

How Friendly Diplomatic Relations Promote Bilateral Trade in Digital Services: Empirical Evidence from China's Partnership Diplomacy

Qing Li^{1,a}, Jiacheng Peng^{1,b}, Suxuan Han^{1,c}, Xiaoqing Wu^{1,d*}

¹ Guangdong University of Foreign Studies, Guangzhou, China

^agwliqing@163.com, ^bgdufspjc@163.com, ^cmessixuan@163.com, ^{d*}502738671@qq.com

Abstract. How to use diplomacy to promote bilateral digital services trade in the context of politicization of trade issues is a key issue for developing countries to seize digital opportunities to develop their productivity. This paper empirically tests the role of partner diplomacy in promoting the development of inter-country trade in services. The study finds that: (1) the scale of bilateral services trade between China and the host country increases by approximately 13% for each partner level increase in diplomatic relations, and this boosting effect remains robust after considering model changes, changes in explanatory variables and endogeneity issues. (2) The mechanism test finds that the promotion effect of partner diplomacy on bilateral services trade is essentially a trade cost-cutting effect, which is achieved in four forms: trade negotiations, high-level visits, treaty signing and platform building.

Keywords: partnership diplomacy; digital economy; trade in services.

1. Introduction

The current academic community still lacks systematic and mechanistic thinking and analysis on the effects of partner diplomacy on digital services trade, which can form an effective guide for Chinese enterprises to avoid political risks and uncertainties in the process of conducting digital services trade. To this end, this paper conducts an empirical analysis using bilateral services trade data between China and 36 countries from 2006 to 2020 to verify the promotion effect of partner diplomacy on inter-country digital services trade and reveal the mechanism of partner diplomacy's impact on reducing the cost of inter-country digital services trade. This paper empirically explores the underlying mechanisms of partner diplomacy driving bilateral digital services trade between China and its host country, to provide empirical support for developing countries to precisely implement measures to promote the development of digital services trade.

2. Theoretical Analysis And Research Hypothesis

Trade in digital services is a rule-intensive form of cross-border trade, and interstate rules have an important influence on its development (Ferencz, 2019a; Ferencz, 2019b; Zhou & Chen, 2020). If political tensions arise between the two countries, the negative impact of political conflict may limit cross-border digital trade in the form of conflicting rules, concentrated in the form of digital trade barriers inhibiting the broad and intensive marginal expansion of digital exports by firms in the home country (Zhou & Chen, 2020; Zhou & Yao, 2021; Tong & Fan, 2022). Rational choice institutionalism views bilateral political relations as substantive institutional arrangements between states that help reduce the costs and uncertainties of firms' cross-border transactions and build bridges to deepen economic cooperation between the two countries and guide economic activities in both countries (North, 1990; Keohane, 2005; Zhang & Jiang, 2012). The specific path of action is shown in Figure 1.

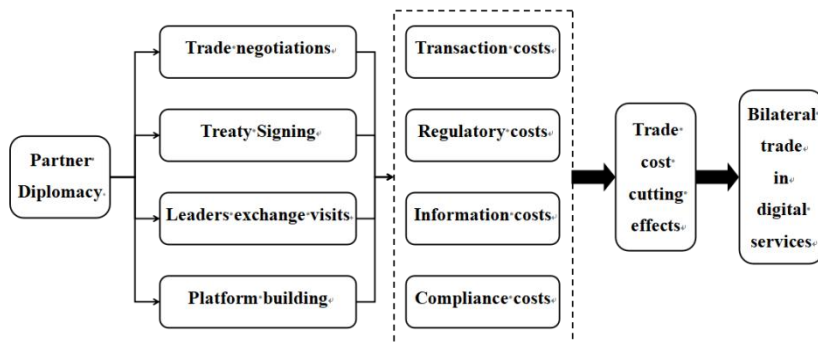


Figure 1 · Analysis of the mechanisms of partnership diplomacy for the development of bilateral digital services trade.

