Abstract. Urban and rural interaction is considered as one of the most important tools of balanced spatial development in the 21st century. The interaction is characterised by certain linkages (people, capital, goods, information, and technology) - both natural and human-made. This research will explore the urban-rural linkages in terms of population flows - their dynamics, costs (both financial and in terms of time spent), and influencing factors. Two surveys were conducted - the working age population survey (n=1008) and the survey of municipality development planning experts (n=67). The survey led to the conclusion that there was a close and intense flow of population movement from cities to rural areas and vice versa. The most significant causes of the movement are visiting, entertainment, services, and employment. Taking into account the fact that public services are located mostly in urban areas, municipalities establish mutual partnership in several spheres, for example, education, culture, employment, health care etc. Improvements in the public transport network accessibility as well as the quality of roads will promote rural - urban interaction and provide equal living conditions for inhabitants in both rural and urban areas.

Key words: urban - rural linkages, interaction, spatial development.

JEL code: R00

Introduction
Sustainable Development Strategy of Latvia until 2030 (2010) states spatial perspective that includes balanced spatial development in the territory of Latvia as one of its priorities. One of the most important goals of spatial perspective is to promote the linkages between urban and rural areas, thus, ensuring equal life and work conditions for inhabitants regardless of the territory they live in. In addition, the European Union’s cohesion policy has been planned in a territorial dimension in addition to the social and economic one since the signing of the Treaty of Lisbon (2007). The spatial structure of Latvia is quite monocentric – inhabitants and resources are concentrated in the cities (68% of the total amount of inhabitants), which has resulted in the decrease of the population number and the fall of life level, the decrease of available services’ amount (Inhabitants and..., 2013).

The challenge and aim of Latvia’s spatial development politics is the provision of balanced development both in rural and urban areas – successful interaction between urban and rural areas, coordination of goods, services, resources, knowledge and information flows will provide balanced development of cities and countryside (Davoudi, 2001; Caplikas, 2003; Evans, 2009; Kule, 2011). The aim of the research is to state the existing linkages, their structure and intensity between urban and rural areas, based on the opinion of inhabitants and municipality development planning specialists. To achieve the aim, the following tasks have been subordinated:

1) to define the notion of urban and rural linkages;
2) to conduct a survey among the working age Latvian inhabitants;

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3) to conduct a survey among the municipality development planning specialists of Latvia.

The following methods have been used to achieve the aim – monographic method to collect the reflections of discussions mentioned in the scientific literature; method of analysis and synthesis, induction and deduction as well as the method of sociological research – a survey. In the first survey, the inhabitants (n=1008) were asked to complete questionnaires. The selected set represented the general set – population of working age of Latvia. The survey was conducted with the aim to evaluate the possibilities of urban-rural development, existing problems and try to find the possible solutions for the development of both territories. In the survey, 49% of respondents stated Riga or other city as the place of residence; 22% - a town; 16% - a village; and 13% - a rural territory. The second survey was conducted among the municipality spatial development planning specialists of Latvia (n=67) who represented 48 municipalities of cities and towns in Latvia. The survey was conducted with the aim to evaluate the necessity of urban-rural interaction by identifying the most essential problems and possible solutions.

**Research results and discussion**

Urban-rural interaction is a part of spatial development that emphasises the mutual linkage and dependence of two territories (urban and rural). Scientists have analysed urban-rural interaction as the precondition for balanced territorial development (Caffyn, Dahlström, 2005; Parr, 2005; Shuchsmith, et al., 2009). If in the 1950s urban and rural areas were considered as divided territorial units with different economy (Tandoh-Offin, 2010), then in the 21st century, innovative technologies and increase of mobility have changed this situation and scientists emphasise that urban and rural areas are interconnected (Fan, et al., 2005). As physical borders of urban and rural territories are disappearing, they are not being perceived as separated dichotomous categories. Contrary to the previously used spatial concept, which emphasised the placement of place or territory in space, in the 21st century the concept of “space of flows”, which characterises the importance of flow and linkage intensity – centre or the city develops there where inhabitant, material and information flows are intensive and cross each other (Amin, 2002).

