FACTORS AFFECTING THE CREATION OF LAND FUNDS IN THAI NGUYEN CITY, THAI NGUYEN PROVINCE

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ABSTRACT

Creation of land funds in Thai Nguyen city from 2004 - 2015 was performed through two forms: 1) the State recovers land and then the State or direct allocates lease land to investors, or they allocate and lease land to investors through auctions on land use rights, with investors bidding for land use projects, and 2) direct agreements between the investors and land users, with a total area of 9,061,339.96 m^2 for 624 projects. The land fund creation by recovery from the State's was the dominant method accounting for 93.75% of the total number of projects and about 97% of the total area of land fund created. Research revealed 5 factor groups (independent variables), social economics, natural conditions and infrastructure, legal policy, finance, and planning affecting creation of land funds and three factor groups (dependent variables) for assessing the results of land fund creation. Five hundred people (officials, organizations and households) related to the creation of land funds were interviewed using pre-designed questionnaires to collect information on the aforementioned variables. Collected data was processed using SPSS statistical software to test Cronbach's Alpha scales and Exploring Factor Analysis (EFA). Among the influencing factors of land fund creation, land price factor, state budget in advancing to the creation of land funds, policies of attracting investment, and urbanization process had the greatest influence. Some solutions to enhance land fund creation in Thai Nguyen city in the future were proposed as follows: Thai Nguyen province People's Committee should determine specific land prices in line with the social economic and natural conditions to help rcover land as scheduled. Thai Nguyen city People's Committee should pay attention to the policies for attracting investment, especially investment projects relevant to land use, and propose specific mechanisms attracting investors in line with socio-economic development of the city.

Keywords: Creation of land funds, influencing factor, Thai Nguyen city.

Nghiên cứu các yếu tố ảnh hưởng đến công tác tạo quỹ đất tại thành phố Thái Nguyên, tỉnh Thái Nguyên

TÓM TẮT

Công tác tạo quỹ đất tại thành phố Thái Nguyên từ 2004 - 2015 đã được thực hiện thông qua 2 hình thức đó là Nhà nước thu hồi đất theo quy định, sau đó Nhà nước giao đất hay cho thuê đất trực tiếp, hoặc thông qua đấu giá quyền sử dụng đất, đấu thầu dự án có sử dụng đất để đầu tư xây dựng các dự án và thỏa thuận trực tiếp giữa nhà đầu tư và người sử dụng đất, với tổng diện tích là 9,061,339.96 m^2 cho 624 dự án. Hình thức tạo quỹ đất do Nhà nước thu hồi đất theo quy định chiếm 93,75% tổng số dự án và 97% tổng diện tích quỹ đất tạo ra. Nghiên cứu các yếu tố ảnh hưởng đến việc tạo quỹ đất tại thành phố Thái Nguyên đã xác định được 22 yếu tố, được chia thành 5 nhóm yếu tố (các biến độc lập): kinh tế xã hội; điều kiện tự nhiên và cơ sở hạ tầng; chính sách pháp luật; tài chính và lập kế hoạch, ba nhóm yếu tố đánh giá kết quả tạo quỹ đất (các biến phụ thuộc). Năm trăm (công chức, viên chức, tổ chức, hộ gia đình và cá nhân) liên quan đến công tác tạo quỹ đất đã được phỏng vấn với các câu hỏi được thiết kế sẵn để thu thập thông tin về ảnh hưởng của các yếu tố đến công tác tạo quỹ đất. Các số liệu thu thập được xử lý bằng phần mềm SPSS để kiểm định thang đo (Cronbach's Alpha) và phân tích nhân tố khám phá (EFA). Trong các yếu tố ảnh hưởng đến công tác tạo quỹ đất thì giá đất, chính sách thu hút đầu tư có ảnh hưởng lớn nhất. Một số giải

pháp để tăng cường công tác tạo quỹ đất của thành phố Thái Nguyên trong thời gian tới đã được đề xuất: Ủy ban nhân dân tỉnh Thái Nguyên cần quyết định giá đất cụ thể phù hợp với điều kiện tự nhiên kinh tế và xã hội của thành phố Thái Nguyên giúp thu hồi đất được thực hiện đúng tiến độ. Ủy ban nhân dân thành phố Thái Nguyên cần quan tâm đến chính sách thu hút đầu tư, đặc biệt là các dự án đầu tư có liên quan đến sử dụng đất phù hợp với phát triển kinh tế xã hội trong thành phố.

