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UNIVERSITY CAMPUS AS A SECONDARY CITY CENTER – A CASE STUDY OF NOVI SAD IN SERBIA

Abstract:

The presence of the university within the city triggers competitive advantages together with the various spatial and socio-economic challenges of the urban area. Introducing the historic perspective of the symbiotic relationship between the city and the university, the paper explores the interaction between the campus of the University of Novi Sad and its urban neighborhoods. It is supposed that the university campus can have a more prominent role in the system of centers in Novi Sad through the integration of its functions and open public spaces with the surrounding area and within the limits of the campus itself. The presented analysis supports the idea of the policentricity of the city of Novi Sad.

Keywords: campus, city centers, town-gown relationship, policentricity, University of Novi Sad

УНИВЕРЗИТЕТСКИ КАМПУС КАО СЕКУНДАРНИ ЦЕНТАР ГРАДА – СТУДИЈА СЛУЧАЈА НОВОГ САДА У СРБИЈИ

Сажетак:

Присуство универзитета у граду покреће конкурентске предности заједно са различитим просторним и друштвено-економским изазовима у урбаној средини. Кроз приказ историјске перспективе симбиотског односа града и универзитета, у раду се истражује интеракција између кампуса Универзитета у Новом Саду и његовог градског окружења. Испитана је претпоставка о могућности истакнутије улоге универзитетског кампуса у систему центара у Новом Саду кроз интеграцију функција и отворених јавних простора са околином, као и у оквиру граница самог кампуса. Представљена анализа подржава идеју о полицентричности града Новог Сада.

Кључне речи: кампус, градски центри, однос града и универзитета, полицентричност, Универзитет у Новом Саду

1. INTRODUCTION

The transition to the knowledge society imposed the growing need for synergy between economic development and universities, creating a unique competitive position of the university towns. Considering heterogeneous missions and strong impacts of the higher education institutions, they are recognized as important catalysts of social transformations and a stimulus to the dynamics of regional and city development, going beyond the traditional goals of education and research **Invalid source specified..**

During the current period of population decline in Serbia, the city of Novi Sad is counting enlargement of population, which is to a large extent a result of the existence of the university. It is not rare to hear that Novi Sad is a "university city" that attracts students from all over the Autonomous Province of Vojvodina, as well as from other parts of Serbia and the wider region. Taking into account the changing dynamics of the functioning of the university and the city itself, the relationships between the campus and its urban surrounding is changing as well. Considering that a large number of people, mostly young, gravitate to the university campus daily, this case study examines how the University of Novi Sad and its campus interact with the wider urban context highlighting the relationships and functional composition of the bordering zones around the campus. The paper posts a question if the university campus can be treated as an extension of the city center in a manner that both entities benefit, particularly in response to the unique circumstances – opportunities and restraints – that the city provides. It is supposed that the campus can have a more prominent role in the system of centers in Novi Sad, considering the significance and specificities of the University and favorable location of its campus.

The paper discusses the significance of the University and the campus as its spatial frame, and analyzes the system of centers in Novi Sad by means of site surveys and planning documents reading, with an intention to elaborate the opportunities for better recognition of the University of Novi Sad through the improved spatial conditions in the city. The focus of the paper is on the integration of functions and open public spaces of the campus with the surrounding neighborhoods and within the limits of the campus itself.

2. GENERAL SIGNIFICANCE OF THE UNIVERSITY AND THE CAMPUS

The origins of the university in the western society are rooted in the newly formed cities of the 12th and 13th century medieval Europe. They appeared in accordance with the social conditions and emerging urban society of the time. Based on the model of guilds – professional associations of craftsmen or merchants, universities were established as associations of students and/or masters (teachers). Striving for the autonomy and academic freedom since the inception, they were an important factor of social life, but equally dependent on municipal and public authorities for financial support and legal rights and privileges **Invalid source specified..**

