

## Managing land complaints when the State acquires land: A case study in Bac Ninh city, Vietnam

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### CHRONICLE

*Article history:*

Received: March 3, 2022

Received in revised format:

October 2 2022

Accepted: November 25, 2022

Available online:

November 25, 2022

*Keywords:*

*Affecting factors*

*Complaint settlement*

*Impact rates*

*Land acquisition*

*Vietnam*

### ABSTRACT

The study's major purpose is to determine the factors that affect the settlement of land complaints and propose some policy implications to improve the settlement of land complaints. Experts are asked about the factors that may affect and their impact rates on the settlement of land complaints when the State acquires land. The proposed research model has 5 hypothetical latent variables and 17 hypothetical observed variables. As a result of the model being tested by SPSS 20.0 software, all hypothetical latent variables and hypothetical observed variables satisfy the test criteria. The impact rates of the hypothetical latent variables range from 9.19% to 36.15%. The group of implementing complaint settlement factors has the strongest influence, and the group of legal factors has the weakest influence. Policy proposals include improving settlement procedures and land databases, strengthening facilities and personnel, and perfecting the legal provisions for complaint resolution.

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## 1. Introduction

According to the law of Vietnam, the land belongs to the entire people and is uniformly managed by the State on behalf of the owner. People do not have the right to own land but have the right to use land granted by the State through land allocation or land lease or recognition of land use rights. The State allocates and leases land to people who have a demand to use it. The State recognizes land use rights to existing land users when the land is under the land use plan and is free from disputes through the issuance of land certificates. The State shall acquire land from land users when the State needs land to carry out investment projects according to the land use planning (Le, 2017; Nam et al., 2021; Hoang, 2015). Land acquisition is the process that the State undertakes to regain the land use rights of the people who are using the land. This form of regaining land use rights is similar to the form of land expropriation in countries with multiple ownership of land (Ahmed et al., 2018; Nam and Yen, 2021; Notess et al., 2020; Acharya, 2002). Land acquisition or land expropriation is a complicated process because it directly affects the livelihood and employment of those whose land is acquired (Asian Development Bank, 2007; Qingliang, 2008; Larbi et al., 2004; Notess et al., 2020). Before issuing the decision on land acquisition, the State shall make compensation for the land and properties attached to the land. The State also provides support and arranges resettlement for those whose land is acquired under the law (Zhou, 2014; Diriba, 2016; Pham and Nguyen, 2016; Do, 2020). This is a process that takes a lot of time, effort, and money, and has to solve many other problems related to land users (Pham and Nguyen, 2016; Chilombo, 2021; Mabe et al., 2019; Pham and Hoang, 2017; Patil et al., 2020; Thondhlana, 2015). Therefore, land acquisition is often associated with complaints about state agencies and competent individuals' administrative decisions and

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administrative acts (Le, 2017; Yengoh et al., 2016; Olga, 2020). The complaint is a legal term (Welsh, 2019; Wonders, 1988; Edwin, 2003; Susskind and Anguelovski, 2008; Welsh, 2019; Wonders, 1988). In the most general sense, complaints are acts of individuals or organizations that require responsible agencies, organizations, or individuals to correct acts that they believe are incorrect and cause damage to their legitimate rights and interests. Complaints always involve the complainant and the complaint settler (the complained person). A complainant means every individual, agency, or organization that exercises the right to complain following the Constitution and law. A complaint settler is a competent agency, organization, or person in an agency or organization that has made illegal decisions or acts, infringing upon the complainant's legitimate rights and interests. When exercising the right to complain, a competent agency, organization or person must go through a legal representative following the law. The object of a complaint is a decision or act of an agency or organization or of a competent person in an agency or organization for which the complainant has grounds to believe that such decision or act is illegal or infringes on their lawful rights and interests. The decision to settle the complaint must be in writing, in which the will of the decision-maker is expressed, to be considered the object of the complaint (National Assembly of Vietnam, 2011).

From the general concept of complaints, it could be understood that a complaint when the State acquires land is an act of the person whose land has been acquired, asking the State to reconsider administrative decisions or administrative acts of civil servants. In other words, land users require individuals and organizations to review the issued administrative decisions as well as the administrative actions performed when the State acquires the land (Hoang, 2017; Nam et al., 2021; Pham et al., 2019). Land users and people whose rights and obligations related to land use are directly affected by administrative decisions or administrative acts have the right to lodge complaints (National Assembly of Vietnam, 2013).

