

UNDERSTANDING THE CONCEPT OF URBAN VILLAGE IN HANOI CITY, VIETNAM: SOCIAL - SPATIAL - ECONOMIC INTERACTIONS WITH SURROUNDING URBAN AREAS

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Abstract

In cities throughout Asian countries, there is an increasingly ubiquitous presence of “urban villages” that reflects the transformation of traditional farming villages into urban places under the impact of rapid urbanization. Hanoi - one of the two biggest cities in Vietnam - has been witnessing the fast changes of rural settlements into urban built environments during the in-situ urbanization process since the 1990s. It is very important to have a comprehensive understanding of the urban village model in the urban development context of Hanoi city. Therefore, the major aims of this research are to examine the characters of the urban villages formed by the urban sprawl in peri-urban areas, to explore the interactions among urban villages and surrounding new urban areas in terms of socio-economic and spatial aspects, and to detect the gaps, if any, between the two models of development. Yen Xa urban village in Tan Trieu commune was chosen as a case study. Structured and semi-structured interviews with villagers and local authority’s representatives were conducted in the research. The first findings from research are expected to propose recommendations that will help bridge the gaps between the two urban settlement models in terms of legal, physical and psychological aspects towards sustainable development.

Keywords: urban village; urbanization; socio-economic transformation; peri-urban; Hanoi city.

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1. Introduction

The peri-urban landscape of Asian countries has undergone remarkable transformations in recent decades [1]. There is an increasingly ubiquitous presence of “urban villages” as a unique phenomenon formed during the fast or in-situ urbanization in the big Asian cities such as Guangzhou, Shenzhen in China, Kuala Lumpur in Malaysia, Hanoi and Ho Chi Minh city in Vietnam, etc. This phenomenon reflects the process when traditional farming villages were transformed into an urban built environment under the influence of rapid urbanization [1–3].

The vigorous economic development triggered a rapid urbanization in almost every major city in Vietnam, particularly in Hanoi and Ho Chi Minh city. It can be stated that the introduction of the Doi Moi policy in 1986 was a significant turning point for the considerable transformation of Hanoi. With an economic growth rate of about 7.4% annually, the GDP of Hanoi increased 11.2 times

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between 1985 and 2000 and 24.3 times from 2001 to 2019. Hanoi's GRDP per capita is estimated at VND120.1 million (US\$5,196), up 7% per year, and higher than the national GDP per capita of 4,791 [4]. The urbanization rate continues to rise steadily, from 36.8% in 1999 to 41.1% in 2009, and 49.2% in 2019 [5], and is reported to exceed 60% by 2030 [6]. Today, with over 8 million inhabitants, Hanoi city has joined the network of Asian Mega-cities [7], Hanoi has undergone remarkable changes over the past ten years since the expansion of its administrative boundaries on August 1, 2008. After the expansion and merging with one province (Ha Tay), one district (Me Linh of Vinh Phuc province), and four communes of Luong Son district, Hoa Binh province, the current Hanoi sprawls over 3,328 km² [8]. The city has to face the fast changes of rural settlements into urban places in the periphery. During the process of urbanization, the number of traditional rural villages has been spatially encompassed by the expansion of the city [9]. New town developments (known as KDTMs) in Hanoi since the 2000s have driven Hanoi's rapid urban expansion process [10] and reinforced a "dualistic" structure in peri-urban zones with the socio-spatial fragmentation and socio-economic split in emerging urban territories as urban villages and new urban development areas.

The urban village phenomenon has captured the attention of experts and professionals internationally. However, there is a lack of systematic and multi-disciplinary overviews of this phenomenon in the large cities of Vietnam, especially for Hanoi, the city that is experiencing the rapid urbanization with the development of KDTMs and the submergence of surrounding traditional villages in the peri-urban areas of Hanoi. Therefore, it is very important to have a comprehensive understanding of the urban village concept and model in the urban development context of Hanoi city. The main objectives of this research are: To examine the characters of the urban villages formed by the urban sprawl in peri-urban areas; to explore the interactions among urban villages and surrounding urban areas, and to highlight the gaps between these two models of development (the model of KDTMs and the model of urban villages). Yen Xa urban village at Tan Trieu commune – a place at the periphery of central Hanoi surrounded by some KDTMs and reflects clearly the relationship among two models of settlement - was chosen as a case study to examine socio-economic and spatial interactions under the impact of rapid urbanization. Through the case study, this research reveals the gaps between the two urban settlement models in terms of legal, physical, and psychological aspects to propose some recommendations to bridge these gaps towards sustainable development.

2. Literature review

2.1. *The notions of urban villages in Asian countries*

The urban village phenomenon in Asian developing countries has aroused academic attention since the early 1990s when there were huge influxes of population rushing into its cities coupled with urban expansion [11].

The phenomenon that first occurred and associated with the term "Desakota" was coined by the urban researcher Terry McGee from the University of British Columbia around 1990. It comes from Indonesian *desa* - "village" and *kota* - "city". This term used to describe areas in the extended surroundings of large cities, in which urban and agricultural forms of land use and settlement coexist and are intensively intermingled. Desakota areas are situated outside the periurban zones, from which daily commuting is easily possible, i.e. more than 30 or 50 km away from the city center. They often sprawl alongside arterial and communication roads, sometimes from one agglomeration to the next. They are characterized by high population density and intensive agricultural use (especially wet-rice cultivation), but differ from densely populated rural areas thanks to the more urban-like characteristics [12].