This symbiotic relationship between the city and the university has continued to evolve throughout history. The 19th-century European universities were grounded on the value of universal, pure knowledge and freedom of learning and research "for their own sake" **Invalid source specified..** Its social role has been metaphorically articulated as the "ivory tower" phrase, which points to the irresponsiveness to socio-economic demands and real-world problem-solving. Spatial expression of such academy-society relations was the suburban or isolated greenfield campus development in the 1960s and 1970s, which separated students from other civic structures and public life **Invalid source specified.Invalid source specified..**

Contrary to the European university tradition, North American universities emerged much later, mostly as a result of private initiatives and therefore sensitive to the effects of the market and the demands of the social environment. It is stated that American universities have achieved a significant relationship with community needs, providing excellent professionals, expert knowledge and continual advancing in science, and forming the basis for sustained economic growth and prosperity **Invalid source specified..**

On the turn of the new millennium, globalization and neo-liberal ideology imposed new challenges and demands on higher education worldwide. Universities have been assigned with the third mission (besides two essential roles of teaching and scientific research), implying to their economic role as a force of development in the knowledge society. Studies on the heterogeneous mission of the university point to diverse modes of their engagement in the contemporary society based on the

knowledge spill-overs, innovation and technology transfer in collaboration with industry and private sector; support in the entrepreneurial engagement through intermediary structures like technology transfer offices, science-technology parks, R&D centers and start-ups **Invalid source specified.**

Nowadays, the type of suburban university structure does not provide the right environment for the modern knowledge society to flourish **Invalid source specified.** The university campus itself should represent an urban area that forms an integral part of the city. Its physical settlement, the quality of design and the definition of its functional program might influence specific relationships with the city which certainly vary according to the context **Invalid source specified.** The relationships between cities and universities have started to shift as a result of the reconfiguration of the socio-spatial organization of economic activity. The major social and economic transformations over the course of the twentieth century reflected on universities' degree of engagement with communities outside their campuses. O'Mara states that "the historical transformations of university and city since the mid-twentieth century have been closely intertwined and interdependent" **Invalid source specified.**, which is especially relevant for the urban neighborhoods with the large physical and political presence of higher education institutions. The universities are nowadays exhibiting a significant capacity to affect the social, spatial and symbolic structures of the urban area. The concept of the "town-gown relationship" explains the relations between the universities and the communities that surround them. The boundary between town and gown entities is declared to have real and lasting consequences, particularly in terms of land use and policy issues **Invalid source specified.** At the same time, the social component of this relationship has growing importance. Gehl and Gemzoe **Invalid source specified.** stress the influence of university and especially students on the vitality of the city center, giving the examples of famous university cities and districts well known for their vitality and interesting atmosphere. As the economic and social purpose of the university has changed, so did the degree of the university's engagement with communities outside their campuses. It is stated that "nowadays the university has been transformed from a closed space for communicating knowledge into an open space aimed at active engagement in the social life of cities and regions" **Invalid source specified.** Greater socio-economic incorporation of the university into its urban structure seeks the way for its spatial reflection – the need for rethinking the role of the campus within the spatial organization of the city and its central functions.

3. SYSTEM OF CENTERS IN NOVI SAD

The traditional center of Novi Sad consists of a great variety of uses due to the fact that it is the oldest part of the city which has always been a place of a dynamic urban life. Contemporary socio-economic context and processes have further contributed to the richness of programs of the neighborhood in terms of the rise of a share of non-residential uses. The most important city institutions are located here (local administration, culture, education, business, etc.), but the center is also traditionally related to the trade, which became the prevalent use together with cafés and restaurants **Invalid source specified.** Apart from the old city center, General urban plan suggests the system of primary centers along main city streets, such as the linear center between old core and main boulevard – Bulevar oslobođenja, as well as the Fortress of Petrovaradin, as a tourist attraction, and Mišeluk, foreseen for decades as the future center on the right bank of the Danube. This layout of central zones should create conditions for the development of secondary centers, usually parallel to busiest streets, and make a system of connected central functions. All those centers ought to be mixed-use zones adjusted to different catchment areas. The focus points of current and future development also include a wide range of specialized public institutions in the city, since Novi Sad is a provincial and macro-regional center. Specific programs of science and higher education, health care, culture, trade, and sport are usually developed concentrated in so-called specialized centers – university campus, clinical center, sport and business centers, fair, etc. Those institutions, attracting people from the wider region and even from abroad, are among strategic priorities for the development of the city as a whole **Invalid source specified.** Contemporary global and local circumstances have caused the emergence of a new focal point – the shopping mall Promenada, recently being one of the main places of interest. With its inner-city location, Promenada attracts various groups of people from the city, as well as from other areas – competing with the traditional urban center and reflecting a number of issues connected with contemporary consumerism.

