spaces	47	31%	57%	43%	€9	€5	€9	€2
<i>Access to public spaces in relation to earnings</i>	10	6%	0%	100%	0.85%	0.50%	0.97%	0.50%
5. Access to nature	51	33%	45%	55%	€10	€5	€8	€2
<i>Access to nature in relation to earnings</i>	13	8%	0%	100%	0.84%	0.63%	0.69%	---
6. Better environment	63	41%	35%	65%	€11	€12	€9	€12
<i>Better environment in relation to earnings</i>	23	15%	0%	100%	1.08%	0.91%	0.88%	1.67%
7. Better education and health care	77	50%	32%	68%	€15	€10	€14	€24
<i>Better service in relation to earnings</i>	29	19%	0%	100%	1.71%	1.43%	1.40%	0.50%
8. Higher public safety	70	45%	31%	69%	€11	€12	€8	€12
<i>Higher public safety in relation to earnings</i>	28	18%	0%	100%	0.87%	0.67%	0.67%	0.83%
Zielonki Municipality								
1. Reduced travel time	76	60%	18%	82%	€34	€24	€66	€24
<i>The value of time spent in traffic jams in min.</i>	71	56%	20%	80%	€0.09	€0.04	€0.17	€0.02
<i>Reduced in relation to monthly earnings</i>	49	39%	29%	71%	2.23%	1.50%	2.93%	1.67%
<i>Reduced in relation to expenditure on fuel and tickets</i>	74	58%	19%	81%	28%	12%	47%	5%
2. More roads in the area	67	53%	31%	69%	€29	€12	€56	€12
<i>More roads in relation to earnings</i>	26	20%	0%	100%	1.98%	0.83%	3.18%	0.50%
3. Larger homes	66	52%	45%	55%	€202	€24	€801	€24
<i>Larger homes in relation to earnings</i>	25	20%	0%	100%	5.02%	1.63%	7.26%	1.00%

Table 2

Willingness to pay for amenities expressed by the households

Amenities	N	n	Share "No"	Share WTP	X	M	σ	D
4. Access to public spaces	68	54%	37%	63%	€24	€12	€28	€12
<i>Access to public spaces in relation to earnings</i>	28	22%	0%	100%	2.73%	0.83%	7.95%	0.56%
5. Access to nature	64	50%	44%	56%	€20	€12	€24	€24
<i>Access to nature in relation to earnings</i>	21	17%	0%	100%	1.09%	0.71%	1.08%	0.56%
6. Better environment	65	51%	35%	65%	€27	€22	€29	€24
<i>Better environment in relation to earnings</i>	24	19%	0%	100%	4.01%	0.97%	11.51%	2.00%
7. Better education and health care	72	57%	25%	75%	€27	€12	€38	€12
<i>Better service in relation to earnings</i>	36	28%	0%	100%	1.62%	1.11%	1.50%	1.00%
8. Higher public safety	73	57%	42%	58%	€26	€15	€24	€12
<i>Higher public safety in relation to earnings</i>	25	20%	0%	100%	1.58%	1.19%	1.42%	1.25%

Table 3

Willingness to pay for amenities expressed by the businesses

Amenities	N	n	Share "No"	Share WTP	X	M	σ	D
Cracow City								
1. Reduced travel time	15	25%	67%	33%	€294	€241	€193	€482
2. More roads in the area	16	27%	63%	38%	€73	€30	€93	€12
3a. Type of infrastructure to improve	8	13%	25%	75%	---	---	---	---
3b. Fee for improved Infrastructure	12	20%	58%	42%	€40	€48	€13	€48
4. Larger workplace	17	28%	47%	53%	€972	€120	€2351	€120
5. Access to public spaces	15	25%	73%	27%	€88	€72	€63	€120
6. Better environment	15	25%	67%	33%	€113	€72	€114	---
7. Higher public safety	17	28%	35%	65%	€54	€36	€40	€24
Zielonki Municipality								
1. Reduced travel time	16	46%	75%	25%	€73	€193	€57	€241
2. More roads in the area	17	49%	65%	35%	€43	€27	€27	€24
3a. Type of infrastructure to Improve	15	43%	80%	20%	---	---	---	---
3b. Fee for improved infrastructure	15	43%	80%	20%	€56	€38	€56	€48
4. Larger workplace	19	54%	63%	37%	€867	€120	€922	€120
5. Access to public spaces	17	49%	71%	29%	€108	€72	€97	€120
6. Better environment	17	49%	82%	18%	€74	€72	€85	€72
7. Higher public safety	17	49%	82%	18%	€94	€33	€127	€36

Tables descriptions

N	- number of responses
n	- share in the total number of responses per. responding to the survey
Share "No"	- share of answers with "n" that are not willing to pay
Share WTP	- share of answers with "n", which express the willingness to pay
X	- arithmetic average
M	- median
D	- dominant, modal
σ	- standard deviation
---	- inability to calculate, incomplete data

WTP for infrastructure amenities: reducing the travel time to destinations

In the light of the research, 82% of suburban households reported WTP for reduced travel time to the selected destination point. Also, residents of the city have reported WTP, but at a lower level of 61%. Residents of the suburbs who reported WTP would be willing to cover costs for a shorter time to reach the destination of about €24 per month (dominant, median). Similar values were shown by residents of the city, as the dominant €24, and the median €19. This expenditure in respect to the monthly earnings of the respondents in both groups of inhabitants is: 0.95% for the city; for suburbs: 1.5% (median). However, in respect to expenditure on transport (fuel, tickets) for the city are 19% and 12% for suburbs (median). Respondents' answers also allow the assessment of the time value spent in traffic. Thus, for the suburban residents 1 minute in traffic is worth €0.04 (median, excluding fuel) while most of the respondents indicated €0.02 (dominant). The city residents responded similarly; dominant €0.04; median €0.02. It should be added, that for the suburb residents the main destinations are work and the children's school; while in the case of city residents, the destination is work and the city center.

In conclusion, the suburb residents are more likely to incur additional charges for reduced travel to selected destinations. This does not mean that the city inhabitants are not inclined to do this as well, because they show interest in shorter trips. Regardless of the level of earnings, the monthly fee for shortening the time is the same both in the city and suburbs, and it fluctuates around €20 per month. At the same time for both groups of respondents, the time spent in traffic is similar between €0.02 and €0.04 per min. regardless of the length of time spent in traffic jams. This is due to the fact that traffic formulates in the city (the area of the city, which was the subject of analysis for the area of the city) and it relates to the same extent in both groups of respondents – traffic jams definitely formulate less frequently in the suburbs. In this light, the responses are consistent.

In regards to companies, within both the suburbs and the city, a minority reported WTP for reduced time travel, which indicates that they are not interested in such an amenity. The profile of business activity conducted in the area, which is not based on transport, justifies these results. Operators located in the city reported WTP are 33% of respondents, and the suburbs entities 25%. The results of WTP for reducing the travel time to destinations may be an indication for the policy makers in making decisions regarding the nature and scope of investments in transportation. It should be noted that there are not the companies but the residents who show interest in shortening the commuting time. Thus, investments in shortening travel time to destinations have a good justification and social and political benefits. In addition, public demand for these investments can be presented in the form of monetary involvement: WTP by multiplying the number of the area inhabitants. Therefore, valuing the social benefit of shortening the commuting time for the residents of Zielonki Municipality (20k inhabitants) in a one year period will receive the amount of € 480k-680k. In contrast to the urban fringe area of the city (115k inhabitants), this amount is 2.2-4.5 ml € per year. Because businesses are not interested in shortening commuting times, the public authorities may consider outside road investments and the development of public transport (buses, trams, subway), which promotes and justifies a tendency to the compact of cities and prevent traffic on the one hand, and on the other hand it fits into the local spatial plans.

WTP for infrastructure amenities: increasing the roads in the area

The larger number of roads refers to both number of additional roadways, and the width and bandwidth of the existing ones. In the light of the research, 69% of the suburban population reported WTP for more roads in the area. It should be noted that this result is lower than the previous questions (82%). At the same time the monthly fee for more roads in the area is €12 per month (median and dominant), and it is also lower than in the case of shortening the travel

time to the selected destination point. Thus, the suburban residents tend to value higher the commuting time than the number or quality of the roads. However, the city inhabitants WTP was reported by 77% of the respondents, and this is a higher result than in the previous question, where WTP for reduced travel time was reported by 61%. Interestingly, the WTP for more roads in the area is valued at the same level by the city residents as well as suburban ones, i.e. €12 per month (median and dominant). This fee in relation to earnings is similar for both groups of respondents, because for the city residents the median is 0.91% and for the inhabitants of the suburbs it represents 0.83% of the monthly earnings.

In this light, it can be concluded that the suburban inhabitants recognize the need to develop more roads than the residents of the city, but for the two groups of respondents the value of this development is the same. In regard to the question of shortening the travel time, it should be noted that this query presents a purpose or effect, but the question of more roads represents an action aimed at achieving this goal. Having this in mind, it should be noted that the residents of both areas value twice as much the result than the method of its implementation. Thus, the potential investment in local roads could go towards increasing the capacity of existing roads, rather than towards the actual construction of new road sections. At the same time, the results of WTP for increasing the roads in the area may help the process of making decisions by policy makers in terms of type of investment, which were mentioned in the WTP for infrastructure amenities: reducing the travel time to destinations. Thus, in the urban fringe and suburbs, socially justifications enable the investment in public transport and new roads that take into account the communication needs of residents more than businesses. Because in the case of businesses, both from the suburbs and the city, a minority reported WTP for more roads in the area. The answers are consistent with the previous question concerning a shorter travel time. Companies are interested in the number of low-grade and quality of roads in the area, due to their profile in the area of business specialization and in the case their activity is not based on transport. Operators located in the city who reported WTP represent 38% of the respondents, and the entities from the suburbs are 35%. Therefore, companies are not interested in raising additional charges for more roads in the area.

WTP for infrastructure amenities: access to or improvement of an infrastructure element

As a part of the research concerning infrastructure, only companies from both regions were asked the question of an access or improvement of an infrastructure element. 75% of businesses from the city reported WTP for the selected item of infrastructure and it was mostly parking lots. In this case WTP is not meant as a declaration to incur additional charges, but an indication of infrastructure needs. However, they were not ready to pay for them directly, arguing that it should be guaranteed in the context of taxes paid by the company. Only 42% of companies reported WTP, and those estimated the infrastructure for €48 per month (median and dominant). However, in regards to companies from the suburbs, WTP for access to the infrastructure element was reported by 20% of the units. In the opinion of these entities there is a lack of adequate pedestrian crossings and they should be added, while one of the main access roads to Cracow is located in the area. For these companies the value of the corresponding crossings is about €39 per month (€38 median, €48 dominant). Generally, it can be noted that the companies are aware of the needs of specific infrastructure, but they are not ready to pay. The results have territorial implications: because in this case the WTP is a measure of the needs but also the determination to access a particular item of infrastructure. It can be said that the development of entrepreneurship in both areas is not heavily dependent on the construction of a new element of infrastructure. Thus, policy and decision makers should take into account the opinion of entrepreneurs, which is due to the efficiency of public spending and it can concentrate the funds on perhaps other, broader infrastructure needs.

WTP for spatial amenities: expansion of a functional space

An expansion of functional space is defined as the increase in surface area of the households in both regions, while in the case of companies it is a larger area of the plant. In the light of the research, 47% of households in the city study area reported WTP for larger houses. For those households the value of their housing needs is €12 per month (median and dominant), which represents 0.8-1.4% of their monthly earnings. In contrast, households from the suburbs who reported WTP for the larger houses represent 55%, which is a noticeably larger share than for the residents of the city. For the residents of the suburbs the value of the bigger houses is €24 per month (median and dominant), which represents 1.0-1.6% of their monthly earnings, which is a similar level as for the city residents.

With this in mind, it can be concluded that, contrary to common thought, suburban residents are more interested in larger homes than the city residents. The value of enlargement within housing for the suburban residents is twice as high as for the inhabitants of the city. This double difference in value is due to the fact that the suburban households are wealthier than the city households – as it was indicated in the methodology section of this article. The confirmation of this conclusion is also made by the involvement of WTP in salaries, which for the residents of both areas is very close. The cases of companies, which differentiate from the residents even more, represent a reverse trend. The companies from the city are more interested in the enlargement of their plant space than companies from the suburbs. With regard to the business of the city, 53% reported WTP for larger functional space, and the value of extra space for these entities is €120 per month (dominant and median). Exactly the same value indicates the entities located in the suburban area, however, the proportion of the reporting entities WTP is much lower and it is of 37%. Generally, it can be said that for increasing the area of the plant primarily the companies from the city are willing to cover the costs, and to a lesser extent, these are the companies from the suburbs. Operators of both regions value the enlarging of their plant at the same level of €120 per month.

The territorial implications of the results of the research are different for the two areas of analysis. The urban fringe identifies the need for adequate space for running business. Proper business activity has two dimensions: it is both a larger area plant – which results from the analysis of the current point, being as well associated with infrastructure such as parking lots at the business point – as a result of responses to the WTP for access or the improvement of an infrastructure element. However, with regard to the suburbs, where more than half of the respondents would be willing to pay for a bigger house, those results can be regarded as a harbinger of increasing of urban sprawl. Given the results of the analysis, households within suburbs have a preference for living in the suburbs because of their predilection for more natural environments and, in addition, households are financially well off. Thus, colliding consumer preferences, their financial status and willingness to pay for a larger apartment can be formulated in the hypothesis that in the future such households will seek larger homes out of the city.

WTP for spatial amenities: access to public spaces

Public space in this study was understood as a compound of all kinds of places available widely that have the physical form and which can be used to satisfy the needs of stakeholders and their social networking, e.g.: shopping malls, recreational areas, public building.

In light of the research, 63% of suburban households reported WTP for access to public spaces and determined the value of such a facility for €12 per month (median and dominant). The indicated value is generally 0.6%-0.8% of the monthly household budget. However, in relation to the households of the city study area, 43% reported WTP for access to such space, indicating the level of access to €4.8 per month (median €4.8; dominant €2.4). In relation to the

monthly earnings the indicated value of WTP is 0.5% (median, dominant).

The results indicate that for households located in the suburbs the access to public space is more valuable both nominally and relatively to earnings. The majority of suburban residents reported a WTP for access to public spaces, against minorities of the city residents.

When it comes to companies, the results are very similar to the above and indicate that 29% of companies from the suburbs reported WTP for access to public spaces, and 27% of the companies of the city expressed such a readiness. So operators on both sides of the border of the city indicate that they are not interested in raising additional charges for access to public spaces, while those who were interested value this amenity at a high level.

The results confirm that the suburbs of big cities have to deal very often with urban sprawl – which takes place in this case. Polish urban sprawl is characterized by chaos in the structure of land development, and it is due to the fact that the vast majority of plots are privately owned by a relatively high price and there are no public spaces. The conclusions from the results of the analyses are addressed here mainly to policy makers in the suburbs: spatial plans should take account of public spaces, and policymakers should secure funds for their implementation. Public spaces enhance the attractiveness of the municipality, and they may cause land densification thereby preventing urban sprawl.

WTP for spatial amenities: access to natural open spaces

The above question concerning the valuation of public spaces was an attempt to assess the valuation of natural open space, which can be used by the residents while enriching the landscapes of the inhabited area. This question is addressed only to the households located on both sides of the border city. The results of the analyses for the two areas are similar and indicate that 55% of the city population reported WTP for access to nature, while 56% of people in the suburbs reported the same willingness. For the residents of the suburbs the potential access to nature is worth €12 per month (median), which constitutes 0.71% of the household budget while for the residents of the city it is assessed to a value close to €5 per month (median), which represents 0.63% of the household budget.

The above presented results indicate that the communities on both sides of the border of the city do not differ and they would be ready to bear a fee for the access to nature. Despite the differences between the assessment of access to nature between the inhabitants of the city and the suburbs, the reported values are a similar percentage of the household budget. While the results for the city inhabitants are not surprising, the results of the assessment of the suburbs' residents need to be considered. Although the residents of the suburbs inhabited the areas close to the natural open spaces, the high interest in wider access to nature should be sought in their preferences. The residents of these areas settled primarily for reasons of environmental preferences and related aesthetic of the area, while the other conditions were less important. In the light of the outcome of the two studies presented, the results are consistent, and the consumer preferences towards access to nature are very strong and highly valued (Lityński and Hołuj 2015). This conclusion stems from the fact that, despite living near open areas, most households are willing to pay the additional charge for increasing the access to such areas. This conclusion may have territorial implications in the form of the spatial needs of the common policies of the city and the neighboring municipalities (and this is not the case in Poland). It's about securing access to natural open spaces (e.g. parks, green belts) for the residents.

WTP for spatial amenities: higher quality of the environment

A better environment was explained to the respondents being particularly as a higher air quality

and lower noise pollution. Taking into account the study results, both residents of the city and suburbs reported WTP for a better environment. For both groups of respondents the WTP were reported by 65% and the value on the whole was estimated at: city €22 per month (median), which accounted for 1% of the budget; suburbs €12 per month (median), which accounted for 0.9% of household budget.

A better environment was also the subject of analysis among the companies of the city and suburbs. Companies in both regions are not interested in incurring additional charges for these amenities because WTP reported 18% of companies in the suburbs and 33% of the companies of the city.

These results are consistent with those presented above for a similar issue, which focused on access to nature. Also the requests and the justification of these results are similar. In addition, the analysis in both areas proves that there is a need to improve the environment, and the residents are willing to participate in the costs. This creates opportunities for policy makers to implement environmental solutions co-financed by the locals. The results are also the reasons for the present activities of the local authorities. The idea is that the local authorities in the analyzed area bring funding to replace the heating stoves in homes from old to new gas carbon.

WTP for public service amenities: better education and health care

In the light of the studies, suburban residents in the majority reported WTP for better access to these kinds of public services and their share is 75%. Residents of these areas valued this access for 12 € per month (median and dominant). That indicated fee is not more than 1% of the household budget (median 1.1%, 1% dominant). In contrast, residents of the analyzed area of Cracow reported WTP to 68% and they estimated the value of nearly €10 per month (median), which represents 1.4% of the household budget.

Considering the above, households with both regions are substantially interested in education and health care at a higher level. For the residents of the suburbs we observed a higher interest in better public services, but the value of better services valued by this group is slightly lower than indicated by the inhabitants of the city.

Education and health care services in the analyzed suburbs and urban fringe do not represent amenities that attract the residents to settle in those locations. For this reason, the territorial implications of the results may be related to municipal, suburban or urban fringe area development strategies. Making a better offer of these services to the urban fringe can prevent urban sprawl and attract people to settle within the city limits. However, from the point of view of the authorities of the neighboring municipality of the city one can consider raising the quality of education in local schools. High levels of education may be an element of competitive advantage over other municipalities and the reason for families to settle in the municipality. It should be noted that such strategies are implemented in the suburbs in the US (e.g. a suburb of Chicago, IL.: families are moving to the district of Stevenson High School, Lincolnshire, IL., so that children may attend this particular high school. This results in a high demand for real estate and high income tax in the municipality).

WTP for public service amenities: higher public safety

Higher public safety in the studies was defined as the derivative of the level of threat of crime and police response to this type of pathology. In regard to households of the suburbs and the city, the results indicate that 69% of the city population and 58% of the suburban population reported a WTP for raising safety in the area. For the city households an improvement of the safety is valued at €12 per month (median), which represents about 0.7% of their budget, while

for the households of suburbs a higher security is worth €14, which is 1.2% (median) of their budget.

However, in relation to the business of the two study areas, the results indicate that 65% of the entities from the city and 18% of the suburban subjects reported WTP for increasing safety. For the companies of the city, safety can be evaluated for €36 per month (median €36, dominant €24), and for those from the suburbs for €33 per month (median €33, dominant €24).

Thus, the results of the analysis indicate that households from both regions are interested in increasing the security in the area of residence and they would be ready to pay for it. At the same time the residents of the suburbs valued safety higher, both in nominal terms and as a percentage of their revenue. The businesses represent diverse points of view. In their vast majority, companies of the city would be interested in enhanced security, while companies from the suburbs are situated on the other pole – they feel safe. At the same time companies of both regions valued higher security at a similar level.

The territorial implications of the results are the same as in the case of education and health care: policy makers should adopt appropriate tasks to ensure that amenities could be a factor in encouraging people to settle in the area.

Conclusions

In large urban areas of developing countries like in Poland, there are various infrastructural and public services amenities, but the desire to achieve socio-economic development at a higher level is inextricably linked with the upgrading of these amenities. A part of the existing amenities is sufficient to the continued economic development. However, there are amenities that need to be improved, especially in areas neglected or problematic from the point of view of spatial policy – here taking into account the urban fringe areas and the suburbia. These areas require investments from the part of policy makers, but outside a valuation of financial outlays for investments there remains a social problem in their valuation, and also for the social and economic funds in this area of development.

Using an example of Cracow City and its suburbs the research attempts to estimate the value of a number of hypothetical improvements to the entities of the real economy. This demonstrates the social and economic value and justification of potential investments which are important for policy makers. At the same time the study shows differences between the neighboring entities spatially separated by the administrative boundaries of the city. It turns out that the administrative border does not differentiate companies, but it polarizes households. This is particularly noticed in the differences of their socio-economic profile.

Based on the research regarding the amenities improvements, different conclusions can be addressed to the policy makers of cities in the developing countries. So that, amenities located in the area favor and accelerate economic and social development. Reduced travel time to selected destinations is important in maintaining the momentum of economic development and it requires investments in infrastructure. But not in all cases, as these investments must go towards the construction of new roads and they do not meet always the social and economic expectations. Often, companies in these areas are not based on transport and do not require significant investments in roads. In the case of the suburbs and the urban fringe, often a better solution might be the expansion of public transport, which has social and financial reasons. At the same time, such investments are conducive to the compactness of the city and they can be a remedy for urban sprawl. The issue of the impact of amenities on the formation of urban sprawl appears in literature (Wu and Gopinath 2008), as well as in the present conducted research. It turns out that amenities in the form of a bigger house are of real interest for the residents of the suburbs, which may contribute to further urban sprawl. The increase of urban

sprawl is justified by the lack of public space in the suburbs and by the demand for access to open spaces for which the residents have reported WTP. This diagnosis should find a response in the form of policy makers in the preparation and implementation of relevant spatial plans (e.g. parks, green belts). Residents in both urban fringe and suburbs report the need for a better environment while they are willing to participate to the costs of its improvement. This creates opportunities for policy makers to implement environmental solutions co-financed by the locals. Public services like education, health care and public safety are important amenities as incentives for the urban population to settle in a certain area but also for the area's socio-economic development. In the light of the research results, the area of the suburbs and the urban fringe require improvements in terms of their development strategy. Such improvements can prevent urban sprawl and contribute to creating areas of specialization (e.g. education) prompting families to settle in and stimulating the local development. The development of entrepreneurship is also an important opportunity to enhance economic activities and urban growth. The needs in this field report generally on the entities from the urban fringe while they require new business areas as well as associated infrastructure (parking lots).

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AN ANALYSIS OF THE ECONOMIC DETERMINANTS AND THE QUALITY OF THE INSTITUTIONAL FRAMEWORK AS FACTORS TO ATTRACT FOREIGN DIRECT INVESTMENT IN SOUTH- EASTERN EUROPE: THE CASE OF GREECE

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Abstract: Foreign Direct Investment (FDI) is considered by researchers as a critical factor for economic growth and development since they have shown a positive relationship between FDI and economic growth. The recent economic crisis in the European Union (EU) has brought up again the discussion of the key drivers specific to the attraction of FDI. In addition to strict economic factors the literature emphasizes the role of institutions in a country as determinants in attracting FDI inflows. An analysis of the role that the quality of institutions in attracting FDI has in Greece is attempted using an econometric model on institutional, regulatory, country specific and firm level data. For the purpose of giving a regional dimension in the analysis, and for attempting a comparison of the findings, the analysis focuses besides Greece, in two other Southeastern European countries (SEE), Bulgaria and Romania, being two new member states of the EU.

