

Retraction

Retracted: Analysis of Farmer Relocation Selection Behavior Based on Bayesian Network

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

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- [1] S. Li and Y. Guo, "Analysis of Farmer Relocation Selection Behavior Based on Bayesian Network," *Journal of Function Spaces*, vol. 2022, Article ID 9155510, 8 pages, 2022.

Research Article

Analysis of Farmer Relocation Selection Behavior Based on Bayesian Network

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The study of farmers' migration choice behavior can reflect people's needs for the future living environment from the side and has practical and important guiding significance for adjusting and improving the focus of future development. In order to make a detailed analysis of the prediction of migrant workers' behavior in cities, this paper studies the internal mechanism of the change of commuters' commuting patterns under the background of urban suburbanization. Using Bayesian network, this paper establishes a model of commuting mode transfer of urban immigrants, taking personal and family attributes as control variables. The influence of factors such as migration attributes and changes in building environment perception before and after migration is analyzed. Based on the survey data, a Bayesian network of farmers' land use behavior is established by using Bayesian network method to investigate the choice of farmers' migration direction. In the research process of migration direction, the research structure shows that 60.1% of farmers want to stay in the countryside, rather than migrate through Bayesian network algorithm. The results of regression analysis by establishing a multivariate logistic model show that there is a strong willingness to choose small towns and large cities. However, the willingness to choose not to relocate to local villages is relatively weak.

1. Introduction

In recent years, with the development of inland economy, a shortage of migrant workers has appeared in many provinces and cities in China. Scholars have made various analyses on the causes of the phenomenon of "shortage of migrant workers." Due to the need of economic construction and development, rural cultivated land has been requisitioned by the government, and many farmers no longer engage in agricultural production in the primary industry, but turn to urban development with more employment opportunities. In recent years, the construction of new countryside has been getting better and better. Many farmers who go out to work have returned to the villages where they lived since childhood. What are the factors that affect their relocation? Farmers who come to cities and towns to work for a living are playing drums, fearing that they have no technical skills and can only serve as cheap labor in cities. The analysis

of China's investment in agriculture, rural areas, and farmers has certain significance, but it fails to fully understand the root of the problem of "shortage of migrant workers" [1]. If the services for migrant workers fail to keep up, the phenomenon of "labor shortage" will be difficult to eliminate, and the information service for migrant workers is even more important.

Through the present situation, we will fully understand the influence of the general characteristics of peasant groups and other factors on their willingness to move to cities and towns in the future. Based on the sample survey, this paper analyzes the current situation of migrant workers' information behavior through the field investigation of migrant workers. The emergency risk of mutual fund assistance of farmers' professional cooperatives is a brand-new research perspective. An empirical analysis of the risk of mutual fund emergencies is not only conducive to promoting the development of rural cooperative finance but also has important

research value and guiding significance for preventing the occurrence of mutual fund emergencies [2]. In the process of urbanization in China, farmers' willingness to move directly affects the process and direction of urbanization in China and is related to the speed, scale, and effect of urbanization. The formulation of various policies and measures in the process of urbanization must take into account farmers' own wishes and choices, especially farmers' willingness to choose their future living space [3], so that we can have a clearer understanding of farmers' preference for future living space and the motivation of their choice.

On the basis of the existing research literature, from the perspective of farmers' willingness to choose central villages, small towns, and big cities, this paper takes farmers' own demographic characteristics, economic and social characteristics, and resource endowment as explanatory variables and empirically analyzes the influence of these characteristic variables on their willingness to move [4] by adopting multiple models. The main research contents of farmers' information behavior measurement include information demand, information search channels, difficulties encountered in the process of obtaining information, motivation of obtaining information, information absorption and utilization, and information evaluation. The chi-square test is carried out to eliminate irrelevant variables, and then, SPSS Clementine 12 data mining software is used to compare the prediction effects of TAN, Markov, and Markov-FS three different Bayesian network models and select the best Bayesian network model for farmers' future relocation. The farmers' land decision-making model is established, and the related influencing factors are analyzed in detail [5]. Based on Bayesian network, this paper constructs the transfer model of the main commuting modes of the relocated people and analyzes the related attributes of relocation by probabilistic reasoning, as well as the influence of the built environment changes caused by relocation on the change of commuting modes.