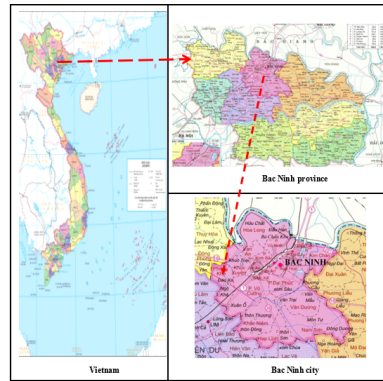
Settlement of complaints when the State acquires land is a form of complaint settlement and is one of the contents of state land management in Vietnam (National Assembly of Vietnam, 2013). According to Nguyen et al., (2018); Nguyen, (2013), complaint settlement is the process of reviewing, verifying, making conclusions, and making decisions according to the order and procedures prescribed by law for administrative decisions and administrative acts related to land. The proper settlement of the law plays an important role, contributing to ensuring the legitimate rights and interests of individuals and organizations, and ensuring security and social order (Bakker and Moniaga, 2010; Bessonova, 2020; Brewer, 2007; Han and Lin, 2019). Thus, it can be understood, that the settlement of complaints when the State acquires land is the process of reviewing, verifying, making conclusions, and making decisions according to the order and procedures for deciding on land acquisition and deciding to approve the plan of compensation, support, and resettlement by administrative agencies or competent persons in state administrative agencies. Complaint settlement is affected by a lot of factors that are facts and circumstances that make the complaint settlement process fast or slow, favorable or difficult. The affecting factors are probably the provisions of the law; awareness of law observance of individuals and organizations; the complexity of complaint cases; facilities and personnel for handling complaints; or quality of cadastral records; organizing complaints settlement (Nguyen et al., 2018; Nam et al., 2021; Han and Lin, 2019; Bessonova, 2020; Brewer, 2007), etc.

Up to now, there have been many studies related to complaint settlement in general and land complaint settlement in particular at different aspects and levels. Liu et al. (2019) indicate the impact of socio-economic databases on complaint settlement in their study. Pham and Hoang (2017) assess the advantages and disadvantages when dealing with complaints about granting land use right certificates. Islam et al. (2015) study the rights of land users, including the right to appeal administrative decisions of the State when people believe that such decisions affect their interests and their legitimacy. Nam and Yen (2021) assess the impact of urbanization on land complaints and settlement of land complaints and have shown that increased urbanization increases the number of land complaints, putting pressure on land complaint settlers. Nam et al. (2021) research the management of the public land fund, including settlement of complaints about the decision to settle land disputes between households renting public land. Some authors delve into the limitations of the regulations on complaint settlement in general and land complaints in particular (Nguyen, 2017; Tran et al., 2018). Susskind and Anguelovski (2008) study the characteristics of land complaints and land complaints settlement in communities with indigenous knowledge.

Wonders (1988) studies the settlement of disputes over encroachment of land by adjoining land users. Zhou and Banik's (2014) study on complaints about dispute settlement decisions when implementing land acquisition and compensation for people whose land is acquired. Nguyen et al. (2018) researched backlog and prolonged land complaints in some provinces and cities in Vietnam. They also indicate some factors that have an impact on the complaint settlement including the complexity of cases and the land database. Research by Phan et al. (2016); Ho et al. (2015); Que et al. (2019) show that the most complicated and time-consuming is to settle complaints about compensation, support, and resettlement when the State acquires land. Le (2017) studies the implementation of the law on administrative complaints in the field of land in the central highlands provinces. Le (2017) examines how the law on administrative complaints is implemented in the central highlands. According to him, understanding and obeying the law affect the resolution of complaints. In his article, Nguyen (2013) examines how to resolve administrative complaints, including conflicts of land interest. Similarly, another study analyses the status of the settlement of compensation, assistance, and resettlement complaints when the state acquires land (Pham and Nguyen, 2016). In all cases, they learn that facilities, funds, and cadres can affect complaint settlement.

The above authors have pointed out one or several factors affecting the settlement of complaints in general, complaints when the state acquires land in particular. However, no author has yet explored in-depth factors that may influence the resolution

of complaints in general and complaints when the state acquires land in particular. Therefore, it is necessary to examine the factors affecting the settlement of complaints when the State acquires land to answer the following questions: What are the factors affecting the complaint settlement when the State acquires land? What is the impact of each factor? What policies should be in place to resolve complaints faster and more effectively when the State acquires land? Vietnam's Bac Ninh city (Fig. 1) is chosen as a test site for the proposed research model to answer these questions since complaints about land expropriation by the State accounted for the largest proportion (61.27%) during the 2016-2020 period. Furthermore, dealing with these complaints is also very complex due to the influence of many factors, but so far no research has been done on this subject (Bac Ninh City People's Committee, 2021a). Bac Ninh city is also the political, economic, cultural - social, scientific, and technical center of Bac Ninh province with an urban population of 254,834 people. Therefore, the number of complaints about land acquired by the state in recent years tends to increase. (Bac Ninh City People's Committee, 2021b).



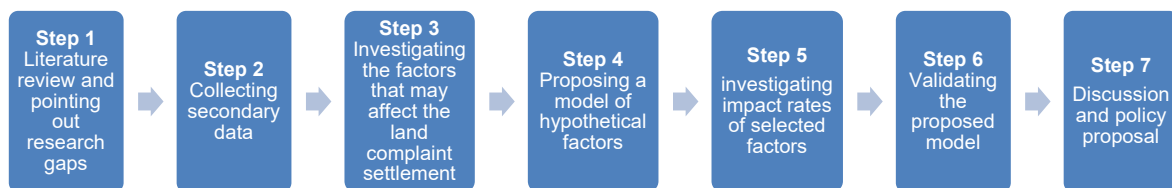
**Fig. 1.** Geographical location map of Bac Ninh city, Bac Ninh province

Source: Vietnamese publisher of environmental resources and maps (2020)

## 2. Material and methods

### 2.1. Steps in the research process

Research on factors affecting complaint settlement is carried out through 7 main steps (Fig. 2). Step 1 studies the theoretical and practical basis of land complaints and settlement of land complaints to point out research gaps. Step 2 collects secondary data on natural, and socio-economic conditions and settles complaints when the State acquires land in Bac Ninh city. Step 3 investigates officials directly involved in the settlement of land complaints to identify factors that may affect the settlement of land complaints. Step 4 proposes a research model of hypothetical factors that may affect the settlement of land complaints. Step 5 investigates officials about the impact rates of selected factors on the settlement of land complaints. Step 6 tests the proposed research model against the test criteria. Step 7 discusses and proposes policies to improve the settlement of land complaints in order of priority based on the impact rates of the factors.