Key Words: *foreign direct investment, Southeastern Europe, institutions, economic growth, Greece .*

Introduction

At the aftermath of the economic crisis far too much talk about FDI and the urgent need to create a favorable climate and appropriate policies in order to allow Greece to attract FDI has been made. FDI in addition to the transfer of capital includes other substantive “intangible” resources such as know-how, development of human capital, new production methods, and technology (Vitalis 2002, Altomonte and Guagliano 2003, Kinoshita and Lu 2006). These resources, in the context of models of endogenous growth, play an important role and contribute significantly to the economic growth and development of countries by creating, among others, economies of scale in production, efficient methods of production and diffusion of knowledge (Schoors and Van Der Tol 2002, Pike et al. 2006). Therefore, FDI is considered as an essential developmental factor by a number of researchers such as Borensztein et al. (1998), De Mello (1999), Liu et al. (2002), Shan (2002), and Kim and Seo (2003).

In empirical level most macroeconomic studies have found a positive and statistically significant relationship between FDI and economic growth (Findlay 1978, Blomström et al. 1992, De Gregorio 1992, Blomström et al. 1994, Bende-Nabende and Ford 1998, Sanchez-Robles 1998, Baldwin et al. 1999, Zhang 2001, Campos and Kinoshita 2003, Kim et al. 2003, Vu and Noy 2009, Johnson 2006). These findings contradict some previous studies which concluded that FDI supersede domestic investments and therefore has a negative impact on economic growth and development (Hymer 1960, Caves 1971).

Concerning the factors determining FDI, apart from the purely economic ones, there are studies which emphasize the role of institutions and political stability in a country to attract foreign investors. Several econometric studies concluded that sound institutions and lack of corruption can attract FDI (Wei 2000b, Globberman and Shapiro 2002, Stern 2003, Daude and

Stein 2007). Previous studies had also indicated that a country's poor FDI attractiveness is due to bureaucracy, ineffective tax system, corruption, labor market structure, and macroeconomic conditions (Apergis and Katrakilidis 1998, Pantelidis and Nikolopoulos 2008, Bitzenis et al. 2009). A recent study in 2011 about the reasons for the reluctance of international investors across Greece conducted by the Boston Consulting Group, shows that the main problems of Greece are: the bureaucracy; the unstable legal status with the continuous changes in the tax system; the administrative procedures; and the administration of justice (Boston Consulting Group 2011).

The purpose of this paper is to empirically provide evidence as to whether and to what extent the quality of institutions and regulations affect FDI inflows in Greece, a member state of the European Union (EU) since 1981, and of the Eurozone, since 2002. In order to give a regional dimension in the analysis, and for making the results comparable, our analysis focuses besides Greece, on Bulgaria and Romania, two new member states of the EU. Both countries joined the EU in 2007. Although previous research (Globerman and Shapiro 2002, Bénassy-Quéré et al. 2007, Daude and Stein 2007) has analyzed the effects of institutional determinants on FDI by employing country-level data, in this research a set of institutional and governance variables developed by the Heritage Foundation is employed, using also firm level data.

The motivation for studying the importance of the quality of institutions and the effectiveness of regulations as determinants on FDI in SEE region is that only recently these factors have been studied as determinants of FDI in former transitional economies, and it would be interested to examine whether the findings apply to a mature economy like Greece as well (Kaditi 2013, Estrin and Uvalic 2013).

The paper is organized as follows. The first section presents an overview of the evolution of FDI and institutional quality in SEE. The second section provides an overview of the relevant literature of the importance of economic activity, political and legal systems, business environment, and institutions in attracting foreign investors in a country. In section three the econometric model is explained, along with the dependent as well as the explanatory variables, whereas the empirical results are presented in the fourth section; section five presents a summary and conclusions.

Foreign Direct Invest and Institutional Development in SEE

Since Bulgaria and Romania cut from communism a new geographical space for business activities emerged. Economic conditions have undergone radical changes reformulating the business relationships of these two countries with foreign companies. The significance of the SEE markets has gained increasing interest among scholars to understand the nature of this region and its new business opportunities (Veremis and Daianu 2001, Choromides 2003). In the attempt to set up market economies for the former transitional economies and being new members of the EU, much attention was devoted to measures such as macroeconomic stability, privatisation, price and trade liberalisation. It is evident that research in these fields is necessary in order to understand the structural changes. However, the lack of research in the role of institutions in the SEE countries as determinants in attracting FDI inflows reflects a more general neglect of these economies.

The strategic location of the SEE region in the European continent, the opening of local markets for trade and investment, the continuous efforts in promoting institutional reforms for deeper integration in the EU, the comparatively low level of labour costs are only but a few of the determinant facts that make SEE region attractive for international investors. This is illustrated by the acceleration of FDI (Fig. 1). However, companies operating in the region faced a distinct institutional framework, which predetermined the strategic opportunities for businesses. That has created challenges for foreign investors. As a result, the SEE region has

witnessed a considerable rise in FDI flows during the period 1992 to 2008. Bulgaria and Romania have become very attractive and in 2008, the two economies received \$23.8 out of \$41.2 billion dollars, whereas the FDI flows for Greece amounted to \$4.5 billion dollars. After years of growth, all SEE economies experienced a deep recession as a result of the global financial crisis in 2008.

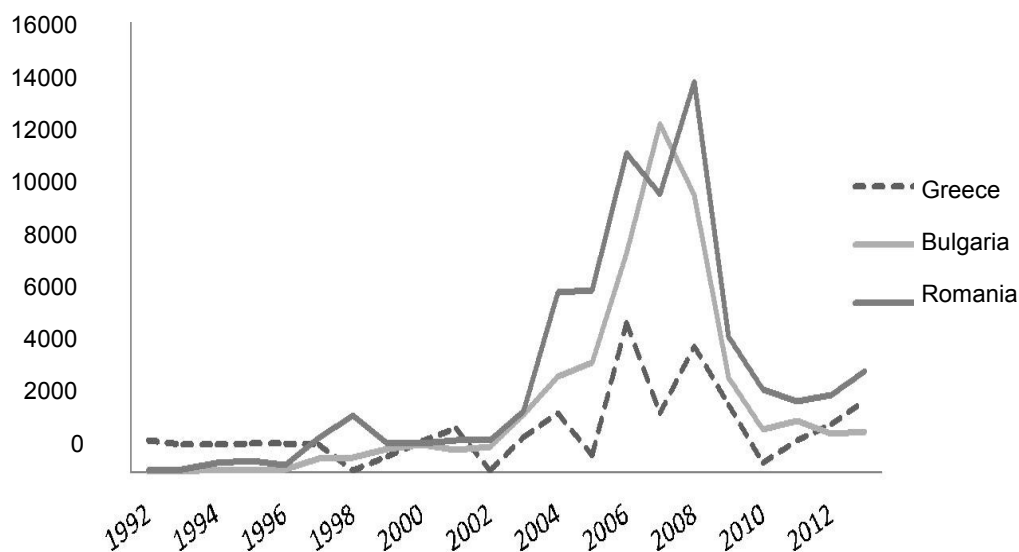


Fig. 1 – FDI inflows in Bulgaria, Greece, Romania (1992-2013) (Million \$)
Source: UNCTAD statistics (processed by the author)

All the three SEE countries have made considerable progress in promoting private sector development via privatization, deregulation, and improving public administration, however, the unstable tax system, phenomena of corruption, lack of access to finance, restrictive labour policies and the poor quality of regulations are still perceived by foreign investors as the key constraints to invest in the region (Table 1).

Since 1995, the institutional and regulatory frameworks in the three SEE economies have been reformed at various extents. In the overall score on the Index of Economic Freedom 2014 developed by the Heritage Foundation, both Bulgaria and Romania rank better than Greece (Fig. 2). The index is graded on a scale of 0 to 100, with higher values indicating more rigid regulations. It is obvious that Bulgaria and Romania experienced significant improvements compared to Greece in most indicators over time, as higher values correspond to institutions and regulations of higher quality.

According to the Heritage Foundation's 2014 country report, Greece has achieved its highest level of economic freedom in 2010, but its scores have dropped dramatically since then. Since 2010, Greece's economic freedom has declined by 7.0 points, with scores falling in seven of the ten measured categories. The economic freedom score in 2014 is 55.7, making the Greek economy the 119th freest in the 2014 Index.

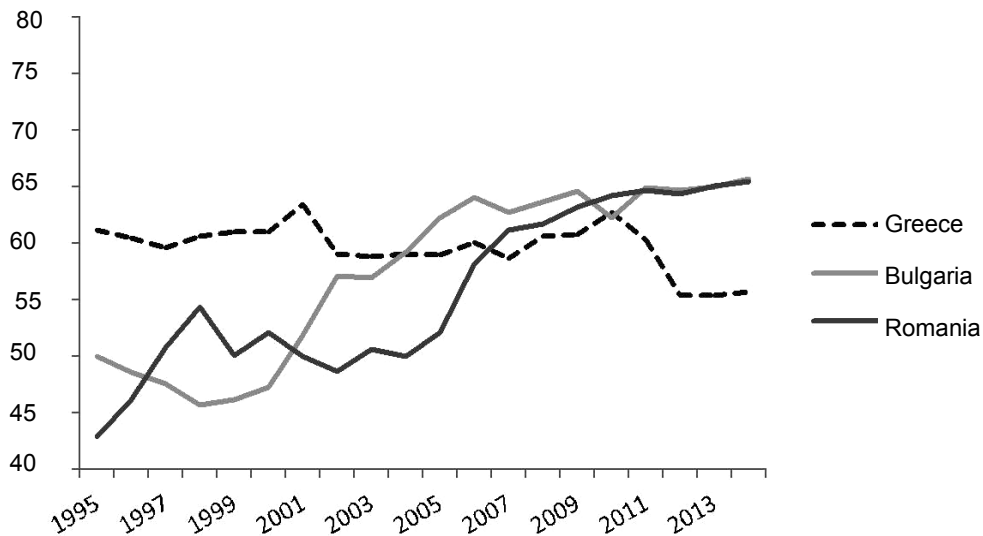


Fig. 2 – Index of Economic Freedom. Overall Score (1995-2014)

Source: Heritage Foundation, Index of Economic Freedom 2014 country reports (processed by the author)

Once considered as a “moderately free” economy, today Greece is considered as a “mostly unfree” economy. Greece is in the 40th place out of 43 countries in the European region with its overall score below the world and regional averages. Throughout the history of the Index, Greece’s economic freedom score has dropped by over 5 points (The Heritage Foundation, Index of Economic Freedom 2014). Although improvements in fiscal, business, labor, monetary, trade, and financial freedom, major declines in government spending, freedom from corruption, property rights, and last but not least investment freedom have cancelled out any gains. Despite efforts in the recent years to develop a more business friendly environment, the market conditions seem to be unable to amend the new economic realities, with tax evasion and corruption deeply-rooted in the economy.

Romania’s economic freedom score is 65.5, making its economy the 62nd freest in the 2014 Index. Since 2010, Romania’s economic freedom has increased by 1.3 points, with scores increasing in five of the ten categories, reflecting improvements in investment freedom, labor and monetary freedom, which advanced 5.0, 4.8 and 3.8 points respectively. Throughout the history of the Index, Romania’s economic freedom score has increased by over 22 points. Romania is ranked 29th out of 43 countries in the Europe region, and its overall score is higher than the world average (The Heritage Foundation, Index of Economic Freedom 2014). Despite, the remarkable economic performance in the recent years and its accession in the EU in 2007, Romania’s progression in terms of judicial independence and anti-corruption processes remain inefficient.

Bulgaria’s economic freedom score is 65.7, making its economy the 61st freest in the 2014 Index. Since 2010, Bulgaria’s economic freedom has increased by 3.4 points. Gains were recorded in six of the ten factors, led by management of government spending and monetary freedom, which advanced 16.2 and 10.1 points, respectively (The Heritage Foundation, Index of Economic Freedom 2014). Bulgaria is ranked 28th out of 43 countries in the Europe region. Throughout the history of the Index, Bulgaria’s economic freedom score has increased by over

Table 1

FDI and institutional indicators in SEE (1995-2014)

FDI Inflow (in million \$)	Bulgaria	Greece	Romania	Overall Economic Freedom Score	Bulgaria	Greece	Romania
2013	1 450	2 567	3 617	2014	65.7	55.7	65.5
2010	1 525	330	2 940	2010	62.3	62.7	64.2
2005	3 920	623	6 483	2005	62.3	59.0	52.1
2000	1 016	1 108	1 057	2000	47.3	61.0	52.1
1995	90	1 053	419	1995	50.0	61.2	42.9
Property Rights				Freedom from corruption			
2014	30.0	40.0	40.0	2014	35.2	33.2	37.7
2010	30.0	60.0	40.0	2010	36.0	47.0	38.0
2005	30.0	50.0	30.0	2005	39.0	43.0	28.0
2000	50.0	70.0	30.0	2000	29.0	49.0	30.0
1995	50.0	70.0	30.0	1995	30.0	50.0	10.0
Fiscal Freedom				Government spending			
2014	91.2	65.9	65.9	2014	64.5	19.2	59.2
2010	86.3	65.9	65.9	2010	48.3	41.9	59.8
2005	80.3	58.0	58.0	2005	53.4	54.4	68.9
2000	67.9	52.2	52.2	2000	54.4	54.4	63.3
1995	46.0	62.5	62.5	1995	50.5	55.3	52.2
Business Freedom				Labor Freedom			
2014	73.5	75.8	71.0	2014	80.2	53.9	65.2
2010	77.8	77.4	72.5	2010	78.1	55.1	60.4
2005	55.0	70.0	55.0	2005	80.3	56.1	55.5
2000	55.0	70.0	55.0	2000	N/A	N/A	N/A
1995	55.0	70.0	55.0	1995	N/A	N/A	N/A
Monetary Freedom				Trade Freedom			
2014	79.6	76.3	77.1	2014	87.8	82.8	87.8
2010	69.5	77.6	73.3	2010	87.4	82.5	87.5
2005	83.1	78.1	62.6	2005	82.0	80.2	70.4
2000	0.0	75.5	38.1	2000	49.8	77.8	74.0
1995	26.3	65.3	0.0	1995	72.4	77.8	79.0
Investment Freedom				Financial Freedom			
2014	55.0	60.0	80.0	2014	60.0	50.0	50.0
2010	50.0	60.0	75.0	2010	60.0	60.0	50.0
2005	50.0	50.0	30.0	2005	70.0	50.0	50.0
2000	70.0	70.0	70.0	2000	50.0	30.0	50.0
1995	70.0	70.0	70.0	1995	50.0	30.0	50.0

Source: The Heritage Foundation, Index of Economic Freedom 2014

15 points, but further reform is necessary in order for Bulgaria to achieve a broad-based economic freedom and growth. In particular, institutional reforms must support judicial independence and tackle of corruption in order to strengthen the foundations of economic freedom and ensure progress toward greater prosperity.

Literature Review and Empirical Studies

According to Dunning (2000), the decision of foreign investors regarding the location of the investment is subject to the strategy they want to pursue. In the case where the strategic orientation of the foreign investors is resource seeking, the decision as to whether to invest depends on factor endowments differences, with foreign investors seeking to take advantage of either the natural resources or the cheap labor of the host country. If the strategic orientation of the foreign investors is market seeking investment or a market oriented strategy, the decision as to whether to invest depends on the target country's domestic and regional market size, and market potential.

One of the strongest FDI determinants is the state of the economy. According to the literature the size of the domestic market and its growth potential are significant FDI determinants, suggesting that foreign investors seek to serve primarily the domestic market rather than the international market (Kobrin 1976, Nigh 1986, Shatz and Venables 2000, Torrisi et al. 2008). Billington (1999) and Fung et al. (2002) suggested that besides the absolute level of GDP which has a statistically significant positive impact on FDI inflows, the growth of an economy also has a statistically positive impact on the FDI flows in the host country. Al Nasser (2007) suggests that apart from the purely fundamental economic factors such as GDP growth and the size of the market, macroeconomic stability also affects the inflows of FDI. Similarly, Baniak et al. (2005) in their studying of the determinants of FDI inflows into transition countries suggested that macroeconomic stability increases FDI flows.

Another determinant factor that has a positive impact on the FDI inflows is the openness to trade, suggesting that in economies where tariff and non tariff barriers are not restrictive to trade also receive higher volumes of FDI inflows (Asiedu 2002, Addison and Heshmati 2003, Nonnenberg and Mendonça 2004, Bevan and Estrin 2004).

Apart from the purely economic factors, there are studies which emphasize the role of institutions and political stability in a country to attract foreign investors. Already by the end of the 1990s, emphasis was placed on the role of institutions as the basic parameters of economic growth (Acemoglu et al. 2005). The quality and the effectiveness of governmental institutions are seen as important factors in attracting FDI, since they affect the business and legal environments in a country (Blonigen 2005, Gani 2007) therefore good governance, a sound business environment are attractive location advantages for foreign investors (Singh and Jun 1995, Globerman and Shapiro 2003, Globerman et al. 2006, Busse and Hefeker 2007, Gani 2007, Busse and Groizard 2008, Dutta and Roy 2009, Barthel et al., 2010, Berger et al. 2011, 2013). Host countries with a sound business environment are able to attract more FDI (Dutta and Roy 2009) and reap the benefit of FDI and achieve economic growth more effectively (Busse and Groizard 2008).

According to the literature, capital market stability, sound and transparent regulations, legal stability and transparency positively affect FDI inflows, whereas political volatility significantly reduces inward FDI (Akhter 1993, Ramcharran 2000, Baniak et al. 2005, Bénassy-Quéré et al. 2007, Naudé and Krugell 2007, Bussmann 2010). Countries with a sound legal system are able to attract more inward FDI which contributes significantly to the economic growth and development (Baek and Qian 2011). In general, it is accepted that countries that record higher economic prosperity have greater political and economic freedom, better rights protection and intellectual property rights and lower level of corruption, thus perform relatively better in terms

of FDI inflow (Acemoglu et al. 2005, Bénassy-Quéré et al. 2007). Buchanan et al. (2012) pointed out that the quality of institutions not only relates to the amount of FDI but also with their variability.

Wheeler and Mody (1992), Gani (2007), Groh and Wich (2009), suggest that complex and time consuming bureaucratic procedures affect the expected returns from investments, thereby negatively affect the decisions of foreign investors. Khan and Akbar (2013) employed several political risk indices such as government stability and corruption, while other studies have used corruption as a measure of political risk displaying a negative impact on FDI (Wheeler and Mody 1992, Wei 2000a, 2000b, Getz and Volkema 2001, Habib and Zurawicki 2002, Bénassy-Quéré et al. 2007). Similar factors also indicated by Wheeler and Mody (1992), Filippaios and Kottaridi (2013) who emphasize the particular influence exerted by the corruption. Finally, Bénassy-Quéré et al. (2007) find the impact of financial efficiency, the stability of the tax system, the efficiency of the judiciary and of supervisory instruments to be among those factors which exercise significant influence on FDI.

The institutions can have an impact on FDI through three channels. The first channel is through the direct impact that economic development has on FDI due to the positive macroeconomic prospects. Second because the low level of institutions involves an extra cost for foreign investors. In this case, for example, there are the costs incurred due to corruption (Wei 2000b). Third, because of the high non-recoverable costs, FDI is particularly prone to any form of instability. Especially with regard to greenfield investments, empirical evidence supports that they are influenced by the uncertainty arising from the political volatility, the effectiveness of the legal system and the extent to which the laws on property rights are enforced, given that this type of FDI require high irreversible costs (Stern 2003).

Methodological Approach

According to Dunning's OLI paradigm (1993), a firm must fulfill three criteria prior to any form of FDI. First the firm must possess certain ownership advantages that can balance the additional costs related with operating in a foreign market. The second condition of the OLI paradigm is that the firm must be in position to efficiently exploit in terms of cost of production its competitive advantages in a foreign rather than in the domestic market. The third criterion of international production is that it is more profitable for the company to transfer and exploit its ownership advantage across borders, than selling it to a third party via licensing or franchising.

The level of political and financial stability, quality and efficiency of regulatory and institutional factors, clearly affect the attractiveness of the location advantage of a given country, by diminishing the transaction costs foreign investors face. Therefore, countries with sound political and financial institutions are more attractive to foreign investors.

As a result, foreign investors are positively affected by favorable local market developments, either in terms of cost of production or market growth potential and the quality of institutions. In this context, following Kaditi (2013) the equation below will be used to explain FDI decisions in the three SEE Economies:

$$FDI_{it} = a + b_1 FDI_{it-1} + b_2 Years_{it} + b_3 Resources_{it} + b_4 Firm\ Variables\ (Other)_{it-1} + b_5 Institutional\ Variables_{it-1} + b_6 Country\ Variables_t + b_t d_t + c_i + u_{it}$$

where i indicates the i^{th} firm, and t indicates the time. The disturbance term is specified as a two-way error component model, so that firm heterogeneity is indicated by c_i , namely the unobserved firm-specific effect, whereas year-specific dummies, d_t , are included to account for common trends in the volume of FDI stock of the firms. a , b are parameters to be estimated (Kaditi 2013).

A detailed description of the variables used in the equation is presented in table 2.

The firm-level data used is retrieved from three commercial databases, ICAP, STAT BANK, and Amadeus. After deleting firms with incomplete and missing data, an unbalanced panel data was constructed which included 360 companies that have received FDI between 1996 and 2012, of which 157 are located in Greece, 95 are located in Bulgaria and 108 are located in Romania. Foreign investors are originated from all over the world, while we did not control for the sectoral distribution of the local firms. Regarding firm characteristics, twelve variables are employed and they are presented in detail in table 2. More specifically we include specific firm variables to capture the effects of possible location advantages according to Dunning's (1993) OLI paradigm.

To estimate the possible effect of the firm's *Size*, the total capitalization of the firm is employed and it is expected to be positively related to FDI, since larger firms may receive larger flows of inward FDI. The firms' operating years (*Years*) is also included since established firms are expected to be more experienced to operate in the domestic market, therefore, diminishing the possible transaction cost of foreign investors, and they are expected to be more attractive to foreign investors. The *Operating Profit* of the firms may affect foreign investors' decision, since profitable firms are expected to be more attractive to foreign investors.

To examine possible location advantages, the firms' *Operating Costs* may be another factor important to foreign investors. Firms with higher operating costs (such as cost of material used, and labor costs) are expected to be less attractive to foreign investors therefore this exploratory variable is expected to be negatively related to the dependent variable. To examine the possible effect on the firm's ownership advantages, the explanatory variable *R&D* intensity is employed. Since a firm can develop new competitive technology using its own investments for R&D, the explanatory variable is expected to be positively related to the investment decision of foreign investors.

It seems plausible that access to the best resources is already in the hands of local firms, and that the best way to access these resources is to invest in the target firm that holds them. For foreign investors the need for complementary inputs may be dominating over considerations concerning post-investment costs or risks. To examine the effect of the variable associated with resources' intensity, an explanatory variable *Resources* is employed, and it is expected to be positively related to the dependent variable.

While popular debate is often focusing on production costs, the attraction of markets is at least as important. Foreign firms facing constraints to growth within their domestic market are forced to explore new opportunities. If markets are saturated or rising costs reduce competitiveness, this creates strong motives for restructuring and relocation, searching for markets with growth potential, or use the new markets as export platforms from which to satisfy other neighboring foreign markets. Such a strategy is likely to include high start-up costs thus demand more dynamic followers. To examine this effect, an explanatory variable *Growth Rate* is employed. The higher the growth rate of sales of the target firms, the higher the amount of FDI is likely to be, therefore, a positive sign is expected for this explanatory variable.

Similarly, capital intensive companies require a large resource commitment but may yield large profits. Although high profits may induce companies not to invest in countries facing high financial risks this may be particular relevant if the company cannot afford the entire investment and it sees the partnership option as a way to complement its resources. To examine this effect, an explanatory variable *Investment* is employed and a positive sign is expected for this explanatory variable.