The innovative contribution of this paper is to study the internal mechanism of the change of commuters' commuting patterns under the background of urban suburbanization. Using Bayesian network, this paper establishes a commuting mode transfer model for urban immigrants and takes personal and family attributes as control variables to analyze the effects of migration attributes and changes in building environment perception before and after migration. In this paper, Bayesian network model combines probability theory and graph theory and can systematically describe the complex correlation between random variables. The structure of the interdependence between variables is directly revealed in the language of graph theory. The Bayesian network of farmers' land use behavior is established by using Bayesian network method to investigate the choice of farmers' migration direction. In the research process of migration direction, the regression analysis results of establishing a multiple logistic model show that the willingness to choose small towns and big cities is strong, while the willingness to choose not to migrate to local villages is relatively weak. In the analysis of farmers' income, SPSS chi-square test is used to eliminate irrelevant variables, which greatly reduces the amount of calculation of data mining, and Bayesian network model is used to compare the predic-

tion effect with the actual data, which has a certain reference value for the study of migration selection.

This paper studies the internal mechanism of the change of commuter commuting mode under the background of urban suburbanization. The research is divided into five parts. The first part expounds the general characteristics of farmers and the influence background of other factors on their willingness to move to cities and towns in the future. The second part analyzes the land use behavior of farmers by analyzing the survey results or applying regression models from the perspective of economics and sociology. The third part expounds the related technologies of this paper, including introduction and formula of Bayesian network, Bayesian network inference algorithm, and overview of Bayesian network data integration application. The fourth part analyzes the data of farmers' migration. It includes the data structure model based on Bayesian network expression and farmer migration. Finally, the full text is summarized. In the analysis of farmers' income, SPSS chi-square test is used to eliminate irrelevant variables, which greatly reduces the amount of calculation of data mining, and Bayesian network model is used to compare the prediction effect with the actual data, which has a certain reference value for the study of migration selection.

2. Related Work

Due to the difference of land use patterns between the inside and outside the city, the mismatch between suburban residence and employment development, and the imperfect public transport infrastructure in the new peripheral areas, residents commuting after moving out of the city is becoming more and more motorized, and the traffic congestion in suburban corridors is becoming increasingly prominent. From the angle of economics and sociology, this paper studies the land use behavior of farmers by analyzing the survey results or applying regression models. From the microscopic perspective, the Bayesian network of farmers' land use is studied. Combined with the personal and family situation and the economic and social environment of the original place of residence, the value orientation of various relocation destinations is formed, and finally, the destination with the highest relocation value is selected as the final choice will.

Zhu and Fan think that the relationship between built environment and travel behavior is the theoretical basis to explain the change of commuting behavior of the relocated people [6]. Doguc and Ramirez-Marquez think that relocation is a cyclical event of life, and its related attributes will have a certain impact on commuters' travel [7]. Another scholar said that travel behavior is subject to peoples' subjective feelings about the built environment, and the change of subjective environment cognition will affect individual choices. Li et al. think that the relationship between data can only be described by correlation, not causality. For example, the height and weight of a normal person are related, but it cannot be speculated whether birth height affects weight or weight affects height [8]. Prospero et al. think it is feasible to infer causality from data and put forward probability and causal inference algorithm for the first time, which is now Bayesian network [9]. Scanagatta et al. use Bayesian network to build regulatory