Từ khóa: Công tác tạo quỹ đất, thành phố Thái Nguyên, yếu tố ảnh hưởng.

1. INTRODUCTION

The creation of land funds is the process of land consolidation to meet the needs of social economic development (Do Thi Thanh Van *et al.*, 2013). The creation of land funds has contributed significantly to the socioeconomic development of cities, areaes, and the country. The creation of land funds in accordance with land use planning and plans approved by competent State agencies, is done through two forms: 1. The State recovers land in accordance with land use planning and approved plans, or for implementation of projects by competent State agencies, and then the State or its direct allocates leases the land to investors, or allocates and leases the land to investors by auctions on land use rights, bidding for land use projects; 2. Investors (institutions, households, or individuals) can make agreements with land users (the assignee, the capital contribution, lease, conversion of land use rights; transferred assets attached to land rent) to carry out investment projects in accordance with the law.

The creation of land funds has contributed significantly to Vietnam's socioeconomic development, but it has not really promoted the possibility of Thai Nguyen city. The creation of land funds was in accordance with land use planning and approved plans, however some projects did not hand over the schedule set, and there is no reserve land fund for social economic development of Thai Nguyen city. Ho Thi Lam Tra *et al.* (2016a) and Ho Thi Lam Tra *et al.* (2016b) pointed out that financial factors, legal policy factors, social economic factors, natural conditions and infrastructure factors, and planning factors have the great influences on the creation of the land funds in Yen Bai city and Cao Bang city. Therefore, it is necessary to find out the factors affecting the creation of land funds that are the basis for proposing solutions to enhance the efficiency of land fund development in Thai Nguyen city.

2. METHODOLOGY

2.1. Data collection

Data collected from the State agencies: The results of land fund creation in Thai Nguyen city in the period of 2004-2015 were collected from the offices related to the work of the land fund creation in Thai Nguyen city and Thai Nguyen province (Department of Natural Resources and Environment of Thai Nguyen, Center for the House and Land Fund Development of Thai Nguyen, Department of Natural Resources and Environment of Thai Nguyen, Land Fund Development Center of Thai Nguyen Province, Land Fund Development Centre of Thai Nguyen city).

Data collected from survey: Through the research collected in the creation of land funds in Thai Nguyen city, 22 influencing factors were chosen. These factors were divided into 5 groups of independent variables (i.e., social economics, natural conditions and infrastructure, legal policy, finance, and planning,). In addition, 3 dependent variables (i.e., promoting social economic development, environment being improved, and standard of living being raised) were defined to assess the impact levels of the independent variables (observed variables) on the creation of land funds in Thai Nguyen city. These variables are summarized in Table 2. Five hundred people (270 officials, 90 organizations, and 140 households), who were involved in the creation of land funds were interviewed with the pre-designed questionnaire to collect information about the aforementioned variables.

2.2. Statistical analysis

2.2.1. Data reliability assessment

In order to test the reliability of the measuring data, the Cronbach's Alpha and Exploratory Factor Analysis (EFA) was applied.

Cronbach's Alpha: Reliability of the scale was assessed by means of internal consistency through Cronbach's alpha coefficient. We used the reliability from Cronbach's coefficient alpha prior to the factor analysis (EFA) to eliminate inappropriate variables, because these garbage variables could create dummy elements. Cronbach's alpha coefficient showed whether the variables were linked together or not. The value of Cronbach's Alpha of the 5 typical groups of variables were greater than 0.6, ensuring reliability of the survey data (Hutcheson and Sofroniou, 1999).

