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## International Review of Economics and Finance

journal homepage: [www.elsevier.com/locate/iref](http://www.elsevier.com/locate/iref)Governance, foreign direct investment and domestic welfare<sup>☆</sup>Dibyendu Maiti<sup>a</sup>, Arijit Mukherjee<sup>b,c,\*</sup><sup>a</sup> The University of the South Pacific, Suva, Fiji<sup>b</sup> Loughborough University, UK<sup>c</sup> CESifo, Germany

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## ABSTRACT

The issue of economic governance is highly discussed pertaining to the question of industrialisation of a country, but the literature on trade and foreign direct investment (FDI) hardly pays attention to this aspect. We develop a simple model to show how good economic governance in the domestic country, reducing domestic marketing and distribution costs, affects inward FDI and domestic welfare. Whether good governance in the domestic country attracts FDI depends on the way it affects the marketing and distribution costs. The effect of good governance is ambiguous on domestic welfare and depends on the cost difference between the firms, international transportation cost and the extent of cost reduction. Our analysis reveals strategic reasons for poor governance in some situations in the presence of foreign competition.

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## 1. Introduction

Better economic governance for improving investment climate is an important objective of many developing countries in recent years, and is getting significant attention in both academic and policy circles. As mentioned in the [World Development Report \(2005\)](#), “A good investment climate provides opportunities and incentives for firms – from micro-enterprises to multinationals – to invest productively, create jobs, and expand.” There are several factors, such as policy uncertainty, macro instability, corruption, cost of access to finance, crime, regulation and tax administration, courts and legal system, electricity, labour regulations, transportation, access to land and telecommunications, affecting investment climates ([World Development Report, 2005](#)), and many, if not all, of which can be improved through better economic governance.

As mentioned by [Rodrik \(2008\)](#), “The focus of reform in the developing world has moved from getting prices right to getting institutions right.” ... “Governance reforms have become the buzzword for bilateral donors and multilateral institutions, in much the same way that liberalization, privatization, and stabilization were the *mantras* of the 1980s.” Due to the belief that good governance is important for investment, economic growth and development, its effects on foreign direct investments (FDIs),

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which are believed to promote economic growth and are important for many developing countries,<sup>1</sup> certainly deserve attention. However, to our knowledge, this aspect did not get much attention in the literature.<sup>2</sup>

Some efforts have been made to show the relationship between economic governance and FDI empirically, yet the theoretical literature did not pay much attention to this aspect. A number of scholars like [Sin and Leung \(2001\)](#), [Globerman and Shapiro \(2002\)](#), [Gani \(2007\)](#) and [Fan, Morck, Xu, and Lien \(2007\)](#) show that economic governance and FDI are positively correlated. However, [Chang \(2007\)](#) points out that the performances of some countries with weak governance are better than their counterparts with strong governance. [Weller and Ulmer \(2008\)](#) mention that "... China has attracted significant foreign investment despite notoriously persistent corruption". Hence, the effects of economic governance on international trade, investment and welfare may not be trivial, and it is due to the fact that real-world economies operate in a second-best environment because of multiple distortions of reform policies ([Rodrik, 2008](#)). This paper is an attempt to understand such phenomenon in a more systemic way.

We develop a simple model to show the relation between good governance and inward FDI by analysing the effect of governance on the non-production costs in the domestic economy. To be more specific on the economic governance, we assume that economic governance by the domestic country reduces domestic marketing and distribution costs, which are likely to affect the domestic and foreign firms symmetrically irrespective of exporting or FDI decision taken by the foreign firm. Thus, our paper focuses on a specific but an important economic aspect of governance. Our motivation for looking at the domestic marketing and distribution costs comes from recent works showing the importance of these costs on a firm's foreign-market entry decision ([Ishikawa, Morita, & Mukunoki, 2010](#); [Nocke & Yeaple, 2007](#); [Qiu, 2010](#)). The reduction in the domestic marketing and distribution costs can be the outcome of investment by the domestic government on road and infrastructure. It may also be due to better economic governance that is reducing corruption in the transportation sector.<sup>3</sup>