First, China can use its diplomatic power to secure preferential treatment and institutional arrangements for Chinese enterprises, for example by granting them the legitimacy to operate to reduce transaction costs. Second, partnership diplomacy can facilitate the signing and implementation of regulations related to digital trade in services, promote policy harmonisation and convergence of standards between the two countries, and reduce the cost of adaptation to rules and regulatory transition for enterprises. Third, partnership diplomacy can facilitate high-level strategic communication between the two countries, improve the transparency of digital services trade policies and rule harmonisation between the two countries, and reduce the cost of information search and the risk of failed political cooperation between countries. Fourth, partnership diplomacy can promote the establishment of a government-to-government cooperation platform to provide policy preferences and government support for digital services enterprises on both sides, reducing trade barriers and the cost of regulatory transition for enterprises caused by differences in rules.

The following hypotheses are formulated in this paper based on the above analysis.

Hypothesis 1: Establishing partnerships will help promote the development of digital services trade between China and the host country.

Hypothesis 2: Partner diplomacy enhances China's digital services trade with host countries by reducing trade costs.

3. Study Design

3.1 Measurement Model Setting

To examine the effect of partner diplomacy on bilateral digital services trade between China and the host country, the following econometric model is constructed to test.

$$Y_{it} = \alpha_1 + \beta_1 * Parsix_{it} + X' \varphi + \eta_i + \mu_t + \varepsilon_{it} \tag{1}$$

Where *i* represents the country-level sample, *t* represents the time-level sample and the explanatory variable *Y* represents total bilateral digital services trade. *Parsix_{it}* represents the diplomatic ranking coefficient of China to country *i* in year *t*. *x* represents a series including market size (GDP) of China and the host country, differences in the level of regulation (Regular), upgrading of industry structure(Upgrade), cultural distance (Culture), digital infrastructure differences (Internet)、differences in education levels (Educate); η is an individual fixed, μ is a time effect, and ε is a random disturbance term.

4. Empirical Analysis

4.1 Baseline regression

Table 1 reflects the effect of partner diplomacy on China's bilateral digital services trade with the host country.

Table 1 Baseline Regression

Variables	(1)	(2)	(3)	(4)
			Trade	
Parsix	0.1043*** (0.0365)	0.1163*** (0.0386)	0.1287*** (0.0367)	0.1322*** (0.0362)
CGDP		1.5178*** (0.1862)	1.9221*** (0.3238)	1.7947*** (0.3405)
GDP		0.1405** (0.0640)	0.2011*** (0.0622)	0.2355*** (0.0649)
Culture			-0.0164*** (0.0033)	-0.0163*** (0.0046)
Internet			-0.0311** (0.0123)	-0.0328** (0.0146)
Educate				-0.1209 (0.2289)
Regular				0.0211 (0.1739)
Upgrade				0.5063 (0.3310)
Year fixed effects	YES	YES	YES	YES
Individual fixed effects	YES	YES	YES	YES
N	424	424	424	424
R2	0.9687	0.9689	0.9704	0.9707

Note: ***P<0.01, **P<0.05, *P<0.10, the standard error of clustering robustness is in brackets.

In columns (1)-(4), the coefficients of partner diplomacy are all significantly positive at the 1% level, which indicates that the establishment of a partnership is conducive to promoting the development of digital services trade between the two countries, leading to a conclusion consistent with the theoretical hypothesis of this paper.

4.2 Robustness tests

This paper uses the instrumental variables approach to address the omission of essential variables from the model. In terms of instrumental variable selection, this paper selects the dummy variable of whether the host country has historically been a socialist country as the instrumental variable (Soci). The reason is that the host country used to be a socialist country and had closer political relations with China, thus establishing a partnership. At the same time, historical variables have no influence on current variables. The instrumental variables are selected to satisfy homogeneity. Columns (2)-(3) of Table 2 show the relevant regression results, with a significantly positive coefficient on the diplomatic relationship and a Cragg-Donald Wald F-value greater than 10, indicating that there is no weak instrumental variable problem with model regressions in this paper.

Table 2 Endogenous Treatments and Mechanism Tests

	(1)	(2)	(3)	(4)	(5)
Variables	Parsix	Trade	Trade	Cost	Trade
Soci	0.0877*** (0.0201)				
Parsix		0.3182** (0.1532)	0.4064*** (0.0474)	-0.0154*** (0.0012)	0.1421*** (0.0531)
Cost					-17.1305*** (2.0600)
Control variables	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES
Individual fixed effects	YES	YES	YES	YES	YES
N	424	424	293	293	293
R ²	0.8851	0.9685	0.7198	0.8320	0.7753

Note: ***P<0.01, **P<0.05, *P<0.10, the standard error of clustering robustness is in brackets.