Financial resources are a firm's competitive advantage in the presence of asymmetric

information regarding investments. Therefore, a firm with internal funds or low leverage is more likely to be attractive to foreign investors while a firm that needs to raise funds or face credit constraints may not be as attractive. Therefore, an explanatory variable measuring the share of debts over the firm's total assets, *Total Debt*, is employed.

Taxation is another explanatory variable that is expected to be negatively related to the dependent variable, since the lower the amount of net profit, the lower the amount of FDI inflows will be.

The contribution of exports over the sales of the firm is taken into consideration by employing the explanatory variable *Exports*, since international companies have competitive advantages that arise from their international activities as such. This includes international accumulation of know-how, arbitrage opportunities, flexibility for production shifting, superior recognition of opportunities, and international diversification of risk. With increasing presence in foreign markets and accumulated knowledge of these markets, the firm is in position to analyze the business environment more accurately and take estimated risks. Therefore, the firm becomes more competitive and confident in committing resources in foreign markets therefore this factor is expected to be positively related to the dependent variable.

An explanatory variable indicating the geographic diversification of companies, *Geography*, is employed, since companies with international experiences are expected to know better how to take advantage of new opportunities in a new foreign market, to face lower entry costs since they can exploit synergies within their international network, resulting in increasing value of their operations by serving more countries. Internationally experienced companies can use their market specific skills developed in foreign countries to overcome any market specific externalities against local competitors therefore this explanatory variable is expected to be positively related to the dependent variable.

Regarding the country control variables that may affect FDI, *GDP* and *GDP per capita* are two of the basic macroeconomic indicators of a country's economic performance reflecting the economic cycle of the economy; whether it is headed for growth or recession, and the consumption potential of the population in the domestic market. A growing economy and a higher consumption prospects are expected to positively affect the investment decision of market orientated investors to undertake FDI.

Another macroeconomic indicator that is employed and is expected to influence the decision of foreign investors is *Inflation*. High inflation rates minimize the consumption potential of the population in the domestic country, raise the price of production inputs and it is therefore expected to negatively affect any foreign investment decision.

Since economies with low tariff and non tariff barriers that impede international trade offer a solid foundation for international business activity, the explanatory variable *Trade Openness* indicating the country's open market orientation that may affect FDI decisions is employed.

The quality of institutions and regulations in the three SEE economies is expected to affect the investment decision of foreign investors. Overall, weak institutions are assumed to negatively affect investment decisions, while high quality institutions are expected to positively affect investment decisions. In order to examine the role that the quality of regulations and institutions has as determinants in attracting FDI, a group of explanatory variables is employed. The Index of Economic Freedom from the Heritage Foundation is an indicator which is calculated for 186 countries and it takes into account 50 independent variables, which are broken down into ten different categories. Their operational definitions are presented in detail in Table 2. Since higher values of these variables correspond to institutions and regulations of higher quality, the estimated coefficients are expected to be positive so that the economy is more attractive to investors

Table 2

Definitions of variables

Institutional Variables		Unit	Source
Rule of law	Property Rights: measures the degree to which a country's laws protect private property rights and the degree to which its government enforces those laws. It also analyzes the independence of the judiciary, the existence of corruption within the judiciary, and the ability of individuals and businesses to enforce contracts.	[#]	The Heritage Foundation (Index of Economic Freedom)
	Freedom from Corruption: Corruption erodes economic freedom by introducing insecurity and uncertainty into economic relationships.	[#]	
Government Size	Fiscal Freedom measures the tax burden imposed by the government. It includes both the direct tax burden in terms of the top tax rates on individual and corporate incomes and the overall amount of tax revenue as a percentage of GDP.	[#]	
	Government Spending measures the level of government expenditures as a percentage of GDP. Government expenditures, including consumption and transfers, account for the entire score.	[#]	
Regulatory Efficiency	Business Freedom is a quantitative measure of the ability to start, operate, and close a business.	[#]	
	Labor Freedom is a quantitative measure that looks into various aspects of the legal and regulatory framework of a country's labor market.	[#]	
	Monetary Freedom combines a measure of price stability with an assessment of price controls. Both inflation and price controls distort market activity. Price stability without microeconomic intervention is the ideal state for the free market.	[#]	
Open Markets	Trade Freedom is a measure of the absence of tariff and non-tariff barriers that affect imports and exports of goods and services.	[#]	
	Investment Freedom measures the constraints on the flow of investment capital.	[#]	
	Financial Freedom is a measure of banking efficiency as well as a measure of independence from government control and interference in the financial sector.	[#]	

(see the next page)

Table 2

Definitions of variables

Firm Characteristics			
FDI	The percentage of equity share owned by the foreign firm. A firm is considered as foreign owned if foreign invested capital is at least 10%. Since there is no data available to indicate the change on foreign ownership over time we assume that the percentage of foreign equity share remains the same (Damijan et al. 2003).	[% of rate]	ICAP, STAT BANK, AMADEUS
Size	Total capitalization of the company (measured in €).	[#]	
Resources	The resource intensity is measured by a dummy variable, equal to 1 if the main economic activity of the company is in a resource-intensive industry and 0 otherwise.	[#]	
Investment	Capital intensity is proxied by the ratio of total assets/sales.	[#]	
Exports	Value of exports/sales of the company.	[#]	
Geography	Number of different geographical markets in which the company is active.	[#]	
Years	Number of years the firm operates.	[#]	
Operating Profit	Profit or loss after taxes.	[#]	
Growth Rate	Percentage change of sales in the year of the investment over the following years.	[% rate]	
Operating Costs	The cost of labor and material inputs.	[#]	
R&D	Technological intensity is proxied by the percentage ratio of R&D expenditures over total sales.	[% rate]	
Total Debt	The share of the total debt in terms of the firm's total assets.	[% rate]	
Taxation	Percentage of the taxes paid in terms of a firm's sales.	[% rate]	
Country Variables			
GDP per capita	The annual percentage change of GDP per capita.	[% rate]	UNCTAD Statistics, Bank of Greece
GDP	The annual percentage change rate of GDP.	[% rate]	
Trade Openness	The total volume of exports and imports as a share of GDP.	[% rate]	
Inflation	The annual percentage change in the general level of prices of products and services.	[% rate]	

To control for any possible correlation problems since various institutional variables measure similar economic freedoms, we group those institutional variables that measure similar economic freedoms (Daude and Stein 2007). In particular, the average of *Property Rights* and *Freedom from Corruption* will be used in the equation as an indicator on *Rule of Law*, the average of *Fiscal Freedom* and *Government Spending* will be used in the equation as an indicator on *Government Size*, the average of *Business Freedom*, *Labor Freedom* and *Monetary Freedom* will be used in the equation as an indicator on *Regulatory Efficiency*, while the

average of the remaining variables, *Trade Freedom, Investment Freedom and Financial Freedom* will be used in the equation as an indicator on *Open Markets*.

Empirical Results

Due to the nature and the use of the lagged predictive variable, and the statistical analysis of time series data, the linear least square estimators equation results not only to biased and inconsistent but to also to biased fixed and random effects estimators. To overcome this effect we employ a generalized method of moments procedure (Blundell and Bond 1998). The bias in the two step standard errors will be corrected by following the correction procedure of Windmeijer (2005). Following Arellano and Bond (1991) we are using an autocorrelation test, and in addition a Sargan test to examine over-identifying restrictions in our statistical model. The results suggest no serious problem. The Sargan test verifies the null hypotheses, that the over-identifying restrictions are valid. Similarly, the Arellano-Bond test reveals no significance effects of serial correlation in the first-differences errors. The results in Tables 3, 4 and 5 suggest that the explanatory institutional and regulatory variables have a statistically significant relation to FDI in the three SEE economies. Regarding the importance of the coefficients, the results suggest that the effect of the institutional and regulatory quality on FDI is much higher for Greece than the 2 other SEE economies.

In columns 1 to 4 the four institutional and regulatory variables are reported separately. It is evident from the coefficients that the explanatory institutional variables for Greece, which are related to the **Rule of Law** and **Regulatory Efficiency**, are the explanatory variables with the highest estimators and with the highest statistical significance at less than 1% level, and appear to have a statistically significant negative effect on FDI. The existing literature (Wei 2000b) supports our results that transactions costs incurred due to corruption that promotes uncertainty, and it raises transaction costs for foreign investors, thus their unfavorable development affects negatively FDI decision in Greece. The administrative procedures and the administration of justice are considerably deterring FDI decisions, since the results confirm that the quality of the institutions and regulations in Greece are factors which have been deteriorated and foreign investors consider them when choosing to expand their operation.

As far as the regulatory efficiency index is concerned, the results suggest that the lengthy and burdensome process for launching and operating a company had a statistically negative effect on FDI, indicating that one of the main problems of Greece is the bureaucracy. The legal framework consisting of lengthy and conflicting with unclear applicability procedures raise barriers to entry and, more importantly, suppress business. The resulting complexity creates a rigid and inefficient administration that impedes FDI (Lucas 1990, Singh and Jun 1995). Overall the results stress out that the business environment in Greece suffers not only from obstacles to operating a business, but also from the little protection offered to investors.

For Bulgaria, the importance of the coefficient which is related to the **Rule of Law** and the statistical significance at less than 5% level suggest that the impact on FDI, although negative, appears to be lower than in Greece. On the contrary, the importance of the coefficient which is related to the **Regulatory Efficiency** with statistical significance at less than 5% level appears to have a statistically significant positive effect on FDI. For Romania, the explanatory institutional variables which are related to the **Rule of Law** and **Regulatory Efficiency**, are the explanatory variables with the highest statistical significance at less than 1% level, and appear to have a statistically significant positive effect on FDI. Their evolution over time appear to have positively affected FDI in Romania.

The other indicators related to **Government Size** and **Open Markets** appear to play a less, still statistically significant negative role in affecting the decision of foreign investors in Greece. This result coincides with the findings of the existing literature (Ramcharran 2000, Baniak et al. 2005, Naudé and Krugell 2007). Although the government has changed the existing incentive

Table 3

Empirical Results

	Rule of law	Government Size	Regulatory Efficiency	Open Markets
FDI Greece	0.637 (0.062) ^{***}	0.754 (0.070) ^{***}	0.584 (0.078) ^{***}	0.564 (0.072) ^{***}
Size	0.130 (0.075) [*]	0.130 (0.052) ^{**}	0.138 (0.055) ^{**}	0.075 (0.052) [*]
Resource	0.204 (0.054) ^{***}	0.217 (0.050) ^{***}	0.124 (0.073) [*]	0.256 (0.060) ^{***}
Investment	0.035 (0.015) ^{**}	0.028 (0.017) [*]	0.003 (0.004)	0.042 (0.020) ^{**}
Growth Rate	0.028 (0.017) [*]	0.007 (0.014) [*]	0.157 (0.096) ^{**}	0.206 (0.160) ^{**}
Exports	0.201 (0.037) ^{***}	0.068 (0.042) [*]	0.080 (0.030) ^{**}	0.048 (0.020) ^{**}
Geography	0.184 (0.064) ^{***}	0.150 (0.060) ^{**}	0.068 (0.067)	0.152 (0.060) ^{**}
Years	0.548 (0.060) ^{***}	0.380 (0.068) ^{***}	0.769 (0.072) ^{***}	0.148 (0.062) ^{**}
Operating Profit	0.018 (0.051)	0.008 (0.021)	0.003 (0.006)	0.009 (0.006)
R&D	0.206 (0.024) ^{***}	0.074 (0.026) ^{***}	0.071 (0.044) [*]	0.053 (0.039) [*]
Operating Costs	0.257 (0.364)	0.082 (0.125)	0.071 (0.140)	0.121 (0.128)
Total Debt	-0.293 (0.075) ^{***}	-0.263 (0.069) ^{***}	-0.364 (0.180) ^{**}	-0.185 (0.067) ^{***}
Taxation	-0.086 (0.217)	-0.075 (0.135)	-0.017 (0.028)	-0.023 (0.026)
GDP per capita	1.077 (0.365) ^{***}	0.797 (0.219) ^{***}	1.093 (0.358) ^{***}	0.311 (0.153) ^{**}
GDP	0.053 (0.009) ^{***}	0.042 (0.017) ^{**}	0.013 (0.024)	0.051 (0.009) ^{***}
Trade Openness	0.048 (0.682)	0.137 (0.502)	0.032 (0.518)	0.078 (0.497)
Inflation	-0.041 (0.008) ^{***}	-0.027 (0.007) ^{***}	-0.020 (0.007) ^{***}	-0.011 (0.005) ^{**}
Rule of Law	-0.188 (0.064) ^{***}			
Government Size		-0.102 (0.023) ^{***}		

Table 3

Empirical Results

	Rule of law	Government Size	Regulatory Efficiency	Open Markets
Regulatory Efficiency			-0.174 (0.121)***	
Open Markets				-0.065 (0.035)*
Constant	-1.483 (1.704)	-1.850 (1.395)	1.272 (1.493)	1.812 (1.104)
Sargan test	0.066	0.125	0.153	0.097
Auto-correlation test	0.108	0.341	0.375	0.162

Values in the parentheses are Standard Errors. No Obs: 2.512. The P-values are reported for the Sargan and the auto-correlation tests. Significance levels: $p < 0.01$ ***, $p < 0.05$ ** , $p < 0.1$ *.

policies, comprising the need to attract FDI, through significant fiscal and financial provisions, the unstable legal status, the fact that Greece's trade policies still favor domestic companies while the EU members have very low tariff rates and few non-tariff barriers, and the constant changes in the tax bill are considerably deterring FDI. The successive changes in the tax regime for example constitute a serious obstacle to any interested foreign investor. FDI are long-term investments which are not easily reversible. Hence, any investor should be able to assess the revenue and the cost of its investment long-term which implies that knows in advance the legal and tax obligations.

Greece's economy is moderately free, facing major fiscal weaknesses. The recent public debt and unemployment crises have not been adequately addressed and as a result there are significant delays in structural changes in particular as regards to the operation of the market and the difficulty to access finance. With economic uncertainty deterring FDI, the overall stability of the financial system destabilized, Greece's attractiveness as an FDI location with regard to the Open Markets explanatory variables has to be improved. On the contrary, the explanatory institutional variables for Bulgaria and Romania, which are related to the **Government Size** and **Open Markets**, and are statistical significant at less than 5% level, appear to have a statistically significant positive effect on FDI. Their evolution over time, appear to positively contribute to the attraction of FDI in Bulgaria and Romania.

Contrary to the emphasis placed by the EU on the ability of the Eurozone countries to attract FDI, the results suggest that Greece failed on the implementation of structural reforms leading to a stable and working market economy, the development of appropriate and transparent commercial laws, the restructuring of the industrial base, all of which are factors that can lead to an increased volume of FDI, and therefore to swift integration to the Eurozone (Altomonte and Guagliano 2003). The combining effect of the ambiguous FDI policies and the weak economic environment in Greece discouraged the international investors, with direct restrictive result to the attraction of FDI inflows. To this end, there is a need for an enhanced effectiveness of competition policy through the introduction of a "centrally-led review of stock of laws and regulations for competitive effects with follow-up revisions of laws and regulations that unnecessarily restrain competition" (OECD 2014: 18).

The results indicate that an efficiently regulated economy, clearly defined laws, effective political and economic institutions, all of which are determinant factors of macroeconomic

stability, capital market and private sector development, are expected to positively influence economic growth through the promotion of FDI (Ramcharran 2000, Altomonte 2000).

Regarding the firm-specific variables for Greece, the results are positive and statistically significant. Firms that have received foreign investments may, therefore, be more attractive in the future as well. Similarly, the results of the Size and R&D variables are positive and statistical significant, indicating that foreign investors prefer large firms and those who can acquire new technology. Furthermore, the capital and resource intensity the growth rate of sales explanatory variables, and last but not least, the advantages related to the geographical diversification, and export orientation of the local firms, are positive and statistically significant.

The relevant positive and significant coefficients of the geographical diversification, and export orientation of the local firms suggest that foreign investors seek not only to serve the domestic market but the international market as well. This finding does not coincide with the findings of Kobrin (1976), Nigh (1986), Shatz and Venables (2000) and Torrisi et al. (2008) who suggested that foreign investors seek to serve primarily the domestic rather than the international market. As expected, Total Debt appears to negatively affect FDI, whereas the coefficient of Years indicates that established firms with experience are more attractive to investors.

Table 4

Empirical Results (cont.)

	Rule of law	Government Size	Regulatory Efficiency	Open Markets
FDI Bulgaria	0.724 (0.337)**	0.762 (0.335)**	0.543 (0.277)**	0.411 (0.168)**
Size	0.137 (0.052)**	0.133 (0.063)**	0.289 (0.169)*	0.165 (0.088)*
Resource	0.157 (0.068)**	0.246 (0.070)**	0.123 (0.055)**	0.384 (0.100)**
Investment	0.007 (0.017)	0.015 (0.002)**	0.041 (0.005)**	0.010 (0.004)**
Growth Rate	0.007 (0.008)	0.002 (0.003)	0.40 (0.259)*	0.01 (0.019)
Exports	0.083 (0.030)**	0.098 (0.041)**	0.065 (0.023)**	0.047 (0.026)*
Geography	0.188 (0.087)**	0.167 (0.030)**	0.143 (0.020)**	0.175 (0.020)**
Years	0.230 (0.086)**	0.167 (0.052)**	0.315 (0.080)**	0.472 (0.075)**
Operating Profit	0.0024 (0.143)	0.074 (0.055)	0.030 (0.027)	0.021 (0.168)
R&D	0.015 (0.010)	0.009 (0.020)	0.007 (0.009)	0.004 (0.010)
Operating Costs	0.117 (0.024)**	0.093 (0.018)**	0.157 (0.064)**	0.061 (0.024)
Total Debt	-0.312 (0.105)**	-0.254 (0.072)**	-0.179 (0.090)**	-0.440 (0.109)**
Taxation	-0.013 (0.017)	-0.017 (0.062)	-0.011 (0.025)	-0.020 (0.039)

Table 4

Empirical Results (cont.)

	Rule of law	Government Size	Regulatory Efficiency	Open Markets
GDP	0.567	0.839	0.338	0.452
per capita	(0.210)***	(0.277)***	(0.183)*	(0.164)***
GDP	0.016	0.020	0.018	0.007
	(0.017)	(0.010)**	(0.010)*	(0.009)
Trade Openness	1.275	0.225	0.085	0.429
	(1.204)**	(1.611)	(0.403)**	(0.407)**
Inflation	-0.041	-0.019	-0.015	-0.028
	(0.010)***	(0.008)**	(0.004)***	(0.010)***
Rule of Law	-0.028			
	(0.012)**			
Government Size		0.783		
		(0.319)**		
Regulatory Efficiency			0.495	
			(0.080)**	
Open Markets				0.238
				(0.099)**
Constant	0.408	-2.583	1.293	2.485
	(2.561)	(2.797)*	(1.706)	(1.795)
Sargan test	0.057	0.155	0.067	0.084
Auto-correlation test	0.176	0.193	0.358	0.642

Values in the parentheses are Standard Errors. No Obs: 1.520. The P-values are reported for the Sargan and the auto-correlation tests. Significance levels: 0.01***, 0.05**, 0.1*.

For Bulgaria and Romania, the results of Operating Costs suggest an efficiency seeking FDI form of investment by firms seeking lower operating costs by either relocating production facilities to countries with lower labour cost or outsourcing elements in the value chain to lower cost of suppliers abroad, a motivation cited in the literature for FDI in former transition economies (Estrin et al. 2000, Bevan and Estrin 2004), while the results of the R&D variable, although positive, are not statistically significant. In comparison with Greece, FDI in Bulgaria and Romania is aiming mainly in traditional and low technology sectors.

The coefficients of the country-specific variables GDP and GDP per capita are positive and statistically significant for all countries, whereas Inflation has a negative impact on FDI flows. These results are consistent with the findings of Billington (1999), Fung et al. (2002), Baniak et al. (2005) and Al Nasser (2007), who conclude that macroeconomic stability and the growth potential of the economy are among the main determinants of FDI. The results indicate that FDI flows in SEE were also driven by the market size and consumer demand, therefore the orientation of the foreign firms that have invested in the region was market seeking, either investing in established local brands and, or local supply chain networks. The large inflows of FDI to SEE have often been argued to be explained in terms of firms seeking new or quickly growing markets for their products (Lankes and Venables 1996).

Table 5

Empirical Results (cont.)

	Rule of law	Government Size	Regulatory Efficiency	Open Markets
FDI Romania	0.532 (0.295)*	0.415 (0.215)*	0.659 (0.386)*	0.660 (0.262)**
Size	0.169 (0.068)**	0.188 (0.088)**	0.169 (0.077)**	0.175 (0.096)*
Resource	0.136 (0.068)**	0.148 (0.070)***	0.191 (0.055)**	0.086 (0.034)**
Investment	0.066 (0.047)*	0.041 (0.022)*	0.007 (0.004)*	0.065 (0.021)***
Growth Rate	0.027 (0.009)***	0.015 (0.009)*	0.086 (0.047)*	0.074 (0.016)***
Exports	0.057 (0.022)**	0.070 (0.033)*	0.054 (0.020)**	0.080 (0.073)*
Geography	0.164 (0.066)**	0.139 (0.048)***	0.158 (0.052)***	0.298 (0.153)**
Years	0.195 (0.088)**	0.115 (0.058)**	0.244 (0.057)***	0.376 (0.095)***
Operating Profit	0.015 (0.019)	0.009 (0.012)	0.021 (0.036)	0.016 (0.095)
R&D	0.148 (0.210)	0.058 (0.115)	0.063 (0.192)	0.009 (0.014)
Operating Costs	0.141 (0.039)***	0.194 (0.095)**	0.029 (0.032)	0.108 (0.032)***
Total Debt	-0.196 (0.086)**	-0.157 (0.054)***	-0.168 (0.071)**	-0.235 (0.104)**
Taxation	-0.064 (0.182)	-0.079 (0.146)	-0.044 (0.158)	-0.038 (0.167)
GDP per capita	0.376 (0.167)**	0.472 (0.145)***	0.298 (0.139)**	0.275 (0.117)**
GDP	0.108 (0.029)***	0.167 (0.072)**	0.119 (0.093)*	0.086 (0.025)***
Trade Openness	1.447 (0.394)***	0.049 (0.348)	1.182 (0.338)***	1.168 (0.279)***
Inflation	-0.025 (0.007)***	-0.033 (0.011)***	-0.085 (0.022)***	-0.067 (0.030)**
Rule of Law	0.746 (0.214)***			

Table 5

Empirical Results (cont.)

	Rule of law	Government Size	Regulatory Efficiency	Open Markets
Government Size		0.351		
		(0.179)**		
Regulatory Efficiency			0.402	
			(0.086)***	
Open Markets				0.385
				(0.168)**
Constant	0.338	2.901	1.365	2.229
	(1.164)	(2.827)	(1.025)	(1.467)
Sargan test	0.068	0.137	0.107	0.184
Auto-correlation test	0.259	0.162	0.248	0.266

Values in the parentheses are Standard Errors. No Obs: 1.728. The P-values are reported for the Sargan and the auto-correlation tests. Significance levels: 0.01***, 0.05**, 0.1*.

The results in tables 3, 4 and 5 with regard to the growth rate of sales, GDP and GDP per capita, resource intensity and operating costs, suggest that contrary to our expectations that FDI in all SEE economies will be mainly of the vertical, efficiency-seeking type, it is evident from the findings that neither the vertical, efficiency-seeking type nor the horizontal, market-seeking type of FDI dominates. Our findings coincide with the findings of Christie (2003) who suggested that in the SEE economies there is no clear distinction between efficiency and market seeking FDI type, and Kekic (2005), who suggested that the impact of market size, operating costs and natural resources were all statistical significant determinants on FDI in SEE economies.