**Fig. 2.** The order of steps to study the factors that affect land complaint settlement

### 2.2. Data collection and a proposed research model

Secondary data on natural, and socio-economic conditions and settling complaints when the State acquires land are collected at the People's Committee of Bac Ninh city. Primary data are collected through two surveys for all personnel (91 cadres, officers, and servants) directly involved in complaint settlement when the State acquires land in Bac Ninh city. The surveys are conducted using a pre-printed survey form. The first investigation aims to determine the factors that may affect the settlement of complaints when the State acquires land. The content of the survey form has basic information about survey respondents and their opinions on 21 hypothetical factors affecting complaint settlement. The hypothetical factors are inherited

from previous studies. Each hypothetical factor in the questionnaire has 2 corresponding options (either affecting or not affecting complaint settlement) for respondents to choose one of the two. Additionally, respondents can add other factors that they believe affect complaint settlement to the lower part of the questionnaire. Processed data show that 26 factors probably affect complaint settlement with different assessment rates (from 13.41% to 89.67% of the total respondents). Of 26 factors, 5 factors are added by the survey respondents in addition to the 21 hypothetical factors already recorded in the questionnaire. The study selected 17 factors from those factors that have a rating greater than 50.00% of the total survey respondents. The 17 selected factors are classified into 5 groups of affecting factors according to the characteristics of the factors (Table 1). Each selected factor is considered an observed variable. Each group of factors is considered as a latent variable and is called an independent variable. Land complaint settlement when the state acquires land is considered as a dependent variable because it is affected by independent variables. Thus, according to Table 2, there are 5 independent variables and 1 dependent variable. The proposed research model on hypothetical factors affecting the land complaint settlement is shown in Fig. 3.

**Table 1**

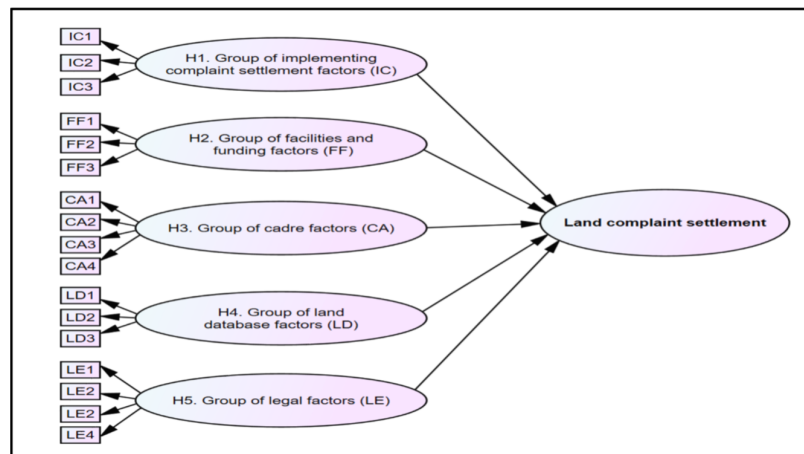
Groups of hypothetical factors affecting the settlement of complaints when the State acquires land in Bac Ninh city.

Group of factors	Group of factors
I. Group of implementing complaint settlement factors (IC)	Responsibility (CA3)
Check and monitor the settlement process (IC1)	Communication skills (CA4)
Coordination between agencies (IC2)	IV. Group of land database factors (LD)
The complexity of cases (IC2)	Fullness level (LD1)
II. Group of facilities and funding factors (FF)	Updateness Level (LD2)
Facilities for receiving complaints (FF1)	Connectivity level between the agencies involved (LD3)
Funding for complaint settlement (FF2)	V. Group of legal factors (LE)
Means of exchanging information when settling complaints (FF3)	The sequence of steps to resolve complaints (LE1)
III. Group of cadre factors (CA)	The time limit for settlement (LE2)
Number of employees (CA1)	Complainant's legal knowledge (LE3)
Qualification (CA2)	Complainant's sense of law observance (LE4)

The study uses multivariate linear regression models to determine factors affecting complaint settlement when the State acquires land in Bac Ninh city. The model has the following form:

$$Y = \beta_0 + \beta_1 \times IC + \beta_2 \times FF + \beta_3 \times CA + \beta_4 \times LD + \beta_5 \times LE$$

where Y is the dependent variable represents the extent to which the land complaint settlement is affected;  $\beta_0$  is constant;  $\beta_1, \dots, \beta_6$  are the regression coefficients of the corresponding variables that are implementing the complaint settlement factor group; facilities and funding factor group; cadre factor group; land database factor group; legal factor group; IC, FF, CA, LD, LE are the independent variables that are the implementing complaint settlement factor group; facilities and funding factor group; cadre factor group; land database factor group; legal factor group.