Interaction is defined as visible and invisible human, capital, goods, information and technology flows that include administration, legal, financial, and cultural relationship between both territories (Davoudi, 2001, Kule, 2011) and the aim of which is balanced spatial development and socio-economic growth of both the involved territories. Urban-rural interaction is created by different material and non-material flows between urban and rural areas, thus, creating the basis for linkages. For instance, residents’ commuting from urban to rural areas and vice versa can cause economic or social linkages depending on the aim of commuting. Caplikass (2003) highlights the importance of residents’ commuting by emphasising that urban-rural interaction characterises resident migration between urban and rural areas which causes the changes of spatial structure of urban-rural areas. The interaction can be promoted or, just the opposite, limited by the activities of particular territory’s administration both regarding the development of particular territory and cooperation with the neighbouring territories. Several essential benefits can be obtained as a result of interaction, for instance, public services are promoted, the potential of the territory is actively used and, as a result, the inhabitants of both territories are beneficiaries. An essential element of interaction is the linkages that have developed between the territories and come from different development potentials of territories (Caffyn, Dahlström, 2005), and their role continues to increase. According to the researchers and policy-makers, the linkages are one of
the most important tools in the development of balanced spatial development (Evans, 1990; Gaile, 1992; Rural-urban Linkages..., 1995, Stoica, et al., 2010). Several processes determine it – firstly, the prevalence of the market based economic development and its influence on export-oriented agricultural production which is based on effective economic linkage usage among producers and external market. Towns are very important in this aspect as they function as an intermediary between surrounding territory producers and local or international consumers simultaneously providing work places in non-agricultural sector for inhabitants of rural areas. Secondly, one of the administration organisation’s tendencies is the implementation of decentralisation and strengthening of local institutions’ work. In addition to the traditional infrastructure and service providing services, local municipality is responsible for the support of economic development and poverty reduction (Tacoli, C, 1998). Yet, although urban-rural linkages are recognised as important part of territorial development, relatively rare are the cases when this aspect has been included in the strategies of development planning (Tacoli, 1997; Mylott, 2009).

Physical manifest of linkages can be measured in structural and functional flows (Smith, Courtney, 2009) which are associated with an interaction between two human beings, places and objects but they themselves actually do not embody any interaction (Unwin, 1989; Kule 2011). It is possible to distinguish the existence of natural flows, partially human readjusted flows as well as human flows and those created as a result of human activities. The flows created by humans are capital (private, public), human and goods’ flows as well as flows of ideas, innovation, and information (Gaile, 1992; Douglas, 1998).

This research will be carried out to investigate the linkages of urban and rural areas from the aspect of resident flows – the reasons, costs (from both the financial aspect and time consumption) and the most important causal factors.

**Results of resident survey**

Exactly residents’ commuting from one territory to another because of different reasons is considered to be an essential urban-rural interaction flow – economic linkages characterise inhabitant employment aspects and shopping habits but demographic linkages characterise the choice of place of residence, while administrative linkages reflect the range and quality of public services available to inhabitants. The survey targeted at inhabitants of Latvia was carried out in the summer of 2013 to find out those habits and activity of inhabitants that determine the choice of place of residence, shopping habits as well as those factors that determine and influence commuting from urban to rural areas and vice versa. As the matter of fact, 1008 inhabitants aged 18-44 of the Republic of Latvia were included in this survey (random error 3.09%, probability – 0.95) according to the principle of stratified randomness. Stratification characteristics were chosen to reflect the proportion of inhabitants according to the situation in Latvia: 1) the place of residence – urban or rural area; 2) the region – statistical regions of Latvia.