Conclusion

This study originally presented the evolution of FDI in SEE briefly and compared the performance of the three countries, namely Bulgaria, Greece and Romania. The focus then turned to the role of institutions in attracting foreign investors in a country. In this context, the relevant literature was explored and the conclusions drawn in order to discuss the current status of institutions in SEE. Contrary to the main determinants of FDI location such as access to low-cost labor, large markets, and the availability of natural resources, which are diminishing in importance, other factors such as the overall stability of a country's economic and social institutions strongly determines its attractiveness as a FDI host country (Lucas 1990, Singh and Jun 1995).

Using firm and country-level data during 1996-2012, the significance and the effectiveness of a broad set of institutional and regulatory variables as factors that might have an effect FDI decision in the region and whether the contribution of regulatory and institutional factors driving FDI in the former transitional economies of Bulgaria and Romania are different than Greece was explored. They are found to be so. Overall, the results confirm the universal belief that the quality of institutions and regulations in a country are important factors in the decision of FDI.

The examination of the effect of the institutional and regulatory variables on FDI in all South-eastern economies confirmed their statistically significant influence on FDI decisions. In addition firm and country explanatory variables, not only had a statistically significant influence

on the foreign investment decision, but they were statistically significant on the various regulatory and institutional variables.

Our analysis confirmed that quality of institutions and regulations have a significant positive effect on FDI. Besides the direct influence on the economic development of a SEE country, institutional and regulatory quality also affects the economy indirectly, through its impact on the level of FDI inflows. Other firm- and country- specific variables, such as Size, Age, R&D intensity, Operating Costs and GDP per capita were also proved to have a statistically significant influence on FDI.

Greece, compared to Bulgaria and Romania, has not pursued any strong policies and institutions necessary for its integration in the world economy, thus it has not reaped any benefits from the increase in international capital movements, resulting in a small degree of participation in the international distribution of foreign investments in SEE. Greece faces inherent weaknesses for many years and eventually led to the crisis experienced for the seventh consecutive year. The crisis initiated a broad discussion for the need of redefining goals and policies with particular emphasis to be given to attempt to attract FDI as an essential ingredient for the restart of the country's economy and the creation of jobs.

In the past, there have been attempts to improve the business climate with the investment laws but these efforts are not enough. Greece needs consistent policies with clear frame and long-term strategic planning. The consolidation of the public sector with a radical restructuring of the structures and modes of operation is an essential precondition for any further action. The bureaucratic system must be eliminated in order to simplify the start-up procedures but also any activities concerning the relationships between the public and private sector in order to prevent any corruption phenomena. The prevalence of transparency has a prominent role in ensuring the efficient operation of the state and therefore the confidence of foreign investors.

A long-term strategic planning is required for any macroeconomic and political stability. The successive changes in the tax regime for example constitute a serious obstacle to any interested foreign investor. FDI are long-term investments which are not easily reversible. Hence, any investor should be able to assess the revenue and the cost of its investment on long-term which implies that he knows in advance the legal and tax obligations.

Loose restrictions or tax incentives are not strong motives for foreign investors. Emphasis must be given to the reduction of bureaucratic procedures and a stable tax system, the development of trustworthy legal and anti-corruption system, a fair competition policy, and any other policies necessary to ensure that foreign investors in Greece will be treated in a fair and consistent way. In this respect, we must emphasize that it is very important for the future development of the Greek economy as an attractive FDI host country, that the government will pass all the necessary reforms on the business and regulatory environment.

The above conclusions are not wishful thinking. Policies, irrespective of the FDI, are the ones which ensure the healthy development of a country. However, they require a strong political will, in a country which for decades was structured upon perverse structures.

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IS SOCIAL RESILIENCE AN ECONOMIC STRUCTURE ISSUE OR JUST THE ABILITY OF COMMUNITIES TO COPE WITH EXTERNAL STRESS ?

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Abstract: The paper analyzes social resilience at county level in Romania, in the context of the recent global financial and economic crisis. Generally, social resilience is seen as the ability of communities to cope with external stress such as changes in the economic environment. This study emphasizes the vulnerabilities of economies where communities live in, namely the particularities of economic environment where human communities evolve and co-evolve by resilience emergence. Thus, the link between the social and the economic component requires a special attention, initially external shock being experienced by the economic structure, which, to respond to sudden changes, dissipates shock to the other components of the social-economic system, namely the social component. The close relationship between the economic and the social components causes economies deepening into crisis by triggering a circular causality process. The population's decision to change residence interrupts this process, leading to social resilience.

Key Words: *social resilience, labor market, population movement, Romania*

Introduction

In social-ecological systems, adaptive capacity refers to the ability of people to cope with the change in their environment, by observing, learning and altering their interactions (Folke 2006). Resilience is able to provide shock absorption capacity, while maintaining the function. When change occurs, resilience offers components for (system) renewal and reorganization (Gunderson 2002, Holling and Gunderson 2002, Barthel et al. 2014).

Luthar and Cushing (1999) and Gartstein et al. (2014) argue that resilience cannot be directly measured, but only inferred, based on two concepts that compose it: the risk (or adversity) and successfully adaptation (or competence). Thus, differences in social resilience may occur either because of different risks to which the population was subjected, whether as a result of various population competences (skills, the ability to see opportunities in the labor market).

Vulnerability is the other side of resilience, so that when the social system loses resilience, it becomes vulnerable to change that initially was able to absorb (Kasperson and Berberian 2011). As Perman et al. (2003) observed, the (negative) feedback loops lower the level of resilience. Some economic activity seemed to reduce resilience so that the magnitude of disturbance the system is subject to, without producing a parametric change, decreases. So, the risk for population of losing their jobs (for demand and supply matching on the labor market, see Mocanu 2011) is increased in regional economies that undergo significant vulnerabilities.

As resilience decreases, the social-economic system becomes more vulnerable, so that smaller shocks lead to achieving the critical threshold beyond which the system's evolution is changing. Thus, the distribution of economic and social variables becomes sharply

uncorrelated. That had an impact on the upward trend of economic development.

Starting from the definition of the resilience provided by Holling et al. (1995) – the system's ability to absorb disturbances or the size of disturbance that can be absorbed before the system changes its structure by altering its variables or the processes that control system behavior – we consider that social resilience is just a type of it. When referring to the social-economic system, we consider the behavior of the employed population who, faced with changes in the economic component, avoids exit from the labor market by hiring in another economic activity and by changing the place of residence. However, all these should be viewed through the prism of sustainable development broadly, Common and Perrings (1992) argue that there is a close relationship between resilience and sustainable development. The components are linked together, as Gual and Norgaard (2010) claimed synergistic linkages and co-evolutionary connections between the ecological and the social component. We appreciate that the social and the economic component are linked together, the internal changes of one bringing changes in the other.

Among social-economic indicators, unemployment is the interface between the economic and the social component, economic decisions in reducing the size of businesses directly reflecting on population behavior. Therefore, we take unemployment as a landmark in the analysis of resilience because it greatly influences population decisions in changing the place of residence, thus affecting the stability of the population. Even if mobility is seen as one of the important indicators of social resilience, Adger (2000) notes that resilience conclusions can be drawn only by analyzing the presence or absence of migrants in a given area or community. The movement of the population may be an important evidence of instability or, conversely evidence of increased stability of the population, as it depends on the type of migration (Adger 2000). Economists belonging to the neoclassical stream model the migration decision as an individual decision for adaptation and for household risk dispersion (Ruitenbeek 1996, Adger 2000).

At the same time, Ruttan (1998) emphasizes that contemporary economic theories and policies, based on the premise that economic growth depends on social infrastructure, are continuously expanding. In addition, economic growth is assumed to depend on positive externalities capture from investment in human capital (Hayami and Ruttan 1985, Stern 1996). Employees in the formal sector are considered, by Machlis et al. (1990), elements of resilience at community level.

When we look at the effects produced by the recent economic and financial crisis on regional economies, we look at the number of the unemployed. Although, initially we had in mind differences which may exist in respect of employment in different economic activities, the conclusions we draw are often limited to the adaptation of the population. So, we lose sight of risk, namely of economic activities being differently exposed to the economic crisis. Furthermore, redundancies in various economic activities offer different possibilities for further employment, depending on the skills gained and the similarities between the economic activity of origin of the unemployed and the economic activities where jobs are available. Job exchange aims to facilitate the job/worker matching, reducing input flows in unemployment, negative job attitude, and low job satisfaction (Mocanu 2011). In conclusion, the study of social resilience should not be limited to assessing the opportunities which determine the redundant population to change its place of residence when finding a job in another locality. The study should include information on the vulnerabilities of the economy, in this case, on how some regional economies were exposed to the economic crisis.

Materials and methods

We aim to investigate the correlations between the number of the unemployed resulted from

the economic crisis, on the one hand, and the number of the existing employees by economic activity when the crisis occurs, also the changes in the number of employees in different economic activities during the crisis and, on the other hand, the evolution of the change of residence, in order to have a complete picture of the relations between the social and the economic component in the social-economic system. The economic activities taken into consideration are: agriculture, industry, construction and commerce. The analyzed period is 2009-2011 and the level of data aggregation is NUTS III in Romania. Data source is the National Institute of Statistics. The method used to analyze the geographical data is the Hierarchical Ascending Classification (HAC). By this method we obtain regional typologies of social risk to which the population was subjected and the population's ability to avoid becoming unemployed once the economic crisis has been triggered. HAC allows a precise hierarchy over a vast set of data after a certain data aggregation strategy: minimum link, minimum diameter, average distance, and variance. This helps the rapid creation of nested partitions in a dataset (Bruynooghe 1977).

Results and discussion

We intend to analyze resilience from the following perspective: the global economic crisis meant a disturbing factor for the Romanian economic system, and it imposed special measures to be taken by the economic agents and among these measures layoffs were most important. In this way, disturbance was dissipated into the system, from the economic component to the social component (the population was forced to act in order to maintain itself on the labor market). The question is whether the economic component of the resilience that emerged means equally social resilience or, on the contrary, we are dealing with two processes, and even if they are dependent on each other, the emergence of one is not conditioned by the occurrence of the other.

The analysis of social resilience in the Romanian social-economic system is a two-step approach:

- the influence of external shock (economic crisis) on the economic component;
- the propagation of changes from the economic to the social component.

We begin by analyzing the influence of the economic crisis on economic activities in Romania at county level. To achieve this, a HAC was run using data representing: the number of the employees by economic activities in 2009; the evolution of the number of employees in those economic activities in 2009-2011; the number of the unemployed people in 2009; and the evolution of the unemployed in the above mentioned period. Also, a typology of counties using the number of the occupied people by economic activities instead of the number of employees by economic activities for the same period was made. In this way we want to compare the results, knowing that agriculture, an economic activity which plays an important role in social resilience during the economic crisis, registers significant differences between the number of the employees and the number of the occupied people.

Generally, a process of redistribution in the territory of the occupied people and of the unemployed can be observed. This is very evident in the case of classes comprising the largest number of counties (classes 2, 3, 4, 5). Here, the evolution trend over 2009-2011 is opposed to the territorial stock spreading in 2009. More specifically, if the number of the occupied people by different economic activities was above the national average, the evolution was negative and when the number of the occupied people was below the national average the evolution was above the national average. A process of circular causality whereby territorial spreading is correlated with evolution was observed in class 6 for agriculture and industry while a process of conversion from agriculture to industry can be seen in class 1 (Fig. 1).

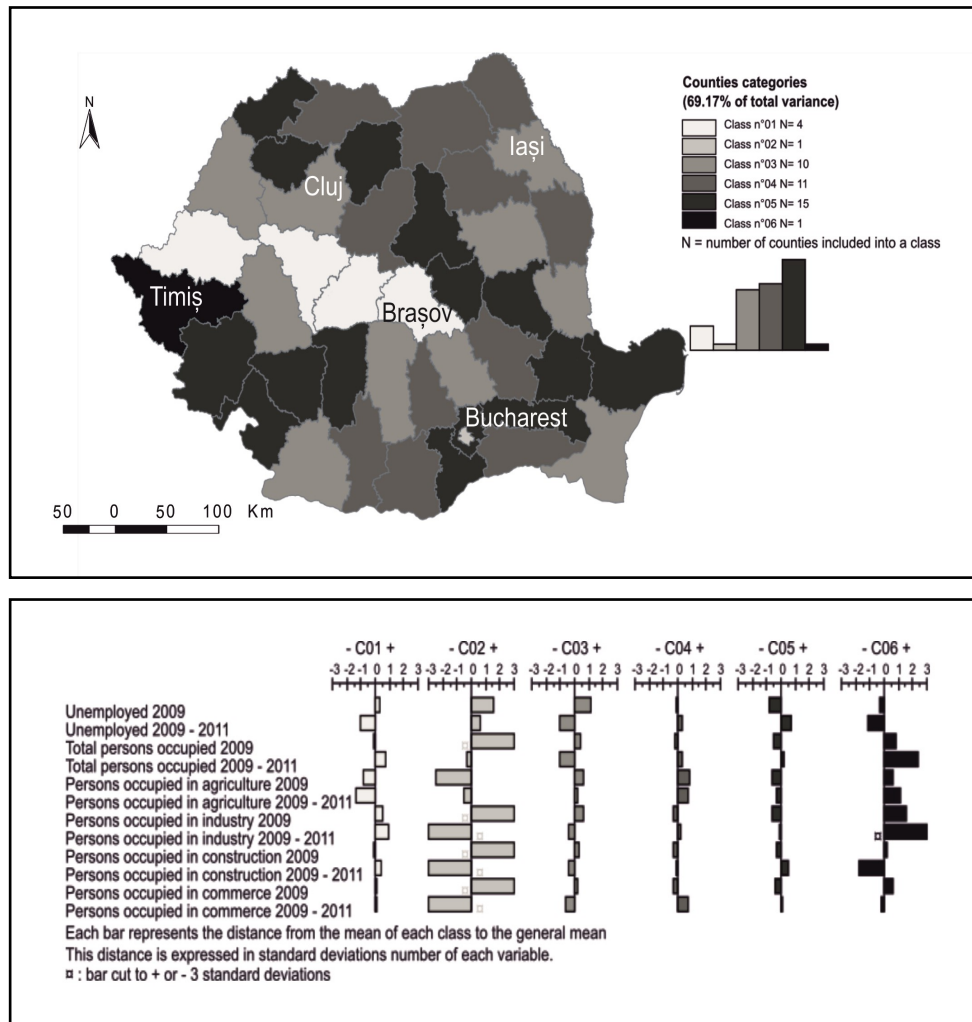


Fig. 1 – Types of counties using the occupied and the unemployed population and the average profile of classes (2009-2011)

Data source: National Institute of Statistics
 Made with Philcarto (<http://philcarto.free.fr>)

Class 1. Counties attractive for occupation in industry (conversion from agriculture); Class 2. Counties with strong economic restructuring (convergent to agriculture); Class 3. Counties repulsive for all economic activities but with the number of occupied people above average at the beginning of the crisis (decreasing number of the occupied and the unemployed population); Class 4. Counties attractive for agriculture and commerce (evolution of the occupied and the unemployed people close to the national average); Class 5. Counties attractive just for constructions and repulsive for other economic activities (growing number of the unemployed and evolving occupation number close to the national average); Class 6. Counties attractive for agriculture and industry and repulsive for constructions and commerce (decreasing number of the unemployed, and increasing number of occupied people).

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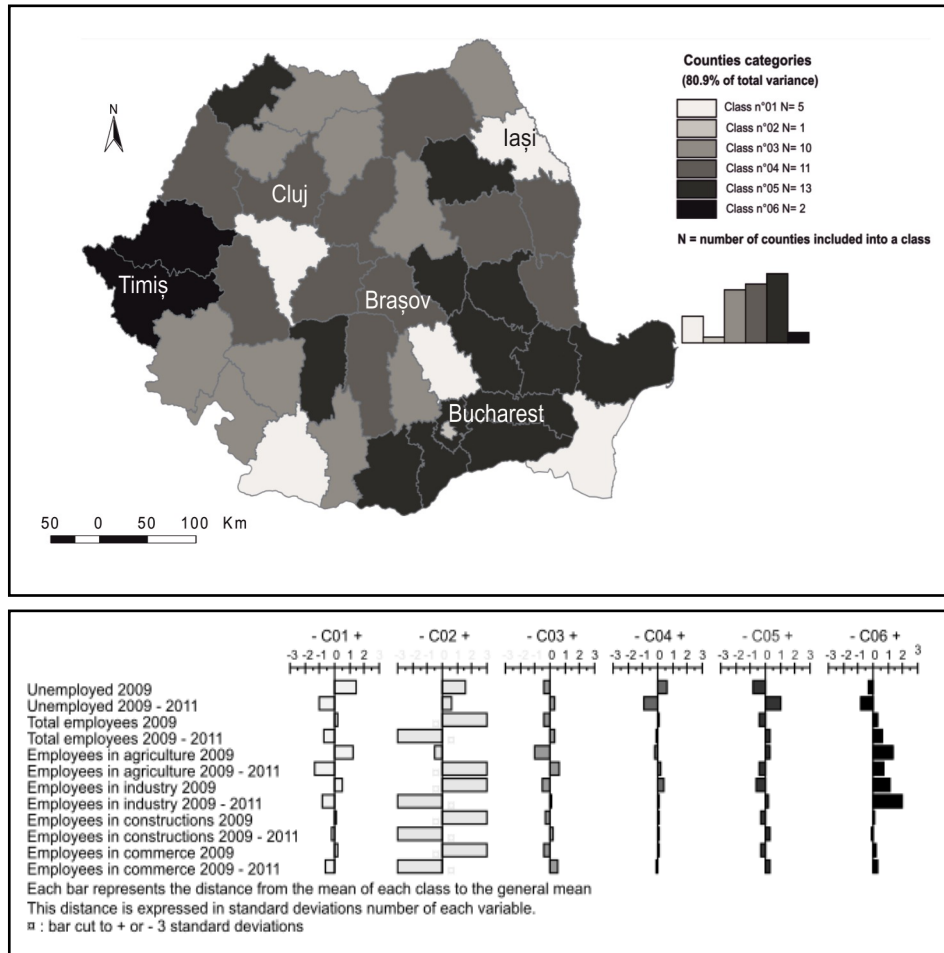


Fig. 2 – Types of counties using employees, unemployed and average profile of classes (2009-2011)

Data source: National Institute of Statistics
 Made with Philcarto (<http://philcarto.free.fr>)

Class 1. Counties repulsive to all economic activities, but the number of employees in agriculture and industry was above the national average at the beginning of the crisis (decreasing number of employees and of the unemployed people); Class 2. Counties with strong economic restructuring (convergent to agriculture); Class 3. Counties more attractive for employment in all economic activities, but the number of employees at the beginning of the crisis was below the national average in all economic activities (evolution of the unemployed and the number of employees close to the national average); Class 4. Counties neutral in terms of attractiveness for all economic activities (decreasing number of the unemployed and the employees evolution close to the national average); Class 5. Counties strongly repulsive to industry (increasing number of the unemployed and employees evolution above the national average); Class 6. Counties more attractive for agriculture and industry and neutral attractiveness for constructions and commerce (decreasing number of the unemployed, increasing number of the employees)

The same process of territorial redistribution can be seen for the number of employees, although county clustering is slightly different (see classes 2, 3, 5). Noteworthy is the neutral position of class 4 counties, where the evolution of all economic activity is close to the national average (Fig. 2). Overall, the economies most affected by the recent economic crisis belonged to southeastern Romania counties, the number of the unemployed registering a significant increase.

The next step is to analyze the reaction of the population to changes in the economic component, and for this a HAC was run, including data on the number of the unemployed, departures and settling of residence and net migration in 2009 and the evolution of these indicators over 2009-2011.

When the population was laid off it could seek a job in the same county, or change residence to another county, where more jobs were available and employment opportunities were greater. There are strategic economic sectors less vulnerable to crisis, identified by Kerimoglu and Karahasan (2012) as sectors where talent (group of individuals who are highly educated) is present. We see that the southeastern Romanian counties are those that recorded the highest number of resident departures (Fig. 3). This is why, the number of the unemployed increased above the national average. Therefore, changes in the economy led to social changes, the population bearing the effects of the economic crisis. We can say that the economic component plays the role of a dissipative structure in the social-economic system. The information on the extent and spread of the economic crisis in the world crossing that component raises the entropy that was dissipated or exported to the social component (for more details of dissipative structures see Prigogine and Stengers 1984). This meant a self-organization of the economic component, with the cost of increasing entropy in the social component (Ianoș 2000). Thus, entropy was transferred from the economic to the social. This can be a way of maintaining order by extending the entropy expression space, as Nemeș et al. (2012) suggested. But this process did not stop here; the redundant population's reduced purchasing power affecting domestic consumption. So, the population further influenced the economic component and this circular causality boosted the economic crisis in Romania. Walby (2007) thought on the same line when he concluded that the solution to describe how interlinked systems are is to consider all the other systems as a medium for a system, which implies a mutual impact of systems. We must bring into question the high degree of connection between the economic and the social component. Loosely coupled systems have more time to recover from failure and therefore they are better able to absorb potential shocks, while tightly coupled systems do not allow for delay and therefore increase the risk to amplify the disturbance (Perrow 1999, Duit and Galaz 2008).

The diversity of economic activities in a county is not important for the economic evolution during the crisis. If we look at the data on the evolution of the number of employees at national level in 2009-2011, we understand that an evolution slightly above the national average (approx. -10 000 employees for each county) means a negative trend. The predominance of agriculture (economic sector with lower income) and poor service development in southeastern Romanian counties could lead to seeking jobs outside the county in order to cope with the challenges posed by the changing economy. If the population migration will continue to specific developed regions, this may lead to problems related on population concentration (Afandiyev et al. 2014). The negative feedback loops deepening the system into entropy would have been discontinued, reaching an equilibrium level. This happened in other counties of Romania. When order was gradually restored, we saw the emergence of resilience.

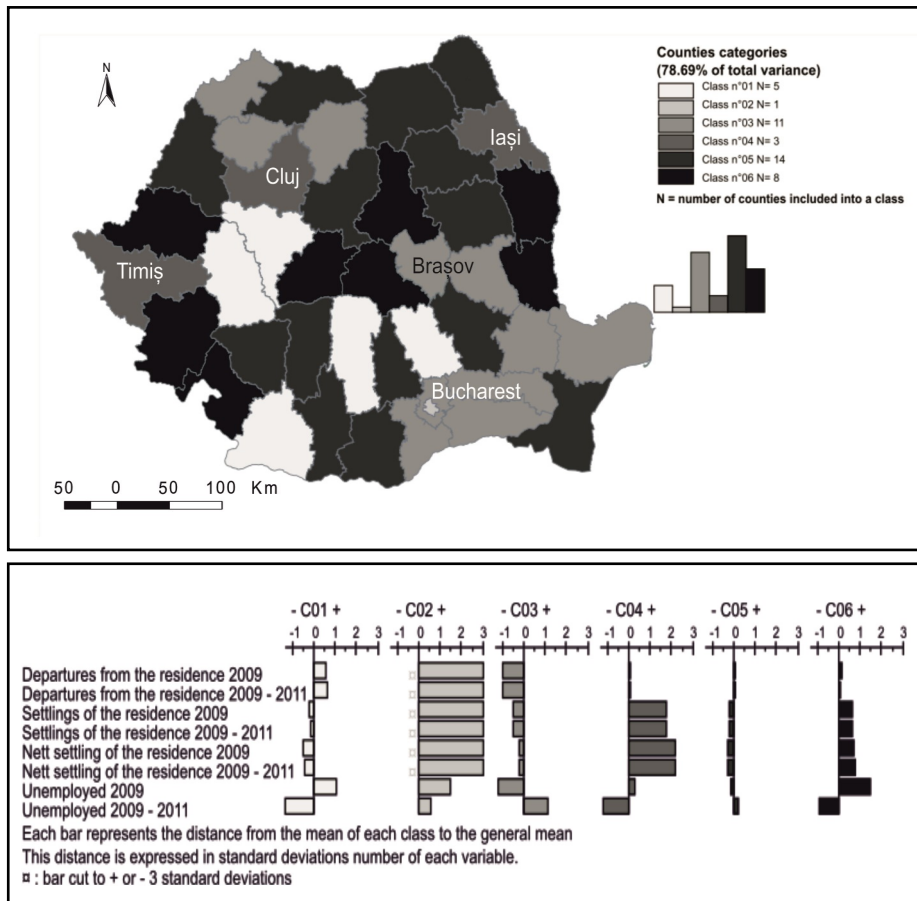


Fig. 3 – Types of counties using indicators of internal migration, number of unemployed and average profile of classes (2009-2011)

Data source: National Institute of Statistics
 Made with Philcarto (<http://philcarto.free.fr>)

Class 1. Counties repulsive for living in, but with decreasing number of the unemployed people; Class 2. Counties with strong internal migration movement, but with positive migratory balance and the number of the unemployed slightly increasing; Class 3. Counties repulsive for living in and increasing unemployment rate; Class 4. Counties attractive for living in and decreasing unemployment rate but with close to the national average unemployment rate in 2009; Class 5. Counties neutral in terms of attractiveness for living in and unemployment rate evolution close to the national average; Class 6. Counties attractive for living in and decreasing unemployment rate but with many unemployed people in 2009.