networks of multiple genes [10]. Chouaib et al. think that although the appropriate tangent point can be found in this way, it increases the complexity of the model, and only a few discretization intervals can be obtained, thus making the data lose more information [11]. Tong et al. think that developing small towns is the only way for China's urbanization. We should attach great importance to the irreplaceable functions of small towns, and the strategic position of small towns will remain unchanged. It is believed that the widespread "urban diseases" in big cities at present cannot be used as a reason to stop urbanization [12]. Leng et al. think that farmers' choice of relocation has gone through the cognitive stage of the destination, the judgment stage of relocation value, and the formation stage of relocation choice will [13]. In this process, farmers first make a preliminary assessment of the natural and socio-economic environment of several target destinations based on their own knowledge and experience and then get the benefits and costs of relocation of several target destinations. Rizvi et al. think that the willingness to move is the result of comprehensive evaluation and comparison between residents' residence and target residence [14]. Belur et al. believe that the external behavior of human beings is based on the geographical environment, and the decision-making behavior made by people is the corresponding result of the perception and evaluation of the geographical environment [15]. Khan et al. believes that farmers' decision-making behavior of moving is the result of their perception and evaluation of the external environment such as rural areas, small towns, and big cities [16]. Hoogesterger and Rivara think that farmers run, economic crimes, death/escape/kidnapping of the head of the mutual aid society, natural disasters that cause the cooperative to fail to operate normally, abnormal computer network paralysis, mass petitions and demonstrations, and other cases that may cause great harm are the risks and unexpected risk events of mutual funds [17]. Nayak et al. think that whether to develop big cities, medium cities, small cities, or small towns should be mainly regulated by the market, and the government can only guide them [18]. Delcroix believes that the development direction of urbanization in China is the development of medium-sized cities in urban circle, and at the same time, the further development of medium-sized cities will form a new urban circle [19].

3. Related Technologies of This Paper

3.1. Brief Introduction and Formula of Bayesian Network. Bayesian network, also known as belief network, is an extension of Bayes method. A typical Bayesian network consists of directed acyclic graph (DAG) and conditional probability table (CPTs). Bayesian network is a combination of probability theory and graph theory. Bayesian network has attracted the attention of different research fields since it was put forward, and several classical networks have been generated. When using Bayesian network to solve problems, the set of variables whose values have been determined is called evidence D . The set of variables that need to be solved is called hypothesis X . Target intention recognition based on Bayesian network is to solve the hypothetical variables under the condition of given evidence (battlefield events that have occurred). During the initialization of Bayesian network, the target intention and

the confidence of battlefield events are given in advance. When a new battlefield event is detected, the influence of the event (evidence) on the target intention (hypothesis) can be updated by Bayesian backward propagation. Until the confidence of a hypothesis (node state) in the goal intention exceeds the preset threshold, the goal intention is determined to be true. Bayesian network reasoning is an event probability speculation based on the established network model, and the probability of the target event after an event occurs is calculated by conditional probability. Network edge deletion is as follows: on the basis of the previous network structure, check the conditional mutual information of each point pair in the edge set, and delete the points below the threshold. The expressions of mutual information $I(X, Y)$ and conditional mutual information $I(X, Y|C)$ of the point pair are, respectively,

$$I(X, Y) = \sum_{x,y} P(x, y) \log \frac{P(x, y)}{P(x)P(y)}, \quad (1)$$

$$I(X, Y|C) = \sum_{x,y,c} P(X, Y, C) \log \frac{P(x, y|c)}{P(x|c)P(y|c)}.$$

The probability change of node variables in the network will transfer information through conditional probability dependence and change the probability distribution of target variables. The specific calculation formula is

$$P(XU, e) = \lambda_e(X) \Theta_{x|u} \prod_i \pi_x(U_i) \prod_j \lambda_{y_j}(X), \quad (2)$$

$$P(U_i, e) = \sum_{xu \setminus \{u_i\}} \lambda_e(Y) \Theta_{x|u} \prod_{k \neq i} (U_k) \prod_j \lambda_{y_j}(X), \quad (3)$$

where Y is the child node set of X and $\pi_X(U)$ represents the information passed to U by the parent node set X . $\lambda_Y(X)$ is the information transmitted from X to Y ; $\lambda_e(X)$ is an indicator for evidence; if X is entered in the e variable, the indicator is 1; otherwise, it is 0; $P(XU)$.

Union tree algorithm includes the Hugin algorithm and Shafer-Shenoy algorithm. When the network structure DAG and the node parameter set CPTs are determined, the network can be applied to practical cases to prepare for subsequent probabilistic reasoning. At present, a variety of structure learning algorithms have been developed, including the famous PC, K2, TAN, and EM. Some of these algorithms can learn the structure of the reference network under certain conditions. Some algorithms give up the original intention of constructing benchmark network and turn to the development of Bayesian classifier, such as TAN algorithm, whose Bayesian classifier is called TANC.