**Fig. 3.** Proposed research model on hypothetical factors affecting land complaint settlement

The second investigation is conducted to get the opinions of officials implementing the settlement of land complaints about the impact of each factor on the settlement of land complaints according to the Likert scale. The questionnaire contains 17 selected hypothetical factors and five levels of impact for each factor, so that survey respondents can choose one level out of five. Impacts are classified into 5 levels with corresponding scores (very impactful – 5 points; quite impactful – 4 points; moderate impactful – 3 points; little impactful – 2 points; very little impactful – 1 point) (Likert, 1932). Additionally, survey respondents are asked to give their opinions on advantages, disadvantages, and causes when they deal with land complaints.

The number of samples (the number of respondents) is determined based on the requirements of the exploratory factor analysis and multivariate regression model. According to Hoang and Nguyen (2005), each observed variable (an affecting factor) needs to be investigated by at least 5 questionnaires (respondents). According to Tabachnick and Fidell (1996), multivariate regression analysis requires at least  $50 + 8 \times p$  questionnaires ( $p$  is the number of latent variables – the number of groups of affecting factors). The research model has 17 observed variables (17 affecting factors), so the minimum number of questionnaires is  $17 \times 5 = 85$ ; The number of latent variables is 5 ( $p = 5$ ), so the number of questionnaires (respondents) is  $50 + 8 \times 5 = 90$ . To meet the requirements of exploratory factor analysis and multivariate regression analysis at the same time, the study investigates 91 people who responded to the first survey.

### 2.3. Statistical analysis

Survey data on factors affecting land complaint settlement are processed and analyzed by SPSS 20.0 software. The reliability of the scale is tested through Cronbach's alpha coefficient. According to Hair et al. (1998) to ensure reliability, Cronbach's alpha coefficient must be between 0.60 and 0.95 and the total variable correlation coefficient must be greater than 0.30. The exploratory factor analysis is used to reduce a set of 17 observed variables into a set of 5 latent variables to save time and money. The exploratory factor analysis is performed through the 5 criteria including factor loading, Bartlett test, Kaiser-Meyer-Olkin (KMO) coefficient, percentage of variance, and eigenvalues. The factor loading represents the correlation relationship between the observed variable and the latent factor. The higher the factor loading, the greater the correlation between that observed variable and the latent factor and vice versa. According to Hair et al. (1998), factor loading is an indicator to ensure the practical significance of the exploratory factor analysis. Factor loading greater than 0.3 is considered minimal; Factor loading greater than 0.4 is considered important; Factor loading greater than 0.5 is considered to be of practical significance. So the study chose factor loading greater than 0.5.

Bartlett test is a statistic used to test the hypothesis that variables are not correlated in the population. In the case of this test it has statistical significance (Sig. < 0.05), and the observed variables are correlated with each other in the population (Kagen and Levin, 1986). KMO coefficient is an index used to consider the appropriateness of factor analysis. If this value is less than 0.5, then factor analysis is likely not suitable for the research data set. The value of KMO must reach a value of 0.5 or more ( $0.5 \leq \text{KMO} \leq 1$ ) which is a sufficient condition for factor analysis to be appropriate (Igbaria et al., 1995). The variance represents the variation of the observed variables as a percentage. If the variation is considered to be 100%, then this value represents how much the factor analysis explains. This value cannot be lower than 50%. In EFA analysis, the eigenvalue is commonly used to determine the number of factors. Based on this criterion, only factors with Eigenvalues greater or equal to 1 are kept in the analytical model (Igbaria et al., 1995). Besides the main criteria for evaluating the settlement of complaints when the State acquires land include the number of complaints, complaint contents, settlement results, limitations, and reasons for complaint settlement in the period 2016- 2020 in Bac Ninh city.

## 3. Results

### 3.1. Land acquisition and settlement of complaints when the State acquires land in Bac Ninh city

In the 2016-2020 period, the State acquires 126,1953 hectares of land, of which the agricultural land area is 125,4600 hectares (accounting for 99.42% of the total acquired land area), the non-agricultural land area is 0.7353 hectares (accounting for 0.58% of the total area of land to be acquired). The total number of households having their land acquired is 758 households, of which 626 households have their agricultural land acquired (accounting for 82.59% of the total number of households whose land has been acquired); 132 households have non-agricultural land acquired (accounting for 17.41% of the total number of households whose land was acquired) (Table 2). Because Bac Ninh city has implemented the most investment projects, the amount of land acquired and the number of households with land acquired were the highest in 2018. This is also one of the reasons leading to the highest number of complaints in 2018 (22 cases).