Conclusions

The geographical space configures and reconfigures the systems over time. It may bring sufficient evidence to prove that the geographical space is the support and a determinant agent of the systems' development. Social-economic systems at county level are not uniform in composition. However, we cannot say for certain that a county's economic profile has led to diminishing the negative effects of the economic crisis, but this affirmation is certain: the recent economic crisis has led to the spatial redistribution of economic activities. Thus, before the crisis, counties with a higher number of employees in certain sectors than the national average did reduce their activity more sharply, while counties with a lower number of employees suffered slower economic transformation. The population's response to these economic changes was mainly the change of residence. Therefore, the migratory movement was driven by job losses, professional reconversion being an option less considered by the unemployed population.

The importance of this type of analysis is a practical one, enabling decision-makers to act by taking into account the relationships established between the components of the social-economic systems. Based on knowledge of causal relations and the interaction between the components, decision-makers can act through the efficient use of resources.

Following the evolution of the economic variables in southeastern Romanian counties over 2009-2011 we see that the effects of several small shocks in different economic activities did not annul each other, but they were rather amplified. Interactions between economic activities being strongly localized mainly in cities, we can better understand people's decision to migrate from one county to another. By changing the place of residence, the macroscopic type of instability that dominates the Romanian economy diminishes, social resilience emerging – a real process of social self-organization.

The most vulnerable regions to economic and financial crises are those where the economic component custody decisions to population, on the labor market. Such situations are common in economies with low competitiveness, where the economic component is subjected to increased competition during the crisis.

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SPATIAL INFORMATION SYSTEMS – A TOOL SUPPORTING GOOD GOVERNANCE IN SPATIAL PLANNING PROCESSES OF GREEN AREAS

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Abstract: The article presents issues connected with the use of GIS for planning processes of green areas within the city. The main theoretical background of the article is the good governance concept which can be used in planning works with cooperation of local actors. The article shows how the local government can use the geo-survey in the participation processes. The green areas are only the example of the use of this tool in spatial planning processes. The aim of the article is to show how useful can be spatial information systems in the decision-making on the local level and how it supports public participation. Additionally, it has to be indicated that this type of tool can contribute to an increase in the effectiveness of local authorities' activities in the spatial planning field. The use of these tools contributes to an increase of the level of public participation and to the clarity of the planning process.

Key Words: *spatial planning, good governance concept, GIS, green areas*

Introduction

Participation in spatial planning and the good governance concept

An important element in the spatial planning processes is public participation, due to which it is possible to apply solutions which cause fewer conflicts. The fact of the participation of local actors in the spatial planning process allows using their knowledge and taking into consideration positions which could be omitted in case of lack of public participation. Local community participation in spatial planning may be related directly to the good governance concept. Each government and institution tries to create a definition of good governance. But it is known that there is no generally accepted definition of the concept. The lack of definition is compensated by the identification of its characteristic principles. This concept concerns the democratic countries and it is based on the principles of: transparency, accountability, participation, social inclusion, and effectiveness and efficiency (Ministry of Regional Development 2008, Wilkin et al. 2008, Amosa 2010, Demmke and Moilanen 2011, Kakai 2013, Wilkin 2013, Miłaszewicz 2014). A well-governed commune should use the good governance principles while fulfilling their activities, due to which the concept has grounds to be used within the local communities in all fields of local government activities including spatial planning (Munshi and Abraham 2004, Munshi et al. 2009). From the perspective of a commune, it has to be acknowledged that all good governance principles should be observed in a local environment. Transparency of spatial policy results from the fact that local authorities on the basis of local law of making decisions, which influence spatial planning and at the same time space users. Appropriate local law enforcement is made easier due to the clarity and accessibility of documents for all the local actors. In terms of overall understanding and international consensus, good governance is an overriding concept from which it can be inferred a number of fundamental principles of democratic society. The particular value of good governance can be seen by the fact that the concept has proved to be practical and expedient in relation to the functioning of society and its political system on the local level.

The local development policy is composed from many sectoral policies which can be provided as an element of good government concept in the local level. One of the local policies is spatial planning policy which must be provided in accordance with the good governance concept. The principle characteristics of good governance can be useful in providing the spatial planning policy in the communes. Transparency in spatial planning is based on the possibility of familiarizing oneself with the documents in the scope of spatial planning already at the moment of their compilation. Thus, local actors have the possibility to familiarize themselves with a land use plan project while it is laid out. Another element of the transparency is the necessity of making public the local law after its approval. Local authorities are obliged to present land use plans on the websites. Similarly, it is indicated in the Spatial Planning and Land Development Act that the accessibility to land use plans and their study is open for everybody and every citizen has the right to get a local plan extract.

Due to the accomplishment of the transparency principle, it is possible to fulfill the accountability principle, because the articles comprised in the local law can be controlled by the local community provided that they are understandable. Accountability is of a particular importance for local authorities because of the election cycle, which in case of self-government units in Poland lasts 4 years. Transparency and accountability are connected with the access to spatial planning information. A support for the accomplishment of these principles are represented by geoportals, which are set up by local authorities in order to present the graphic design of the possessed land use plans and other spatial information connected with the functioning of a basic administrative division unit. Due to geoportals, apart from the text and graphic design of a land use plan, it is possible to indicate precise geolocation data.

The basis for the accomplishment of the public participation principle is the Spatial Planning and Land Development Act, which enables participation of a natural person and institutions in the document compilation process concerning spatial planning in a commune. It is also connected with social inclusion, because it is assumed that commitment in the planning procedure belongs to all local actors. Inside the planning procedures it is possible to use the potential of a local community, due to which the prepared document concepts have features of co-governance. A support for spatial planning is represented by the inhabitants, who, due to the structure of the legal articles, have a possibility to participate in the spatial planning procedure. Standardization of Polish spatial planning law in 2003 led also to the fact that the study of land use conditions and directions and land use plans has identical compilation procedures. Due to such formulated records of the act, every participant connected with the plan can: submit proposals to these documents; make oneself familiar with the presented project; participate in a public discussion over the project; submit remarks to the project's documents.

The established laws enable to claim that in spatial planning a ladder of participation may be applied (Arnstein 1969, Wiedemann and Femers 1993, Maier 2001, Andrzejewska et al. 2007, Sartorius et al. 2009, Stout 2010, Bizjak 2012), which in Polish conditions enables to claim that in spatial planning processes we are on a consultation level, and sometimes there is a possibility to achieve a higher level that enables to build consultation teams. However, in the present shape of law and activities of local authorities, the higher levels of the participation ladder are difficult to obtain (Fig. 1).

Effectiveness and efficiency in spatial planning should be estimated by the availability of land use plans within the territorial unit area that means the effectiveness of local authorities in the usage of instruments shaping land management. On the other hand, there is efficiency that means the development of areas indicated in land use plans with specific functions with no need to change them. This will be also connected with the consistent accomplishment of the assumed planning solutions, which will be socially accepted and will not enforce on the local authority the security of the financial means for changes in the existing planning documents. It

will enable to assess the local authorities in the long term, on the basis of the intensity of land use plans changes which will indicate the change of local authorities' attitude to strategic assumptions, or their incompatibility with the local community preferences.

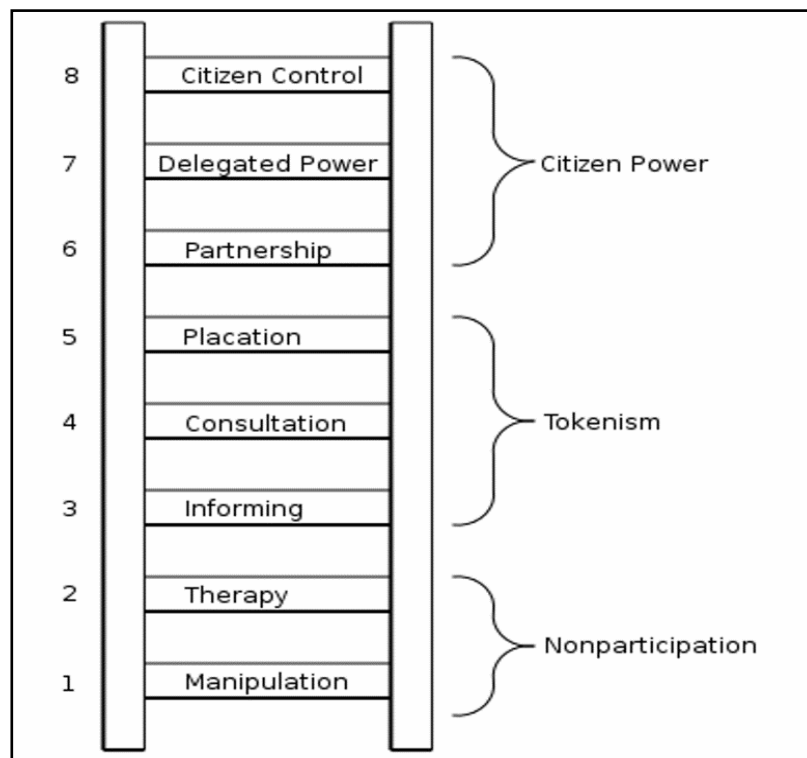


Fig. 1 – Ladder of citizen participation
Source: Arnstein 1969

The need of public participation in the local authorities' activities can be seen in the whole European Union (Aitken 2010, Bäcklund and Mäntysalo 2010). An instrument used in this scope is undoubtedly represented by the new technologies, which can be implemented in the process of public consultation. This kind of approach to the development of the consultation sphere is very rare in the Polish reality, however, due to the appearing projects, such as for example "Count on green", one has to see in these instruments the opportunities of development, even in the civic budget sphere, which are promoted by the local authorities in many cities and communes.

The spatial planning policy is connected with green areas in each spatial policy carried out in the European countries. In case of urban areas it has to be related to urban green areas, urban forests and agricultural areas, which constitute an element of urban environmental system within the city's area (Giecewicz 2005). Urban green areas become an important element of the city's activity; very often they constitute public space, where there is an interaction between the human relations. The local community uses the urban green areas for recreation, sports or meetings. Regardless of these elements, it is important to indicate which urban green areas are used intensely, and which part of the city lacks green areas. The subjects that are jointly

responsible for green areas in the city are the local authorities, which, by creating spatial policy, have the possibility to influence the shape and location of these areas. The planning documents that are drawn up by the local authorities should have indications for the care of urban green areas and to determine the development perspectives of this function in the city. Frequently, it is indicated that green infrastructure is not an element limiting the development opportunities of individual city's areas or of an unit as a whole; it concerns also urban green areas which aim at providing benefits both for nature as well as for the local community (Kowalski 2011).

Urban green areas do not come down only as the most easily noticed in the urban space parks, but they are also connected with (Czarnecki 1968, Davies et al. 2006): public green areas (among others: parks, green squares, yards, boulevards, promenades); green areas for a specific purpose (among others: screening green strips, green areas accompanying communication, gardens, cemeteries); accompanying green areas (among others: in the scope of industrial areas and warehouses, cultural-social services, technical-economic services and housing estates); agricultural and forestry areas (e.g. horticultural and production farms); sight-seeing-recreation areas (among others: public forests, historical parks and various forms of nature conservation).

An element that supports the development of green areas is public consultation. It has to be indicated that active public participation in spatial planning is supposed to serve making appropriate strategic decisions by the local authorities, and it allows for the transparency and clarity of the decisions that are made. Such an approach has an impact on building trust towards local authorities and it is one of the purposes of its functioning from the perspective of a cyclical nature of elections, which is often indicated in the literature on this topic (Andrzejewska et al. 2007, Siemiński 2007, Mergler et al. 2013).

Particularly in the case of cities, green areas are an element of public space, and thus they become an area that allows for meeting the needs of the residents, improving the quality of life and establishing social contacts, which result from their functional-spatial features. In the literature, it is indicated that green areas should be treated not only as an element of environmental system of a city, but also as cultural space (Sutkowska 2006), which also undergoes the legal discipline resulting from the articles concerning spatial planning. In this regard, one can speak of ecosystem services in urban areas through a properly conducted spatial policy.

In the case of local community participation in the spatial planning sphere, one of the elements of accomplishment of this principle may be the use of methods based on spatial information systems. That is about creating interactive portals that will allow the local community to express their opinions connected with a particular topic concerning the spatial planning sphere. This element can be used by the local authority permanently or incidentally. The approach to this issue consists of promoting and implementing public participation in every stage of the spatial planning. It is particularly visible in the spatial planning theory, where the idea of public participation is present for many years (Johnson 1984, Carver et al. 2001, Conroy and Evans-Cowley 2006). It brings to the decrease of conflicts coming from the established decisions of land use plans (Taylor 1998). An additional support for this kind of activities is the possibility to use new technologies by public administration. This creates a bridge in building the knowledge resource and the learning society (Friedmann 1997, Ranson 1998) that consciously supports the spatial planning processes.

Spatial planning has an impact on ecosystem services through changes in spatial development areas. According to the definition, ecosystem services are benefits coming from ecosystems in order to improve the living conditions of the community (Millennium Ecosystem Assessment 2003). Cooperation of local authorities and the community during the works on spatial development plans is directly related to ecosystem services, since at the local level challenges

in this scope can be accomplished most successfully (Gunderson and Holling 2002). This is particularly important in case of public ecosystem services, where changes are easily identified by the local community (Ostrom 1990). Local authorities have to take into account the needs of local communities and to respect their needs in the scope of ecosystem services development. One of the ways to meet these assumptions can be the use of the SoftGIS method in spatial planning.

In the article there are used materials coming from the research carried out in the scope of "Count on green" project, whose leader was the Sendzimir Foundation (2014). This kind of activities are supposed to contribute to building relations between the local authorities and the community which can continuously express their opinions concerning the needs connected with land management changes. The project was carried out in Lodz, Cracow, Poznan and Warsaw, and its purpose was to implement the innovative nature management methods on the basis of intersectoral collaboration and citizens' participation.

A solution used in the "Count on green" project was a softGIS method used in Finland, which is about expanding spatial data of geosurveys that allow for obtaining information from the inhabitants concerning their needs in the scope of spatial planning and other self-government activity areas. Such constructed tool allows to collect data that creates abundant databases used by the authorities to make different strategic decisions (Rantanen and Kahila 2009, Kahila and Kytta 2010, Czepkiewicz 2013).

The geoportal that was developed in the project allowed for collecting spatial data from the local actors who are the users of the urban space. The collected data can be a material that allows for their use in the decision-making process connected with the changes undergoing the land management field. The SoftGIS method implementation based on the spatial information systems allows confirming the thesis that spatial information systems become a powerful tool supporting the process of making decisions on various levels of self-governments as well as on the government level. It is also indicated by the INSPIRE Directive, which emphasizes the necessity of collecting and making public data concerning the environment. This results from the need of the accomplishment of the Treaty Establishing the European Community assumptions where in Article 6 the need of taking care of the environment was indicated. The INSPIRE Directive indicates that spatial information is an element that allows for activities connected with environmental protection and a common access to them influences a better coordination of the decisions made. Similarly, it has to be indicated that the INSPIRE Directive, in the third attachment, enumerates the necessity of collecting spatial data connected with the land management field, which is directly related to spatial planning.

As a part of the activities undertaken in the project, a geoportal using the softGIS method was created, which enables to indicate locations connected with the green areas in the city important for the inhabitants. Such organized spatial data collection, apart from indicating particular places in the city, allows also carrying out research and to express the participants' opinions. Participation is voluntary and it depends on the access to the Internet, which allows claiming that the recipients of this tool in Lodz are represented by 59.2% of households that have a personal computer with an Internet access (Central Statistical Office data from the year 2012). It is particularly important since the quantity analysis of the remarks made by the inhabitants to the land use plans in Lodz after 2006 showed that their number is most frequently included in the range from 1 to 10 remarks for one land use plan. This result is not satisfactory taking into consideration a low rate of the local actors' activity in the spatial planning sphere.

Materials and Methods

In the analysis carried out for the purpose of the article, there was used data concerning Lodz, collected between 6th March and 6th May 2014. The discussed part of the data concerns places of spending free time by the inhabitants, and indications where the area of the city should be enriched with green areas. With reference to the areas, where the local community spends their free time, it has to be indicated that this type of data should encourage green areas administrators to take care of them especially as for the retaining and increasing the quality of these areas. Significant is also the issue connected with the respondents' indications concerning the lack of green areas. This kind of information should be used by the local authorities in the spatial planning process. They can also be used for the needs of activities connected with the public roads management in a city through the appropriate planning of by-road space management that may become an element enriching a city area in new green areas.

The respondents were invited to the study via the internet. Many answers were collected thanks to the help of the volunteers who used tablets to collect data. The study was promoted via the website of the Foundation, the profile of the project on Facebook, a contest for schools on the greening of backyards, city games, the information in the local media and meetings promoting the project (Sendzimir Foundation 2014). The green areas were treated very widely in the study. Apart from places indicated in the statistics, it also included lawns, green yard, plantings and bushes in the city. The respondents had full flexibility to indicate places for spending time surrounded by greenery and places which lack greenery. They had full administrative area of Lodz to use in the study.

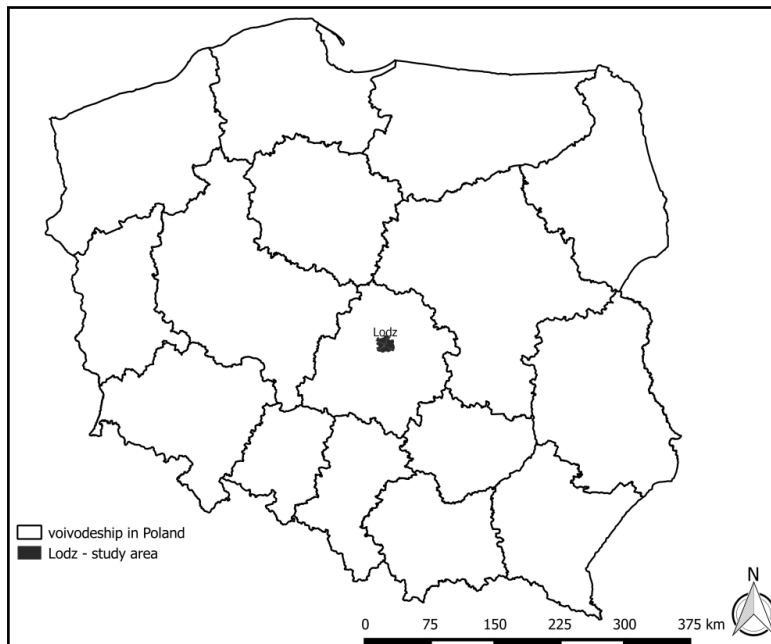


Fig. 2 – Localization of the study area in Poland

Lodz is the third largest Polish city in terms of population (Fig. 2). It is inhabited by over 711 thousands of people. From the statistical point of view, parks, green squares, community green areas, green belts and forests are considered as green areas. According to the Central Statistical Office data, parks, green squares and community green areas take up 1601.4 ha, green belts occupy 456 ha and forest lands occupy 2801.7 ha. In total, it gives 4858.8 ha, which is 16.6% of the city. However, it has to be stated that in majority these areas are situated on the outskirts of the city.

Significant is the fact that Lodz has got land use plans only for 6.2% of the total area of the city. According to the City Hall Urban Office data, in the coming years it is planned to draw up land use plans for the next 80% of the city, which will be related to the necessity of taking into consideration the votes of the inhabitants concerning green areas in land use plans and thus in spatial policy.

At the beginning of May, in the research there were indicated 853 places of spending free time inside the green areas. With reference to the areas that lack urban greenery there were recorded 337 indications. The preliminary analysis of the respondents' indications is based on the analysis of statements with reference to the district division. In order to carry out more detailed analyses, the division into housing estates in Lodz was used. In 2014 in Lodz, there is a division into 36 city support units, which cooperate directly with the municipal government. This cooperation concerns also the support of activities for the sake of the environment protection, nature, urban greenery and spatial planning. Such a division of duties results into the fact that the opinions expressed by the participants of the research may be used also by the community council as a consulting material related to green areas and spatial planning.

The analyses were supposed to indicate the spatial distribution of the answers given by the respondents. This was possible due to the use of open source QGIS software which served to indicate the housing estates that are popular in terms of spending free time in the surrounding of green areas. The other aspect of the research was to indicate the areas within the city that require the intervention of the local authorities and to supplement the urban fabric with green areas. The analyses were carried out at two aggregation levels: districts and housing estates.

Results and Discussion

“Count on Green” Project as a support method for spatial planning

The carried out research showed that the respondents in majority spend their free time in the urban green areas; only 7.2% of the participants' indications concerned the green areas which were outside the biologically active areas in Lodz appointed in 2009, when the Urban Atlas was being drawn up by the European Environment Agency (EEA). To the biologically active areas belong: urban agricultural areas, screening green strips, wetlands, urban green areas, sports and recreation areas, forests and surface water areas. Such inference allows claiming that the local community spends its free time in the arranged urban green areas and a very rare phenomenon is spending free time in an area directly adjacent to the city's green areas. In case of the indicated by the respondents necessity of the complementation of green areas, it has to be assumed that only 9.2% of the indications concerned places that are in a direct neighborhood of vast biologically active surfaces.

