

Tax evasion detection using data mining

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Convictions are strong that the current traditional methods cannot obviate the needs of country's tax. Therefore, the necessity of applying new smart techniques that can handle this huge amount of data in a very short time with high precision is felt. Prime reasons for the mentioned necessity are increasing the volume of data and the speed of their production in the country's tax system and the limitation of audit experts and, on the other hand, being limited the timing of the tax declarations in terms of accuracy. Therefore, data mining and modeling methods can be used to identify suspected tax evasion statements and then refer them to expert experts. As a result, only declarations that do not follow a specific pattern will be given to experts, which will reduce the workload of the experts and it causes suspicious cases to be dealt with more and more attention and care. In this research, 617 companies' declarations have been considered in terms of accuracy. Data are divided into training and experimental categories. The fuzzy clustering technique has been used to divide corporate declarations into two types of suspicious and normal. Suspicious declarations are statements that are likely to occur in tax evasion. In the next step, the two created clusters will be divided by support vendor machines to create a behavioral model for them. This procedure is repeated five times, and then an average of five repetitions is presented. At the end of the performance, the created model will be evaluated by using experimental data.

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