The term of “Desakota” reflects the concept of urban villages in Asian countries, that is understood literally as “villages in the city” - the rural villages that exist in both the suburbs and even in the center of the big cities in the process of rapid urbanization [11, 13]. Urban villages are surrounded by KDTMs or areas that develop new urban functions such as cultural centers, trade services, entertainment, etc. They are also surrounded by high-rise buildings, transport infrastructure and other modern buildings. The urban villages are often densely populated, their infrastructure needs are not fully met and narrow roads are developed based on the village road system. The residents of urban villages largely come from traditional agricultural villages (Figs. 1, 2 and 3). Liu et al. [14] considered the urban village as a special form of neighborhood, while Wang et al. [13] argued that the development of urban villages is an important part of China’s urbanization process.



Figure 1. Xian Village - an “urban village” that was engulfed by the expansion of the city in Guangzhou - China [15]



Figure 2. Urban villages are surrounded by the urban sprawl of Linh Dam new urban area and the ring road number 3 [16]



Figure 3. Van Quan and Yen Xa urban villages, adjacent to Van Quan new urban area [17]

The emergence and development of urban villages in big cities in Asian countries are tightly linked to the city’s development, economic restructuring and social transition [14, 18]. Some researchers from China focused on examining the emergence of urban villages and the role that urban villages play in housing migrants [19, 20].

2.2. *Urban villages in Vietnam*

The existence of urban villages in Vietnam can be perceived as a consequence of the village-based urbanization of large zones surrounded big cities and the conversion of agricultural land into new urban settlement purposes [1]. A large area of agricultural land that previously belonged to villages has been converted into land for the development of new urban areas or centers of commerce, service and/or large industrial production. These villages are clustered, surrounded and gradually encroached by the urban sprawl that will sooner or later occupy the remaining green spaces of the villages, narrowing the boundaries of the urban villages [17].

Although there are several studies on the urban village model it still has a lack of research on the transformation of the urban village and its adoption of informality within the Vietnamese urban context [2]. Many critical questions have not been answered yet, such as how did urban villages emerge and develop in the process of city development? What are the changes of a traditional village and how did these changes impact the residents' living quality? How are the interactions between urban villages and surrounding KDTMs and the inner cities? Moreover, at the urban planning and design level, it becomes possible to recognize and analyze the urban village's pattern concerning the overall structure of city development. Finally, an improved understanding of the urban village phenomenon will contribute to urban theories and practices in planning and management for sustainable development.

3. **Materials and Methodology**

3.1. *Introduction of study area*

The study was conducted in Hanoi, one of the two largest cities in Vietnam, and the one with the highest rate of urbanization across the country. Since the economic reform which started in 1986, the city's population has increased significantly by about 3% per year and had already reached 2.8 million by 2000. According to the UNDP's World Urbanization Forecast, the expansion of the city's administrative boundaries in 2008 doubled its population to nearly 6.4 million. According to the population and housing census carried out in 2019, Hanoi city's population is about 8.053 million people, of which 49.2% are urban dwellers. The metropolitan area is expected to cover 3,436 km² and will have accommodated more than 15 million people by 2030 [21]. However, the projected growth is accompanied by the emergence and worsening of "urban problems", such as rapid urbanization leading to a population explosion while the construction, transportation, and technical infrastructure fail to keep up with the urbanization process. According to the World Bank's report on urbanization in Vietnam, the new urban development areas (known as KDTM) participate in Hanoi's rapid urban expansion process. Originally seen as an urban planning solution to deal with urban development demand, the large-scale implementation of the KDTM model of urban development has led to an over-consumption of peri-urban land. In less than two decades, 27,000 ha had been acquired for numerous KDTM projects on the territory of the rural districts of Hanoi [22]. Many traditional rural villages were changed and lost their farmland for new urban development projects. In this process, the government tends to requisition farmland rather than settlements of rural villages to avoid costly and time-consuming programmer requiring the compensation and relocation of villagers. As a result, the settlement components of villages remain while their surrounding environment dramatically changes. New urban areas spatially surrounded villages leading to the formation of urban villages [2].

Yen Xa village (Fig. 5) – a typical village in the Southwest of the Hanoi city center that is experiencing a quick urbanization and currently affected by two surrounding KDTMs (namely the KDTM of Van Quan and the KDTM of Tan Trieu) - was chosen as a case study for this research. Yen Xa is a

peri-urban village located in Thanh Tri district, about 9 km from Hanoi city center in the Southwest and about 2 km from Ha Dong town in the Northeast. The village was formed about 500 years ago. During the French colonial period, the village belonged to Lien Nam rural district, Ha Dong province. In June 1961, the village was annexed to Trieu Khuc village. As a result of this merger, a new district - Tan Trieu - was established. Since 2008, when Hanoi boundary was expanded towards the Southwest direction and encompassed Ha Dong province, Yen Xa village has been part of Thanh Tri district, Hanoi city [23].