The districts of the city of Lodz are not homogenous; their borders result from historical conditions. This leads to such a situation that the units differ from one another both as for the number of the inhabitants as well as for the surface. Despite such conditions, the division of the city into five districts allows to carrying out analyses that enable the assessment of the potential of these parts of the city in the scope of the possessed green areas. The collected data enabled also to indicate places of the greatest usage intensity in individual city's areas. The

layout of the indications in individual districts of the city allows to claim that most often the citizens of Lodz spend their free time in the surrounding greenery of the Polesie district (30.1% of the indications), which is connected with the botanic garden and the urban ZOO that are situated within this district. An additional potential constitutes the urban park which is one of the biggest park complexes in Lodz. A high activity in the scope of leisure and recreation has also been noted in Bałuty district, where 26.8% of the indications concerning the way of spending free time were recorded. Such a situation results mainly from the fact that in this district there is the Łagiewnicki forest, which is one of the biggest forest complexes within the borders of a city in Europe. It covers the area of over 1200 hectares, which makes it the biggest recreation-leisure complex within the city of Lodz. An important district on the leisure map in Lodz is also Widzew district which concerned 19.7% of the indications. In case of the other two districts, the indications of the respondents were divided evenly because in Górna district there were 11.7% of the indications identified and in Śródmieście 11.6%. Despite the large surface, Górna district does not have many arranged leisure and recreation areas, whereas Śródmieście as the smallest district is not associated with leisure because of its big-city character. (Fig. 3)

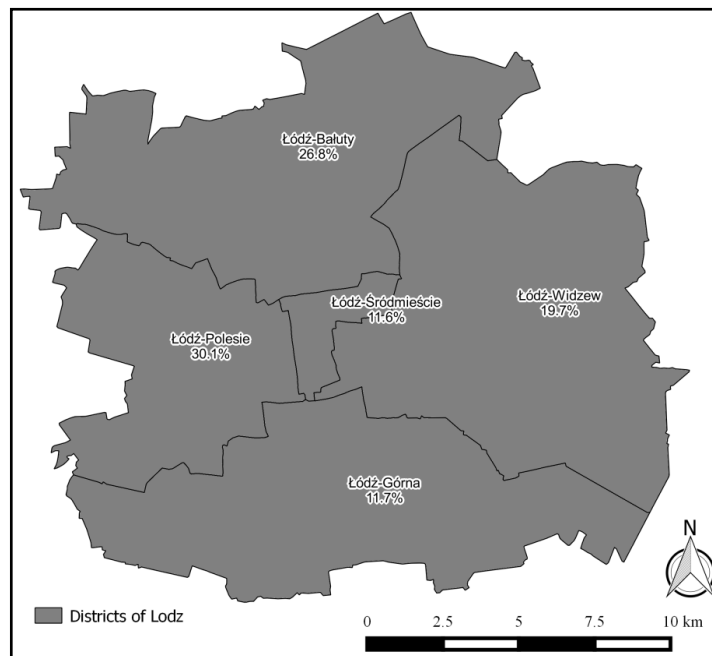


Fig. 3 – Districts of Lodz and the percent of spending free time indicated in each district

A supplement for this type of analysis is the second part of the research referring to the indication of the respondents concerning the part of Lodz that requires finding new green areas. Despite a small number of green areas and a low activity of the local community in the scope of leisure in the green areas of Górna district, there is not an equally high number of indications of the local community in the scope of the necessity for creating new green areas in this part of the city (only 6.2% indications). The situation looks similar in case of Widzew district where green areas are supposed to satisfy the inhabitants, that is why only 7.7% of all the indications concerned the need for planning new green area in this part of the city.

In the districts that have the biggest potential in the scope of green areas and their biggest use, the respondents indicated the necessity of enriching the offer of green areas within the city's surface. In Bałuty district, there were located 13.4% of the indications, and in Polesie district 17.2%. According to the expectations, according to the respondents, the area requiring the biggest number of investment in green areas is Śródmieście district. It was indicated by 55.5% points placed by the respondents on the map. This shows that the city centre in the economic, social, cultural and spatial dimension overlaps with Śródmieście, however, the local authorities have to take care of the urban green areas that create an integral element of this landscape (Fig. 4).

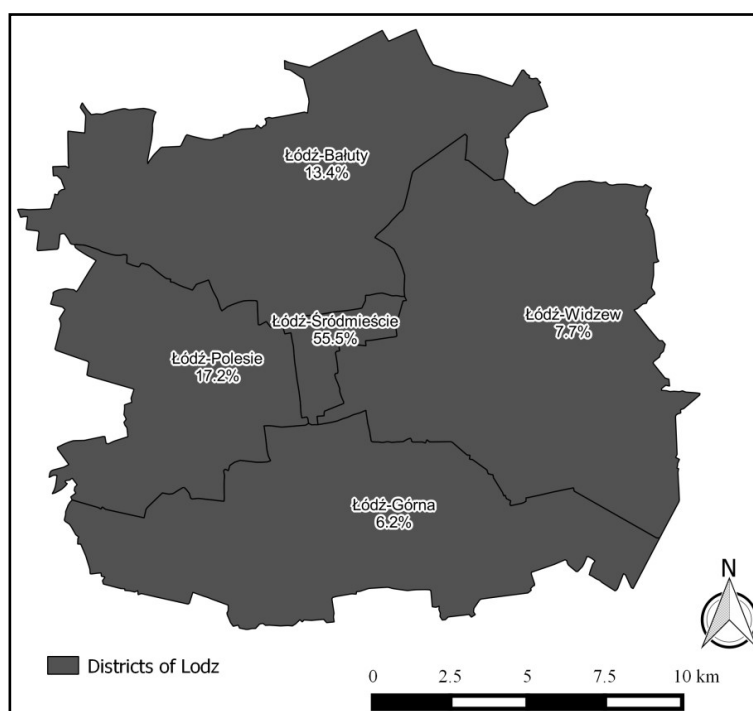


Fig. 4 – Districts of Lodz and the percent of needs of new green areas indicated in each district

The obtained results allowed entering a higher level of the detailed analysis. Due to the division of Lodz into 36 support units of the city it is possible to indicate in which parts of Lodz, the inhabitants most often spend their free time surrounded by green areas and where, according to them, there is a lack of these green areas. Among all Lodz housing estates, eight of them are characterized by the use of green areas to spend free time, and to them belong: Zdrowie-Mania, StaryWidzew, Bałuty-Doły, Stare Polesie, Łagiewniki, ŚródmieścieWschód, Julianów-Marysin-Rogi and Katedralna (Fig. 5). In these estates there were 72.6% of all the indications. The other city estates were characterized by a number of indications that was smaller than 30, that is less than 3.5% of all the data. The biggest number of the indications had Zdrowie-Mania estate which gathered 15.7% of the spatial data concerning spending free time in the green area. This results from the fact that in this area there is one of the biggest urban parks – Józef Piłsudski park (commonly known as Park naZdrowiu), which is connected with the urban zoo and the botanical garden in Lodz. In the case of Stary Widzew estate, its popularity as for its possibility of leisure in the surrounding of green areas should be seen in the fact that it is a big

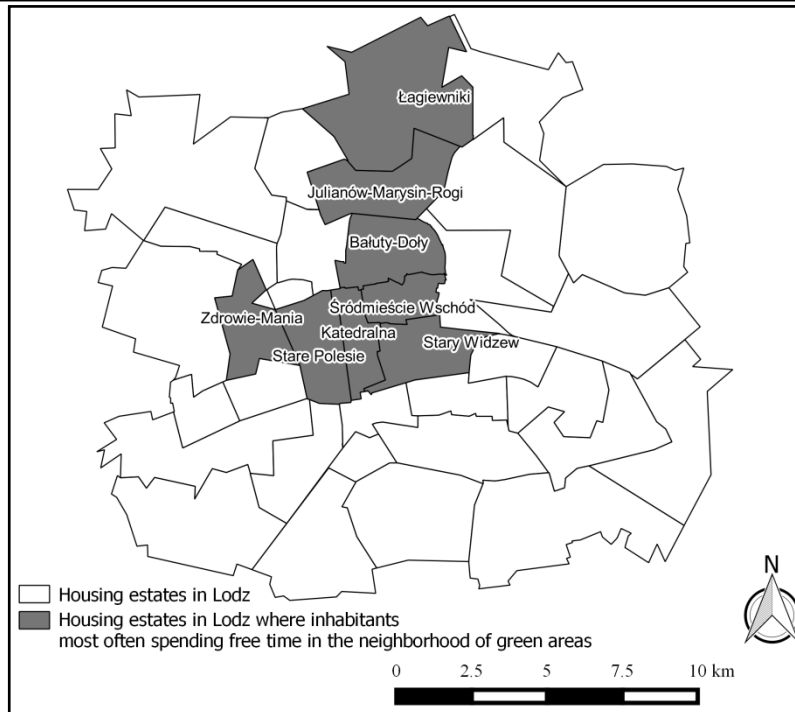


Fig. 5 – Housing estates in Lodz with the highest number of indications of spending free time in the neighborhood of green areas

housing estate and within its area there are attended urban parks such as: 3rd May Park, Nad Jasieniem Park, Źródlińska Park and Widzewski Park. This estate was indicated as a place of spending free time in the neighbourhood of green areas by 12.2% of the collected data. The last estate that is characterized by a high level of the given votes was Bałuty-Doły district, where there were located 11.5% of the data. This housing estate is characterized by a high level of post-war building development and developing modern buildings. In its area there are: Staromiejski Park, Helenów Park, Ocalałych Park and Szarych Szeregów Park. Additionally, these areas are supplemented by green squares and green areas connected with the river Łódka flowing through the estate. The green areas in this city area include also cemetery complexes.

In five Lodz housing estates, the respondents did not indicate any place where they spend time in the surrounding of green areas. While in case of Karolew-Retkinia Wschód estate the ensuing situation is not surprising, in case of the following housing estates: Wzniesienia Łódzkie, Mieszki, Andrzejów and Wiskitno it is very interesting because of the fact that these estates are on the suburbs of Lodz, and despite the lack of the arranged urban greenery it forms there is a lot of biologically active space which creates a natural climate both for leisure as well as for recreation.

The second stage of the research shows these districts in which, according to the indications, the local authorities should take care of introducing new green areas; these are the following housing estates: Śródmieście-Wschód, Katedralna and Stare Polesie (Fig. 6). All the estates were located in the central part of the city. It should be emphasized that Śródmieście Wschód

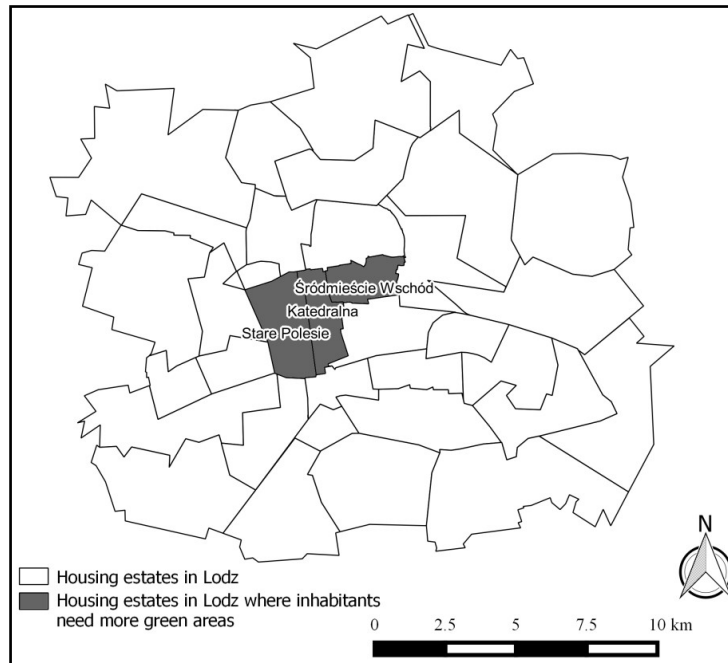


Fig. 6 – Housing estates in Lodz with the highest number of indications of lack of green areas

and Katedralna estate are a part of Śródmieście district. Stare Polesie is a district that is directly adjacent to Śródmieście on the western side.

In the estates that belong to Śródmieście district, the local community indicated the need for developing green areas. The necessity of new green areas in Katedralna district was indicated by 43.3% of spatial data. As for Śródmieście Wschód estate, it was 8%. In the only estate that was outside Śródmieście district appointed 14.8% of data, which emphasized the necessity of increasing the greenery source in this area. Interestingly, in the same area a significant number of indications with reference to the issues connected with spending free time in the green areas were recorded. This shows that the local community has a need to increase the number of new greenery in this area.

In the other housing estates in the city of Lodz, the number of indications did not exceed 5%, where in the case of nine estates there was no indication. This shows that in these particular areas there is no lack of green areas or they are not considered to be leisure-recreation areas. The conclusion from this analysis is also the fact that the local community focused 66.2% of the indications in the areas of three Lodz housing estates. This brings also the conclusion that a big-city character of these estates should enforce on the local authority care for introducing green squares or green elements in these areas in order to provide the development of these areas in accordance with the sustainable development principle. Significant is also the fact that the public space of the city centre should become an inhabitant-friendly area.

Conclusion

The carried out research indicated explicitly the areas in which the local community enforces the need for care and development of green areas. Regardless of this fact, the tools used in the research are a basis for the discussion between the local community and the authorities of the city. In the Polish context, almost 65% of the households have Internet access, which allows for using this resource and the softGIS software in the process of public consultation in the scope of spatial planning. This type of tool becomes an element that enables to collect a rich material that supports making decisions in the scope of spatial planning.

Carrying out this kind of consultations is coherent with the assumptions of the good governance concept, since through the public participation in spatial planning with the usage of new information tools, transparency of these processes can be achieved in an easy way. These results from the fact that all the data is available on the Internet website and every inhabitant that has an Internet access can become familiar with them. Verifiability of the data is about analyzing their spatial location and the content of the commentaries posted in the portal by the users.

With reference to accountability, important is the fact that the local community, through the analysis of the surrounding and strategic documents, will be able to verify which of the demands made by the means of GIS technology were accomplished by the local authorities. This leads to making public both positive and negative assessments in the scope of the inhabitants' applications accomplishment. Similarly, with reference to the social inclusion principle, there is an expansion in the group of recipients of the local authorities' activities, which is a constantly growing number of Internet users who often want to influence the local authorities' decisions actively. Additionally, the portal allows for expressing one's opinion about the future shape of the public space, the only limitation being the possibility of the Internet use.

As the research showed, softGIS tools increase the effectiveness and efficiency of the local authorities activities, since the decisions made by the subjects managing the territorial units may be focused on the local actors' needs. Consultations made in this way may refer to particular activities made by the local authorities but they may also be made permanently due to which the local authorities will be able to estimate the inhabitants' needs. An additional element increasing the effectiveness is the fact that the local law formulated in the land use plans enables the control of the investors' behaviors and care about the spatial order and sustainable development. Obviously, the higher the efficiency of the local government, the higher is the indicator of the commune's cover with land use plans. This results from the fact that these are strategic documents that allow for estimating a long-term spatial policy of a commune. Information tools enable, on the other hand, to obtain information from the local community faster, and thus react faster to the changing inhabitants' needs. According to the partial results of the research, efficiency can be also noticed in the number of the obtained spatial data.

Referring to efficiency, it has to be emphasized that land use plans compilation is an expensive enterprise that burdens the territorial unit budget. The efficiency criterion will be then connected with lowering the costs concerning spatial planning. Thus, softGIS tools allowing for their unlimited use become an element of this criterion due to the fact that information-communication technologies (ICT) are a promoted instrument as an element that enables to decrease the costs of public administration activities, including the local administration level.

The research showed that within four months, it was possible to collect a rich database concerning green areas in Lodz. It also proved the involvement of the local community in the activities for the sake of the city. The indicated research is only an element of the full research,

which, however, shows an interest in the urban green areas. Ultimately, the website with the geosurvey is supposed to be available for an indefinite period of time and the data can be used by the academic environment, the public administration and the inhabitants.

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URBAN IDENTITY AND IRANIAN NEW TOWNS

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Abstract: In an era when urbanization on a large scale and at a rapid pace has become a dominant trend, particularly in developing countries, the fundamental issue of urban spaces identity is always being ignored. This is an important issue in two respects. First, it refers to the weakening of the identity elements over time, coinciding with the new development; second, it regards the lack of attention to identity stimulants, and failure in using them in a figurative and semantic manner in a small-scale structure to the macro-scale of urban tissues. The relative identity crisis is particularly apparent in new towns and it is one of the obstacles to attract population into these soulless towns. The main purpose of this paper is to evaluate the identity of 10 new towns in Iran to achieve a conceptual-cognitive framework for reviewing the above mentioned problem. We conducted this research based on qualitative and quantitative methods and by the use of the Goeller matrix and of a qualitative survey questionnaire. Findings indicate that in terms of selected measures, the new town of Baharestan achieved the first place and the other two towns "Andisheh and Pardis" occupied the next ranks. Results indicate that among new towns under investigation, the new town of Baharestan got the highest rank because its principles of identity were inspired by the principles of the Isfahan School.

Key Words: *urban identity, new towns, the Isfahan Urbanism School, Goeller matrix, Iran*

Introduction

New Urbanism and Smart Growth are relatively new approaches to urban design that deal with environmental problems, housing issues, and community well-being. Rapid pace of urbanization that affected the third world countries is a by-product of the post-1945 period. In most developing countries like Iran, the spatial population distribution is not balanced, leading to deficiencies in services, hygiene and the formation of slums. In order to balance these patterns across the country, different strategies have been applied, one of which being the construction of new towns (Zali et al. 2013). New towns have been built in most parts of the world during all periods of history since urbanization began (Ziari 2006). Socially, cities are places suitable for the formation of social institutions, promoting cultural values, expanding and strengthening social relationships, preserving human values as well as local and national identities. Therefore, the identity of the urban environment has become one of the most controversial issues in the present era (Negarestani et al. 2010).

Anonymity, homogeneity and heterogeneity, which are observed in many of the modern cities and are expanding at an increasing rate, have not only created an unfamiliar environment and unfavorable landscape for residents but they have also overshadowed all aspects of socio-environmental life in urban communities, because the physical form of cities is in fact the kernel of the social world that affects all aspects of society from economics to aesthetics. Hence, one of the major problems by which large cities in general and the new towns in particular are plagued today is the urban identity and the lack thereof in their body and soul (Azizi and Arbab 2010, Moshiri et al. 2011). The results of such planning policies, after a few decades, are

overpopulation, migration and accumulation of industries in or around these cities, including also the loss of their identity (Ferdowsian 2002).

Today, cities in Iran are being formed and expanded, not on the basis of their original identity, but based on the emulation of western trappings and modern patterns without considering their vernacular patterns (Rezvani 2005). Actually, the period of modernization should be considered as the beginning of rupture and ignorance in the urban identity and social life of urban spaces. As a result of fascination by exotic trappings, the indigenous cultural manifestations have been utterly ignored. On the one hand, due to the lack of knowledge and indifference towards the importance of indigenous patterns from this period onwards, realities were being ignored in the urban development projects. On the other hand, due to the increasing popularity of Western culture, which has surrounded the community by technological tools, causing massive influx of unfamiliar Western patterns, the today identity and its multiple dimensions are sought and brought from outside the country which is ingrained with the concept of "retrieved from external identity" (Naghizadeh 2013).

In the inevitable trend of globalization and the influence of countries with advanced civilization and development background, most of the countries with cultural-historical systems are concerned over their identity. They have realized that they should adapt their general development policies with the covert culture of the society, so that by promoting the noted policies they can deal with the unintended consequences of such a powerful influence. All the factors above have caused an obvious gap between urbanization, culture, thought, and history which is in turn the consequence of the historical rupture in the modern era. This rupture is more tangible in the new towns, where due to the absence of historical context, an important contributor to identity will be eliminated spontaneously, and other factors will inevitably be used to enhance identity.

The urban form in the Iranian cities is defined according to the meaning got by its identity format from the content that is affected by the theoretical foundations of the Iranian architecture, art, and urbanism, emphasizing that the form-content relationship like the body-spirit relationship is obvious in the worldview foundations. According to the historical-cultural necessities, there are three steps required to find future-oriented solutions to the identity problems in the new towns: first, recognizing the identity factors in the historical process of Iranian cities in line with the correct explanation of the issue; second, assessing the current situation and calculating the distance to the desired position; and third, finding strategic solutions to achieve identity in the development process of new towns. This study is an attempt associated with the first and second steps above to provide a conceptual-cognitive framework for reviewing this vital issue, as well as measures to promote urban identity. The main objective of this study is to evaluate the identity of 10 new towns in Iran (after the Islamic revolution) to achieve a conceptual-cognitive framework for reviewing the identity of urban spaces in the new towns.

Methodology

This research used the analytical method to measure the identity of the new towns in Iran (10 towns selected in this study, Fig. 1) using the Goeller matrix model methodology (Patton and Sawicki 1986) to evaluate the results of the relevant questionnaire. The Goeller matrix approach considers the impacts with the options in currency, natural, temporal or in physical units (such as towns and urban area). In this method, each matrix row represents an impact (which is measured based on an indicator) and each column represents an option. Various options are evaluated based on the selected indicators. Number, color or marking can be used to illustrate the results of the evaluating options. Thus using this method, the types of quantitative and qualitative impacts can be applied. This method is also flexible enough; so that it allows the decision maker to determine appropriately the weight for different indicators.

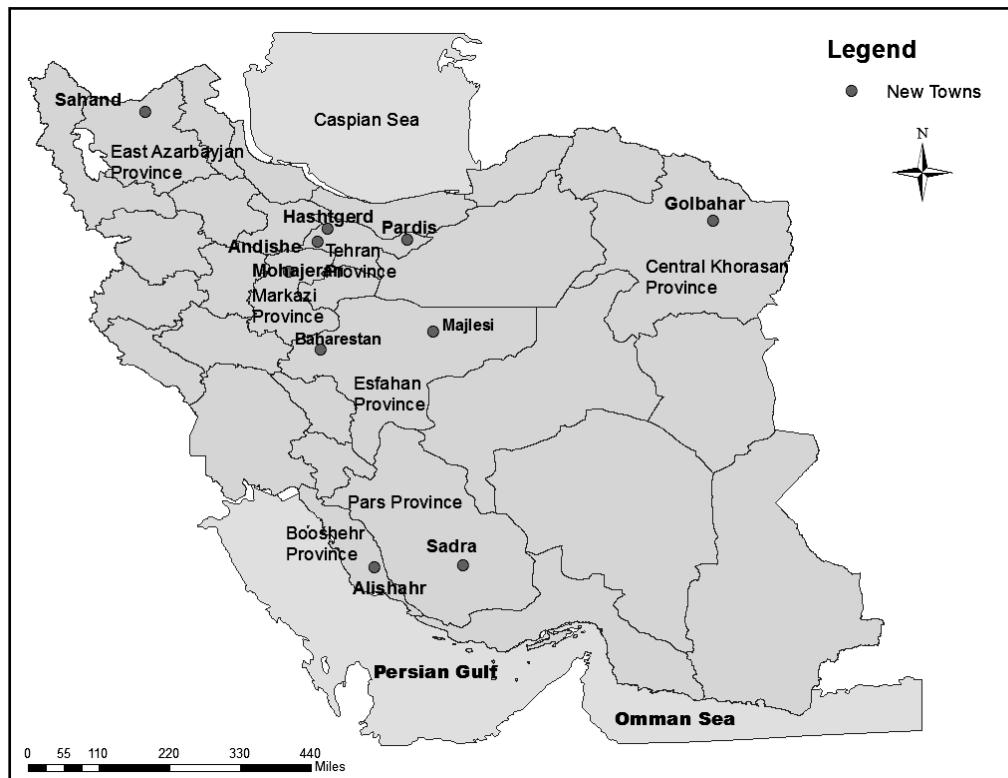


Fig. 1 – The location of the surveyed new towns in Iran

Due to flexibility, simple applicability and possibility of using an interval scale in this research (because of the spectral nature of the topic under assessment, namely identity), this evaluation method was used for weighting the rate of using the indicators of the Isfahan school of urbanism in the new towns. So for the assessment, the names of towns are listed in a matrix row and the names of the considered indicators are listed in a matrix column.

In order to apply this procedure, and due to the conceptual affinity (Ahari 2001, Ahari 2005, Habibi 2012, Habibi 1995a, Mahdavi 2010) to the indicators of urban identity on the one hand, and because of the good coverage between the identified indicators and the concept of sustainable urban design on the other hand, the identified indicators of urbanization inside the Isfahan School were used as documented indicators, according to which 50 questionnaires were distributed and completed separately among academic and professional experts in the 10 selected towns. In total, 42 questionnaires were finalized and analyzed. The questionnaire was written and completed in the period of one month of the late 2013. Its goal was the use of knowledgeable experts' views in order to rank the new towns according to the rate of their enjoyment from the Isfahan school of urbanism as a desired type of Iranian urbanism. 25 people were selected from the population of urbanism experts working in the new towns; so, the share of each city was of averagely 2.5 people. But this distribution was done based on the population of each city, so namely 3 people were selected from larger cities and 1 person was selected from small cities. The experts who completed the questionnaires were split in two groups: 25 people from the scholars of urban identity area and 25 people from the urbanism

experts working in the construction companies of the new towns, which were aware of the identity issue and its related problems in the new towns. In Table 1, the considered indicators were presented for measuring the condition of identity in the new towns. The measurement was done based on these indicators.