Exploratory Factor Analysis (EFA): EFA is a technique within the factor analysis whose overarching goal is to identify the underlying relationships between the measured variables (Norris and, 2010). The applied parameters when testing by EFA are the index of Kaiser-Mayer-Olkin (KMO) and Bartlett's test. The KMO and Bartlett's test are measures of sampling adequacy that are recommended to check the case to variable ratio for the analysis being conducted. The KMO is a measure of sampling adequacy, both overall and for each variable. The Bartlett's test is used to evaluate the correlation between the variables overall. In most academic studies, KMO and Bartlett's test play an important role for accepting the sample adequacy. The variables are only accepted when $0.5 \leq KMO \leq 1$. Values between 0.5 and 0.7 are considered mediocre, values between 0.7 and 0.8 are considered good, values between 0.8 and 0.9 are deemed great, and values above 0.9 are superb (Hutcheson and Sofroniou, 1999). Bartlett's test is used to evaluate the overall correlation among the variables. The test has statistical significance when it is less than 0.05, and the observed variables are correlated linearly with representative factors while the adjusted regression coefficients influences the order. The explanatory level of the observed variables is measured by the value of the extraction variance, this value must be greater than 50%. In EFA, factor loading is the correlation between a variable and a factor where only a single factor is involved or multiple factors are orthogonal. In general, the data is confident if factor loading is greater than 0.3, higher factor loadings indicate that a variable is closely associated with the factor (Hair *et al.*, 2010). From the adjusted regression coefficients (β), we can see the order of the factors that influence the creation of land funds of Thai Nguyen city.

2.2.2. Linkert scale-based assessment

The Likert scale (Likert, 1932) is used to assess the impact levels of each factor in the creation of land funds in Thai Nguyen city. Each factor is evaluated according to five levels: very high: ≥ 80%; high: from 60 to 79%; average: from 40 to 59%; low: from 20 to 39%; and very low: <20%. The general assessment index is a weighted average of the number of respondents in each level and coefficients of each level (a very low assigned coefficient has a score of 1, and a high assigned coefficient has a score of 5). In the case of 5 measured scale, a hierarchy of influence assessment index of each factor is determined: very high ≥ 4.20; high: from 3.40 to 4.19; average: from 2.60 to 3.39; low: from 1.80 to <2.59; and very low <1.80.

3. RESULTS AND DISCUSSION

3.1. Creation of land funds in Thai Nguyen city

3.1.1. The forms for creation of land funds

Since implementing the Land Law in 2003, the common ways for creating land to serve projects have been done in two forms. The first way, the State recovers land in accordance with land use planning and approved plans, or for implementation of projects by competent State agencies, and then the State or direct allocates leases the land to investors, or allocates and leases the land to investors by auctions for land use rights where investors bid for land use projects. The most common way for

creating land to serve projects is the State recovers land in accordance for the implementation of projects (grey pathway) (Fig. 1). In the second way, investors made direct agreements with land users on the transfer of land use rights and capital contributions to buy their assets associated with land.

3.1.2. The results of land fund creation in Thai Nguyen city

The creation of land funds in Thai Nguyen city from 2004-2015 was performed through two forms that were the State's recovery and direct agreements between the investors and land users, with a total area of 9,061,339.96 m^2 for 624 projects. The form of land fund creation by recovery from the State's was the dominant method, accounting for 93.75% total of the projects and about 97% of the total area of land funds created. Land fund creation made by direct agreements between the investors and the land users were done for 39 projects with a total area of 268.518,13m^2 (6.885,08 m^2 area per project on average).

Land funds have been established and put into operation, and used as the grounds for the implementation of investment projects which serve the social economic development of the city. However, there are still many limitations of the creation of land funds in recent years: (1) The amount of land recovered by the State under the land use planning and land use plans to auction land use rights is limited; (2) Financial resources provide for the creation of land funds was lacking and disbursed slowly; (3) Land prices were underestimated; (4) The livelihood of people after land acquisition has not been guaranteed, especially for poor people and ethnic minorities who live primarily on agricultural production.