3.2. Bayesian Network Reasoning Algorithm. Network reasoning is based on a given Bayesian network. According to the conditional probability formula in Bayesian probability, the values of other nodes are deduced from the known values of any one or more nodes in the network. Data discretization refers to the process of breaking up continuous data into discrete data. This is not only the research hotspot of Bayesian network but also the research hotspot of the whole machine

learning field. Data discretization refers to segmenting continuous data into discrete intervals. The principle of segmentation is based on equal distance, equal frequency, or optimization methods. Data discretization is mainly performed on continuous data. After processing, the data value range distribution will be changed from continuous attributes to discrete attributes. This attribute usually contains two or more value ranges. It has been proved that data discretization is a NP problem. At present, a variety of data discretization algorithms are proposed, which are divided into two categories according to supervised discretization algorithm and unsupervised discretization algorithm [20]. Unsupervised discretization algorithms do not consider class attribute information, mainly including equidistance, equifrequency, and discretization algorithms based on kernel density estimation.

The process of reasoning posterior probability problem, maximum posterior hypothesis problem, and maximum possible explanation problem with network structure and prior probability belongs to NP problem. The network with simple structure adopts accurate reasoning algorithm, including joint tree (cluster tree) reasoning algorithm, symbolic reasoning, and elimination reasoning. Approximate reasoning algorithms are used for complex networks, including random sampling and circular message delivery.

Network reasoning includes four reasoning algorithms:

- (1) Variable elimination algorithm: its principle comes from the research of dynamic programming with indefinite order, which simplifies the reasoning calculation process by using the decomposition of joint distribution. This algorithm decomposes the joint probability into a series of parameterized conditional probability products through chain product rules and conditional independence and then transforms the formula. By changing the order of summation and product operations, it selects the elimination order of nodes during summation, thus reducing the computational complexity. The advantages of this algorithm lie in its universality and simplicity, and it can solve multiconnectivity, etc.
- (2) Junction tree algorithm: this algorithm can not only solve the reasoning in single connected network but also complete the reasoning calculation in multiconnected network, especially when there are multiple query nodes in the network. In the reasoning process, the message will spread to each node of the junction tree in turn and finally make the junction tree meet the global consistency. At this point, the potential function of a cluster node is the joint distribution function of all variables contained in that node [21]
- (3) Monte Carlo algorithm: Monte Carlo algorithm, also known as random sampling algorithm, is a kind of approximate calculation method widely used in numerical integration and statistical physics. Monte Carlo algorithm can be divided into two categories, namely, importance sampling algorithm and Markov chain Monte Carlo algorithm. Their main difference is that

the samples produced by the former are independent of each other, while those produced by the latter are interrelated

- (4) Approximate reasoning algorithm based on variational method: the basic idea of variational method is to transform the probabilistic reasoning problem into a variational optimization problem through variational transformation. Commonly used algorithms are naive mean field algorithm and circular propagation algorithm

The concept of the Shafer-Shenoy algorithm is simple and easy to understand, but because the Hugin algorithm avoids redundant computation, we mainly use the Hugin algorithm to build joint tree in reasoning process. Union tree algorithm is one of the most commonly used accurate reasoning algorithms, and it is also the basis of all accurate reasoning algorithms engines in BNT, as shown in Figure 1.

- (1) Establish a Moral graph, connect the parent nodes of the same node pairwise, and change the directed edge to the undirected edge
- (2) Triangulate the Moral graph and connect the nonadjacent nodes in the Moral graph with the least number of edges greater than 3
- (3) Identify all regiments
- (4) Establish joint tree: ellipse represents nodes, and rectangle is a set of divided nodes

According to the sequence of Bayesian network establishment, data preprocessing, structure learning algorithm, grading function, classification test method, and network reasoning are five parts, which provide suggestions for the subsequent use of Bayesian network to build a model.

The theoretical basis is provided as shown in Figures 2 and 3.