Table 2 is the same as the questionnaire form. So that the indicators of the Isfahan urbanism school were listed in the column of the table and the names of the towns in the row; and then the respondents were asked, based on each indicator considered separately, to give to every city scores from A to E. The range of scores was from 2 to 10; so according to Table 3, the score A has 3 points and the score E 10 points. Afterwards, according to the weighting that was done by the experts; based on Fig. 2, a general conclusion was done on the condition of weighting the indicators in all towns. In the last stage, the towns were ranked based on Table 4 and according to the weight that was given separately to each indicator in every city. A total of 42 questionnaires were finalized and tested. Thus, the concept of urban identity in Iran and the scientific literature was initially scrutinized and analyzed applying the intended indicators in the target towns based on the Goeller matrix. The results of the quantitative calculation were presented in the form of the final findings of the study, and then the final discussion and conclusions of the research were submitted.

Scrutinizing the Target indicators to Measure Urban Identity

As a key component of Iran's urban policy and planning, new town development has been scrutinized from various aspects such as design and architecture, geography, and sociology, with much of the literature concentrating on the substantive challenges of the development process (Zamani and Arefi 2013). Iran's rapidly growing urban population is concentrated in a few large cities. Using the new town strategy, the government of Iran plans to direct the future population growth and economic activities from large cities such as Tehran, Esfahan, Mashad, Shiraz and Tabriz to the new towns around them (Atash and Beheshtiha 1998).

Having a set of identity features is essential, considering particularly one with physical-space dimension that could provide the possibility to achieve the appropriate scales and standards for testing the urban identity of the Iranian new towns. In the same time, this set of identity features has to meet the needs of Iranian cities as well as being applied in new towns according to their specific conditions. On the other hand, the physical tissue and the urban spatial structure are major urban aspects that shape the urban identity, since the formation of the physical urban tissue is affected by the thoughts, ideas, beliefs, activities, and culture of the local community. Understanding this part of the city can lead to a greater recognition of social, economic, and cultural aspects. In fact, the physical tissue provides the possibility to visually recognize the urban identity, and that is why it is more significant than the other dimensions of identity (Azizi and Arbab 2010). In this regard, the Isfahan School urbanization indicators are known as a movement for the revival and reinventing of the ancient Iranian flux, with its most obvious verbal combination seen in spatial and physical collections, and they are considered as the basis of assessment and modelling of the urban spatial-physical identity. The indicators of the assessment practice are presented in Table 1.

Analytical Concept of Urban Identity

Urban identity, architectural identity and the urban images about them are sometimes formed by very different components in a long period inside the urban space. A city is a territorial phenomenon, evolved in the history, resulting from culture, and the spatial effects of human roles in the geographical environment. The worlds' first cities were founded when primitive societies benefited from the capacity of production, storage and added-value exchange; however, while their various forms of construction represent a response to the individual and collective needs of dwellers, they enjoy features that demonstrate different understandings of

Table 1

The indicators of the Assessment of Urbanization in Isfahan School

Indicator	Description	References
<i>Unity</i>	Urban space should be homogenous and all its elements combine with a general identity.	Habibi 1995b, Habibi 2012, Ahari 2001, Ahari 2006, Ahari 2005, Foroutan 2009, Mahdavi 2010, Habibi and Habibi 2010
<i>Accumulation</i>	Its meaning is the gathering of various elements of urban space in a certain place which causes the creation of a special space identity in that place.	
<i>Contrast</i>	Diversity in facing the elements of urban space forms the contrast indicator while it homogenizes them in a general identity. This principle save urban spaces from assimilation and loss of identity.	
<i>Connection</i>	When urban spaces are connected to each other, they express a concept in a general format.	
<i>Proportionality</i>	It pursues the ratios of sizes, objects and buildings, of full and empty spaces and the ratio of human presence inside the space; this indicator seeks for beauty.	
<i>Continuity</i>	It includes the past, the present, and the future; it happens in the present while it has its head in the past and its legs in the future.	
<i>Territory</i>	Each element of the urban space from housing, as the smallest element, to texture, as the largest element, has its own privacy. The stranger and the relatives are defined in each of these privacies; and it is natural that by the movement from microelements toward macro-elements, privacy will be alleviated. In other words, fewer people can enter to personal privacy at home than to city privacy.	
<i>Establishment</i>	Establishing a building in a certain place will feature a special characteristic and identity that is lacking in other places.	

the diverse communities of the universe and of the natural creation. Therefore, biological complexes along with their very existence portray the culture of their creators. A culture with both material and immaterial aspects; so that instruments, tools for living, material goods, and their production methods can be considered as components of "the material culture" while customs, beliefs, arts and sciences, and social norms are considered as the components of the "non-material culture" or "spiritual culture" of urban communities. Thus, urban identity includes characteristics such as: historicity; locality; collective memory; a particular historical period; a context of general and specific social relations (Madanipour 1996, Negarestani et al. 2010); and sense of individual, family, group, tribal, local (urban, rural, and national) belonging; cultural, social, economic, and political events; the rights and duties of citizens or their absence; technology level; inferior-superior relationships; class status; international relations; and national status.

Urban identity is born, grown, and transformed through the interaction of the above elements as well as their contradictions and communalities, while it contains several positive and negative aspects. Many pundits equate urban identity with urban personality, and consider it an element to distinguish cities from each other, while in psychological theories anything that causes distinction is not defined as "identity", but "personality". Researchers suggest that the lack of attention to urban identity is the outcome of the standard approach in the design of spaces and buildings, the technology and materials used in constructions, and the excessive similarity between cities and urban spaces. They attribute their reasoning to the existence of traditional cities, each being different from the others and having a unique identity. In other words, their identity is the result of unique historical, cultural, social, and physical characteristics.

Urban identity is both objective and subjective. It is objective because there are a set of outer contours in cities such as architecture, constructions, and human services. The major part of urban identity is subjective which is associated with the imaginations created inside the human mind by the urban fabric and urban space. Urban identity depends heavily on the attitude towards urbanization. If urbanization is viewed as an issue in the cultural context, then cities may be considered as the physical manifestation of culture (Ghasemzadeh 2013). Different identities emerge due to the manifestation of certain cultures in each environment based on natural resources, ideology, and common value systems. Some experts presented a comprehensive definition of the urban identity and its variants to identify the root causes of the crisis in modern cities.

Urban identity of the City

The importance of the concept of identity stems from being part of the very essence of place (Casakin et al. 2015). Identity is a sphere that helps individuals to recall a place and distinguish it from other places; like the individuals, cities also need to have different characteristics or distinctions. Consequently, identity has become not only a term, but rather a comprehensive theme and concept in making new places and built environments (Cheshmehzangi 2015). Like the individuals, identity is created by a large number of definable characteristics or elements (Lynch 1960).

Relph (1976) defined the demand of place identity as a deep human need that exists for compatibility and to join significant places. If we choose to ignore this need, then the future can be held in an environment where places are not important. On the other hand, if we choose to respond to this need and to exceed placelessness (Relph 1976), then there is a potential for the development of an environment in which places are reflecting and facilitating the diversity of human experiences (Oktay 2002). There are several reasons for the attempts to strengthen identity inside urban communities, including political and ideological motives, the need for a sense of belonging, the reaction against change as an adverse phenomenon and the need for cultural adversity in a world where culture becomes increasingly identical (Karimian 2010).

Historical efforts were made to develop the environment and they can never be repeated or experienced; so that these legacies represent certain productions at certain times, as well as a set of forces and will powers. We can shape the environment in a way that it has a strong sense of place, which is deeply felt by the inhabitants through their: prominent identity; human vitality; strong symbolic messages that will stimulate memories and tendencies; and structures that will shape the experiences of the individuals in a hierarchy or in certain patterns.

From the perspective of identity, the new towns represent a typical policy and symbolic planning created by planners, which is entitled "the image of culture", as a physical introduction of the human elements, representing the functional patterns that constitute culture. The findings of Teo (1996) indicate that, from the inhabitants' perspective, one of the fundamental flaws of

the new towns of Singapore is the lack of attention of urban planners to urban identity and its characteristics and physical-spatial manifestations (Teo 1996).

Urban Identity in Iran

The concept propounded that Iranian urban identity includes the characteristics and values of Iranian architecture and urbanism before the arrival of Islam to Iran. The period began with the sedentary tribal lineages and tribes, their unity and the building of old towns. "The Temple City", the first of its kind, was built as a ziggurat at Chogha Zanbil about three thousand years ago. "The Government City", later on, was formed during the Median period in Ecbatana, and it eventually culminated at Persepolis. The urban tissue comprised a citadel, residential neighborhoods, warehouses, temples, gates, and fences (Mojtahedzadeh 2003). Later, along with the growth and prosperity of trade and economy, another important element, namely the bazaar, was placed in the heart of the city.

In general, what is noteworthy as a symbol of urban identity (at least from the physical spatial dimensions point of view), before the arrival of Islam in Persia (Sassanian period), is represented by the five key elements of the urban structure, which is formed during thousands of years in harmony with the climatic, economic, and social conditions, and along with the advancements made by the people in the fields of knowledge and material tools, each including particular elements such as temples, baths, and markets. The five elements are: Kohandej, medial shar (city), external shar, market, and square (Habib et al. 2008).

The identity, physical and spatial characteristics of the Iranian city were highly correlated and interdependent, so that not only they were not dissipated after the arrival of the Islam to Iran. Instead, they were combined with the Islamic world while the replacement of traditional elements with new ones, such as building mosques instead of temples, led to the formation of a new identity with a particular physical space, namely the Iranian identity. The three elements of the market, citadel, and Jame Mosque and their surrounding neighbourhoods, and other spaces such as cistern, or school and Tekieh, which were built sometime later, formed the elements and spaces of the ancient Islamic cities in Iran. In the Islamic period, the religious role of the city was more prominent and it outweighed by far its military and economic role.

In the period after the arrival of the Islam to Iran, the three physical elements of mosque, market, and neighborhood formed the characteristics of the Islamic city (Habibi 2012). In the context of its historical evolution and with all its ups and downs, consistent with the climate, economic, and social conditions and along with the advancement in knowledge and indigenous technology, the Iranian city created and completed its own physical spatial identity, and it presented a particular style of architecture and urbanism. The final stage of this historical trend was the Qajar era that coincided with the beginning of inequitable relations with the West. Also, an unplanned blindly imitation of the modernist culture in all aspects of economic and social life as well as inside the city represented the beginning for the elimination of the historical identity of the city, resulting in the mere imitation of foreign patterns without adaptation to the local conditions. Nevertheless, by the mid-sixties, with the promotion of comprehensive urban plans in different cities of Iran during the urban renewal process, traces of vernacular architecture and urbanism in buildings and structures were still visible. However, due to the popularity of comprehensive detailed plans, which were copied from the Western versions, particularly during the decades after the 1960s, those characteristics were forgotten and replaced by identical land use patterns in all cities.

What is noteworthy about the identity of the new towns in general, and the new towns in Iran, in particular (Ziari 2006), is that due to their newness, the issue of identity in these cities is different from the ancient cities with historical roots. The identity of citizens in old cities can be strengthened through the physical and visual reinforcement of valuable historical elements

(Karimian 2010) as well as the emphasis of using them in urban design and planning. However, due to the lack of such elements in new towns, the issue of identity is somehow problematic. Because of the absence of history, culture, and collective memory derived from space, new towns will remain deprived of identity for a long time. They will not experience the formation of identity elements such as collective memory, unless they move toward becoming conventional cities. It is noteworthy that the population moving from other places to these new towns has its own history, culture, and collective memory that can facilitate the process of identification, provided that they are considered conscious urban inhabitants.

Results

As mentioned before, due to the positive characteristics of the Goeller matrix in the evaluation of multiple options based on different indicators, it was used to evaluate the urban identity of the new towns of Iran. The effects of the above mentioned options on the physical, natural, monetary and time units are considered inside the Goeller matrix methods. The indicators and options, as the method of the listed indicators specifies, are displayed in rows and columns, respectively (Table 2). Each row of the matrix represents an effect, and each column represents an option. The different options will be evaluated according to the chosen indicators. Therefore, the variety of the qualitative and quantitative effects could be applied by the Goeller matrix. The matrix allows the decision makers to determine a suitable weight for the different indicators. In this study, each of the sample towns is considered an option, and it is sorted in the columns of the matrix. The evaluation indicators are also demonstrated in the rows of the matrix as a system for the assessment of the options (new towns). The weighting algorithm and the resultant calculation of the questionnaires obtained from the 42 experts are shown separately for each criterion.

Table 2

Goeller matrix for each of the indicators and the target towns in a network of intersecting cells

INDICATOR								New Towns
Unity	Accumulation	Contrast	Connection	Proportionality	Continuity	Territory	Establishment	
C	D	B	C	D	B	B	C	Hashtgerd
C	E	B	C	C	C	B	C	Pardis
D	D	B	D	C	D	B	B	Andisheh
B	B	C	B	C	C	C	C	Majlesi
D	D	C	D	D	E	C	D	Baharestan
B	C	B	C	B	B	C	B	Sahand
B	A	A	B	B	B	C	B	Sadra
C	B	C	B	C	B	C	B	Golbahar
B	B	B	C	B	C	C	B	Alishahr
C	C	B	C	C	C	B	C	Mohajeran

Source: Adjustment based on the researchers' analysis

The rows of the matrix above, adjusted in the form of different intersecting cells, evidence the indicators concerning the process of evaluation and the assessment of urban identity in the new towns of Iran; and the columns of the matrix display the names of the towns in which the above indicators are tested. The coefficients of each criterion were allocated to the target towns, and the weighing process was conducted based on the 5-fold scope and the points of A to E. To prioritize the intended indicators in the target towns, the weight of measures was

determined separately in each new town according to the strength or weakness of the indicators in the distance scales. For example, Point B indicates the inappropriateness of the indicators in the target towns, and the quantitative equivalent to the range of the above matrix 4 of 10. In other words, it can be assumed that the following equation was considered (Table 3):

Table 3

The output indicators for the calculation of Goeller matrix

Sign Distinction	A	B	C	D	E
	Very poor	Poor	Fair	Good	Very good

Given the equation above, the initial matrix is adjusted for the Goeller matrix. To obtain the final score of all indicators, it is necessary to apply the quantitative calculation procedure to each of the indicators in the new towns. Fig. 2 shows the results of the calculation for each indicator individually.

Indicator	Distinction (%)						
Unity	56						
Accumulation		60					
Contrast			44				
Connection				58			
Proportionality					58		
Continuity						58	
Territory							52
Establishment							52

Fig. 2 – The results of the Goeller matrix calculation for each measurement criterion

Source: Adjustment based on researchers' analysis

According to the above table, some of the indicators proposed for the assessment of urban identity in the new towns were in a fair status while others were in a poor situation. In other words, indicators such as contrast and accumulation had a fair condition. In this regard, indicators such as unity, connection, proportionality, continuity, territory, and establishment were in a poor condition.

Table 4 shows the performance of the indicators intended for the target towns, on a distance scale. The desired scope in the corresponding graphs based on the 5-fold scope ranged from 2 to 10. Numbers 2, 4, 6, 8, and 10 indicate very poor, poor, fair, good, and very good conditions, respectively. Whereas any indicator has usually a quite good or a quite bad performance in the planning system, therefore the result of the final assessment of this study ranged between these two variables. The results of all calculations of the indicators used in this study ranged from poor to good are individually shown in the following diagram (Fig. 3).

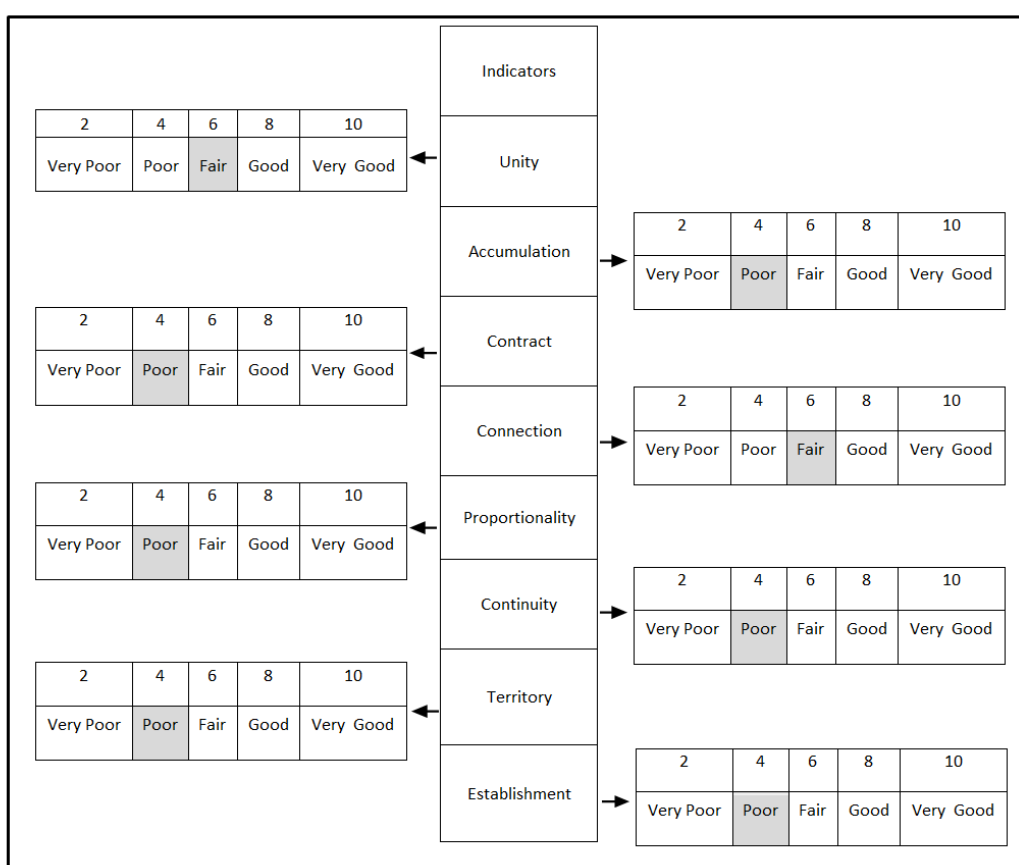


Fig. 3 – Findings from the calculation of research indicators based on interval scale
Source: Adjustment based on researchers' analysis

Thus, according to the distance scale, the final rating of all new towns under study is obtained through the incorporation of the 8 indicators (Table 4).

Table 4
Final ranking of new towns based on the identification of indicators of the Isfahan school of urbanism

Rank	City	Final score	Rank	City	Final score
1	Baharestan	62	6	Majlesi	42
2	Andisheh	50	7	Golbahar	40
3	Pardis	48	8	Alishahr	38
4	Hashtgerd	46	9	Sahand	38
5	Mohajeran	44	10	Sadra	30

Source: Adjustment based on researchers' analysis

As illustrated in the above table, Baharestan new town had a rating of 62, being the first among the ranked towns, while Andisheh and Pardis held the 2nd and 3rd positions, respectively. Interestingly, the results of this study are consistent with the high population of these cities, indicating the effectiveness of the above indicators on high population in the target towns.

According to the results of the evaluation in the new towns and in order to promote urban identity in the new selected towns, there is a framework presented in Table 5 which may help planners and managers in the decision making process in new towns. In this table, due to the situation set based on the Goeller matrix, two current and optimal situations were surveyed for each index. In surveying the current situation, each index of the Isfahan urbanism school was studied and described for all the new towns. Then, in order to improve the identity situation of the new towns, some recommendations were given based on the conditions of each indicator. In these recommendations, a set of strategies has been proposed including the creation of a neighbourhood centre, following the indicators of the new urbanism movement – pedestrian-oriented; variety performances; lively urban spaces – creating the perspective of the Iranian identity. This strategy has been formulated with the aim of strengthening the identification that derived from the Iranian urbanism identity.

The unity indicator was used as a principle and its results show an improper situation in the surveyed towns. In the recommendations it is tried to improve this indicator by the use of physical unity strategies and by identifying the adequate materials for the facings of the new towns. In regard to the indicator of accumulation and due to its relative optimal situation, the creation of a neighbourhood centre and of different social interaction spaces was recommended. The contrast indicator has also a relative proper situation; so, in these towns, the integration of public spaces with values promoted by the new indicators of urbanism was recommended. The connectivity indicator including the connected urban spaces that express a physical concept in a general format had an improper situation in the surveyed cities. So, the physical framework amendment and the placement of different and appropriate performances were recommended to amend this situation. The proportionality indicator has also a situation similar to the connectivity indicator in the new towns; the amendment of the cityscape criteria, on the one side, and applying the sustainable management of land for the establishment of an appropriate application for a harmonious and sustainable development, on the other side, can lead to the improvement of its situation in the new towns. The continuity indicator as a principle that represents the concept of physical continuity of the urban spaces inside the Iran school of urbanism has an improper situation in the surveyed towns. Therefore, the creation of mixed land uses and the attempt to implement urban development projects were recommended to improve this situation. The territory indicator, which has been completely destroyed in the new towns by the dominance of the modernist urbanism, has also an improper situation; for the improvement of this principle, the pedestrian-oriented development, respecting private and semi-private spaces in the city, and including the suggested strategies were recommended. Finally, the establishment territory indicator, which unfortunately has also an improper situation, can be improved by the complete implementation of urban development projects, preventing land use changing and considering the harmony of form, space and activity indicators inside urban spaces.

Table 5

Presenting the Framework to Promote Urban Identity in the Selected New Towns

INDICATOR	Assessment	Results of the Goeller matrix	Optimal State Necessities
Unity	According to the results of the sample studies, no homogeneous system is formed yet in terms of a unique identity formation in the new towns. Failure to establish dominant urban spaces inside the urban tissue, and lack of uniformity in the formation of spaces have caused irreparable harms to the spatial harmony and the relevant activities, while they have disjoined the physical system of the towns.	Poor	In line with creating spatial unity in both procedural and substantive areas in the new towns, measures should be taken for the identification of public and private physical spaces of the cities as well as the formation of unity indicators to evoke a whole unit. Accordingly, the unit components represent a particular gradation; in the meantime, they lead to the formation of a general homogeneous space.
Accumulation	Accumulation of different urban spaces in a specific range and a certain area leads to increased vitality and strong urban life in the new towns. However, according to the studies conducted on the ten new target towns, there is no evidence on the accuracy of the above statement, with the exception of certain areas that have gained fair points due to the increasing density and formation of commercial spaces.	Fair	Accumulated activities and spaces in a certain area of the new towns bring identity and a sense of presence of public spaces in the mind of the observer; and due to its mixed use, and despite its heterogeneity, public space plays certain roles to the people, and thus, it contributes to their presence in these spaces. To achieve such a position in the new towns, attempts should be made to strengthen the uniformity of residential areas by creating neighbourhood centres that enjoy the accumulation of physical and activity spaces.
Contrast	Due to the methods used and the high scores, this indicator is ranked fair among other indicators. The issue was discussed due to the variance of residential units and different densities in certain areas, as well as the common uses in different phases of the new towns. The scope of this indicator in the formation of identity in the new towns has gone beyond these indicators, and it refers to the urban spaces that in addition to creating heterogeneity in physical spaces are of a great help in strengthening functional relationships and space consolidation, despite the existing differences.	Fair	In the new towns, the most considerable indicators of identification and creation of urban living spaces are the ones that lead to the formation of a special system in a certain town which is different from other similar towns; and accordingly, the city is distinguished from other towns and it has its own identity. In line with creating new spaces in the contemporary urbanism, this issue can comply with some visual proportions of Iranian traditional urbanism due to the position of elements and some certain spaces. In other words, by combining the urban elements of the new urbanism movement and by creating accessible urban public spaces, we can attach more weight to the indicator of contrast in the new towns.