From 2004 to 2015, creating a land fund by agreements between investors and land users for economic development purposes had a total area of 268,518.13 m^2 for 39 projects. Those projects were from the production and trading in line with the approved land use plan. Investors received the land use right transferred from economic organizations, and households and individuals did not have to make land acquisition procedures (Article 40 of the Land Law 2003, Article 73 of the Land Law 2013). Creation of a land fund in the form of an agreement ensures the market prices of the land use rights. However, in recent years, creation of land funds in this form no longer exist such as: (1) Creation of land funds is limited in size and number of projects; (2) Many investors have had difficulty accessing adequate land information about the land to make the agreement; (3) Some projects cannot reach an agreement on 100% of the area of the entire project due to a lack of consensus on land prices between investors and land users; and (4) A lack of regulations on capital contributions to ensure the livelihood of land users after capital contributions and mechanisms to encourage investors to create a land fund in the form of an agreement.

3.2. Identification of the influencing factors on creation of land funds in Thai Nguyen city

Through the research of the factors affecting the creation of land funds in Thai Nguyen city, 22 factors were identified, which were divided into 5 groups of factors (independent variables): social economic; natural conditions and infrastructure; legal policy; finance; and planning. Three groups factors evaluating the results of land fund creation (dependent variables) are shown in table 1. These factors were investigated in order to assess the impact of these factors on the creation of land funds by EFA and the factors were considered as observed variables.

3.2.1. Cronbach's Alpha reliability test

The Cronbach's Alpha coefficients in Table 2 show that the reliability of the instrument ranged from 0.703 to 0.835. The results show the value of Cronbach's Alpha of 5 typical groups of variables: the group of social economic factors is 0.812; the group of natural conditions and infrastructure factors is 0.829; the group of financial factors is 0.828; the group of legal

policies is 0.777; and the group of planning factors is 0.835, these are greater than 0.6, which ensure reliability of the survey data in social science research.

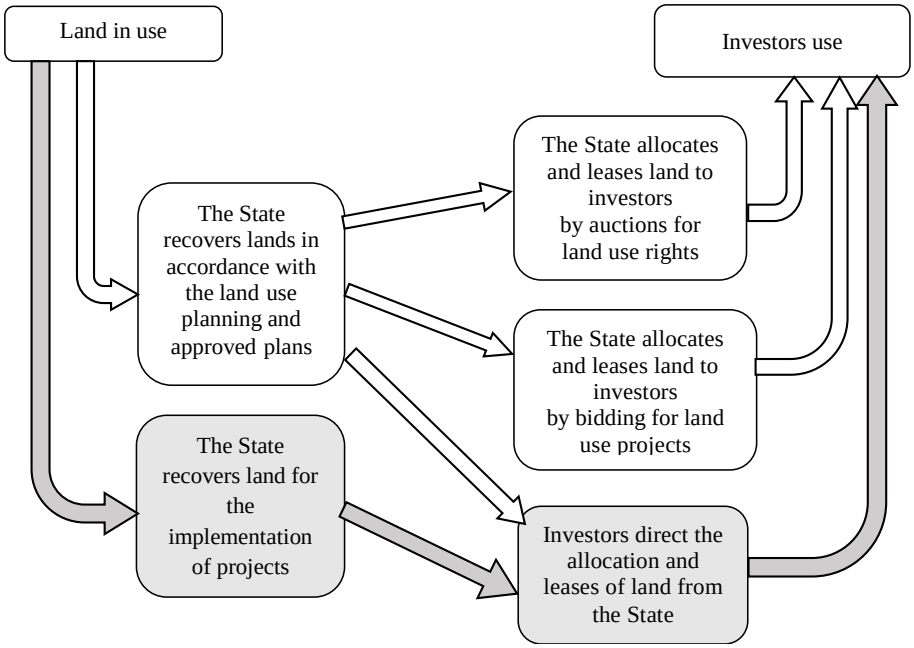

Figure 1. The State recovers lands for the purposes of socio-economic development of the nation

