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研究課題名（和文）Trade, Wage Inequality and Intra-Firm Bargaining: A Structural Decomposition Analysis

研究課題名（英文）Trade, Wage Inequality and Intra-Firm Bargaining: A Structural Decomposition Analysis

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研究成果の概要（和文）：このプロジェクトは、企業の賃金率を分解するためのモデルを構築し、企業の賃金率を留保賃金と賃金レントを分解して、それぞれの効果を検証している。このモデルを用いて、企業レベルのデータを利用して、企業賃金率をこの二つの要素を分解した。さらに、グローバル化がどのように賃金格差と分解した要素を与えるのを分析した。

研究成果の学術的意義や社会的意義

本研究のアプローチは、国際貿易研究領域の最先端の動向を応用ミクロ計量経済学の手法に導入することで、グローバル化が賃金格差に与える影響とそのメカニズムを検証し、その経済効果の分析を試み、独創的なものである。また、賃金格差と企業のグローバル化に関する研究を推し進めることになり、学術的意義を持っている。

研究成果の概要（英文）：This project develops an estimation framework to decompose the firm wage rate into the reservation wage, which proxies for workforce composition, and wage rent, which captures rent sharing between the firm and workers. This methodology is then applied to data from manufacturing firms and further explore how globalization affects the firm wages through the two channels.

研究分野：国際経済学

キーワード：賃金格差 企業ミクロデータ

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1 . 研究開始当初の背景

Two theories have been proposed to explain trade effects on the within-industry wage inequality. One strand of research considers a competitive labor market, in which workers with similar characteristics are paid the same wage rate; hence, wage inequality comes from the differences in workforce across firms. The other line of literature allows firms to pay different wages to workers with the same characteristics, given the existence of labor market frictions. However, no study, to the best of our knowledge, has yet systematically evaluated the relative importance of these two theories in explaining the relationship between trade and within-industry wage inequality.

2 . 研究の目的

This project attempts to fill the void. To this end, we first develop an estimation framework to decompose firm wages into two components: (1) the reservation wage, which reflects the external market value and hence the quality of firm workforce; and (2) the wage rent, which represents the bargaining between firms and workers. The crucial part of our estimation framework is the estimation of output elasticities of inputs and firm markups, which have become standard in the literature.

3 . 研究の方法

We elucidate a theoretical framework by considering a one-principal-to-many-agents bargaining model to decompose the firm wage rate into the reservation wage and wage rent at the firm level, and then use the firm-level operational information to estimate the framework.

4 . 研究成果

We apply our framework to data from Colombian manufacturing censuses from 1981 to 1991. We find that wage bargaining is the main contributor to the total wage rate for skilled and unskilled labor. Specifically, between 1981 and 1991, on average, 76.25 percent of the wage rate came from the wage rent part for skilled labor, and the corresponding number for unskilled labor was 84.12 percent. Given that the reservation wage largely captures workforce composition and wage rent represents the bargaining premium, these results suggest that, in general, a firm's wage rate is not determined by its workers' characteristics (e.g., education, experience), but by bargaining between the firm and workers. Our findings are largely consistent with those of previous studies using matched employer-employee data. For example, Frías, Kaplan, and Verhoogen (2009) for Mexico, and Helpman, Itzhoki, Muendler, and Redding (2017) for Brazil both show that wage rents play a prominent role in determining the wage dispersion.

With estimated reservation wage and wage rent, we can then investigate how much trade reforms affect within-industry wage inequality through changes in workforce reservation wage, and how much comes from the changes in rent sharing between firms and workers. To this end, we follow the identification framework in the literature (i.e., Attanasio, Goldberg, and Pavcnik, 2004; Goldberg and Pavcnik, 2005); specifically, two instruments are constructed for endogenous tariff changes and the first-difference approach is used to estimate the panel data.

We find that during the 1980s in Colombia, trade reforms caused within-industry wage inequality to decrease, which is consistent with findings by Attanasio, Goldberg, and Pavcnik (2004), although they used different data. Regarding our central interest, we find that trade reforms significantly and substantially affect within-industry variations in the reservation wage but have almost no effects on within-industry variations in wage rent. These results indicate that much of trade effects on wage inequality within an industry come from induced changes in the matching between firms and workers, instead of the bargaining between them. Our findings are robust to a series of sensitivity checks, such as including time-varying industry controls, controlling for input tariffs, and using different wage bargaining models.