We consider an international duopoly market with a foreign firm and a domestic firm. These firms compete in the domestic country. The foreign firm can either export or undertake FDI. Exporting requires the foreign firm to incur a per-unit international transportation cost, while FDI requires the foreign firm to invest a fixed amount. These firms also incur per-unit domestic marketing and distribution costs, comprising of transportation cost and labour costs related to sales. In this framework, we examine the effects of economic governance (affecting either domestic transportation costs or the labour costs related to sales) on inward FDI and domestic welfare.

We show that whether economic governance reduces the cost of domestic transportation or the labour costs related to sales may have important implications on inward FDI. If better governance reduces the transportation cost, which is considered to be independent of labour productivity in sales, it increases an incentive for inward FDI. However, if economic governance reduces the labour costs, which depend on the labour productivities, it may reduce the incentive for inward FDI. Our analysis can be extended easily to capture the situation where economic governance reduces the transportation cost as well as the labour costs related to sales.

We further show that, irrespective of the way good governance affects the per-unit costs of the firms, the effects on domestic welfare are ambiguous, and they depend on the factors such as the domestic marketing and distribution cost (which is the sum of transportation and labour costs), international transportation cost and the extent of marginal cost reduction.<sup>4</sup>

Our results can be summarised in the following way. Whether good governance reduces domestic transportation costs or the labour costs related to domestic sales, we get that:

- (i) Good governance increases domestic welfare by attracting FDI, if the domestic marketing and distribution cost difference between the firms is large compared with international transportation cost.
- (ii) Good governance may reduce domestic welfare by attracting FDI if the domestic marketing and distribution cost difference between the firms is small compared with international transportation cost, since the benefit of good governance may be taken away by the foreign firm. Hence, good governance, reducing domestic marketing and distribution cost, may not be beneficial to the domestic country even if it attracts FDI when other benefits of FDI such as knowledge spillover, and the policies, such as taxation to extract foreign profits, remain the same.

Good governance creates two further implications, if good governance reduces the domestic marketing and distribution costs by reducing the labour costs related to domestic sales:

- (iii) Good governance reduces domestic welfare by preventing FDI if the domestic marketing and distribution cost difference between the domestic and the foreign firms is large enough compared with international transportation cost. Hence, the domestic country may not have the incentive to improve governance unless they are complemented by other FDI-attracting policies.

<sup>1</sup> As mentioned in [UNCTAD \(2006\)](#), FDI dominates international trade in recent years.

<sup>2</sup> [Dong and Gou \(2010\)](#) and [Wang et al. \(2013\)](#) show the effects of corporate governance on R&D investment and FDI respectively. [Kim et al. \(2013\)](#) show that social capability of a country plays an important role in determining the effects of trade and FDI on domestic investment.

<sup>3</sup> [Rahman \(2011\)](#) points out that illegal payment to ease passage through the system may create high transportation costs.

<sup>4</sup> [Mukherjee and Sinha \(2007\)](#) show the effects of marginal cost reduction in the domestic firm, either due to innovation or knowledge spill-over, on inward FDI and domestic welfare. Unlike that paper, better governance in the current paper reduces the marginal costs of both the domestic and the foreign firms, and makes the type of cost reduction important.

- (iv) Good governance may increase domestic welfare by preventing FDI if the domestic marketing and distribution cost difference between the domestic and the foreign firms is small compared with international transportation cost. Hence, the domestic country would prefer to improve governance to prevent FDI if there are no other benefits of FDI, such as knowledge spillover. This is in contrast to case (iii), where good governance may increase domestic welfare by attracting FDI.