Table 1. Factors affecting the creation of land fund in the city of Thai Nguyen

No	Influential factors –observed variables	Symbol	No	Influential factors –observed variables	Symbol
I	Group of social economic factors	SF	II	Group of natural conditions and infrastructure factors	NF
1	Income of households, individuals	SF1	1	Land area	NF1
2	Profitability from land	SF2	2	Location	NF2
3	Urbanization process	SF3	3	Land use objectives	NF3
4	Population density	SF4	4	Social infrastructure	NF4
5	Educational level	SF5	5	Technical infrastructure	NF5
III	Group of financial factors	FF	IV	Group of legal policy factor	LF
1	Land prices applied in land fund creation	FF1	1	Land policies	LF1
2	Funding from state budget	FF2	2	Investment attraction policies	LF2
3	Funding from organizations	FF3	3	Support policies	LF3
4	Funding from other sources	FF4	4	Other social policies	LF4
5	Capital contribution from land use rights	FF5			
V	Group of planning factors	PF	VI	Group of results of land fund creation	RL
1	Master plan of socio economic development	PF1	1	Promoting social economic development	RL1
2	Land use planning	PF2	2	Environment being improved	RL2
3	Urban planning norms	PF3	3	Living standards being raised	RL3

Table 2. Results of analysis Cronbach's Alpha reliability

Symbol	Observed variables	Cronbach' Alpha
FF	FF1, FF2, FF3, FF4, FF5	0.828
SF	SF1, SF2, SF3, SF4, SF5	0.812
NF	NF1, NF2, NF3, NF4, NF5	0.829
LF	LF1, LF2, LF3, LF4	0.777
PF	PF1, PF2, PF3	0.835
RL	RL1, RL2, RL3	0.703

Table 3. Total variance explained

Component	Initial eigenvalues			Rotation sums of squared loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)
I	5.041	22.913	22.913	3.017	13.714	13.714
II	3.435	15.615	38.528	2.994	13.609	27.323
III	2.074	9.428	47.957	2.890	13.135	40.457
IV	1.578	7.174	55.131	2.438	11.082	51.539
V	1.518	6.898	62.028	2.308	10.489	62.028

3.2.2. Exploratory factor analysis

In EFA, the KMO coefficient (Kaiser-Meyer- Olkin) is used to assess the suitability of the EFA model, and if $0.5 \leq KMO \leq 1$, the model is determined to be suitable. KMO's testing results of the observed variables show the KMO = 0.829, so the survey data in this study fits the EFA model. For these data, the value is 0.829, which falls into the range of being deemed great. So, we should be confident that the factor analysis is appropriate for these data (Hutcheson and Sofroniou, 1999).

Bartlett's test is used to evaluate the overall correlation among the variables. Test results of the survey data in this study show that the correlation between the observed variables is 0.000 <0.01, so the observed variables are linearly correlated with the representative factors, reliability is 99%, and therefore, factor analysis is appropriate.

The explanatory level of the observed variables is measured by the value of extraction variance. Test results show that the extraction variance value is 62.028, and since 62.03% > 50.00%, changes in the dependent variable are explained by the observed variables in the model (Table 3). Thus, the group of factors (independent variables) explains 62.03% of the changes in the factors studied (dependent variables).

The results obtained in the matrix of correlation in Table 4 show that all the variable have a high degree of positive relationships with one another. They have values in the range from 0.676 to 0.865. Thus, all standardized factor loadings in our model are significant; this is a confirmation of the validity of the theoretical framework. The relationship between the results of land fund creation and the master plan of socio economic development showed the highest positive correlation (0.865). That means the master plan of socio economic development is the most determinant factor affecting the results of land fund creation in Thai Nguyen city.

In EFA, the rotation factor matrix allows sorting the original group of factors into groups with a linear relationship to discover representative factors, because the sample size is 500, to select factor loadings of 0.3. The analytical results show that characteristic variables have factor loadings of greater than 0.3. After the re-arranging, the original 22 variables are classified into 5 groups representing 5 groups of specific variables (Table 5).

The result of running a regression model determined an adjusted squared correlation coefficient with an $R^2 = 0.618$, this means that 61.8% of the results of land fund creation in Thai Nguyen city can be explained by the variation of the 5 groups of independent variables, while the rest (38.9%) is explained by other factors outside the model (Table 6).