**Table 2**  
Land acquisition and complaints in Bac Ninh city for the period 2016-2020

Year	Acquired land area (ha)	Agricultural land			Non-agricultural land				
		Area (ha)	Number of households whose land has been acquired	Number of households complaining	Percentage (%)	Area (ha)	Number of households whose land has been acquired	Number of households complaining	Percentage (%)
2016	1.4640	0.9400	45	9	20.00	0.5240	60	11	18.33
2017	24.5537	24.5000	125	12	9.60	0.0537	59	7	11.86
2018	37.9845	37.8900	176	20	11.36	0.0945	5	2	40.00
2019	36.5800	36.5700	156	15	9.62	0.0100	7	3	42.86
2020	25.6131	25.5600	124	7	5.65	0.0531	1	1	100.00
Total/ Average:	126.1953	125.4600	626	63	10.06	0.7353	132	24	18.18

Source: Bac Ninh City People's Committee (2021a)

During the 2016-2020 period, there were 87 households with complaints (accounting for the highest rate of 61.27% of the total number of land complaints cases) (Fig. 4). There were 63 households with complaints related to agricultural land acquisition, 24 households complained related to non-agricultural land acquisition. Even so, the average percentage of households complaining about agricultural land acquisition is smaller than the average number of households complaining about non-agricultural land acquisition (respectively 10.06% and 18.18%) (Table 2). The main reason is the acquisition of non-agricultural land, which is mainly residential land, which directly affects people's lives, jobs, and activities, in addition to determining the price of residential land and the price of assets associated with it. Residential land is also more difficult than agricultural land. In particular, arranging resettlement to ensure better conditions than the old place of residence also faces difficulties and obstacles because there are no comparison criteria issued by competent authorities. Complaints are also very diverse. Some households complained about 6 out of 14 complaints (Table 3) due to the acquisition of both agricultural and non-agricultural land. The vast majority of households complain about 2 to 3 issues related to compensation, support, and resettlement.

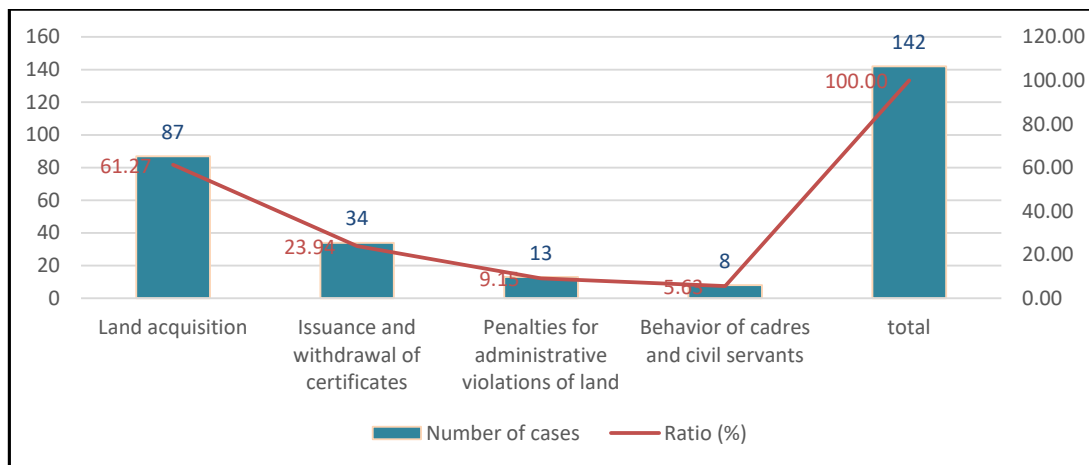


Fig. 4. Types of land complaints in Bac Ninh city in the 2016-2020 period

Table 3

Settlement of complaints when the State acquires land in Bac Ninh city in the period 2016-2020

Complaints regarding the following matters	Total cases	Ratio (%)	Settled		Not settled		Complaints right		Complaints partially correct		Complaints wrong	
			Case	Ratio (%)	Case	Ratio (%)	Case	Ratio (%)	Case	Ratio (%)	Case	Ratio (%)
Determining the area of land to be compensated	19	21.84	17	89.47	2	10.53	2	11.76	2	11.76	13	76.47
Land price for compensation	75	86.21	70	93.33	5	6.67	15	21.43	32	45.71	23	32.86
Amount of assets attached to land to be compensated	28	32.18	24	85.71	4	14.29	3	12.50	16	66.67	5	20.83
The unit price for compensation for properties attached to land	34	39.08	32	94.12	2	5.88	5	15.63	9	28.13	18	56.25
Origin of land	17	19.54	15	88.24	2	11.76	2	13.33	12	80.00	1	6.67
Floor area and construction unit price are compensated	21	24.14	19	90.48	2	9.52	14	73.68	3	15.79	2	10.53
Land acquisition boundary	11	12.64	9	81.82	2	18.18	3	33.33	3	33.33	3	33.33
Location of resettlement land	31	35.63	27	87.10	4	12.9	4	14.81	0	0.00	23	85.19
Infrastructure conditions in the resettlement area	13	14.94	11	84.62	2	15.38	5	45.45	4	36.36	2	18.18
The price of resettlement land is not suitable	25	28.74	20	80.00	5	20.00	9	45.00	0	0.00	11	55.00
Level of support to stabilize life	35	40.23	35	100.0	0	0.00	10	28.57	0	0.00	25	71.43
Level of support for production and business	19	21.84	19	100.0	0	0.00	8	42.11	0	0.00	11	57.89
Number of land plots for resettlement allocated	4	4.60	3	75.00	1	25.00	0	0.00	0	0.00	3	100.00
Support for land use fee for resettlement	3	3.45	3	100.0	0	0.00	0	0.00	0	0.00	3	100.00

Source: People committee of Bac Ninh city (2021a)

The most complained content is that the land price for compensation calculation accounted for 86.21% of the total number of complaints because the land price for compensation calculation is not guaranteed to be equal to the market land price (lower than the market land price). The content of the second complaint (40.23%) is the level of support to stabilize the life of the subjects whose land is acquired because the person whose land has been acquired thinks that the support level has not yet compensated for the losses they have suffered when the State acquires the land. The content with the least complaint (3.45%) is the support for land use levy for resettlement because the basic resettlement support money is determined following the law and satisfied the requirements of the affected households whose land is acquired (Table 3).