According to the survey, 46% of respondents commute from urban to rural areas or vice versa at least once a week (16% - every day), thus, it can be concluded that the commuting of inhabitants is very intensive. The main means of transportation are private cars or public transport. Differences can be observed in the results of the survey depending on the respondent’s place of residence. The inhabitants of rural regions commute more to urban areas than the inhabitants of urban regions commute to rural areas – at least once a week this route is commuted respectively by 68% and 41%. Only 8% of rural area inhabitants go to urban areas just a few times a year or less, while in the group of urban regions,
this proportion of inhabitants accounts for 28%. Also those people living in farmsteads and villages actively go to urban areas – 27% living in farmsteads and 37% living in villages commute in the route of rural – urban area every day, only 2% of Riga inhabitants and 4% of inhabitants living in the biggest cities go to rural areas every day. This situation shows that urban areas have an important role in the daily life of people working in rural areas.

Source: author’s construction

**Fig.1. Reasons to commute in the route of urban - rural area, %**

The respondents have pointed out that the most important reasons to go to rural or urban areas are as follows – to visit family and friends (26%); travel, see nature and culture objects, to entertain, to attend culture events (14%); to do shopping (13%); to receive services (12%); and to work (10%). The division of respondents’ opinions depends on the place of residence – most part of the respondents living in villages or rural areas have pointed out that the main reason for commuting is work in the city as well as the limited offer of state and municipality services at their place of residence. While those living in the cities commute to see their relatives and friends, travel or relax. Regardless of the intensity of movement, 59% of the respondents are satisfied with the existing place of residence and do not plan to change it. According to the answers given by the respondents, it can be concluded that urban areas serve as important places to receive various services and do shopping, while rural areas are used for tourism activities or for visiting acquaintances or relatives.

In order to determine the economic importance of urban and rural area mutual dependence, the respondents were asked to reveal the time period required for a one-way trip to rural area (or urban) and specify their costs of this one-way trip. One-way trip from urban and rural areas on average requires 1.1 hour and it costs LVL 5.88 (EUR 8.37). Time consumption is calculated in LVL, and reflects the economic importance, taking the average net wage of LVL 343 a month or LVL 1.95 (EUR 2.77) per hour (in 2012, source - CSB, 2013). The total amount of one year expenses for respondents, including heir consumption is LVL 1 556 286 (EUR 1 093 764), which suggests that urban-rural linkages are an important part of
economics. According to the survey results, 80% of the necessary goods and services the respondents purchase in urban areas, 4% - in rural areas, and 16% equally in both territories.

**Results of municipality development planning specialists’ survey**

Taking into account the results of residents’ survey, the municipality spatial development planning specialists responsible for territorial development plan and programme development were given questionnaires. In the survey, 67 respondents from 48 municipalities took part (confidence level 95%, standard error – 7.95%).

According to the survey results, 85% of the respondents believe that interaction between urban and rural areas is necessary, while 13% point out that interaction depends on the particular municipality. Taking into account the scientific discussions about the positive and negative impact of cities on the surrounding territory, the respondents were asked to give an answer to the question about the impact of nearby cities on the tendencies of municipality development. In this respect, 43% of the respondents admitted that particular and close dependence can be observed, while 34% of the respondents believed that the impact was indirect and would be observed in the long term. The government of Latvia, when planning the future spatial development politics, wants to concentrate the resources in the development centres (30) – in the biggest cities, emphasising the transfer of positive impact on the surrounding territories, avoiding resource division. This approach has got the objections from the municipality authorities in the current negotiation and consultation process because there is a concern that cities will use these resources only for the implementation of their functions and neighbouring municipalities will not be able to get the funding, thus, hindering their development (Tamulevica, 2012; Luksa, 2012).