From the adjusted regression coefficients (β), the order of the factors that influence the creation of the land funds in Thai Nguyen city are as follows: financial factors; legal policies factors; social economic factors; natural condition and infrastructure factors; and planning factors.

3.3. Evaluating the influence of factors in the land fund creation in Thai Nguyen city

Likert scale (Likert, 1932) is used to assess the impact of each factor in the creation of a land fund in the city of Thai Nguyen. The influence of factors affecting the creation of the land fund in the city of Thai Nguyen range from 2.96 to 4.35 (Table 7).

- The degree of influence of financial factors group on the land fund creation:

In "Group of financial factors", the factors of "Land price" and "Funding from the State budget" have a very high influence to the results of land fund creation in Thai Nguyen city. The overall assessment indices are 4.35 and 4.21, respectively (Table 7). The factors "Funding from credit organizations" and "Capital contributions from land use rights" at large had general evaluation index values of 3.59 and 3.46, respectively (Table 7). Those indices are similar to the overall assessment indices of land fund creation in Yen Bai city and Cao Bang city (Ho Thi Lam Tra et al., 2016a; Ho Thi Lam Tra et al., 2016b). The factors of "Land price" and "Funding from the State budget" have the greatest influence on the creation of land funds in Thai Nguyen city, Yen Bai city, and Cao Bang city. These results reflect the reality in those cities: land price greatly influences the creation of land funds.

- The degree of influence of the group legal policy factors to land fund creation

In "Group of legal policy factors", the order of the factors influencing the results of land fund creation in Thai Nguyen city is "Investment attraction policies", "Land policies", "Support policies", and "Other social policy" (Table 7). The order of the factors influences on the results of land fund creation in Yen Bai city and Cao Bang city is "Investment attraction policies", "Support policies", "Land policies", and "Other social policies" (Ho Thi Lam Tra et al., 2016a; Ho Thi Lam Tra et al., 2016b). The factor "Investment attraction policies" has the greatest influences on the creation of land funds in Thai Nguyen city, Yen Bai city, and Cao Bang city.

Table 4. Rotated Component Matrix[a]

Variable	Component					Variable	Component				
	1	2	3	4	5		1	2	3	4	5
NF1	0.792					SF4			0.805		
NF5	0.774					SF2			0.742		
NF2	0.770					SF5			0.722		
NF3	0.755					SF1			0.708		
NF4	0.700					SF3			0.676		
FF2		0.796				LF3				0.831	
FF3		0.740				LF2				0.800	
FF4		0.736				LF1				0.711	
FF5		0.735				LF4				0.676	
FF1		0.698				PF2					0.865
						PF3					0.861
						PF1					0.812

Table 5. Adjusted model through Cronbach's Alpha test and EFA

Scale	Observed variables	Group of factors
F1	NF1, NF2, NF3, NF4, NF5	Natural condition and infrastructure factors
F2	FF1, FF2, FF3, FF4, FF5	Financial factors
F3	SF1, SF2, SF3, SF4, SF5	Social economic factors
F4	LF1, LF2, LF3, LF4	Legal policy factors
F5	PF1, PF2, PF3	Planning factors
RL	RL1, RL2, RL3	Results of land fund creation

Table 6. Results of regression coefficients[a]

Scale	Unadjusted regression coefficients		Adjusted regression coefficients	t	Significance (Sig.)	Multi-correlation statistics		Order (*)
	β	Errors	Beta (β)			Tolerance	VIF	
F1	0,168	0,039	0,168	4,343	0,000	1,000	1,000	4
F2	0,290	0,039	0,290	7,489	0,000	0,992	1,008	1
F3	0,204	0,039	0,204	5,230	0,000	0,978	1,023	3
F4	0,225	0,040	0,225	5,656	0,000	0,955	1,047	2
F5	0,161	0,039	0,161	4,125	0,000	0,984	1,016	5

Note: - Dependent variables: The results of creating the land fund;
- Squared correlation coefficient (R Square): 0.618
- Inspection F with a significance level (Sig.) = 0.000;
- Sample size: N = 500;
(*) The order of the groups of affected factors are sorted by standardized regression coefficients