Regarding complaint settlement, the rate of completion of complaint contents ranges from 75% to 100%; the rate of unresolved complaints about the largest number of resettlement land plots allocated to households (20%) because many households have many generations living together, in some cases up to 5 households when the state acquired land, they requested to be granted all 5 land plots for resettlement but the city did not have enough land plots to allocate to them, so they complained. Although the law stipulates that if there is no land to compensate, the compensation must be in cash so that the households can find new accommodation on their own. Some complaints are completely accurate, while others are only partially accurate. In addition, some complaints are completely wrong according to the report of the Bac Ninh City People's Committee.

The correct complaint content accounts for the highest percentage (66.67% of the total number of issues resolved) is the content of determining the floor area of the construction work and the construction unit price due to errors in the measurement and determination process. construction unit price. Complaints about the level of support for production and business accounted for the second-highest rate (42.11% of the total resolved contents). The content of partially correct complaints with the highest rate (70.59% of the total number of cases resolved) is the complaint about the origin of land when developing the compensation plan for land due to the lack of documents proving the origin of the land. update. Next is the complaint about the infrastructure condition of the resettlement area with a correct rate of 61.54% of the total number of cases resolved. The highest percentage of false complaints (100%) is for the content of complaints about the number of land plots for which resettlement is required to be allocated and supported with land use fees for resettlement.

**Table 4**

Evaluation of the implementation of complaint settlement when the State acquires land in Bac Ninh city.

Evaluation criteria	Opinion		Evaluation criteria	Opinion	
	Agree (%)	Disagree (%)		Agree (%)	Disagree (%)
Leaders regularly check, monitor resolving complaints	87.45	12.55	Good communication skill	78.93	21.07
Good coordination among relevant agencies to deal with complaints	67.8	32.2	Full land database	78.05	21.95
Many complaints have complex content	77.89	22.11	Updated land database	80.93	19.07
Guaranteed facilities	81.45	18.55	Inter-agency land database	81.71	18.29
Funds for complaint settlement are sufficient	81.45	18.55	Reasonable complaint settlement procedure	83.52	16.48
Good means of communication-related to complaint handling	71.73	28.27	The reasonable time limit for complaint settlement	13.41	86.59
A sufficient number of staff	73.84	26.16	The complainant knows the law	79.42	20.58
Professional staff meet the requirements	76.37	23.63	Complainants obey the law well	81.56	18.44
A sense of responsibility to meet requirements	68.43	31.57			

### 3.2. Examining the influence of the groups of factors

The results of evaluating the reliability of the scale through the Cronbach Alpha coefficient for 5 groups of factors show that Cronbach Alpha's coefficients range from 0.765 to 0.850, and the total correlation coefficient is greater than 0.3 (Table 5).

**Table 5**

Results of analyzing the reliability of the scale.

Group of factors	Total variable correlation↓	Group of factors	Total variable correlation↓
1. Group of implementing complaint settlement factors (IC - Alpha= 0.883)		Responsibility (CA3)	0.874
Check and monitor the settlement process (IC1)	0.767	Communication skills (CA4)	0.851
Coordination between agencies (IC2)	0.803	4. Group of land database factors (LD - Alpha = 0.794)	
The complexity of cases (IC3)	0.781	Fullness level (LD1)	0.703
2. Group of facilities and funding factors (FF - Alpha= 0.794)		Updateness Level (LD2)	0.811
Facilities for receiving complaints (FF1)	0.874	Connectivity level between the agencies involved (LD3)	0.673
Funding for complaint settlement (FF2)	0.762	5. Group of legal factors (LE - Alpha = 0.765)	
Means of exchanging information when settling complaints (FF3)	0.801	The sequence of steps to resolve complaints (LE1)	0.835
3. Group of cadre factors (CA - Alpha = 0.850)		The time limit for settlement (LE2)	0.764
Number of employees (CA1)	0.896	Complainant's legal knowledge (LE3)	0.794
Qualification (CA2)	0.781	Complainant's sense of law observance (LE4)	0.802

Thus, the scale used for assessing the factors affecting land complaints is reliable and suitable for the next analysis. The suitability test is performed through the KMO relevance coefficient. The research results determine that KMO equal to 0.984 satisfies the condition  $0.5 < \text{KMO} < 1.0$ , so the exploratory factor analysis is appropriate for actual data. Besides, Bartlett's test results gave a Sig. A value equal to 0.00 and less than 0.05 (Table 6). This proves that the measurement variables are linearly correlated with the latent factors. The factor loading of components is greater than 0.60 (Table 7), so the exploratory factor analysis has practical significance, and the independent variables ensure accuracy in the regression analysis model to determine the impact rates of the factors on land complaint settlement.