**Source: author’s construction**

Fig.2. **Benefits from rural - urban interaction**

It is a positive fact that 93% of the respondents have pointed out that interaction exists already now, mentioning education (37%); culture, entertainment and relaxation (28%); employment (25%); health care (18%); trade and services (13% and 10%) as the main fields. The beneficiaries of this interaction are both the inhabitants of urban and rural municipalities because various services and goods very often are not available in the particular territory. In the survey, 17% of the respondents have pointed out that,
when interacting, the availability of provided services as well as quality (18%) and assortment (9%) is improving, as a result the overall standard of living is improving, and the existing resources are used more effectively.

The respondents were asked to evaluate the factors that have the most important impact on the development of interaction. The availability of public transport is the most important factor (4.45 points out of 5 on average) to commute from one territory to another for seeking employment, purchasing goods and services and other needs. Public transportation is supported by the state grants (LVL 53.13 million or EUR 75.60 million were allocated in 2012) and reduced VAT rate of 12% (standard rate – 21%) (Public Transportation Service..., 2013). Nevertheless, by carrying out the state grant reduction for the public transportation service providers, it is possible to foresee that the offer of public transportation could decrease in the future, thus, giving limited possibilities for inhabitants to commute. The consequences of this situation will be the formation of isolated and left behind municipalities, especially in remote and border regions near Russia and Belarus.

In addition, the quality of the roads is an important aspect (4.31 points on average), especially for the entrepreneurs who have to deliver their goods to the customer. The road quality in Latvia has been a topical question for several years – 47% of country’s main roads are in bad and very bad condition (State’s Main and..., 2013). The estimated funding LVL 508.1 million (EUR 722.96 million) will not provide the improvement of the road network condition because the annual depreciation exceeds the amount of repaired roads. As a result, the estimated performance indicators regarding the road quality in the National Development Plan (NDP) will not be achieved (Acknowledgement to the National..., 2013). Financial support for the formation of interaction has been mentioned as the third most important aspect (4.00 points) as well as the development of national politics and development strategies (3.75 points).

Although Latvia’s Sustainable Development Strategy until 2030 (2010) is intended to strengthen urban-rural linkages, currently no set of tools has been developed and in the NDP (2012), urban-rural interaction has not been set as a priority anymore. The lack of entrepreneurial activity, insufficiency of knowledgeable and professional employees as well as the lack of long-term local municipality strategies have been mentioned as important influential factors.
Conclusions, proposals, recommendations

1. Urban and rural areas are interconnected – there is an interaction between them formed by the flow of inhabitants, capital, and goods, thus, creating the basis for various linkages which is an important tool in the planning of spatial development.

2. The surveyed Latvian inhabitants commute in the route urban area-rural area very intensively – 50% of respondents do it at least once a week to visit relatives or friends, travel or entertain, go shopping, receive services and work. The main means of transport are private vehicles or public transport.

3. The total annual expenses of the respondents, including the consumed time, consist of LVL 1,556,286, which suggests that urban-rural linkage is an essential part of total economics. As the survey results show, 80% of goods and services required for the satisfaction of daily needs are purchased in urban areas, 4% in rural areas, and 16% equally in both territories.

4. Municipality development planning experts believe that as a result of urban-rural interaction, employment opportunities are increasing, the range of goods and services available to inhabitants is improving along with the quality of life.

5. Taking into account the fact that many state and municipality services are not available in all locations, municipalities mutually cooperate in such fields as education, culture, entertainment, employment, health care, and trade. The most important factors that influence urban-rural linkages are connected with infrastructure, for instance, public transport network and availability, road network quality as well as the financial support for the promotion of development.

6. Although, in the national development planning documents urban-rural cooperation has been defined as essential component of balanced spatial development, no set of tools has been developed to promote the building of cooperation.

7. In order to improve the current situation and foster balanced spatial development, the local municipalities shall take into consideration the interests and needs of the surrounding areas when elaborating development strategies. Municipality cooperation and partnership is the key element to ensure equal life quality for inhabitants both in rural and urban areas of Latvia. Although, regional policy delegates decision making to the municipalities, the mutual cooperation shall be set in the national development strategies as one of the requirements in future.

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