Table 7. The overall assessment of the influencing factors on the land fund creation in Thai Nguyen city

No	Factors	Overall assessment index	No	Factors	Overall assessment index
I	Group of financial factors	3.80	II	Group of legal policies	3.83
1	Land prices applied in land fund creation	4.35	1	Land policies	4.29
2	Funding from state budget	4.21	2	Investment attraction policies	4.35
3	Funding from credit organizations	3.59	3	Support policies	3.44
4	Funding from other sources	3.38	4	Other social policies	3.23
5	Capital contributions from land use rights	3.46			
III	Group of socio economic factors	3.60	IV	Group of natural conditions and infrastructure factors	3.24
1	Income of household, individuals	3.45	1	Land plot area	2.96
2	Profitability from land	3.93	2	Plot location	3.10
3	Urbanization process	4.24	3	Land use objective	3.10
4	Population density	3.16	4	Social infrastructure	3.49
5	Educational level	3.21	5	Technical infrastructure	3.56
V	Group of planning factors	3.23	VI	Results of land fund creation	3.58
1	Master plan of social economic development	3.69	1	Social economic development	3.62
2	Land use planning	3.40	2	Environment	3.62
3	Urban planning norms	2.60	3	Population living	3.49

- Influence degree of the group of social economic factors to land fund creation

In "Group of social economic factors", the factor of "Urbanization process" has the largest impact on the results of land fund creation in Thai Nguyen city (4.24), followed by factors, in descending order: profitability from the land, household income, educational level, and population density (Table 7). The creation of land funds is the most important aspect of social economic development in this region and the country (Ho Thi Lam Tra *et al.*, 2016a; Ho Thi Lam Tra *et al.*, 2016c).

- Influence degree of group of natural conditions and infrastructure factors to land fund creation:

The degree of influence of the factors in the "Group of natural conditions and infrastructure" on land fund creation in Thai Nguyen city, compared with other groups, are lower, as indicators are from low to moderate (2.96 to 3.56). In "Group of natural conditions and infrastructure factors," the factor "Technical infrastructure" has the highest influencing degree, at the of 3.56, to the results of land fund creation in Thai Nguyen city (Table 7). Ho Thi Lam Tra *et al.* (2016a) and Ho Thi Lam Tra *et al.* (2016b) pointed out that "infrastructure factors" have influence on creation the of land funds in Yen Bai city and Cao Bang city.

- Influence degree of group of planning factors to land fund creation:

In "Group of planning factors", the order of the factors influencing the results of land fund creation in Thai Nguyen city is "Master plan of social economic development", "Land use planning", and "Urban planning norms" (Table 7). The order of the factors influencing the results of land fund creation in Yen Bai city and Cao Bang city is "Master plan of social economic development", "Urban planning norms", and "Land use planning" (Ho Thi Lam Tra *et al.*, 2016a; Ho Thi Lam Tra *et al.*, 2016b). The factor "Master plan of social economic development" has the greatest influence on the creation of land funds in Thai Nguyen city, Yen Bai city, and Cao Bang city.

Among the influencing factors of land fund creation, the land price factor, the state budget in the advancement of the creation of land fund, land policies, policies of attracting investments, and the urbanization process have the greatest influence, their influence assessment indices are very high ($\geq$ 4.20).

3.4. Proposed solutions to enhance land fund creation in Thai Nguyen city

Based on the results and the influencing factors on the creation of land funds in Thai Nguyen city, some solutions to enhance land fund creation were proposed to improve the effectiveness of creation of land funds in the future as follows:

The most important thing for creation of land funds is financial factors, which are land prices applied in land fund creation, funding from the state budget, funding from organizations, and funding from other sources, and capital contribution from land use rights. Therefore, Thai Nguyen province's People's Committee determines specific land prices in line with the social economic and natural conditions to help land recovery be done on schedule; the development of specific mechanisms of using the state budget to serve land fund creation, which should provide adequate capital sources in time for land fund creation; the allocation of reasonable funding sources for land fund creation, especially enhancing and effectively using land development funds to create reserved land funds when there are appropriate investment projects, and one may hand over land surfaces to implement projects and save time for investors.