Figure 4. Location map of Yen Xa urban village in region of Hanoi city [22]

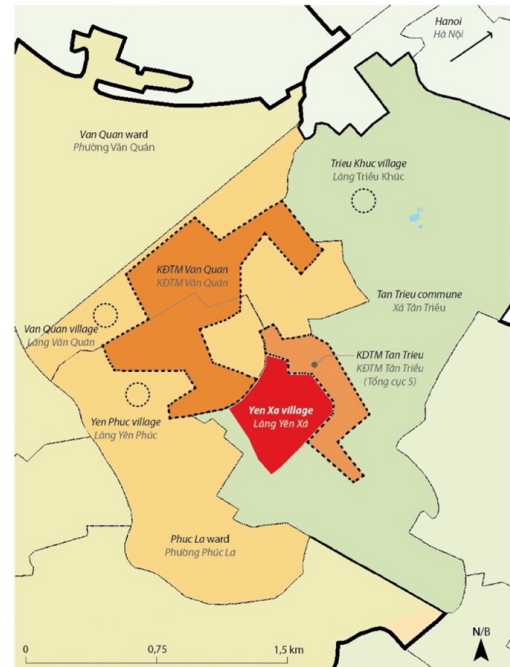


Figure 5. Location map of Yen Xa urban village in relationship with other surrounding urban areas [22]

Yen Xa traditional village is also known as “Do Bui” – the second name. It was an agricultural village that grew a variety of rice and vegetables. Apart from farming, Yen Xa villagers developed some traditional craft productions, such as making wooden shoes and flag tassels to provide for city dwellers. The significant changes of Yen Xa occurred between 2003 and 2007 when the KDTM of Van Quan was developed to the North. The project covers an area of 62 ha of what used to be the farmland of Yen Xa village and two other villages. Moreover, from 2012, some urban development projects (for example a residential quarter for the staff of General Department No. 5 - Ministry of Public Security, KDTM of Tan Trieu) were developed in almost all the agricultural land of the village on East side and the South side. The traditional rural village was totally engulfed by surrounding KDTM projects. The physical and socio-economic structure of the village has been transformed significantly [24]. Therefore, it is urgent to explore the development of the urban village in the extremely fast-growing city of Hanoi and the interaction of this settlement with surrounding new urban areas to gain a general understanding of urban development models in Hanoi’s urbanization context.

3.2. Research methodology

This research included both observational survey and in-depth interview methods. The research conducted interviews with 51 residents in Yen Xa village to collect their opinions on its transformation and their assessments of the current living quality under the impact of new urban development that has surrounded their village. The interviewed residents are people that have been living more than 20 years in the village, then they can experience the transformation of traditional village under the development of surrounding KDTMs.

In addition, the residents' interviews also provide data to explore the interaction in terms of spatial and socio-economic aspects of two different settlement models to adopt a new urban development context. The semi-structured interviews with six local authority's representatives of Tan Trieu commune (including the Deputy President of Tan Trieu Commune People's Committee, representatives of social-political organizations, leaders of the village, etc.), representatives of Van Quan KDTM's Management Board, and planning experts were asked as well.

4. Results

4.1. Spatial transformation of Yen Xa village

Traditional village pattern: Today, the traditional fabric of Yen Xa village remains, despite its heavy urbanization. The village's pattern is still kept with the alley/road network in a "fishbone" style. The village fabric is mainly structured around the typical fishbone road system with the main road from which many small alleys start to run into groups of houses. Before and after the KDTM of Van Quan was built, the village's external road system underwent major transformations, while its internal road-and-alley network stayed almost the same.

There are four important cultural and spiritual buildings that still exist in Yen Xa village.

- Community house: This building is located in the heart of the village, with a pond in the front and a large yard. It is a place where villagers come together, take part in meetings and participate in festivals.

- Duc Thuong temple: This building is in the northwest corner of the village. It was built to worship Linh Lang the Great (Ly Hoang Chan), who was regarded as the God of the village.

- Thanh An pagoda: This is a place for Buddhists from the village and elsewhere to gather and pay respect to Buddha. The pagoda was restored a few years ago and a new three-entrance gate was recently built.

- Village pavilions: The five pavilions in Yen Xa Village are used by farmers when it is rainy or excessively sunny. These pavilions can also be used for funerals when people without relatives are found deceased in the market or on the road. The pavilions are made of wood and without any windows or doors. Today, these pavilions are encircled by houses as the village keeps expanding and the city encroaches on village land.

Land transformation: It is the fact that many new urban development projects were built on the farmland that belonged to traditional rural villages. After these new urban projects were approved, the farmland was revoked by the city government and converted to commercial residential purposes for people from outside to come and live.

As a consequence of the urbanization in Yen Xa village, many farmland plots were converted into housing. In the East and Southeast, most of the farmland was confiscated to build new housing development projects and its affiliated services. In the North, there is an area for villas of the KDTM of Van Quan. The core is mostly residential with the building density increasing towards the periphery.

Many garden houses have been converted into shop-houses. Most of the farmers in the village lose the land, some families with a few acres of rice fields or crops, some families lost up to 4,000 - 5,000 m² of farmland, as revealed with the information from the interviews of villagers in Yen Xa village that adjacent to the KDTMs of Van Quan and Tan Trieu.

The satellite images from Google Earth in Fig. 6 show the considerable change of Yen Xa village's farmland during the recent two decades, from the year 2000 up to now.



Figure 6. Yen Xa village land transformation over the past 18 years, from 2002 to 2019

In 2002, Yen Xa village was surrounded with very large areas of green fields. There were more green spaces inside the village. In 2010, the huge amount of green-fields was converted into construction land with the emergence of the KDTM of Van Quan in the North and the KDTM of Tan Trieu in the Southwest. Within only two years, the KDTM of Tan Trieu turned the farmland into concrete surface with a large solid foundation for the villa development. Yen Xa village became more concretized, densely constructed with two to four-story houses while the green spaces were reduced significantly.