**Table 6**

Test results of KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.984
Bartlett's Test of Sphericity	Approx. Chi-Square	1.956
	df	217
	Sig.	0.000

The results of multivariate regression analysis in Table 8 show that the coefficient Sig. F = 0.000 is smaller than the significance level (0.01), so the regression model is significant, and the independent variables affect the dependent variable Y. Besides, the adjusted  $R^2$  equal to 0.906 (Table 8) indicates that the independent variables put into the regression have an impact on land complaint settlement with 90.60%, the remaining 9.40% are due to the non-model variables and random error. Besides, the Durbin Watson coefficient is 1.885 in the range from 1.5 to 2.5, so there is no first-order sequence autocorrelation phenomenon (Table 8). The variance inflation factor (VIF) of all variables included in the model is less than 2 (Table 8) so the research model does not have a multicollinearity phenomenon. In addition, the variables included in the study are statistically significant (Sig. Equal to 0 and less than 0.05) (Table 8). From the standardized regression coefficients, the regression equation has the following form:

$$Y = 5.524 + 0.791 \times IC + 0.573 \times LD + 0.356 \times FF + 0.267 \times CA + 0.201 \times LE$$

**Table 7**

Weights of the rotation matrix.

Observed variables	Groups of latent variables				
	1	2	3	4	5
IC1	0.884				
IC2	0.786				
IC3	0.761				
FF3		0.841			
FF1		0.773			
FF2		0.698			
CA2			0.912		
CA3			0.847		
CA1			0.801		
CA4			0.783		
LD1				0.827	
LD2				0.802	
LD3				0.754	
LE4					0.877
LE2					0.845
LE3					0.782
LE1					0.754

**Table 8**

Results of linear regression analysis.

Factor group	Standardized regression coefficient	t	Multi-collinear statistics		Order of influence of factor group
			Error (Sig.)	VIF	
Constant	5.524				
IC	0.791	6.521	0.0000	1.954	1
LD	0.573	7.564	0.0000	1.774	2
FF	0.356	5.650	0.0000	1.821	3
CA	0.267	6.452	0.0000	1.961	4
LE	0.201	3.447	0.0000	1.889	5

Sig. F = 0.000;  $R^2 = 0.934$ ; Coefficient  $R^2$  adjusted = 0.906  
Durbin-Watson = 1.885

#### 4. Discussion

The analysis results show that all 17 observed variables and 5 groups of hypothetical factors (5 latent variables) satisfy the testing requirements, so they all affect the settlement of complaints when the State acquires land in Bac Ninh city. The impact rate of factor groups is from 9.19% to 36.15% (Fig. 5). Thus, it can be seen that there is a clear difference between the highest



and lowest levels of influence (3.93 times). As well as the study of Nguyen et al. (2018) the factor group of complaint settling implementation has an impact, but in Bac Ninh city, this factor group has the strongest impact (impact rate of 36.15%). Elements of this group that have an impact on complaint settlement include inspection and supervision by leaders at all levels during the complaint settlement process; the level of coordination of agencies in the complaint settlement process; the complexity of each case. The survey results show that over 87% of respondents (Table 4) believe that leaders at all levels have regularly checked, monitored, and coordinated between agencies in the complaint settlement process. This has helped to settle complaints on time, with fewer errors. However, coordination among agencies involved in complaint settlement is still not good. Many cases that have complicated complaint content need a lot of time to verify, so it leads to not being resolved on time. Besides, some cases are too complicated to be resolved so far.

The land database factor group has an impact rate of 26.19% and occupies the second position in the groups of affecting factors. The land database is shown through the completeness and update of land use information and the degree of interoperability of land information between agencies involved in complaint settlement. The completeness and update of land use information in Bac Ninh city are good, as assessed by over 78% of the total respondents (Table 4), so determining the content of complaints about the origin land, land area, and landowner quite quickly. However, the land-use records related to some complaints are incomplete and not updated, so it takes more time to verify, and some cases are not resolved on time. Especially, the land information communication between agencies related to the settlement of land complaints is not good, so the process of reviewing and appraising the complaint content of each agency still takes a long time. This also partly increases the time to resolve complaints and takes more effort. As with Nguyen et al. (2018), having an up-to-date land database assists in settling land disputes quickly and efficiently.