Thus, our results may provide justifications for the mixed empirical evidences arising from improved economic governance on inward FDI mentioned in the above empirical works. Interestingly, the above-mentioned result (iii) may find justification from the Chinese situation discussed in [Weller and Ulmer \(2008\)](#). If other FDI-attracting policies remain the same, poor governance may help to increase Chinese welfare by attracting FDI.

In a different strand of literature, a number of studies are establishing the relationship between FDI and economic development (see, [Reiter & Steensma, 2010](#) and the references therein), both theoretically and empirically, but no unanimous result has emerged. However, it has been found that a more selective approach towards FDI, which attracts FDI in certain sectors but not in all sectors, has a more positive influence on human development compared with a situation where FDI comes to all sectors ([Reiter & Steensma, 2010](#)). Thus, it justifies the relevance of strategic and discriminatory policies towards inward FDI. Our results reveal similar sentiment. If other favourable effects of FDI are kept at the same level, it is not trivial that good governance itself attracts FDI and increases domestic welfare. Instead, the domestic country's preference for good governance may depend on several factors, such as the way it affects domestic marketing and distribution costs of the firms, the marketing and distribution cost difference between the firms relative to the international transportation cost and the extent of domestic marketing and distribution cost reduction, which may vary across sectors.

In an interesting work, [Banerjee \(1997\)](#) argued why government bureaucracies were often associated with red tape, corruption, and lack of incentives. He showed that the presence of asymmetric information may create the rationale for misgovernance by a benevolent government. We provide a new reason for poor governance and show that the presence of foreign competition may create strategic reasons for poor economic governance. For example, as shown in the above-mentioned result (iii), if good governance prevents FDI, a country may have the incentive for poor governance.

The remainder of the paper is organized as follows. [Section 2](#) shows the model and derives the results. [Section 3](#) discusses the implications of some assumptions considered in our model. [Section 4](#) concludes.

## 2. The model and the results

Assume that there are two countries, called domestic country and foreign country. There is a firm in each country. Assume that firm 1 is in the foreign country and firm 2 is in the domestic country. These firms compete in the domestic country with a homogeneous good. Firm 1 can serve the domestic country by either exporting or undertaking FDI. If firm 1 exports to the domestic country, it incurs a per-unit international transportation cost,  $z$ , and a fixed cost  $F_x$ . However, if the firm undertakes FDI, it saves the international transportation cost but incurs a fixed cost  $F_I = F_x + F$ , where  $F$  shows the cost of forming a subsidiary in the domestic country. The cost  $F$  thus shows plant level returns to scale.<sup>5</sup> For simplicity, we normalise  $F_x = 0$ .

To economise our notations, we further normalise the marginal production costs of the firms to zero and assume that both firms incur positive non-production costs, such as the costs of distribution and sales in the domestic country. We discuss the implications of positive production costs in [Section 4](#).

We assume that, if there is a minimum (or no) governance, firm 1 can sell one unit of the output by hiring  $\lambda_1$  sales persons, each of whom needs to be working for  $h$  hours. Inverse of the working hours of the sales persons shows their productivities. A lower  $h$  implies that the productivity of a sales person has increased, because it requires fewer hours to complete a particular job. Under a minimum level of governance, firm 1 also incurs a domestic transportation cost,  $t$ . Hence, if the competitive per-hour wage of a sales person is  $w$ , firm 1's per-unit marketing and distribution cost is  $\lambda_1 hw + t = c_1 + t > 0$ .

Under either the minimum or no governance, firm 2 can sell one unit of output by hiring  $\lambda_2$  sales persons, each of whom needs to be working for  $h$  hours, where  $\lambda_2 > \lambda_1$ . Like firm 1, under the minimum governance, firm 2 also incurs a domestic transportation cost,  $t$ . Hence, given the competitive hourly wage of a sales person as  $w$ , firm 2's per-unit distribution and marketing cost is  $\lambda_2 hw + t = c_2 + t > c_1 + t > 0$ . Our formulation shows that firm 1 has a better distribution technology.