The boundary between KDTMs (including the KDTMs of Van Quan and Tan Trieu along with residential area of General Department No. 5) and Yen Xa village takes two major forms. The first form is typical with a road that has rural houses on one side and urban houses on the other side (Fig. 7(a)). The second form is a vacant land with no future development planning (Fig. 7(b)). Waste is collected there, causing environmental pollution and leaving a negative impact on the urban landscape. The green buffer zones among villages and KDTMs no longer exist and the urban village is now enclosed with hard and solid facades of buildings.



(a) The first form is typical with a road that has new urban houses on one side



(b) The second form is a vacant land with no future development plans

Figure 7. Boundary between Yen Xa village and the KDTMs of Van Quan and Tan Trieu

Architecture and urban morphology

Most of the buildings in Yen Xa are houses and they take several forms that are very different. In the East and Southeast, most of the houses are commercial row-houses along Yen Xa road (Fig. 8(a)). In the North, on the opposite side, there are well-planned villas (in the KDTM of Van



(a) The row-house style in Yen Xa village alley



(b) The planned villas of the KDTM of Van Quan



(c) Dense, low-rise residential place of Yen Xa village



(d) The architectural difference between urban village and KDTMs

Figure 8. Architecture and morphology of Yen Xa Village

Quan) (Fig. 8(b)). In the Northwest, close to Ong Thuong temple, there are row-houses. Most of them have been constructed but are not yet finished.

Most of the traditional houses (one-story garden houses) have been replaced with tube houses which are two to four stories high. As a consequence of urbanization, the price of land has rapidly increased and plots of land were subsequently parcelled into smaller pieces. Furthermore, villagers divide their land either to give part or all of it to their children or to sell or rent part of it to outsiders. Contrary to the homogenous villas as found in the KDTM of Van Quan, the row-houses in Yen Xa greatly differ from one another, and plots of land vary in size. Architectural styles are also mixed and building heights range between one to five stories. The village morphology can be seen in Fig. 8(c) is dense settlement place with low-rise residential houses which could be different from the new urban area's morphology as seen in Fig. 8(d).

4.2. Socio-economic transformation of Yen Xa village

In the past, farming was the main source of income for Yen Xa villagers. Until the 20th century, local residents had about 500 acres of fertile farmland to cultivate rice. In the 1990s, because of the rapid urbanization in the area, much of the farmland in Yen Xa village was converted to urban land. Other than agriculture, Yen Xa village was also known for its handicrafts, especially for wooden shoe making: "Trucks brought wood to the village and transported products from the village on a regular basis. People from other cities and provinces came here to learn how to make wooden shoes" [23]. Similarly to farming, the practice of traditional handicrafts activities is fading. Instead, many villagers have ventured into commercial services because of the presence of KDTM projects nearby. More than 70% of the survey respondents spoke of that change.

Information from the in-depth survey shows that for the households who lost all their agricultural land and apart from very little support for the career change, people have to mobilize and find new sources of livelihood by themselves. The money from land compensation they received was generally not so commensurate with the actual values of the land that they lost. In the process of adapting to the new living conditions, only one part of the villagers succeeded in changing careers with the similar or higher income level than before. The remaining households' income declined and they are facing many difficulties in non-agricultural life. For those who lost part of their land, the cultivation was not as convenient as before. The irrigation and drainage system has been leveled while the remaining areas are relatively small. The land can only be used for temporary cultivation of vegetables or flowers, but people have to tackle many obstacles due to changing farming techniques, inclement weather, the remaining barren land, so the productivity is rather low. People have to stop farming and find other solutions. The waste land after a few years would be used as the sites for construction materials depots, car parks or some types of temporary business. When the land transformation causes the failure in job changes, some young villagers decide to leave the village and work far away or move to other places in the city. As a result, preserving cultural treasures from one generation to the next could be disrupted while the external socio-economic impacts were significant. Thus, it is difficult for traditional rural villages to "stand still" in the wave of urbanization. In some places, historical and cultural relics of the village are encroached or surrounded by adjacent high-rise buildings.

Furthermore, there is also a big change in the population structure. According to the data from Tan Trieu commune, in 1926, the Yen Xa rural village was home to only 926 people and most of residents were farmers. In 2010, the village population increased to about 6,500 people and in 2018, the population reached 9,000 people, of-which, one-fourth of the population is immigrants who rent houses in the village to live. It is the facts that when the villagers lost their farmland, they have

to change their jobs into doing commercial and service activities. In order to earn for living, some families built simple houses in their residential plots of land and rent it out to people who come from other provinces to stay and work in Hanoi city.

4.3. Spatial and socio-economic interactions between Yen Xa urban village and new urban areas

a. Spatial interaction

The result from the observational survey shows that there is an emergence of transitional space between new urban development areas and Yen Xa village. At the city scale, it seems that KDTMs and the urban village are located next to each other and they are mixed together, making demographic density and urban space integrity much higher. But taking a closer look at the village, especially on the periphery, it can be seen that the vacant land plots between these settlement entities can create “the porous zone” or “transitional spaces” in the peri-urban area. These vacant land plots are opportunities to be fully used to maximize the positive impacts and effects, as well as offer modern facilities of KDTMs to the village.