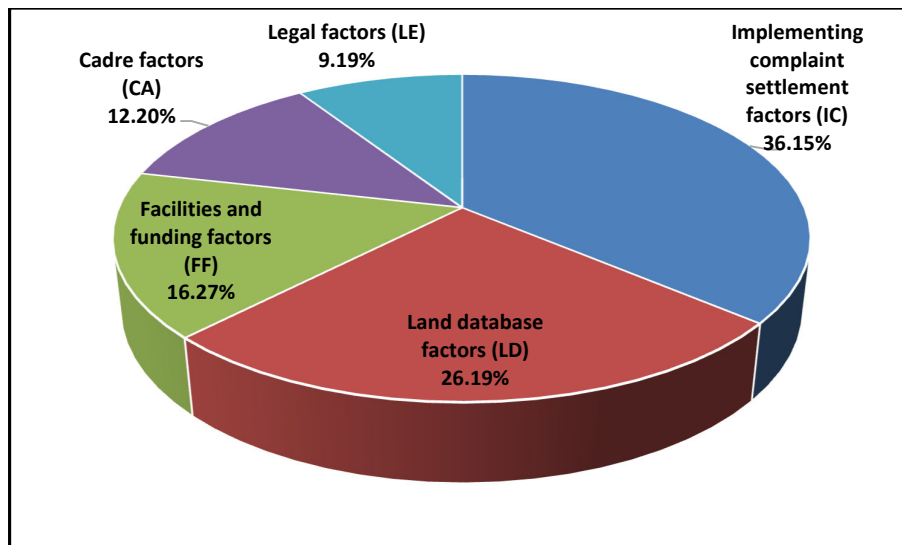


Fig. 5. Influence ratio of factor groups to the land complaint settlement in Bac Ninh city

In the same way as Nguyen (2013); Phan and Nguyen (2016) the group of factors of facilities and funds including facilities for receiving, processing, and notifying the results of complaint settlement and the funding for complaint settlement also has an impact. Its impact rate is 16.27% and occupies the third position. According to the assessment of 81.45% of the total survey respondents (Table 4), the facilities and funds, in general, have met the requirements to resolve the complaints, but the time and effort for settlement are still limited. especially when dealing with complex complaints. When the service fee for verification and verification of complaint contents in some cases is still insufficient, the complaint settlement time is long and affects the issuance of decisions on land acquisition, land allocation, and land lease. The staff factor group has the fourth most influence on complaint settlement with an impact rate of 12.20%. Specifically, the number of officers in charge of dealing with land complaints is lacking according to the assessment of 73.84% of the total survey respondents. In terms of staff quality, most of the staff have met the requirements, but a small percentage (according to 23.63% of the total survey respondents) have not met the quality requirements. As a result, there are errors when instructing people to provide evidence related to complaints or inadequate communication. This angers the complainant. In particular, some people carelessly handle their complaints improperly.

Legal factors include the time limit for complaint settlement, the complainant's understanding of the law, and law observance that affect complaint settlement, as well as Le's study (2017). Although its impact rate is the lowest (9.19%). According to the assessment of 86.59% of total interview respondents (Table 4), the time limit for complaint settlement as prescribed by law is short (no more than 30 days from the date of acceptance; for complicated cases, the time limit for settlement does not exceed 45 days from the date of acceptance). Most of the complainants have grasped the provisions of the land law and the law on complaints because they have been propagated and disseminated in the process of compensation, support, and resettlement

when the State acquires land according to the assessment of 79.42% of the total respondents. However, there are still many people who know the regulations and know the right decisions on compensation, support, and resettlement but still have complaints. Many cases have content of 100% false complaints such as complaints about the number of resettlement land plots allocated and support for resettlement land use levy (Table 3). To settle complaints when the State acquires land in Bac Ninh city on schedule, according to regulations, and completely, and to limit the number of second complaints or lawsuits to administrative courts, it is necessary to implement several recommendations. output according to the priority based on the influence of the factors. Specifically, it is necessary to strengthen the inspection and supervision of leaders at all levels during the complaint settlement process because it is a factor that has a strong impact on complaint settlement. Besides, it is also necessary to promote coordination in complaint settlement of relevant agencies such as natural resources and environment agencies, inspection agencies, tax authorities, and People's Committees at all levels.

To completely resolve land complaints, it is necessary to focus more on human, time, and financial resources as well as strengthen the direction of the leaders of the City People's Committee. To facilitate the verification of complaint content, it is necessary to complete the land database to ensure updating, accuracy, completeness, and communication among agencies involved in complaint settlement. At the same time, it is necessary to improve facilities and increase funding for complaint settlements. It is necessary to strengthen the application of information technology to receive and notify the results of complaint settlement via the internet and the direct form. This makes it possible for the complainant to file a complaint and receive the results of the complaint settlement anywhere, at any time at a lower cost, and more convenience. It is necessary to ensure enough that the service fee for verification and verification of the complaint content is sufficient, especially the cases with complicated content that require a lot of money for verification. To limit errors that may occur when handling complaints, it is necessary to foster and improve the professional qualifications, communication skills, and sense of duty of officials who have not met the requirements. Further, propaganda and dissemination of the law should be strengthened, especially to those who make deliberately incorrect complaints that waste the time and effort of complaint settlement agencies, and disturb the social order.

## 5. Conclusion

The land complaint settlement is affected by 17 factors belonging to 5 groups of factors. Different from previous studies, this study not only identifies the factors affecting the settlement of land complaints but also determines their impact rate. The impact rate of the groups is from 9.19% to 36.15%. The group of factors that carry out the complaint settlement work has the strongest impact; Land database factors have an impact rate of 26.19%; The factor of facilities and funds has an impact rate of 16.27%; The staff factor has an impact rate of 12.20%; Legal factors have an impact rate of 9.19%. For complaints to be settled on time, according to regulations, and definitively, it is necessary to implement synchronous solutions on the land database; facilities and funding; human resources, and the law on complaints. The results of the study on factors affecting the settlement of complaints when the State acquires land can be used as a reference when studying similar issues in other localities in Vietnam and around the world.

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