The study of the specialized centers and focal points as the elements of the spatial structure emphasizes the importance of the diversity of their forms for the proper functioning of the space, urban identity and social integrity, and especially for the diversity and the number of their users. It also reveals the increasing significance of the areas that offer a variety of facilities, enclosing vacant spaces, micro-spaces or smaller squares, among which the student campus stands out as an example

Invalid source specified. University campus in Novi Sad has the most convenient location among specialized centers, with a share of housing facilities and a large number of visitors who spend time there on a regular basis. This creates favorable conditions for the development of accompanying central functions in and around university grounds and gives the opportunity for the opening campus to all citizens, especially young people. Dispersion of the population and economic power from the traditional centers could, therefore, produce new decentralized and interdependent cores that often mimic the patterns of traditional centers but also lead to new qualities of urban densification **Invalid source specified.**

4. CASE STUDY OF UNIVERSITY CAMPUS IN NOVI SAD

The first faculties in Novi Sad were established in 1954 and the creation of the university campus started in 1956 along with the construction of the Faculty of Agriculture. At the time of the establishment of the University of Novi Sad, there was no master plan for the campus – there was just a piece of vacant land where faculty buildings were built as needed. Yet, the position of the university on such an important location – close to the city center and river waterfront (Figure 1) – shows that the site has not been chosen simply due to chance and proves the significance of this institution for the city as a whole. The university campus has one of the best locations in Novi Sad and shouldn't be an isolated monofunctional zone, but an integral part of the city.



Figure 1 Location of the university campus in Novi Sad (source: authors)

Today, the campus is the location for seven faculties, central building of the university, two student restaurants, medical center, and a sports complex, but there is very little housing for students and teaching staff, even less commercial offerings, no cultural and leisure facilities. The whole university counts around 50.000 students and 5.000 employees **Invalid source specified.**, the majority of which study on campus, as the main core, and the rest at faculties in other parts of Novi Sad or in some of three other university enclaves in Subotica, Sombor and Zrenjanin. Because of the disproportion in the number of people visiting campus and those who live there (a little bit more than 1.000), daily migrations, as well as traffic crowds, are significant. The majority of students study and eat on campus but live all over the city. Living outside the campus gives the opportunity to students to mingle with other social groups, but the consequence is the unbalanced activity on campus: the campus life is very vivid during the lessons, unlike in the evenings or during summer break.

Because of the functional composition of the campus, students here attend classes and use student canteen services, but student life does not take place only in classrooms. An important part of

socializing and leisure activities almost exclusively happens outside the campus, even on weekdays, so the academic community plays an important part of urban life in Novi Sad. The exceptions are short gatherings of students in the main square on campus that usually take place during the breaks between lessons, as well as gatherings on the small unnamed plaza between dormitories and student canteen, which emphasize the significance of this kind of uses of space on campus.