Additionally, the village edges today have become more attractive and dynamic places when KDTM projects are developed nearby. New residents come along with new services/facilities increasing from the construction of KDTMs surrounding the traditional village. In the case of Yen Xa village, there are various kinds of shops, small restaurants and stores located in the village edges to provide commodities and services for residents in both new and old settlements.

The research also emphasizes the fact that there is a strong spatial interaction among villagers and new residents of KDTMs in using civic and public buildings like supermarkets, sports halls, healthcare centers and educational facilities. The people who live in Yen Xa village often go shopping to Van Quan KDTM in supermarkets or joining sports clubs/fitness centers, bringing their children to kindergartens or primary and secondary schools located inside the KDTMs while new residents utilize the benefit of traditional whole-sale and freshfood markets nearby the traditional villages. Besides, the religious and spiritual buildings of Yen Xa village, such as Duc Thuong temple and Thanh An pagoda, are still favored by the local people.

b. Socio-economic interaction

The study area is a periphery where both rural and urban settlement environments co-exist. The research clearly shows the interaction between these two residential places which can be seen as “rural - urban” and “old - new” symbioses. Prominent is the diversification of social ethnographical groups in the research area. The peri-urban area is not homogeneous in terms of population because it includes farmers, workers, officers, business owners, the middle class, the poor and even ethnic minorities. New urban residents from KDTMs are mostly those who have stable jobs and have middle or higher-income compared to the public in general in the place, while the villagers, except for those who have successfully changed careers, belong to the lower-income group. People in the new urban areas have diverse needs in terms of economics and services then the urban village is the place to provide materials and services that meet the emerging needs of these KDTMs. Many villagers have ventured into commercial services because of the presence of the KDTM of Van Quan nearby. Various stores sell various kinds of goods and products, such as household items and electric home appliances. Services are booming, especially small-size family businesses, such as hair salons, barber shops, tea shops, bars, etc. Rental housing is also doing well since many migrant workers and students come from outside provinces to Hanoi seeking accommodation in the area. This is a stable source of monthly income for many families in the village.

There is also a market located at the edge of the village (Fig. 9(a)) that serves both local residents and people from neighboring areas. People can also buy food and other products from informal street markets (Fig. 9(b)). While some convenience stores can be found in the village, there are no supermarkets. People have therefore to go shopping in a super-market in the KDTM of Van Quan. Finally, there are many small stores along some main streets in the village and around the village-KDTM boundary.



(a) Traditional market at the edge of Yen Xa village



(b) A super-market in the KDTM of Van Quan

Figure 9. Two different models of markets that both serve the needs of residents in village and KDTM

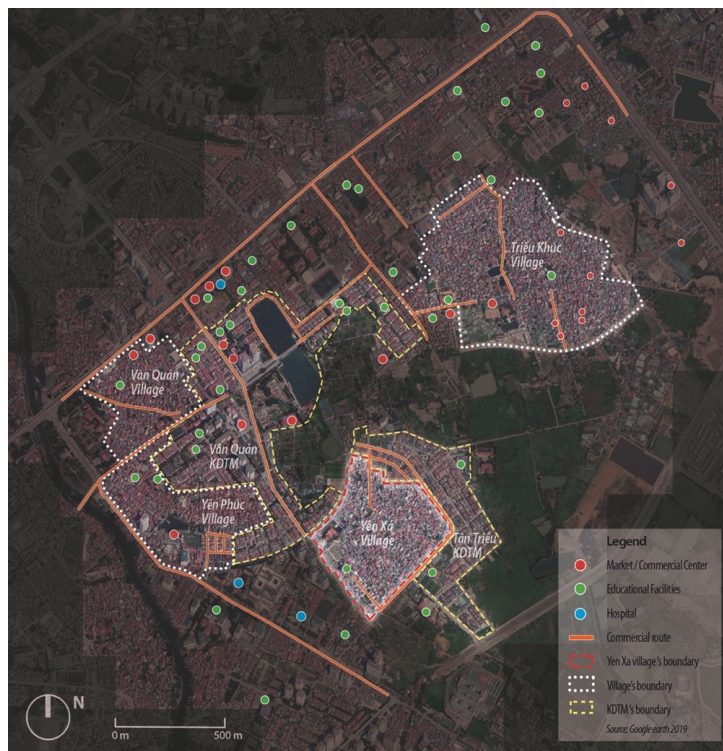


Figure 10. The location map of all educational, commercial and healthcare facilities in the region provide for residents in both urban villages and KDTMs

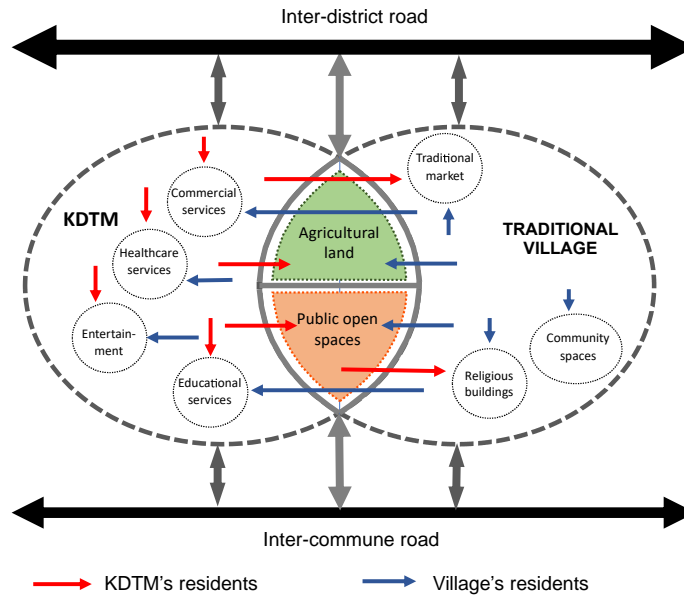


Figure 11. Diagram of the interactions and interconnections between the village of Yen Xa and the KDTM of Van Quan