The BNT of MATLAB has given 13 mature structure learning algorithms. Except that the PC algorithm may produce a loop in the structure learning and cannot build a network, other algorithms can reasonably and effectively build a network structure. At the same time, the improved algorithms TAN_EM and MWST_EM are also used to build the network. Joint reasoning is the most commonly used reasoning algorithm in the learning process, also known as cluster tree propagation algorithm. It is the basis of accurate reasoning, with high computational efficiency and more accurate results. According to the sequence of building Bayesian network structure, this paper mainly introduces the data improvement, structure learning algorithm, scoring function, classification test, and reasoning of the network.

3.3. Summary of Data Integration Application of Bayesian Network. In terms of application, Bayesian network has been used in many fields. For example, the Bayesian network used in the revision function of Google search development; Microsoft developed MSBN software based on Bayesian network. And the medical diagnosis system was developed by

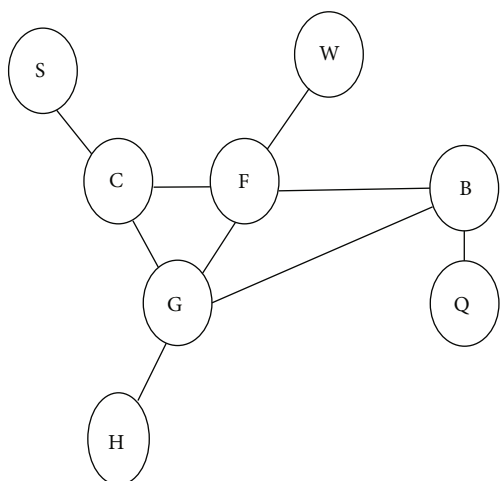


FIGURE 1: Triangulated Moral diagram.

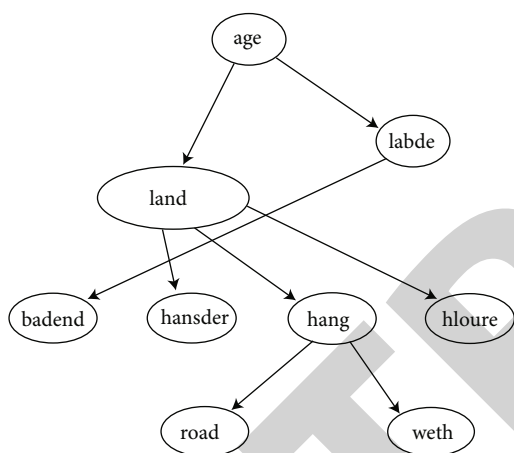


FIGURE 2: HC algorithm.

foreign countries based on Bayesian network. Besides medicine, Bayesian network is widely used in system diagnosis, pattern recognition, military simulation, and other fields.

However, there is still little research on the application of Bayesian network in farmers' migration choice and utilization decision. Although expert knowledge and experience can be used to establish the network structure, its modeling cycle is long, and it will consume a lot of financial resources and manpower. Therefore, it is not mature to apply Bayesian network model to farmers' land use decision. In addition to relying on the knowledge and experience of experts, we can also use the structure learning algorithm to build a network structure of experimental data and evaluate it. At present, R, Weka, SPSS, MATLAB, and other software have developed Bayesian network toolboxes, and the toolboxes developed will be different with different software. Modeling like Weka has low flexibility. Therefore, before establishing Bayesian network, we should choose the appropriate modeling software.

Bayesian network develops rapidly in LUCC field, but the total number of literatures is still small. According to statistics, during 1990-2010, but during 2000-2012, the number

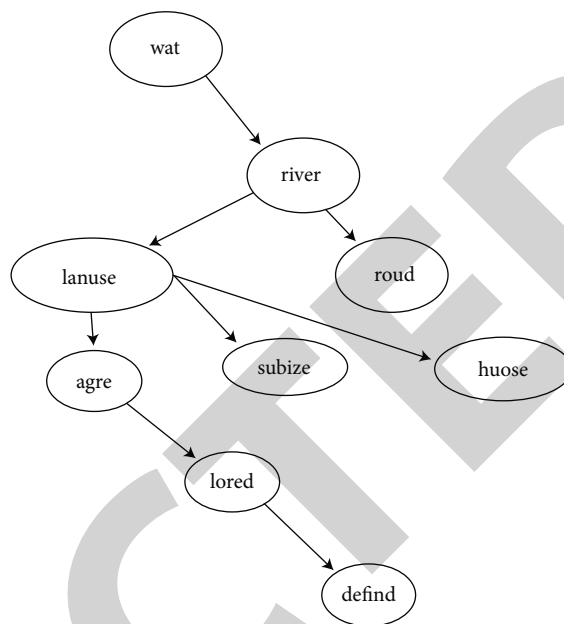


FIGURE 3: MW algorithm.

of foreign literature related to Bayesian network in ecological compensation and land use increased dramatically.