INDICATOR	Assessment	Results of the Goeller matrix	Optimal State Necessities
Connection	Due to its unique nature and in terms of the two aspects below, this indicator was ranked poor in the new towns under study. On the one hand, because of the newness of new towns; the physical rupture was evident in their urban spaces. On the other hand, since urban spaces are not completely formed, the indicator of connection and the coverage of physical spaces are not yet occurred. In other words, in addition to being interpreted as spatial connection, it can be defined as functional connection in which each urban space is similar to a mosaic which has its special services within its area, and together with other functional spaces can lead to the dynamism of urban spaces.	Poor	To achieve the desired position in relation to the indicator of connection, it is necessary to modify the two corresponding procedures since they are imposing certain problems in the present situation. In other words, measures should be taken to contribute to the formation of a simultaneous and harmonious physical development by simply preparing the suitable skeleton for the formation of urban life in the development phase. On the other hand, by the application and locating different functions in the corresponding phases, it will be able to connect spaces and activities beyond physical spaces. The above procedures will bring about place sustainability freeing new towns from uniformity of spaces provided that they are taken into close consideration.
Proportionality	It applies in two aspects of structure and content in the target towns, and it deals with fundamental issues. So that, this is due to the absence of proportion between dimensions and sizes, volumes and buildings, and the ratio between accumulated and empty spaces; also, the lack of congruent concepts in certain phases of development, which are being separated disproportionately, like islands, causing spatial schism, has undermined the indicator of proportionality in the target towns.	Poor	Compatibility and conformity of physical spaces, especially in terms of their architectural character are the factors that should be taken into close consideration in order to fit and promote the status of new towns according to their development phases, and due to the management of space development. Establishing specific design indicators for facades and physical proximity as well as equilibrating the effects of surfaces, such as streets and green spaces with physical symptoms, can play an important role in this regard. In other words, the proportion of development or land management will attribute to establish the procedures to fit the harmonious development and expansion of the new town; meanwhile, it will diminish the creation of eyesore lands with less developing capabilities.

INDICATOR	Assessment	Results of the Goeller matrix	Optimal State Necessities
Continuity	The indicator of continuity regains its meaning through its relationship with discontinuity. In other words, the indicator of discontinuity in the target towns is more apparent than the indicator of continuity. This is due to the lack of strong physical contexts and their repetition in the public and private areas, and the absence of uniformity in the urban development of the new urban centres; this issue is about the phases that have not yet been able to attract public participation in the field of constructions. That is, the weakness of new urban centres is due to the lack of activity corridors corresponding to the transference of a dynamic urban space to the various phases of development.	Poor	In line with establishing uniformity and empowering the important indicator of continuity, as one of the fundamental indicators of identity and place vitality and as an indicator that most of the contemporary new towns need to strengthen, it is necessary to pay close attention to the two issues of form and activity. So that, due to the physical rupture of urban spaces, and by creating fields of realization and evaluation, before and during its implementation, we can contribute to an optimal and structured development. On the other hand, improvement can be achieved by creating mixed-use areas, and by investments in public spaces for linking all spaces of development through corridors, while giving rise to urban survival and public participation.
Territory	The main reason of the weakness of the territorial indicator in the target towns is represented by the modernist characteristics of development spaces, like in other Iranian cities that increase their realm horizontally in the form of unbridled expansion of very small buildings and passages. This indicator has been neglected in all the Iranian cities, especially in the new target towns, from two aspects. The first aspect is territorial by nature, which refers to failure in applying particular spaces and providing special territory for them. The lack of urban public spaces with a proper covering radius for references is an evidence for this matter. The second aspect is called special territory or private territory. It is also due to lack of privacy from the scale of single buildings to their neighbourhoods in the new the towns.	Poor	It will be possible to strengthen this indicator according to the two aspects of territorial by nature and special/private territory. Territorial by nature refers to the lack of lively public spaces in terms of their nature; and in case of existence they will have their own special territory and a good coverage over the new towns. These public spaces can include the entire urban space. The expansion of private spaces with different territories can also be the most important aspect of the expansion of the territorial indicator in the realm of new towns. By establishing limitations on roadways, this territory will take place and will be greatly accepted by the public in certain neighbourhoods or applications forming a series. For instance, by creating commercial applications in certain areas next to recreational spaces, on the scale of a single neighbourhood and roadway access restriction to this unit; we can help enhancing the territory and to increase its property values, while also increasing the private sector participation.

INDICATOR	Assessment	Results of the Goeller matrix	Optimal State Necessities
Establishment	The establishment indicator could be searched in the combination of the previously mentioned indicators, because the establishment of a structure in a specific location or urban space should comply with the guidelines and indicators outlined earlier. If the corresponding indicators are applied, we can witness the objectivity of the establishment indicator. Due to the poor rating of this indicator, there were also fundamental weaknesses in ten new towns surveyed in this study.	Poor	This indicator makes sense by the concepts of urbanization and urban spaces so that each component can play a great role in the entire unit; therefore, along with the realization of indicators such as territory, continuity, and unity, the unique nature of each space and the physical and functional platform of the space should also be considered. In this case, the three elements of form, space, and urban life, in line with each other, will lead to the crystallization of urban life and urban spaces.

Source: Adjustments based on the researchers' analysis

Conclusion

Unfortunately, even after almost 40 years of urban planning experience and a paradigm shift, planning for people, and not planning with people, is still prevalent in Iran (Zebardast 2005). The issue of identity is the main focus in the planned communities of the contemporary era due to rapid urbanization. The population which is going to live in these planned settlements has its own culture, history, and ancestral tradition; and this is of a particular importance in Iran. Urban identity today is as a missing link; and the cities are being formed and spread not on the basis of their original identity, but based on imitation of Western manifestations and modern patterns, without thought and regardless of the indigenous patterns. In fact, modernization is the beginning of the rupture and waning of interest in urban identity and social life. Fascination with the exotic manifestations has resulted in forgetting the traditional indigenous manifestations. Due to the lack of familiarity and ignoring the need for indigenous patterns, from this period onwards, territorial realities were being ignored in the urban development plans. Identity is an important issue in the new towns, and there is a direct relationship between identity and the high population of the new towns; so that towns that did not take this important issue into account have less population. According to researchers and experts, and based on the research direction as well as the results of the Goeller matrix, Baharestan new town achieved the highest ranking, on the basis of the selection of indicators extracted from the Isfahan school of urban development. In other words, the city's planning and design is more compatible with the indicators of identity inspired by the indicators of the Isfahan School. The city's success in achieving its goals among the Iranian new towns verifies the accuracy of what was stated above. One of the main objectives of this study is to present the standards and frameworks for the promotion of urban identity in the selected towns. Therefore, a one-to-one correspondence was used in the qualitative analysis of the results of the Goeller matrix calculations, according to which some indicators were proposed for reaching an optimal image of the 8 indicators mentioned above. It should be indicated that the methodology developed in this paper was associated with the other aspects of identity and its application in other towns. Finding practical solutions for the realization of the fundamental issue of identity in the modern new towns can represent the subject of future studies in this area. The results show that many indicators register a poor situation in the case studies considered and these results represent deep challenges for the new towns, where they constitute a great opportunity for the establishment of the Isfahan school of urban development as pick point of urban development approaches in an

ancient country. Therefore, researchers have proposed the body of strategies for the promotion of indicators of this school in the new towns. Based on the situation of each indicator in each of the case studies, some strategies have been proposed. These strategies focused on the promotion of urban identities based on the local values of urban development especially inside the Isfahan school of urban development.

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BOOK REVIEWS

ESPON Atlas: Territorial Dimensions of the Europe 2020 Strategy

ESPON 2013 Programme, Luxembourg, 2013, 66 p.
ISBN 978-2-919777-36-5

Reviewed by IONUȚ ANGHELE, University of Bucharest, Romania

This book contains information regarding the results of the ESPON SIESTA project (Spatial Indicators for a 'Europe 2020 Strategy' Territorial Analysis). The European Observation Network for Territorial Development and Cohesion (ESPON) commissioned the project in order to investigate the territorial dimensions of the Europe 2020 Strategy.

The book is divided into five unequal chapters. The second, third and fourth chapter represent the core of this publication whilst the first and the last chapters provide the introduction and the conclusions. Although small in size, they provide important information necessary for a better a better understanding of the content.

The first chapter (The Europe 2020 Strategy) is a concise presentation of the Europe 2020 Strategy. It contains information about when the strategy had been launched and adopted, and which are its priorities and objectives. The priorities are Smart Growth, Sustainable Growth and Inclusive Growth and they represent the basis of Europe 2020. In order to achieve these priorities, seven flagship initiatives have been initiated: Innovation Union, Digital Agenda for Europe, Youth on the Move, Resource Efficient Europe, An Industrial Policy for the Globalisation Era, An Agenda for New Skills and Jobs, European Platform against Poverty. Besides the priorities and the flagship initiatives, several measurable indicators have been agreed as headline targets for the whole European Union. These are: 75% of the 20-64 year-old population to be employed, 3% of the EU's Gross Domestic Product to be invested in Research and Development, a 20% reduction in greenhouse gas emissions in relation to 1990 levels, 20% of energy from renewable

sources, a 20% increase in energy efficiency, reducing early school leavers to below 10%, at least 40% of 30-34 year-old population completing third level education, at least 20 million fewer people in or at-risk-of-poverty and social exclusion.

The next three chapters have a similar structure, each representing a detailed presentation of one of the priorities of Europe 2020 Strategy. Each chapter opens with an explanation of the concept and it continues with an analysis of key indicators that illustrate the regional diversity within Europe.

The second chapter (Smart Growth) focuses on the first priority of the Europe 2020 Strategy. It is divided into three subsections: research and the promotion of innovation and knowledge transfer, the quality of education and the digital agenda.

In the first subsection, the authors argue that few European regions reach the overall target on research and development (R&D) expenditure, and that the targets on investments are unlikely to be met. This is because of the slow increase of R&D expenditure and the mismatch between human resources and investment at the regional level. It is also important to note that private expenditure on R&D has increased less in Europe than in other regions of the World, top regions being concentrated mainly in Centre-North.

The second subsection tackles the issue of education in the Europe 2020 Strategy, which is analyzed at a regional level. The percentage of early school leavers, regional distance to achieving national targets regarding drop-out

rates, trends in regional drop-out rates and drop-out rates in Larger Urban Zones are indicators that reflect the territorial situation for lower secondary education, while the Shanghai index, the percentage of population aged 30-34 years with tertiary education, distance to the national targets regarding tertiary education and trends in tertiary education attainment by people aged 30-34 years are the indicators chosen to illustrate the tertiary education level.

The third subsection regarding the digital agenda covers different aspects such as people working in the ITC sector, the broadband penetration rate, the use of e-commerce and the compute use. ITC employment is concentrated in urban areas, especially capital cities. The Nordic countries lead the statistics in broadband penetration, e-commerce, and computer use, whilst in some regions in South-Eastern Europe more than half of the population never used a computer.

The third chapter (Sustainable Growth) is dedicated to the second priority of the Europe 2020 Strategy and it is structured in two subsections: traditional economic indicators of growth and the green economy.

GDP per capita is one of the main EU indicators that reflect economic growth. This indicator varies both between countries and between regions of the same country. The difference between Eastern and Western European countries is still visible, although there are improvements in the East. The economic and financial crisis had a major influence on the evolution of the national GDP per capita. Changes between 2007 and 2011 show that the impact of the crisis is most evident in the United Kingdom, Ireland, Iceland and in the Southern European countries, while the best performing countries are located in Eastern Europe, including non-EU states such as the former Yugoslav Republic of Macedonia and Turkey.

The use of renewable energy is an important aspect of the Europe 2020 Strategy, but only few countries reach the 20% target. The Nordic countries, Estonia, Latvia, Austria, Portugal and Romania are above the proposed target.

In terms of potential, Northern Europe, the Atlantic coast, and the Baltic coast have the greatest potential for electricity production from wind power stations, whilst Southern European regions have the highest potential for photovoltaic energy production.

In chapter four (Inclusive Growth) there are two subsections: employment and lifelong learning; and poverty and social exclusion. The first subsection analyses the territorial patterns of employment and unemployment in European countries. The target for an employment rate of 75% is mainly reached in Central and Northern European Regions whereas the majority of Southern and Eastern European regions suffer from very low employment rates. The study has also shown gender inequalities in employment, with a difference of 13% between the male employment rate and female employment rate in the EU27.

The second subsection begins with statements regarding poverty and it continues with the territorial dimension of the indicators taken into account. The results of the study show that the highest risk of poverty is in Eastern and Southern Europe, mainly in Bulgaria, Romania, Southern Italy and Southern Spain. It is important to note that there are considerable differences between the regions from the same countries in terms of the population at risk-of-poverty.

The fifth and final chapter (Conclusions: Territorial potentials and challenges, and the EU 2020 Strategy) illustrates a series of conclusions regarding the results of the ESPON SIESTA project. One important aspect that is highlighted in this chapter is the difficulty to achieve the headline targets in many of the regions. This is because each region is unique and has its own specificities. The Atlas has managed to show that the European regions are very diverse both in terms of potentials and challenges.

An aggregated index was developed to evaluate the fulfillment of the Europe 2020 Strategy. It measures the distance of the regions from fulfilling the eight headline targets officially set by the EU.

The atlas concludes with a final map, the Aggregated Europe 2020 Map which shows the regional aggregate index for 2009-2010. There is a difference between the Centre-North countries and the rest of Europe in terms of index values. While the Nordic countries, Germany, France and the United Kingdom have regions that register a very high aggregate index, regions in Romania, Hungary, Southern Italy, and Southern Spain are lagging behind.

Overall, it can be said that the book has a very organized structure, with clear and concise ideas. On the other hand, there are some

ambiguities regarding different national targets that are mentioned throughout the book, but are not fully detailed. More information about the national targets could have been useful in better understanding some territorial issues.

Concluding, with 44 maps, 6 figures and 4 tables, the book provides very good visual information considering its purpose and its theme. Also, the text that complements each graphical element offers depth to the content, making this book not just a collection of maps, as its title might indicate, but a valuable resource regarding the Europe 2020 Strategy.

Globalization and New Challenges of Agricultural and Rural Systems

Doo-Chul Kim, Ana Maria Firmino, Yasuo Ichikawa (Eds.),
IGU Commission on the Sustainability of Rural Systems, Graduate
School of Environmental Studies, Nagoya University, 2013, 182 p.
ISBN: 978-4-904316-10-8

Reviewed by FLORIN ALEXANDRU ZAHARIA, University of Bucharest

Nowadays the entire planet is facing globalization and the development process often passes up the sources of energy held both by the territory and the local communities, which are able to provide a quite significant support for the agricultural and rural systems evolution towards progress and welfare. In this context, the theoretical and methodological approaches of the concept of agricultural and rural systems are very important for the future development of the human society.

The book includes papers presented at the 21st Colloquium of the Commission on the Sustainability of Rural Systems (CSRS) of the International Geography Union (IGU), held at Nagoya University, Japan. The overall mission of the Commission is the development and application of an internationally comparable research program on the sustainability of rural systems in various regions of the world. As the editors say, the 21st Colloquium of the CSRS was held during 29th July and 4th August 2013, gathering 40 participants from 16 countries with 36 presentations. The proceedings present 12 papers presented at the colloquium, involving contributions from many individuals and institutions.

The proceedings start and end up with two academic considerations over the main ideas and concepts that CSRS is working on in the broad field of Agricultural and Rural Systems. The starting consideration is made by the text of Christopher R. Bryant, Professor and Director of the Laboratory on Sustainable Development and Territorial Dynamics from the University of Montreal, who points out the importance of research and the development approach in rural geography. As an ending,

Akira Tabayashi, Professor Emeritus from the University of Tsukuba, describes the new roles of the rural space in Japan, and in general. He marks the dynamics of the rural areas in the last decades and their growing importance in all the sectors of the economy. Professor Akira Tabayashi illustrates the prospects for the rural areas naming this process the "commodification of rural space".

The book has its structure organized in 4 chapters corresponding to the four main themes of the Colloquium, indeed very topical in the research field of rural and agricultural geographies. The papers cover various areas of study in the domain of agricultural and rural systems, such as: social construction and analysis of rural sustainability; regulation of rural sustainability; sustainability and the rural business enterprise; sustainability in the interaction between rural and urban systems, rural community dynamics and sustainability. These research directions are among the tasks that were defined at the business meeting in Hague to pursue the CSRS's objectives and to contribute to the IGU Executive's policy of ensuring an enhanced profile for geographic research in the international scientific community.

The papers presented in this book are very valuable for the research of the rural systems, bringing their contribution for the geographical methodological approaches and being a step further to the future development of the rural space.

The first chapter is entitled Rural Landscape, Tourism and Tradition: Challenges and Opportunities and it includes 4 papers with various subjects about rural landscape, tourism development in rural settlements and the effect of tourism on functional diversification. Besides the methodological approach, the papers are represented by case studies of different regions in according with the regional specific of a geographical research. All the authors from this chapter address a fundamental component of the concept of sustainable development which consists in adopting adequate strategies in the concerned regions that can integrate the problems of the geographical environment and the development of the rural settlements on short, medium or long temporal sequences.

In terms of graphic and cartographic representation of the majority of works in this section one can appreciate their high quality and professionalism. In this regard, I would also point the need for its enrichment. This is a comment generally available also for the other chapters treated in the book.

I found very interesting the paper on the participation in landscape and local knowledge. The author realizes the importance of local communities in the large process of developing a certain region. His study is focused on the agricultural landscape of Catalan Mediterranean Mountains. In terms of the classic theme that sees tourism as an alternative for development, the authors propose theoretical models and critical assessments for the current state of tourism in a certain region. In this chapter we also find an international collaborative study that highlights the differences in the approaches of experts from different regions. The authors present this difference by telling us that Romanian experts generally stress more the biocentric approach of landscape while Walloon experts assign importance to urban or industrial landscapes. In my opinion this may be due to the different rates of these landscapes in the analysed regions for each group of experts. Furthermore, the authors of this paper suggest nine features worth to be considered when assessing the landscape.

The second chapter of the proceedings is entitled: Heritage and Rural Society in Sustainable Development and it includes 3 papers with clearly methodological approaches and conclusive results about the role and the importance of heritage in sustainable development. The case study areas include regions from the eastern hemisphere, starting with Japan and Israel and ending with the Australian coast. The authors of each paper point the importance of regional particularities in the process of developing the agricultural and rural landscape. Each of them marks in their studies the big role of the cultural component of every landscape, while representing the solution for starting and accelerating the regional development of rural landscapes.

The third chapter of the book addresses another important theme from the economic sector: Food and Local Production: Issues of Local Farmers in a Global Context. This section includes 3 papers that analyse this problem in the actual context of 3 different regions of the world: Japan, Spain and Laos. This theme is a very actual one in the globalization context, the local producers facing big issues in adapting to the global economy. The authors provide different solutions for the problems that they identify and they try to propose some specific application methods for the region analysed.

The fourth part of the proceedings includes 2 papers that treat the theme of Conceptualization of Rural Factors in general and focus on Vietnam, one of the paper including a case study of community forestry in central Vietnam. In this territorial context, the authors try to find the theoretical and methodological approaches of the concept of agricultural and rural systems, pointing out their importance for the future development processes.

The book manages to find a number of problems for agricultural and rural systems, in the context of globalization. It also captures, through its structure and coherence, the present-day dynamics of rural systems by presenting the causes and the solutions for their territorial problems.

Book Reviews

As previously mentioned, an important issue of this book is represented by the necessity of a quantitative improvement of its graphic and cartographic material. In this sense, it is recommended a more applied approach for managing the representation part of rural landscape research in the future. But the proceedings need to be appreciated for their overall varied and complete approach on the topic of agricultural and rural systems.

geo-system, involving economic, social and cultural changes. The included papers bring viable solutions for the current issues of rural space, in the spirit of sustainable development. Such approaches are very valuable both for scientific knowledge and the local communities of rural settlements, the bridge between them being sustainable development, as the main objective of the IGU Commission on the Sustainability of Rural Systems.

In conclusion, globalization brings new challenges to each component of the

Corrigendum to my paper

“HOUSEHOLD/ZONAL SOCIOECONOMIC CHARACTERISTICS AND TOUR MAKING: CASE OF RICHMOND/TRI-CITIES MODEL REGION IN VIRGINIA”

published in vol. VI, 1, 2014, p. 53-70

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In the originally published paper, I stated, on page 55, that “Sometimes called stop-making behavior, trip-chaining behavior in activity-based modeling describes the importance of multi-purpose trip-making rather than single trip-making. Numerous studies have examined trip-chaining or stop-making models using the frequency of stops on the way home and/or on the way to work as dependent variables (Bhat 1999, Bhat and Singh 2000, Chu 2003, Shiftan 1998, Wallace et al. 2000). In these studies, the stop-making behavior is derived from the activity-based concept and it is used to describe stopping behavior made by a traveler, in particular a commuter, on the way to home or work. With the assumption that a commuter has a regularly followed route, stopping at a location away from home or work during commuting in order to participate in an activity is treated as a deviation from the commute trip. Therefore, in prior research, stop-making models were usually applied with respect to linking non-work activities with work activities, including the morning commute, midday trips, evening commute, and trips before or after the commute (Bhat 1999, Bhat and Singh 2000, Wallace et al. 2000). In addition to work trips, non-workers’ trip-chaining as a series of out-of-home activity episodes (or stops) of different types interspersed with periods of in-home stays have also been investigated (Bhat and Misra 2001, Misra et al. 2003)”.

Due to errors caused by my inadvertent negligence in citations, the above statement will be replaced by the following paragraph:

“Trip-chaining behavior in activity-based modeling illustrates the importance of multi-purpose trip-making. Transportation modelers typically use frequency of stops on the way home and/or on the way to work as dependent variables in their trip-chaining or stop-making models. The term “stop-making behavior” is derived from the activity-based concept and is used to describe stopping behavior made by a traveler. A commuter typically follows the same route, making stops at a location away from home or work during commuting process. Therefore, stop-making models were usually applied to link non-work activities with work activities (Bhat 1999, Bhat and Singh 2000, Chu 2003, Concas and DeSalvo 2008, Concas 2010, Shiftan 1998, Wallace et al. 2000). Besides work trips, transportation modelers have also examined non-workers’ trip-chaining as a series of out-of-home activity stops (Bhat and Misra 2001, Misra et al. 2003)”.

At the same time, two new references, which were carelessly omitted, will be added:

CONCAS S., DESALVO J. S. (2008), *Integrating Transit and Urban Form*, Final Report No. BD 549 WO 37, National Center for Transit Research for Florida Department of Transportation, Tampa.

CONCAS S. (2010), *The Interaction between Urban Form and Transit Travel*, Ph.D Dissertation, University of South Florida, Tampa.

Aims and scopes

Analysis of the urban and regional condition needs to be interdisciplinary. In reality, urban researchers usually tend to belong to a discipline reflecting their training whether as sociologists, geographers, planners or any number of subjects concerned with the study of space and place. Our training very often endorses an appreciation of how other disciplines explore the city. For the journal the acknowledgement of the many disciplines that concerned with understanding cities and regions will be indicated by the different disciplinary back-grounds reflected in the papers published. Articles will be published by geographers, sociologists, planners, economists, political scientists, to mention just few of the disciplines involved in urban and regional study.

The Journal of Urban and Regional Analysis plans to be a key outlet publishing topical articles dealing with cities and regions. In later issues we plan to include sections devoted to notes and comments as well as a policy section outlining and discussing state and non-state initiatives aimed at improving cities and regions, together with the problems confronted by their implementation.

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GIDDENS A. (1990), *The Consequences of Modernity*, Polity Press, Cambridge.

MARSHAL R. (1995), *The global job crisis*, Foreign Policy, 100, 50-68.

*** (1938-1941), *General Romanian Population and Settlements Census on December the 29th 1930, I-X*, ICS, Bucharest.

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