Electoral Incentives and Porks: Exploring Parliamentary Questions Using Convolutional Neural Networks

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In this paper, we quantitatively investigate legislators' electoral strategies and communication style by applying a deep learning model for measuring pork-barrel features on the parliamentary questions. To incorporate this application into our analysis, we have trained a convolutional neural network with TensorFlow 2.6 on the human-labelled pork-barrel legislation, including the bills and the amendments from Taiwan Legislative Yuan. The collection of legislation was manually labelled with binary-instance classification by reading the text, devoted either to promoting the pork-barrel project in a district (earmarked projects) or cultivating favoured minorities by providing subsidies. In the context of the text classification task, the trained model essentially learns the condensed features of bag-of-words instead of learning the pattern from the entire corpus. With the pork-barrel style features measured by the model, we find that legislators under SNTV (single non-transferable voting) are likely to express political intension with regards to pork barrel projects in the parliamentary questions and seek personal votes by promising particularistic benefits to their targeted supporters. Consistent with the literature, switching from SNTV to Single-Member Districts reduces legislators' incentives to propose particularistic benefits but increases the attention to universalism (national) policies.

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