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研究課題名（和文）Export registration in the automobile industry: Effects on manufacturer-intermediary match efficiency

研究課題名（英文）Export registration in the automobile industry: Effects on manufacturer-intermediary match efficiency

研究代表者

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研究成果の概要（和文）：2007年、中国は自動車生産者に最大3つの貿易仲介業者を通じて流通し、その仲介業者を登録簿に記載することを要求する政策を実施した。本研究では、自動車メーカーと仲介業者とのマッチングを説明するモデルを構築する。規制により市場の分裂が内生的に発生することを示している。それは、マッチングと二重マージナリゼーションの非効率性を生み出す。モデルの予測は、仲介業者数の大幅な減少、仲介業者の輸出価格の上昇、自動車メーカーが登録した仲介業者数の大幅な変動など、いくつかの定型化された事実と合致している。総利益の観点からの福祉分析によると、この規制は自動車メーカーに有利であるが、仲介業者の状況を悪化させている。

研究成果の学術的意義や社会的意義

This paper takes advantage of the automaker-intermediary matching data to provide evidence on the economics underlying the linkages among domestic producers and export intermediaries. Predictions from the model show that this regulation benefited automakers and made intermediaries worse off.

研究成果の概要（英文）：In 2007, China implemented a policy requiring automobile producers to distribute through at most three trade intermediaries and list their intermediaries on a registry. Motivated by the registration requirements and granularity in the order sizes handled by most intermediaries, this paper develops a model to describe the matches between automakers and intermediaries.

The model shows market division arises endogenously due to the regulation. It creates inefficiencies in matching and double marginalization. The model predictions coincide with a number of stylized facts: a strong decline in the number of auto intermediaries, assortative matching, export price increases for intermediaries, and substantial churning in the sets of intermediaries registered by the automakers. Welfare analysis in terms of total profits shows that this regulation benefits automakers, especially those relatively less efficient ones while intermediaries are made worse off.

研究分野：International Trade

キーワード：trade intermediary matching export regulation

### 1 . 研究開始当初の背景

In 2007, China implemented a regulation requiring automakers who intend to export automobiles the next year to register with the government. This regulation was initiated in response to the surge in auto exporting intermediaries and increasing product quality disputes abroad. How the regulation takes effect is not immediately obvious. Requiring business relationships to be established before the realization of transactions may distort incentives and undermine economic efficiency. Given the prevalence of similar registration requirements in policy making, there is an urge to better understand its impact, especially from the perspective of firm matching efficiencies.

### 2 . 研究の目的

This research project aims to analyze the economic rationale behind the registration policy and investigate how the structure and performance of the automobile export sector reacted to the regulation. Does it improve efficiency or is there any unintended consequences? Special emphasis will be put on examining the matching efficiencies between automakers and intermediaries given the *unique* information on matches revealed by the registry. The goal of this research is to estimate how large the effect is on the auto export industry and carry out policy counterfactuals to show what would change without the regulation.

To understand the potential impact of regulations in the form of registration is very important. Similar regulations are widely used in many sectors and applied to a variety of economic activities while little has been known about their consequences. This research tries to fill the gap by recognizing the timing scheme of the registration policy and examining its impact on business relationships and overall efficiency of the industry.

### 3 . 研究の方法

This research project started with describing a few stylized facts of the automobile export industry and firm responses to the policy. An economic model of export through intermediaries was built to rationalize policy incentives and analyze its consequences. Unlike previous trade models, demand will not be deterministic on marginal costs, it will be affected by a random shock following Poisson process. This demand shock will be heterogeneous among intermediaries according to their connectiveness in the international market. Manufacturers, when deciding who to match with, are allowed to have Bayesian updates of intermediary qualities based on their previous performances. The policy changes the matching behavior of firms since it requires business relationships to be established before the realization of transactions. The model will show market partition as a result of policy change and matching inefficiencies as well as double marginalization as consequences. Then, the model was simulated to obtain welfare implications.

With a well-structured model and comprehensive data available, I empirically estimated key

parameters of the model and carry out policy counterfactuals. The results showed how an industry consolidation policy restricting the choices of manufacturers could turn out to generate market inefficiencies and shift profits in favor of manufacturers.

#### 4 . 研究成果

Please find the full report using the following link:

[https://www.dropbox.com/s/n8n1glogh3s5qt9/auto\\_kakenhi.pdf?dl=0](https://www.dropbox.com/s/n8n1glogh3s5qt9/auto_kakenhi.pdf?dl=0)

5. 主な発表論文等

〔雑誌論文〕 計3件（うち査読付論文 2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 Chen Bo, Hong Junjie, Jing Ran, Sun Xiaonan	4. 巻 29
2. 論文標題 Demand shocks, financial costs, and export margins: Evidence from China	5. 発行年 2020年
3. 雑誌名 Review of International Economics	6. 最初と最後の頁 780 ~ 801
掲載論文のDOI（デジタルオブジェクト識別子） 10.1111/roie.12498	査読の有無 有
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1. 著者名 Chen Zhe, Hong Junjie, Sun Xiaonan	4. 巻 28
2. 論文標題 Exchange rate risk and trade mode choice in processing trade: Evidence from Chinese data	5. 発行年 2019年
3. 雑誌名 Review of International Economics	6. 最初と最後の頁 537 ~ 564
掲載論文のDOI（デジタルオブジェクト識別子） 10.1111/roie.12462	査読の有無 有
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1. 著者名 Sun Xiaonan	4. 巻 No. 2019-06
2. 論文標題 China's export registration in the automobile industry: Effects on manufacturer-intermediary match efficiency	5. 発行年 2019年
3. 雑誌名 Asian Growth Research Institute Working Paper Series	6. 最初と最後の頁 -
掲載論文のDOI（デジタルオブジェクト識別子） なし	査読の有無 無
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2件（うち招待講演 0件/うち国際学会 0件）

1. 発表者名 Xiaonan Sun
2. 発表標題 China's export registration in the automobile industry
3. 学会等名 Summer Workshop on Economic Theory
4. 発表年 2020年

1. 発表者名 Xiaonan Sun
2. 発表標題 China's export registration in the automobile industry: Effects on manufacturer-intermediary match efficiency
3. 学会等名 2019 Japanese Economic Association Autumn Meeting
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

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