4.3 Impact mechanism test

Where is the Zit mediating variable, representing the cost of digital services trade mediating variable, the specific model of the mediating regression is set as follows. Regarding the measurement of trade costs, this paper refers to Novy’s (2013) study on the measurement of digital services trade costs, which improves on the Anderson, Ricardian and heterogeneous firm models (Anderson, 2004) and applies to a wide range of data results, including panel data.

$$Z_{it} = \alpha_2 + \gamma_2 * Parsix_{it} + X'\varphi + \eta_i + \mu_i + \varepsilon_{it} \tag{2}$$

$$Y_{it} = \alpha_3 + \gamma_3 * Parsix_{it} + \delta_1 * Z_{it} + X'\varphi + \eta_i + \mu_i + \varepsilon_{it} \tag{3}$$

The results are shown in Table 2. Columns (1) - (2) diplomatic relations positively promote bilateral digital service trade and negatively reduce the cost of digital service trade. After adding the variable of digital service trade cost in column (3), the value of the diplomatic relationship coefficient decreases relatively, and the value of the Sobel Z test is 6.927, which is significant at the level of 1%. This indicates that the promotion effect of partner diplomacy on bilateral digital service trade between China and the host country has an intermediary path of reducing the cost of digital service trade.

5. Conclusion

This paper builds a theoretical framework based on rational choice institutionalism and empirically reveals the influence mechanism of partner diplomacy on bilateral digital service trade. The study finds that: the boosting effect of partner diplomacy on the scale of bilateral digital services trade increases by approximately 13% for each level of diplomatic relations, and the boosting effect remains robust after considering model change, change of explanatory variables and endogeneity; the mechanism test finds that the boosting effect of partner diplomacy on bilateral digital services trade is essentially a reduction in trade costs, and is achieved through trade negotiations, treaty signing, high-level visits and platform building. This effect is achieved in four ways: trade negotiations, treaty signing, high-level visits and platform building.

Acknowledgments

This article is supported by major Program of National Social Science Foundation of China, “Research on Constructing an Internationally Competitive Modern Industrial System in the Guangdong-Hong Kong-Macao Greater Bay Area” (No.20&ZD085).

Reference

- [1] Anderson J E, Van Wincoop E. Trade costs[J]. *Journal of Economic literature*, 2004, 42(3): 691-751.
- [2] Ferencz J, Frederic G. Barriers to Trade in Digitally Enabled Services in The G20 [R]. OECD Trade Policy Paper, No. 232, 2019.
- [3] Ferencz J. The OECD Digital Services Trade Restrictiveness Index [R]. OECD Trade Policy Paper, No. 221, 2019.
- [4] Keohane, R. O. *After Hegemony: Cooperation and Discord in the World Political Economy* [M]. New Jersey: Princeton University Press, 2005.
- [5] Novy, D. 2013. Gravity redux: Measuring International Trade Costs with Panel Data[J]. *Economic Inquiry* 51(1): 101-121.
- [6] Schout A, North D C . Institutional Change and Economic Performance[J]. *Economic Journal*, 1990, 101(409):1587.
- [7] Zhang Jianhong, Jiang Jianggang. A study on the impact of bilateral political relations on China's outward foreign direct investment[J]. *World Economy and Politics*,2012(12):133-155+160.
- [8] Zhou Nianli, Chen Huanqi.A study on the digital trade effects of US-style digital trade rules under the framework of RTAs[J]. *World Economy*,2020,43(10):28-51.
- [9] Zhou, Nianli, Yao, Tingting. An empirical study on the trade disincentive effect of restrictive measures on digital services trade[J]. *China Soft Science*,2021(02):11-21.
- [10] Tong, Jia-Dong, Fan, Long-Fei. Intellectual property protection, bilateral political relations and high-technology product exports of innovative countries: a technology containment perspective based on national competition[J]. *World Economic Studies*,2022(07):3-17+135.