This project contributes to the literature on the wage decompositions. A seminal work by Abowd, Kramarz, and Margolis (1999) (hereafter, AKM) develops a methodology for total wage rate decomposition using matched employer-employee data; specifically, it regresses individual wage on individual observed characteristics, individual fixed effects (which captures all unobserved characteristics, and hence workforce heterogeneity), and firm fixed

effects (capturing the rent sharing effect). By applying the framework to matched employer-employee data in France, AKM find that worker heterogeneity is the most important source of wage variations. Following AKM's approach, Frías, Kaplan, and Verhoogen (2009) find that two-thirds of the wage differences come from the wage premia and one-third from the workforce composition in Mexico. Card, Heining, and Kline (2013) study the wage inequality by using matched worker-firm data from the West German, and show that the increase in wage inequality is largely explained by workforce characteristics and matching between workers and employers. Exploiting matched employer-employee data from Brazil, Helpman, Itskhoki, Muendler, and Redding (2017) show that worker and firm characteristics contribute equally to the within sector-occupations wage inequality, and increases in wage inequality are largely explained by the firm effects. Our study follows the literature by decomposing wage dispersion into a wage rent component (firm fixed effects in the AKM-type wage regression) and a reservation wage component (observable worker characteristics and worker fixed effects in the AKM model). The major departure of our study lies in the estimation framework and the required data structure. The implementation of the AKM method requires merged employer-employee data. However, our decomposition framework is based on the production function estimation, which can be applied to all firm data with operational information such as output, labor, capital, materials, and total wages.

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 3件/うちオープンアクセス 2件）

1. 著者名 Xiaoping Chen, Yuchen Shao, and Lianming Zhu	4. 巻 0
2. 論文標題 Technological Links and FDI Spillovers	5. 発行年 2021年
3. 雑誌名 Working paper	6. 最初と最後の頁 0
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 該当する

1. 著者名 Lu, Yi, Jin Wang and Lianming Zhu	4. 巻 11(3)
2. 論文標題 Place-Based Policies, Creation and Agglomeration Economies: Evidence from China's Economic Zone Program	5. 発行年 2019年
3. 雑誌名 American Economic Journal: Economic Policy	6. 最初と最後の頁 325-360
掲載論文のDOI（デジタルオブジェクト識別子） 10.1257/pol.20160272	査読の有無 有
オープンアクセス オープンアクセスとしている（また、その予定である）	国際共著 該当する

1. 著者名 Yunong Li, Mengkai Yang and Lianming Zhu	4. 巻 59
2. 論文標題 FDI, Export Sophistication, and Quality Upgrading: Evidence from China's WTO Accession	5. 発行年 2021年
3. 雑誌名 Japan and the World Economy	6. 最初と最後の頁 101086
掲載論文のDOI（デジタルオブジェクト識別子） 10.1016/j.japwor.2021.101086	査読の有無 有
オープンアクセス オープンアクセスとしている（また、その予定である）	国際共著 該当する

〔学会発表〕 計3件（うち招待講演 2件/うち国際学会 3件）

1. 発表者名 Lianming Zhu
2. 発表標題 Foreign Direct Investment and Industrial Agglomeration
3. 学会等名 Workshop on Trade and FDI（国際学会）
4. 発表年 2019年

1. 発表者名 Lianming Zhu
2. 発表標題 Does Foreign Direct Investment Lead to Industrial Agglomeration
3. 学会等名 China-Japan Workshop on International Economics (招待講演) (国際学会)
4. 発表年 2019年

1. 発表者名 Lianming Zhu
2. 発表標題 Technological Links and FDI Spillovers
3. 学会等名 RIETI-CASS-CESSA joint workshop (招待講演) (国際学会)
4. 発表年 2022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2件

国際研究集会 Osaka Workshop on Trade and Spatial Economics	開催年 2019年～2019年
国際研究集会 Workshop on International Economics	開催年 2019年～2019年

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			
シンガポール	Singapore Management University			
中国	Hong Kong Baptist University	Tsinghua University	Nanjing University	
フランス	Sciences Po			