However, the application of Bayesian network in LUCC also has a lot of problems mentioned above, especially in data preprocessing and structure learning. However, there are also a few exemplary papers. For example, the Bayesian network incorporating the characteristics of land managers was established in Aalders, and even random distribution can be used to better predict the land use. It is concluded that the elderly farmers are likely to face no successors and the land use will be nonagricultural.

4. Analysis of Farmers' Migration Data

4.1. Expression and Analysis Based on Bayesian Network. With the increase of the number of variables involved in the network, the corresponding reasoning process becomes more and more lengthy and complicated. Therefore, the Bayesian network, which uses the belief propagation algorithm to improve the reasoning efficiency, is the product of the combination of graph theory and probability theory. The Bayesian formula (4) composed of structure and parameters is the foundation of the whole network.

$$P(A|B) = \frac{P(A|B) \cdot P(A)}{P(B)}. \tag{4}$$

Test the following determinants of logistics willingness to move: (1) small towns versus central villages, (2) large cities versus central villages, and (3) large cities versus small towns; so the following two logistic model formulas are established by taking choices 1 and 2 as reference classes:

$$\text{Ln}\left(\frac{p_2}{p_1}\right) = \alpha_2 + \sum_{k=1}^k \beta_{2k} x_k, \quad (5)$$

$$\text{Ln}\left(\frac{p_3}{p_1}\right) = \alpha_3 + \sum_{k=1}^k \beta_{3k} x_k. \quad (6)$$

The realization of scoring function based on information theory is based on coding theory and MDL principle. According to the principle of MDL, the structure learning of Bayesian network is to find the graph model with the shortest description length, which means that MDL scoring rules often find a simpler structure to balance the accuracy and complexity of the network. Generally, the penalty function of network complexity is usually expressed by the number of parameters.

4.2. Data Structure Model of Peasant Migration. Farmers' migration is an inevitable requirement for economic and social development to enter a new stage. Institutional changes such as identity change should be included in the scope of urban security to ensure the long-term livelihood of landless farmers. On the basis of previous studies, this paper attempts to use the data structure model of land lost farmers' migration decision and farmers' migration. This paper discusses the characteristics and mechanism of land lost farmers' migration, in order to provide reference for the migration model of land lost farmers. According to the migration direction p1, p2, and p3 of farmers, the probability of choosing rural areas, small towns, and large cities is expressed, respectively, by constructing an income chart and comparing the prediction accuracy of nodes. Compare the prediction accuracy of the models, as shown in Figure 4.

The frequency of data analysis with SPSS 19.0 software is shown in Table 1.

Among them, 60.1% of migrant workers chose to return to their hometowns, and 38.8% of migrant workers chose to stay in urban development.

Measuring the degree of influence of various factors on the transfer of two types of commuting modes, the inference analysis curve of the established network using the confidence propagation algorithm is composed of the sensitivity and specificity of the multiple critical values of a series of variables, the vertical axis TPR indicates the probability that the real value is positive and the prediction is positive, and the horizontal axis FFR indicates the probability that the actual value is negative and is predicted to be positive. When the ROC curve is closer to the coordinates in the upper left. The three categories of the class node "land use" are discussed separately and need to be evaluated by calculating the P, R, and I score F metrics. According to the confusion matrix obtained by the classification test, these indicators are calculated separately, as shown in Figure 5.

