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研究課題名(和文) Superstar Firms and Market Power: Welfare Consequences and Antitrust Implications
研究課題名(英文) Superstar Firms and Market Power: Welfare Consequences and Antitrust Implications
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研究成果の概要(和文)：1. 雑誌論文(計3件)："Competition among Large and Heterogeneous Small Firms," Economics Letters, 2020; ディスカッションペーパー(計1件)："Horizontal Merger Analysis with Endogenous Product Range Choice," ISER Discussion Paper No. 1162, 2022.
2. 国際会議の口頭発表(計4件)

研究成果の学術的意義や社会的意義

Despite abundant empirical evidence, we are lacking in a comprehensive study on the market with superstar and small firms. I established a theoretical framework with firm heterogeneity and examined the impact of merger among superstar firms, which provided implications on antitrust policies.

研究成果の概要(英文)：1. I have published three papers in refereed journals. (1) The paper entitled "An Assignment Model with Local Constraints: Competitive Equilibrium and Ascending Auction" was published in Economics Letters in 2020; (2) The paper entitled "Competition among Large and Heterogeneous Small Firms" was published in Economics Letters in 2020; (3) The paper entitled "The Broker-Optimal Bilateral Trading Mechanisms with Linear Contracts" was published in Economics Letters in 2021.
2. I have published a discussion paper: "Horizontal Merger Analysis with Endogenous Product Range Choice," ISER Discussion Paper No. 1162, 2022.
3. Oral presentation in international conferences and workshops: (1) European Summer Meeting of Econometric Society, 2019, 8; (2) European Association of Research in Industrial Economics, 2019.8; (3) Asia-Pacific Industrial Organisation Conference, 2019.12, Tokyo, Japan; (4) European Summer Meeting of Econometric Society, 2021, 8.

研究分野：Industrial organization

キーワード：Market structure Superstar firms Firm heterogeneity Merger

1 . 研究開始当初の背景

Empirical evidence points to the increasing dominance of extraordinarily successful firms, which we call the “superstar” firms. Autor et al. (2017) identify a rise in sales concentration to superstar firms in most of the U.S. industries. As also shown in Figure 1, in OECD countries, the superstar firms at the frontier have been pulling ahead from the rest in productivity in both manufacturing and services industries (Mcgowan et al., 2015).

Superstar firms share the following characteristics. (i) Superstar firms are dominant, and their strategic behavior imposes a significant market impact. (ii) A superstar firm supplies a wide range of varieties, and is able to adjust its product range. (iii) Superstar firms are generally more productive, and their profitability generates a non-negligible impact on consumer income.

Occupying a large market share, superstar firms play a central role and enjoy substantial market power. How can we characterize the superstar firms and differentiate them from the other firms? How do the strategies of superstar firms interact with the behavior of small competitors? How would merger and entry change the market power of superstar firms and how would consumers be affected?

Existing literature largely assumes that firms share similar sizes and strategic behavior, such as models on oligopoly and monopolistic competition. However, recent empirical evidence reveals that most industries demonstrate high skewness in the distribution of firm size, that is, a few superstar firms and a host of small competitors. The high asymmetry between superstar firms and the rest in size indicates the sharp difference in their strategic behavior, which most of existing theories neglect.

2 . 研究の目的

Traditional oligopoly and monopolistic competition models have several disadvantages in highlighting the role of superstar firms; while the recent theories on “superstar” firms are still primitive with special functional forms. In addition, existing research on the antitrust issues has not examined the role of superstar firms. These research gaps call for a tractable and comprehensive framework to characterize the behavior of superstar firms, test the generality of existing findings, and examine the impact on different economic policies.

This project aims at establishing a general theoretical framework to characterize the behavior of superstar firms, based on which we investigate trade liberalization and horizontal mergers.

3 . 研究の方法

I apply game theory and the general equilibrium framework. In particular, I adopt the aggregative games approach to establish a generalized framework and work out the results that are robust across different classes of utility functions.

4 . 研究成果

My research achievements are as follows.

4.1 I have published three papers in refereed journals.

(1) The paper entitled "An Assignment Model with Local Constraints: Competitive Equilibrium and Ascending Auction" was published in *Economics Letters* in 2020.

In this work, we consider an assignment model where each agent has unit-demand quasi-linear preferences and may face some local constraint, i.e., her possible assignment is restricted to a subset of items. We show that local constraints may lead to the non-existence of competitive equilibrium (CE), and provide a sufficient and necessary condition that ensures its existence.

(2) The paper entitled "Competition among Large and Heterogeneous Small Firms" was published in *Economics Letters* in 2020.

In this work, we examine the competition among superstar and small firms that are heterogeneous in technology. We propose a novel necessary and sufficient condition for the existence of such a mixed market structure. Furthermore, we show that in the presence of cost heterogeneity among small firms, trade liberalization may raise or reduce the mass of small firms in operation.

(3) The paper entitled "The Broker-Optimal Bilateral Trading Mechanisms with Linear Contracts" was published in *Economics Letters* in 2021.