Like many other inner-city campuses, the university campus in Novi Sad is prevailingly a monofunctional zone, compensating this disadvantage by its favorable location and the proximity of the city center. It is placed very close to the traditional urban core, where cultural and leisure activities are concentrated, while on the other side it is bordered by the river embankment, which is the favorite recreational path for the citizens. Because of the high concentration of primary uses in the campus and lack of secondary at the same time, the university imposes a strong influence on the surrounding urban neighborhood, especially on territory of Mali Liman, around the axis that connects the campus and the old city center – Stražilovska Street and along Boulevard cara Lazara, which is one of the main traffic arteries and the edge of the campus. In the past, old railway tracks stretched here dividing central urban tissue from the undeveloped area, later founded as the university campus. The relocation of the railway enabled the more intensive spread of the city toward the south and opened the opportunity to connect the campus with the city center. Although tracing of the new boulevard (Boulevard cara Lazara) resulted in high traffic load and the creation of a new kind of a barrier between the university and the city, this new axis also enabled the flourish of commercial premises on the ground floors of buildings facing the campus, substituting, in a way, mixed-uses shortage on campus itself. These primarily include cafés, small shops, stationary stores, restaurants, etc. Similar situation is seen in Stražilovska Street, once mainly built up with low-rise houses, and today being a hectic mixed-use corridor with various kinds of businesses (Figure 2). The intersection of these two streets is also the busiest entrance to the campus, crowded with people coming by bus or on foot, which are the most common modes of transportation among the student population.



Figure 2 Left: View of Stražilovska Street and the University in Novi Sad (1968) (source: <http://vgis.nsurbanizam.rs/gis/fotoarhiva/>). Right: View of Stražilovska Street (2020) (source: authors)

Even though the campus has an inner-city location, morphologically it is more of a greenfield type, with freestanding structures surrounded by green areas creating pleasant microclimatic conditions. Nowadays, the university complex is almost fully completed as a whole, but the open plan of the university grounds offers some spaces still to be built. There are also some older structures which can be demolished and replaced by new ones with larger volumes and capacities, in order to fulfill ever-rising demands for space enlargement of contemporary educational and scientific activities as well as development plans of the University of Novi Sad.

The western outskirts of the campus was the construction site for the past few years, where the new building of the Science-Technology Park is erected as a joint project of the governments of the Republic of Serbia and Autonomous Province of Vojvodina (APV). The program itself reflects a fairly new process of expansion of the socio-economic mission of higher education through the clustering of research and technology-based organizations on or near a university campus **Invalid source specified..** Science and technology parks are real-estate developments in which land and buildings are used to house public and private R&D facilities, high-technology and science-based companies, and support services. Inner-city universities have begun to apply the research park concept not only to provide needed R&D space for academics and their industry collaborators but also to stimulate the redevelopment of surrounding neighborhoods. The building within the campus

of the University of Novi Sad with a total of 30.000 square meters will be used by the Faculty of Technical Sciences, start-ups and IT companies, and scientific institutes founded by the Government of APV. Its importance is multifaceted, primarily in the domain of the university-industry linkage. The building is located at the junction of the Boulevard cara Lazara and Fruškogorska Street, which form the south-west edge of the campus. It is assessed that the position and the program of the building have the potential to represent a new landmark of the university campus and to act as a strong and direct link between the campus and the city **Invalid source specified..** The future introduction of the start-ups and IT companies on campus is expected to contribute to the functional diversity through mixed-use campus expansion, together with the diversification of the users.

5. HOW TO STRENGTHEN THE ROLE OF THE CAMPUS IN THE SYSTEM OF CENTERS IN NOVI SAD?

Given that the university can be considered one of the major factors of urban infrastructure, its implications are obvious because it occupies an important social and economic space within the dynamics of the city. In other words, universities have an effect by the mere fact of their presence **Invalid source specified..** Taking into account the high mobility of the academic population and the fact that in Novi Sad a large majority of students live outside the campus, they play a significant role in the dynamics of urban life. Practical recognition of this fact is confirmed by the recent implementation of a new line of public transport that passes directly through the campus. This improved the connections between the university and distant parts of the city, but further steps have to be made in order to diminish the negative effects of motorized traffic on campus.

Bordering zone linking the university and the neighborhood north to the campus, called Mali Liman, is of special importance and indicates that the holistic approach is needed in the creation of balanced relationships between the university and the city. Contact zones, where university meets the city are essential parts where the synergy between two entities could be developed. In other words, even though this is a prevailing residential zone, because of the proximity of university and other important programs such as the business and sports center (SPENS) and the court, accompanying uses emerge. Nowadays the only large lot near the campus suitable for new construction is the neglected area north of the university park. This area could be developed having in mind spatial closeness of the university, especially since many companies specializing in innovative research and production choose to settle in and around universities in order to profit from the proximity of scientific research and resources **Invalid source specified..** Proper integration in those edge areas in terms of programs and spatial links as well, should be among priorities regarding that Boulevard cara Lazara with high traffic intensity creates a barrier and an obstacle in connecting campus with the surrounding urban tissue.