Social relationships are reflected in the place when KDTMs residents often visit religious buildings in the Yen Xa village for their spiritual needs while villagers enjoy public spaces and entertainment with sports facilities of the KDTMs. This can be seen as a mutually beneficial relationship, even though it is not really balanced, and nonetheless formulating a threshold in the process in order to have close and long-term interaction between the two communities (Figs. 10 and 11).

4.4. Impacts of new urban areas on Yen Xa urban village – perspective from urban villagers

Yen Xa village offers an interesting case study for the examination of the urban - rural interrelations and interactions in the peri-urban area of Hanoi since it is a typical “urban village” model that transformed from the traditional rural village under the significant impact of urbanization. The physical changes of the urban village can be seen clearly through the new appearance of the village and new urban development areas surrounding it. These changes are also noted by interviewing villagers who are living there. The research group conducted a questionnaire survey and received feedback from 51 residents of the Yen Xa village. It is important to note that the local community plays an extremely important role in securing the success of any planning project. Their voices should be heard and opinions appreciated as well as considered for an enhancement of living quality in general, and the consolidation of social communication in particular as one of the greatest problems that modern society must face today. Therefore, the opinions from Yen Xa’s villagers on the impact of KDTMs on their lives are important aspects to highlight the village transformation and inter-relationships among different settlement environments. About 75% of the interviewed residents (38 villagers) have been living there for more than 10 years, denoting that they understand their places well enough. In total, there are five categories related to socio-economic development and facilities to investigate, including economy, education, healthcare, commerce and entertainment.

The data from questionnaire survey in Table 1 shows that 74.5% of the villagers state that their income has been higher since the inauguration of Van Quan new town and Tan Trieu new residential

place while 23.5% assume that their income stays the same and only 2% complain that they earn less money than they did before.

Table 1. Yen Xa local residents' opinions of the impacts of new-town development to the socio-economic life of the village

Evaluation aspect	Better than before		The same as before		Worse than before	
Income	38	(74.5%)	12	(23.5%)	1	(2%)
Education	41	(80.4%)	9	(12.6%)	1	(2%)
Healthcare	39	(76.5%)	10	(19.6%)	2	(3.9%)
Commerce	33	(64.7%)	13	(25.5%)	5	(9.8%)
Entertainment	32	(62.8%)	17	(33.2%)	2	(3.9%)

The statistics in Table 2 reveal the fact that some aspects related to the technical and social infrastructure of Yen Xa village have been significantly improved under the process of urbanization with the development of new urban areas surrounding the village. Prominent is the quality of education and school facilities, since 82.5% of interviewees stated that the current situation is much better than before. It is followed by the improvement of quality of health services that 76.5% of interviewed people have positive assessments. The reason is that a number of hospitals and clinics have been built in neighboring areas. Commercial services and entertainment activities also improved, with over 60% of the respondent's opinions confirming this positive change. The religious buildings serving spirituality and beliefs have also been renovated and restored, so they are cleaner and more spacious than before. In addition, inundation also decreased compared to the past, even though Yen Xa village has been the lowest-lying place in the whole area.

Table 2. Yen Xa local residents' opinions of the impact of new-town development to the various aspects of their living environment

Evaluation aspect	Better than before		The same as before		Worse than before	
Religious buildings	35	68.6%	16	31.4%	0	0.0%
Public buildings	31	60.8%	16	31.4%	4	7.8%
Natural and farm land	1	2.0%	16	31.4%	34	66.6%
Water quality	13	25.5%	3	5.9%	35	68.6%
Air quality	5	9.8%	8	15.7%	38	74.5%
Inundation	32	62.7%	3	5.9%	16	31.4%
Education facility	42	82.4%	8	15.6%	1	2.0%
Health care service quality	39	76.5%	10	19.6%	2	3.9%
Shopping and commerce	33	64.7%	14	27.5%	4	7.8%
Leisure and entertainment	31	60.8%	18	35.3%	2	3.9%
Urban - rural relation	7	13.7%	4	7.8%	40	78.5%
Traffic connection	34	66.7%	11	21.5%	6	11.8%
Income	39	76.5%	11	21.6%	1	2.0%

However, the survey data also reveals some negative effects of urban development on the living environment of the villagers. The aspects that people considered to be the most serious reductions include the interrelation between rural and urban areas (78.5% of respondents), air quality (74.5%

of respondents), water quality (68.6% of respondents), natural land and agricultural land (66.7% of opinions). The statistics also demonstrate that environmental pollution remains a serious problem, most notably in terms of air quality. Almost three-quarters of those interviewed in Yen Xa complain about the noise, exhaust gas and dust from vehicles and business activities in and/or around their settlements. Even those who thought that the living quality would be higher than 10 or 20 years ago, they had to admit that air and water pollution as a major problem should be solved.