We will now consider two situations in the following analysis: (i) where good governance reduces the domestic transportation cost,  $t$ , and (ii) where good governance increases productivities of the sales persons, i.e., reducing  $h$ .

The first situation may be appropriate for a condition where domestic government either invests more on road and infrastructural development or undertakes appropriate measures to improve service delivery by getting more transparency and effective legal system. The second situation may represent a case where good governance represents sound and stable political system, thus reducing labour unrest, or improves infrastructural facilities, helping the sales persons to cut down the time required to finish each sales deal.

Now consider the effects of good governance on the marketing and distribution costs of the firms. If good governance reduces the domestic transportation cost by  $e$ , it reduces the marginal costs of firms 1 and 2 respectively to  $\lambda_1 hw + (t - e) = c_1 + t - e \geq 0$

<sup>5</sup> See [Helpman, Melitz, and Yeaple \(2004\)](#) for a similar cost structure. There can be some fixed overhead costs of production, irrespective of export and FDI. For simplicity, we have also normalised those costs to zero.

and  $\lambda_2hw + (t - e) = c_2 + t - e \geq 0$ . In this situation, good governance reduces the marketing and distribution costs of both firms by the same amount  $e$ .

If good governance increases the productivities of the sales persons by  $e$ , i.e., reducing the work hours by  $e$ , it reduces the marketing and distribution costs of firms 1 and 2 respectively to  $\lambda_1(h - e)w + t = c_1g_p + t \geq 0$  and  $\lambda_2(h - e)w + t = c_2g_p + t \geq 0$ , where  $g_p = \frac{h-e}{h}$ . In this situation, good governance reduces the marketing and distribution costs of both firms by the same proportion  $g_p = \frac{h-e}{h}$ .

We assume that the inverse demand function in the domestic country is:

$$P = a - q, \tag{1}$$

where  $P$  is price and  $q$  is the total output.

We consider the following game. Given the level of governance, which determines the firms' marketing and distribution costs, at stage 1, firm 1 decides whether to do FDI or export. At stage 2, the firms compete like Cournot duopolists, and the profits are realised. We solve the game through backward induction.

### 2.1. If governance reduces domestic transportation cost

We start with the case where good governance reduces domestic transportation cost, thus reducing the per-unit costs of marketing and distribution for both firms by the same amount  $e$ .

For a given level of governance, if firm 1 exports to the domestic country, firms 1 and 2 maximise the following expressions respectively to determine their outputs:

$$\text{Max}_{q_1} (a - q - c_1 - t + e - z)q_1 \tag{2a}$$

$$\text{Max}_{q_2} (a - q - c_2 - t + e)q_2. \tag{2b}$$

The equilibrium outputs of firms 1 and 2 can be found as  $q_1^x = \frac{a - 2c_1 - t + e - 2z + c_2}{3}$  and  $q_2^x = \frac{a - 2c_2 - t + e + c_1 + z}{3}$ , respectively. The equilibrium profits of firms 1 and 2 are respectively

$$\pi_1^x = \frac{(a - 2c_1 - t + e - 2z + c_2)^2}{9} \text{ and } \pi_2^x = \frac{(a - 2c_2 - t + e + c_1 + z)^2}{9}. \tag{3}$$

Now consider the case where firm 1 undertakes FDI. In this situation, for a given level of governance, firms 1 and 2 maximise the following expressions respectively to determine their outputs:

$$\text{Max}_{q_1} (a - q - c_1 - t + e)q_1 - F \tag{4a}$$

$$\text{Max}_{q_2} (a - q - c_2 - t + e)q_2. \tag{4b}$$

The equilibrium outputs of firms 1 and 2 can be found as  $q_1^f = \frac{a - 2c_1 - t + e + c_2}{3}$  and  $q_2^f = \frac{a - 2c_2 - t + e + c_1}{3}$ , respectively. The equilibrium profits of firms 1 and 2 are respectively

$$\pi_1^f = \frac{(a - 2c_1 - t + e + c_2)^2}{9} - F \text{ and } \pi_2^f = \frac{(a - 2c_2 - t + e + c_1)^2}{9}. \tag{5}$$

The comparison of the profits of firm 1 under both export and FDI (see Eqs. (3) and (5)) shows that firm 1 prefers to undertake FDI if

$$e > \frac{9F}{4z} - (a - 2c_1 - t - z + c_2) \equiv e'_d. \tag{6}$$

It further shows that for a given fixed cost of undertaking FDI, good governance increases firm 1's incentive for FDI. The following result is immediate from Eq. (6).