The legal policies factor includes land policies, investment attraction policies, support policies, and other social policies. Thai Nguyen city People's Committee should continue to promote and implement effective land policies through appropriate forms of support in terms of capital, taxation, and other conditions to develop investment projects; pay attention to the policies of attracting investment, especially investment projects relevant to land use, and propose specific mechanisms of attracting investors in line with social economic

development in city; and effectively implement support policies and other social policies in the land fund creation to ensure the livelihood of people affected by land recovery;

Thai Nguyen city People's Committee should formulate a master plan of social economic development; create reserved land funds in venues where social economic development will be in the near future; be interested in building technical infrastructure adequately, and be ready to serve the needs of the people and investors; and organize the management of land use purposes conducted from formulation of land use planning.

4. CONCLUSION

Creation of land funds in Thai Nguyen city from 2004 to 2015 were performed through two forms, which were recovery by the State and direct agreements among investors and land users with a total area of 9,061,339.96 m^2 for 624 projects. The creation of land funds was not really promoted as a possibility of Thai Nguyen city. Creation of land funds in accordance with land use planning and approved plans was limited, some projects did not hand over the schedule set, and there was no reserve land funds for social economic development of Thai Nguyen city.

Test results of the survey data by EFA confirmed: the survey data are reliable; the observed variables are linearly correlated with representation factors at a 99% confidence level; the observed variables largely explain the changes in the dependent variables; and the order of the groups of factors influencing the results of the creation of land funds in Thai Nguyen city is as follows: financial factors; legal policy factors; social economic factors; natural condition and infrastructure factors; and planning factors.

Among the factors influencing land fund creation, the land price factor, the state budget to advance the creation of land funds, policies of attracting investment, and the urbanization process have the greatest influences.

Some solutions proposed to improve the effectiveness of land fund creation in Thai Nguyen city in the future are as follows: Thai Nguyen province People's Committee should determine specific land prices in line with the social economic and natural conditions to help land recovery being done on schedule. Thai Nguyen city People's Committee should pay attention to the policies of attracting investment, especially investment projects relevant to land use, and propose specific mechanisms of attracting investors in line with social economic development in the city.

REFERENCES

Center for the house and land fund development of Thai Nguyen (2010-2015), report on working results in the period from 2010 to 2015.

Do Thi Thanh Van (2013), Study the situation and propose policy solutions for creating complete land for investment fund economic development, social in Vietnam.

Department of Natural Resources and Environment of Thai Nguyen (2004-2015), results of land allocation, land lease and convert of land use purposes in the period from 2004 to 2015.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010). Multivariate data analysis: A global perspective. New Jersey: Pearson Prentice Hall.

Ho Thi Lam Tra, Vu Tuan Tu, Phan Thi Thanh Huyen (2016a). Assessments of the status of land fund development in the city of Yen Bai - Yen Bai province. Journal of Agriculture & Rural Development, 19: 10 - 27.

Ho Thi Lam Tra, Hoang Phuong Anh, Pham Phuong Nam (2016b). Some factors impact on land fund development in Cao Bang city, Cao Bang province. Vietnam Soil Science Journal, 49: 91 - 96.

Ho Thi Lam Tra, Mai Thuy Duong, Le Van Tho (2016c). Evaluate effect's creation of land fund to economic and social in Cam Pha city, Quang Ninh province period of 2010-2015. Journal of Agriculture & Rural Development, 21: 135 - 142.

Hutcheson, G., & Sofroniou, N. (1999). The multivariate social scientist. London: Sage Publications.

Land Fund Development Center of Thai Nguyen Province (2010-2015), report on the working results in the period from 2010 to 2015.

Land Fund Development Centre of Thai Nguyen City (2010-2015), report on working results in the period from 2010 to 2015.

National Assembly (2003). Land Law 2003.

Norris, M. and Lecavalier, L. (2010). Evaluating the Use of Exploratory Factor Analysis in Developmental Disability Psychological Research. Journal of Autism and Developmental Disorders. 40(1): 8 - 20.