In addition, some areas experienced terrible flooding and tend to be worse than before (31.4% of assessments), the traffic connection between Yen Xa village and surrounding areas is evaluated by the local residents as worse than before (11.8% of respondents).

In fact, environmental and economic factors are equally important to the residents. But so far they have not been matching each other in Yen Xa urban village case study, as the site observation surveys and interviews have already shown.

Another outstanding feature of the current development is that the impact of a new urban area on an adjacent village seems to be stronger than the reverse influence. In principle, when they co-exist, they need to make full use of each other, most clearly reflected in everyday services and activities. In the case of Yen Xa village, the observation and public questionnaire survey prove the fact that apart from socio-economic benefits, the village has been influenced negatively by new town developments in terms of physical environments.

While the land is not expanding and the population is increasing, the development of new urban areas will affect the existence of the urban village. The current situation is that the population density in urban villages keeps on increasing while the area of the village is getting narrower and the quality of the living environment is becoming worse. The urban village is in danger of being submerged and disappeared. The research results have initially shown an overview of the current situation of Yen Xa urban village under the impact of rapid urbanization in suburban areas and can be a premise for questions about the existence of the urban village model in the current context in Vietnam.

5. Discussions

5.1. Preserving and promoting the core cultural values

The urban villages in the new planning areas are home to cultural values, humanity, and various urban economic potentials. In the process of urban development and planning, there are always wide reception of new cultures (such as industrial culture, services) and the appreciation of the depth of traditional culture (agricultural culture). The preservation of traditional cultural values and the adoption of modern lifestyles will create the harmony and social balance for sustainable development.

In traditional villages, culture is normally respected, preserved and transferred from generation to generation. Symbols of traditional culture are reflected in natural conditions, the residents' faith, social circumstances, indigenous materials and traditional technology. Current urban villages, although located within urban boundaries, still feature a strong rural tradition. Village families still retain certain agricultural household characters. If the traditional culture is preserved, urban village will become important points connecting traditional culture to the modern culture formed in the surrounding new urban areas and creating at the same time a so-called cultural sustainability in the whole urban region.

The finding of the research shows that traditional culture can be maintained without the traditional agricultural livelihoods and this is quite a big spectrum of imagination. While some villages may be targeted and "developed" as museums of former ways of life, this will not be possible for all urban villages. The total loss of farmland means a total redirection of livelihoods and a transformation of

lifestyles and that will lead to the emergence of new urban culture, at least for those who stay and can survive the transformation process.

5.2. *Cohesive communities*

Modern urban planning always focuses on the principles to enhance community interaction and to create cohesive communities. One of the ten principles of Intelligent Urbanism in city planning and urban design is the conviviality that promotes social interaction through public domains in a hierarchy of places. The principle emphasizes on the formation of public spaces with different levels that are suitable for the interaction of different objects as individuals, friends, households, community and society. There are many types of public spaces such as squares, sports fields, performance venues, pedestrian pathways, etc., where anyone can access freely without spatial or socio-economic barriers. The nature of many urban planning and design principles of New Urbanism also aims to enhance community interaction with the introduction of a higher level of community participation, less private vehicle traffic and less environmental pollution. Buildings are encouraged to consider a human scale. These public spaces (as community playgrounds) promote interaction, social cohesion and provide urban residents with many opportunities (outside of social networks) for them to meet and communicate with each other, forming groups of people with similar interests to have communication in terms of social work and cultural behavior. More generally, social interaction is an opportunity for urban citizens to understand better the society and to participate in taking social powers that will be starting the formation of new elite classes in the society.

The old villages are places where social interaction is highly valued. All members of the village are connected to each other in a community of families, clans, occupations, beliefs, etc. through places such as communal houses, temples, festivals, and so on. Community spaces in the village are managed by the community, where people can identify each other, share common cultural resources and show their belief in the common, freedom and creativity of each individual in the community. Urban villages are now experiencing the reduction of social interaction. The population of an urban village is increasingly diverse with different origins which has probably resulted in the less interaction. All social relations are set up by legal rules lacking the respect, the solidarity and the love among people regarded as the old culture. Although located in the urban areas, in the urban villages, there is a lack of public spaces and public services in comparison to those in the new urban areas. However, most of the urban villages still retain the core values that would help connect the community through religious works, community spaces in the villages such as communal houses, pagodas, temples, village ponds, markets, etc. and community activities organized in the village festivals to help the “urban villages” still retain the essence of traditional villages which is a kind of material that brings individuals in the community together.

5.3. *How to bridge the gap between different models of urban development in Vietnam - Towards sustainable development*

The current rapid urbanization process in big cities has shown a “gap” or “difference” between the development models of new urban areas and “urban villages”. In the same territorial region, there are both types of settlement which seem to be in conflict at the same time - new urban areas are considered the manifestation of modern civilization along with traditional rural villages forced to “change” under the impacts of urbanization in general and the presence of the new adjacent urban areas in particular [15]. “Urban villages” are “struggling”, “self-developed” and “self-managed” to escape the internal and external difficulties that they face: changes in population structure and economic structure when

agricultural land is increasingly shrunk, agricultural laborers must change their occupation when the means of production (agricultural land) is gradually lost or no longer exists; the degradation of infrastructure and roads continues while the pressure of population growth on infrastructure is increasing; the “break rupture” in the architectural and landscape space, the gradual narrowing of public spaces and the declining of community cohesion.