In this work, we introduce a linear contract to the bilateral trading model with a broker in Myerson and Satterthwaite (Section 5, 1983). Among all the incentive-compatible and individually rational direct bilateral trading mechanisms, we provide a characterization of the broker-optimal direct bilateral trading mechanisms when the buyer makes a non-negative cash payment. In the optimal mechanism, the buyer makes zero cash payment, and shares equity with the seller. This mechanism enables the broker to gain higher profits than that in Myerson and Satterthwaite (1983).

4.2 I have published a discussion paper: "Horizontal Merger Analysis with Endogenous Product Range Choice," ISER Discussion Paper No. 1162, 2022.

In this work, we consider mergers between multi-product superstar firms in a market with a monopolistically competitive fringe of single-product firms. Aggregate product variety is determined by endogenous product variety choices of multi-product firms and entry/exit decisions of single-product firms. We show that mergers with sufficiently high marginal cost synergies harm consumer welfare, despite causing an increase in aggregate variety, if and only if multi-product firms have a fixed cost advantage. However, mergers with sufficiently high fixed cost synergies always hurt consumer welfare. Our results imply that mergers which generate high synergies or an increase in aggregate variety do not necessarily improve consumer welfare.

4.3 I and my coauthor gave oral presentation in international conferences and workshops:

(1) European Summer Meeting of Econometric Society, 2019, 8;

- (2) European Association of Research in Industrial Economics, 2019.8;
- (3) Asia-Pacific Industrial Organisation Conference, 2019.12, Tokyo, Japan;
- (4) International Industrial Organization Conference, 2021, 3, online;
- (5) European Association of Research in Industrial Economics, 2021.8, online;
- (6) Asia-Pacific Industrial Organisation Conference, 2022.12, Melbourne, Australia.

5. 主な発表論文等

〔雑誌論文〕 計3件（うち査読付論文 3件／うち国際共著 2件／うちオープンアクセス 0件）

1. 著者名 Lijun Pan, Dazhong Wang	4. 巻 208
2. 論文標題 The broker-optimal bilateral trading mechanisms with linear contracts	5. 発行年 2021年
3. 雑誌名 Economics Letters	6. 最初と最後の頁 1-6
掲載論文のDOI（デジタルオブジェクト識別子） 10.1016/j.econlet.2021.110055	査読の有無 有
オープンアクセス オープンアクセスではない、又はオープンアクセスが困難	国際共著 該当する

1. 著者名 Lijun Pan, Yongjin Wang	4. 巻 196
2. 論文標題 Competition among large and heterogeneous small firms	5. 発行年 2020年
3. 雑誌名 Economics Letters	6. 最初と最後の頁 1-6
掲載論文のDOI（デジタルオブジェクト識別子） 10.1016/j.econlet.2020.109604	査読の有無 有
オープンアクセス オープンアクセスではない、又はオープンアクセスが困難	国際共著 該当する

1. 著者名 Lijun Pan; Linyu Peng; Yu Zhou	4. 巻 108905
2. 論文標題 An assignment model with local constraints: Competitive equilibrium and ascending auction	5. 発行年 2020年
3. 雑誌名 Economics Letters	6. 最初と最後の頁 1-4
掲載論文のDOI（デジタルオブジェクト識別子） 10.1016/j.econlet.2019.108905	査読の有無 有
オープンアクセス オープンアクセスではない、又はオープンアクセスが困難	国際共著 -

〔学会発表〕 計6件（うち招待講演 0件／うち国際学会 6件）

1. 発表者名 Nisvan Erkal
2. 発表標題 Horizontal Merger Analysis with Endogenous Product Range Choice
3. 学会等名 Asia Pacific Industrial Organisation Conference（国際学会）
4. 発表年 2022年

1. 発表者名 Lijun Pan
2. 発表標題 Endogenous Market Structures with Strategic Inattention
3. 学会等名 The European Association for Research in Industrial Economics (国際学会)
4. 発表年 2021年

1. 発表者名 Nisvan Erkal
2. 発表標題 Horizontal Merger Analysis with Endogenous Product Range Choice
3. 学会等名 International Industrial Organization Conference (IIOC) (国際学会)
4. 発表年 2021年

1. 発表者名 Lijun Pan
2. 発表標題 Horizontal merger analysis with endogenous product range choice
3. 学会等名 European Economic Association (EEA) 2019 (国際学会)
4. 発表年 2019年

1. 発表者名 Lijun Pan
2. 発表標題 Horizontal merger analysis with endogenous product range choice
3. 学会等名 European Association for Research in Industrial Economics (EARIE) 2019 (国際学会)
4. 発表年 2019年

1. 発表者名 Lijun Pan
2. 発表標題 Horizontal merger analysis with endogenous product range choice
3. 学会等名 Asia Pacific Industrial Organisation Conference (国際学会)
4. 発表年 2019年

〔図書〕 計0件

〔産業財産権〕

〔その他〕

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6. 研究組織

氏名 (ローマ字氏名) (研究者番号)	所属研究機関・部局・職 (機関番号)	備考
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7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関
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