Figure 3 Surrounding of the university campus

To a lesser extent, the influence of the proximity of the university is also visible west and south of the campus in residential zones of Liman 1 and Liman 2. A great opportunity could also be achieved by better integration of the campus and the waterfront since the nearness of the river is currently not exploited. Despite the fact that the campus is located on the very bank on the Danube River, its link to the embankment does not exist. Walking path along the Danube attracts a large number of people during the day and especially in the summer evenings and for the last few years it became a place for a gathering of youth. Landscaping of the park, as a contact zone, would improve conditions for students, and other citizens of Novi Sad – better connection between the river bank and the campus would mean better city-river connection, too.

The important aspect of making the campus more inviting to the wider population of citizens is diversification of functions. Majority of campuses in North America with their concert halls, museums, sports stadiums, landscaped grounds, and busy calendar of events, operate as a hub of activities that serves not only students and staff, but the larger population of a town and region, being both an environment for learning and a public space **Invalid source specified**. The introduction of similar programs on the university campus in Novi Sad would enrich the academic and civic life, at the same time. It would enable a longer period of activity and more rational usage of buildings and open spaces among students and citizens as well, but considering a lack of space for new construction, this is feasible only to a certain extent. The realization of additional staff housing and a student social center with a restaurant adjacent to existing structures, as envisioned by the Plan of detailed regulation **Invalid source specified**, could create a new social core of the campus and additionally strengthen the role of the plaza between dormitories. This could contribute to community building among students, and at the same time attract other young people. On the other hand, the planned position of the student cultural center, which is a program that should be open to the general public, not only to students, is secluded from other non-academic functions. This raises a question of better integration of programs in the campus itself with the intention to strengthen the recognition of the university grounds among the wider community, which could also lead to the reinforcement of its competitiveness among other higher education institutions through the improvement of students' everyday experiences. Public spaces may not be the most important, but certainly are a relevant factor when it comes to creating the general image of the University and making it more student-friendly. Open spaces inside the campus are public spaces, and, as such, are open for all the citizens – students and others alike. Regarding obstacles, in terms of little vacant spaces for building on campus and around it, the focus should be on the improvement of the existing open spaces, especially in terms of their landscaping, which is a potential that has not yet been fully exploited.

6. CONCLUSIONS

Having in mind the general significance of the higher education institutions and specific circumstances of the University of Novi Sad and the location of its campus within the city, we could conclude that the university campus should gain more attention in the range of specialized centers. As one of the accelerators of urban dynamics of the city, and especially in the neighboring areas, the campus gives rise to the opportunity of the emergence of accompanying uses in spaces that surround it. A lack of space for all necessary structures on campus has caused the flourish of commercial services in the vicinity. A high density of activities in those zones, coexisting with the university campus, strengthens its role in the system of centers in Novi Sad. Further steps should be directed toward reinforcement of connections between campus and its surroundings, but also toward better integration within the campus itself. The addition of new amenities and high-quality public spaces on campus and in the contact zones of the surrounding neighborhoods would contribute to the idea of policentricity of the city of Novi Sad. This could create a new network of well-used structures – buildings and open spaces alike – and create a vivid center that would reflect both dimensions of policentricity: a morphological and a more “functional” one **Invalid source specified**. From the morphological perspective, it would represent a space of concentration of mixed land uses and employment, while its functional dimension would supply the rest of the city with new functions, diverse programs and flows that could shape the territorial hierarchies in a more sustainable and citizen-friendly way. Enhancement of the relations between the city and the campus would also emphasize the importance of the University as an institution and improve students' everyday life. Together with the highest standard of education, this could develop the identity, recognition, and competitiveness of the University of Novi Sad as a good environment for studying and student life.

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