However, the actual development has pointed out that there is a close link, or can also be understood as a “symbiosis” between the above two residence models. New urban areas with modern design principles and methods have shown some advantages and met the needs of updating the contemporary life of a new generation of Vietnamese people [18, 22]. Regarding the idealization of the modern residence model in planning and design, the new urban areas in Vietnam are confronting the problem of the lack of “popular” and “traditional” factors associated with daily life and the cultural characteristics of Vietnamese people. It is the absence of traditional markets, popular sidewalk restaurants, burden of street vendors, etc. that have been replaced in the new urban areas by convenient supermarkets, restaurants and luxurious shops but people will pay higher than the previous traditional services. In contrast, “urban villages”, despite being urbanized, retain the “popular” characteristic(s) with traditional ways of living associated with traditional types of service space. Moreover, “urban villages” are also places to provide survival opportunities for poor residents from other provinces in the process of finding a way to make a living in urban areas. Thus, “urban villages” will use their advantages associated with the spatial characteristics to complement the defective points in the planning model of the new urban areas. Besides, in terms of culture, “urban villages” are also places to help spread traditional cultural elements. Urban villages associated with the creative freedom and religious beliefs of Vietnamese people can become a sense of place in the urban areas and develop into model of urban village as experienced in developed countries.

To exist and develop sustainably, “urban villages” need to fill the legal gaps. Currently, the Government has only issued laws related to investment in construction and development of new urban areas (Construction Law, Land Law, Housing Law, Regulation of New Urban Areas, Real Estate Business Law, Decrees on Management of Urban Development Investment, etc.), and there are no documents, decrees or legal support for the development of “urban villages” (urbanized villages). Therefore, in addition to the strategies and policies of the city government to preserve and redevelop “urban villages”, it is necessary to have the cooperation of all the parties involved, from investors, experts in the field of planning and city development, socio-political organizations and the community to establish control regulations and new institutions for “urban villages”, hereby ensuring the regeneration of the villages towards the sustainable direction. Then, it is high time to bridge the physical gaps between “urban villages” and new urban areas. The living space of “urban villages” and new urban areas may be relatively independent (not as absolutely equal as the barrier systems, or connecting control by the security system, etc.) but it is vital to have public spaces, common public facilities or shared open places along the borderline between the two areas to foster the connectivity between the two entities, such as traditional markets, commercial space, services, schools, People’s Committee headquarters, community space, parks, flower gardens, etc. that are open to all citizens, thereby promoting social connections and interactions. The infrastructure of the “urban villages”, including transportation, electricity, water supply, sewerage, waste collection and treatment systems, etc. needs to be upgraded or newly built to connect well with the surrounding development areas.

The last point, which is also the key related to the residents, is to build a cohesive community based on common interests and benefits and to enhance the quality of life. Symbiosis in the use of space and economic activities will blur the psychological gap between the residents of the villages and

the inhabitants of the new urban areas. The community and community-based organizations need to be mobilized to participate in decision-making processes for regional policies, strategies, and action plans for the sustainable development of urban villages from a social perspective.

6. Conclusions

It can be stated that the emergence of "urban villages" is an indispensable stage in the process of urbanization of peri-urban areas in Vietnam. Along with the rapid development of new urban areas, traditional rural villages have been considerably transformed in terms of spatial, population and socio-economic aspects. The most obvious manifestation of this transformation is that most of the agricultural land of villages were converted to residential and commercial lands. The village's structure of population and occupation reflects significant changes. The number of immigrants living in villages to work in the inner city or surrounding areas is increasing. Besides, the number of villagers that changed their jobs from farming to non-agricultural jobs are increasing. The architectural and spatial morphology of the village also changed with the increase of multi-story concrete houses, the reduction of garden spaces, open spaces and an increase in the building density. In addition to the benefits that urban areas bring to villagers, people are also affected by the rapid and uncontrollable urbanization, such as pollution of air, soil, and water, the connection between the village and the new urban areas and the surrounding areas is poor, the social interaction of the people in the village also decreased, the land of religious buildings in the village is occupied and encroached.

The specific case study of Yen Xa village shows an interaction in the symbiotic form of two settlement models: new urban areas and urban village model. The residents in new urban areas have diverse demands for their living that villagers can supply through their resources. Technical infrastructure and utilities are developed systematically in new urban areas and also accessible to not only residents in new urban areas but also villagers in traditional villages. New urban areas' residents also use traditional services and religious buildings for spiritual needs. The study also points out the legal, physical and psychological gaps in protecting the traditional village's existence and helping it adapt to the new development context. The model of an urban village still complies with the principles of modern urban planning towards sustainable development and smart growth. Controlling the development of new urban areas, holding buffer zones or transitional spaces between two residential models will contribute to preserving the landscape and village structure.

Therefore, in the process of urbanization, the preservation and improvement of urban villages need to be clarified in the overall vision of the whole city and the directions and strategies for urban development planning in the future. At the level of overall planning and development planning of peri-urban areas, theoretical models of the structure and functions of urban villages should be further investigated. At the district level, zoning planning needs to introduce long-term strategies and actions to enhance the interaction between residential models: new urban areas - urban villages - rural villages system.

These strategies should focus on transitional spaces between models, in combination with inter-connected traffic planning, systems of technical infrastructure, social infrastructure, public spaces, relationships within the community and intangible cultural values towards sustainable development.

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