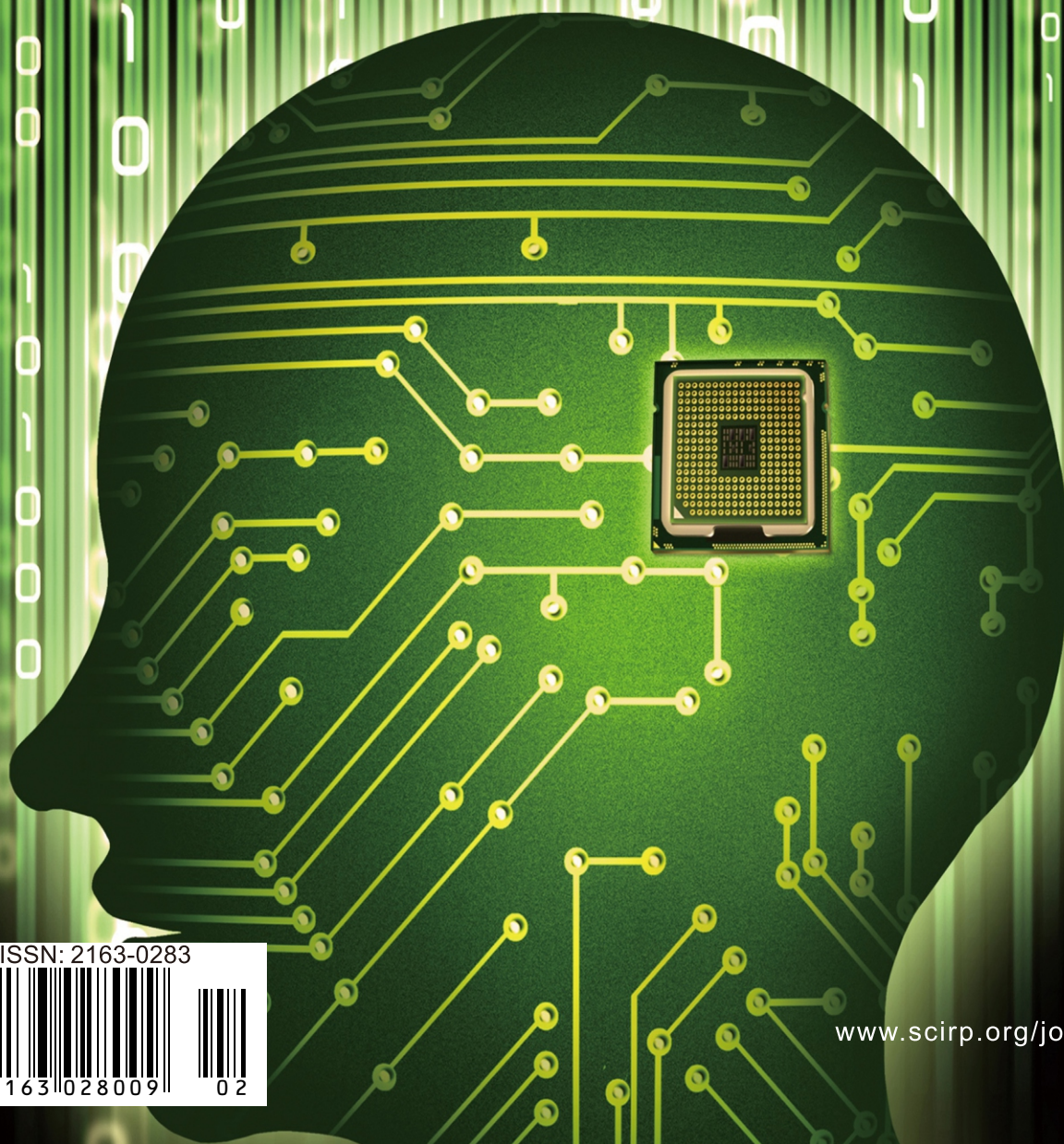


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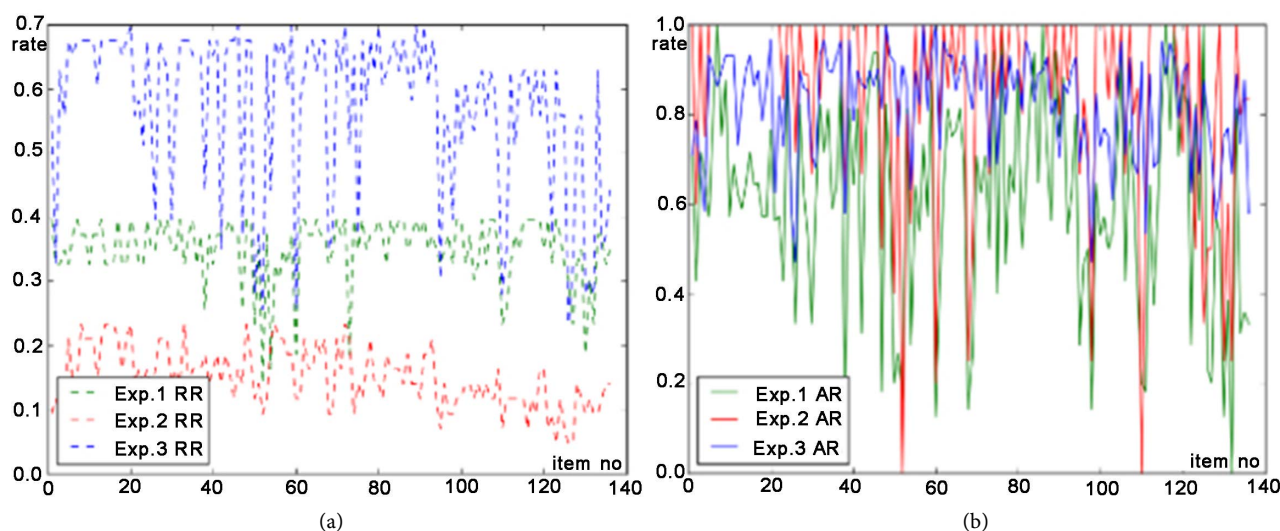
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**Figure 11.** *RR* and *AR* of Exp.1, Exp.2 and Exp.3.

**Table 12.** indexes of three experiments.

<i>No</i>	<i>rr</i>	<i>DC(rr)</i>	<i>ar</i>	<i>DC(ar)</i>	<i>F</i>
<i>Exp.1</i>	34.97%	<b>0.15</b>	61.21%	0.38	0.43
<i>Exp.2</i>	14.93%	0.31	<b>85.95%</b>	0.26	0.25
<i>Exp.3</i>	<b>57.23%</b>	0.22	82.42%	<b>0.14</b>	<b>0.67</b>

As **Table 12** shows, the *rr* of Exp.3 is higher than Exp.1 and Exp.2 while the *rr* stability of Exp.3 is between others; the *ar* stability of Exp.3 is higher than Exp.1 and Exp.2 while the *ar* is between others. Generally, the *F* value of Exp.3 is much higher than Exp.1 and Exp.2.

## 6. Conclusions

This paper proposes a method for optimize the elderly evaluation model with the rough set theory. The method proposed in this paper is tested in the Lime Family Company. Real-life result shows that the method can reduce more than 40% items with over 90% accuracy prediction rate. Compared with commonly used methods in industry, our method has good performance on both reduction rate and accuracy. For example, compared with decision tree, our method has the same reduction rate performance and 20% improvement on average in accuracy. Compared with expert knowledge based methods, our method has the same accuracy performance and can reduce more than 30% items of evaluation. Our method helps to promote the efficiency of the evaluation process.

Future work includes analyzing the impact of parameter settings on the evaluation results, investigating the different importance among items, and validating with data from more companies.

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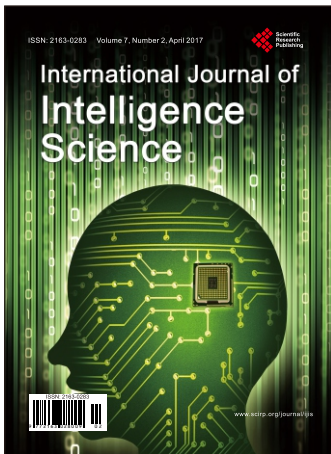


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