Network reasoning is often used to verify the practicability of the model. The network parameters are updated by parameter learning, and the results are random. After many times of learning, the results tend to mean distribution. Therefore, based on the survey data and network structure, the prior probability distribution of each node is set. In the network constructed by MWST+T+K2 algorithm, the classi-

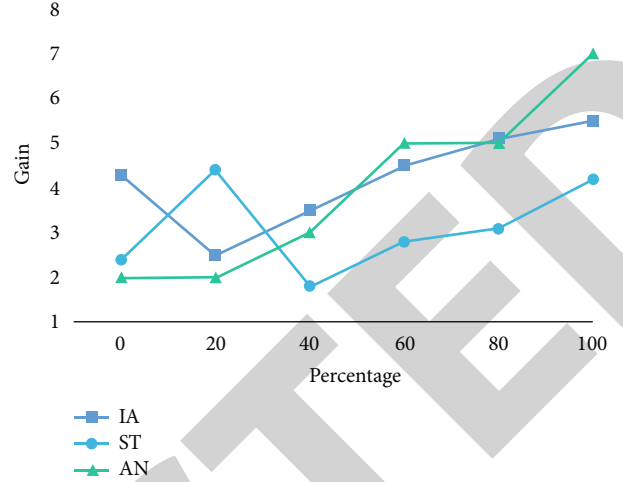


FIGURE 4: Income chart of three Bayesian network models.

fication level of MWST and MWST+T+K2 classifiers is the same under CV-5 test, and the classification accuracy is higher than that of NBC and TANC at the same time, and the best results are obtained.

In the research process, combined with the idea of software reuse in SoftMaker 8 project, we make full use of the historical risk data in the software project development process to build a risk historical database, realize the organic combination of historical knowledge and cases with current project risks, facilitate the improvement of Bayesian network reasoning data, and effectively improve the effect of risk management. MWST+T+K2 and GES networks have certain advantages in the four scores. The four scores of GES network are high, but the MWST+T+K2 network has more obvious advantages because of its long running time, high algorithm complexity, and inconsistent network structure with the research needs. At the same time, GES and MWST+T+K2 algorithms are used to process large data sets. Comparing their time consumption, it is found that GES takes a long time, which is not conducive to practical research. In addition, observing the MWST+T+K2 network, it is found that the relationship between the structural nodes is consistent with the objective facts, and it can be inferred that MWST+T+K2 network can be used as Bayesian classifier from the opposite causality in the network.

The similar node "land use" of MWST+T+K2 network has three states, namely, farmers' choose orchard planting, shed planting, and land idle, and its subnodes are labor and subsidy. Among them, the node "labor" has three values, indicating that the number of labor force of farmers is "less," "average," and "more." The four numerical values of "subsidy" are represented as "no subsidy," "small subsidy," "medium subsidy," and "large subsidy" in turn.

Figure 6 shows the land use reasoning data analysis chart. The research variable is the commuting mode after moving. When analyzing the sensitivity of the attributes of moving and the changes of built environment, the research takes the individual family attributes as the control variable and infers the influence of the changes of these two attributes on the changes of different commuting modes. For

TABLE 1: Analysis of whether farmers will stay in urban development in the future.

	Frequency	Percent	Valid percent	Cumulative percent
Valid	Not	1756.9	60.1	60.1
	Yes	1146.1	38.8	99.8
Total		2929.8	99.8	99.8

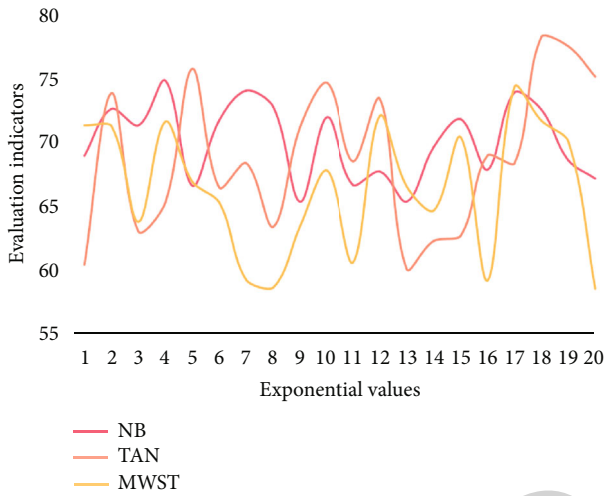


FIGURE 5: MW+T+K2 network evaluation index.

