

## GAKUSHUIN UNIVERSITY FACULTY OF ECONOMICS

1-5-1 Mejiro, Toshima-ku Tokyo, 171-8588, Japan telephone: +81 3-5992-3075 shinsuke.kambe@gakushuin.ac.jp

October 22, 2019

I am writing this letter as the evaluation of Mr. Hongcheng Li's ability and qualification for the admission to a PhD program based on his research. I am a professor of Economics at Gakushuin University in Japan. I recently published an article<sup>1</sup> at Theoretical Economics and Mr. Li contacted me and requested comments on his research. His research is very much related to my published work and since then we have been exchanging emails though we have never met.

The following is the evaluation of the August, 2019 version of Hongcheng Li (2019), "Does Ex-Ante Asymmetry Matter? A Modeling of Multi-Player Asymmetric War of Attrition", mimeo.

This paper studies the provision of a public good through a multi-person war of attrition. The new element of the model is the possibility of the types who are not willing to provide it in any circumstance. Because of the incomplete information about types, the equilibrium becomes unique.

Theoretically speaking, we can regard this work as the combination of Ponsati and Sakovics (1995)<sup>2</sup>, and Kambe (2019) mentioned above. It extends Ponsati and Sakovics (1995) to an N-person game and it extends Kambe (2019) into the continuous type space. As far as I know, this is a new model. He characterizes its equilibrium and shows its uniqueness. Due to the complex interaction among players and the dynamic nature, the analysis is technically demanding. Thus, his findings make a proper contribution. Building on the results of the above two papers, he made further analyses on various properties including welfare. I am sure that, when the research is completed under appropriate supervision, this will make a fine chapter of a dissertation.

When I got his first draft, the analysis was already well advanced. After I made comments on the draft, he made several revisions at such a frequency that I was not able to keep up with. Based on his mathematical ability and his devotion to research both demonstrated in his work and during our contact, I believe that he is well qualified to be admitted to any PhD program.

Please feel free to contact me if you have any question about my evaluation.

Sincerely,

Shinsuke Kambe<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> Shinsuke Kambe (2019), An N-person war of attrition with the possibility of a noncompromising type, Theoretical Economics, 14, 849–886.

<sup>&</sup>lt;sup>2</sup> Ponsati, Clara and József Sákovics (1995), "The War of Attrition with Incomplete Information," Mathematical Social Sciences, 29, 239-254.

<sup>&</sup>lt;sup>3</sup> PhD in Business from Stanford University, 1993. A junior research fellow at Nuffield College, Oxford from 1993 to 1995. Faculty of Economics, Gakushuin University from 1995 to present.