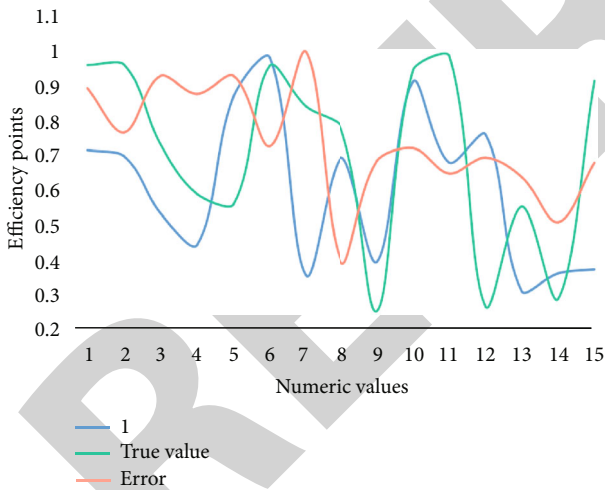


FIGURE 6: Land use reasoning data analysis diagram.

the transfer of non motorized migrants to public transport, in addition to family attributes such as family cars, car purchases and personal income, the change of commuter distance after relocation, of which transportation convenience is the main factor. Commuting distance is the main factor for nonmotorized commuting to bus commuting after relocation; that is, when commuting distance exceeds the service range of slow traffic, the possibility of commuters using bus after relocation will increase significantly Figure 7.

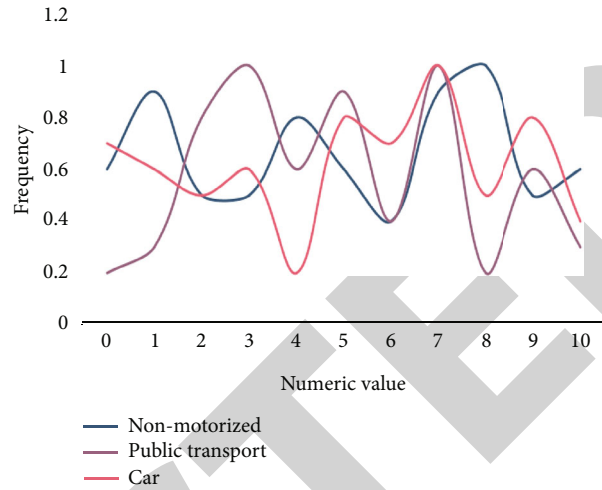


FIGURE 7: Farmers' migration travel mode.

Based on the research of MWST+T+K2 network, HC-K2 algorithm is put forward based on experience and experimental results, and a new Bayesian network-HC-K2 network for farmers' land use decision is established. At the same time, by comparing TANC, HC-K2, and MWST+T+K2, the classification accuracy of HC-K2 is higher than that of MWST+T+K2, which improves the classification problems of MWST+T+K2. According to the above data and model analysis, the choice of farmers' migration direction is reflected from the side.

5. Conclusions

This paper studies the internal mechanism of the change of commuters commuting style in the background of urban suburbanization, builds a model of urban migrants commuting style transfer by using Bayesian network, analyzes the influence of factors such as migration attributes and perceived changes of built environment before and after migration with personal family attributes as control variables, and establishes a Bayesian network of farmers' land use behavior by using Bayesian network method and based on survey data, so as to investigate and study farmers' choice of migration direction. In the research process of migration direction, the regression analysis results by establishing multiple logistic model show that the willingness to choose small towns and big cities is stronger, while the willingness to choose not to migrate to live in local villages is relatively weaker. The larger the construction area of rural housing is, the higher the willingness to move to smaller towns and not to move. Farmers who participate in the new rural cooperative medical insurance and whose houses have obtained the real estate license are more willing to move to larger cities. In the analysis of farmers' income, SPSS chi-square test is used to eliminate irrelevant variables, which greatly reduces the calculation amount of data mining, and Bayesian network model is used to compare the prediction effect with the actual data, which has certain references for the study of migration selection.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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