**Proposition 1.** *If good governance reduces domestic transportation cost by  $e$ , thus reducing the per-unit marketing and distribution costs of firms 1 and 2 by the same amount  $e$ , it increases the possibility of undertaking FDI by firm 1.*

The reason for the above result can be described as follows. Good governance reduces the per-unit costs of marketing and distribution for both firms by the same amount, thus increasing firm 1's profit under both FDI and export. However, since the international transportation cost creates a distortion in firm 1's profit under export, firm 1's gain from good governance is higher under FDI than under export. Hence, good governance increases firm 1's incentive for FDI.

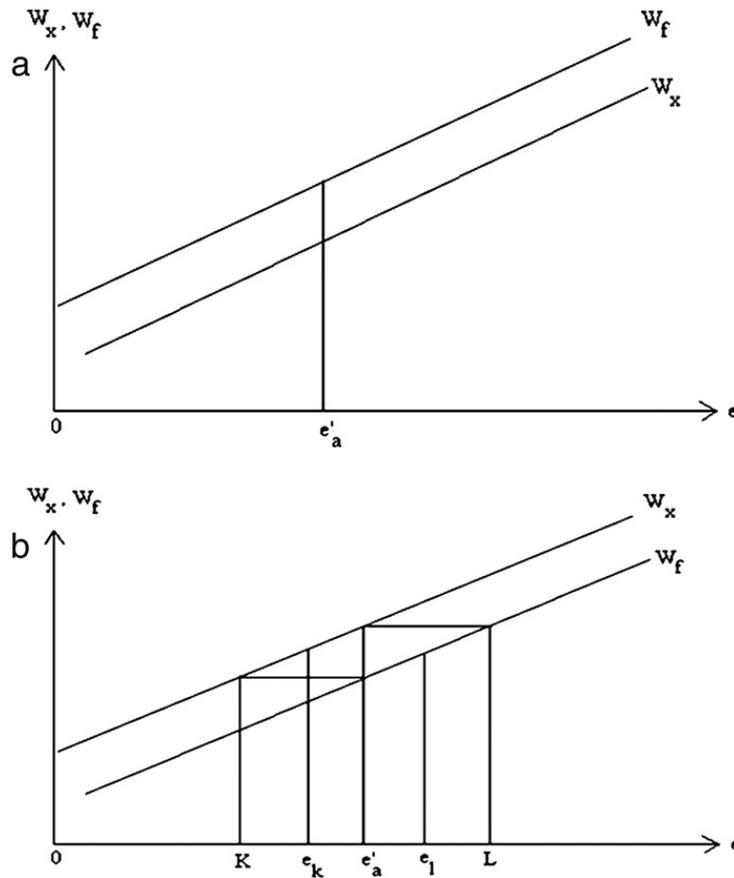


Fig. 1. (a): The effect of governance on domestic welfare when  $(c_2 - c_1) > \frac{z}{2}$ . (b): The effect of governance on domestic welfare when  $(c_2 - c_1) < \frac{z}{2}$ .

Now consider the implications of good governance on domestic welfare, which is the summation of consumer surplus and profit of firm 2. If firm 1 exports, the domestic welfare is

$$W^x = \frac{2(a - 2c_2 - t + e + c_1 + z)^2 + (2a - 2t + 2e - c_1 - c_2 - z)^2}{18} \tag{7}$$

However, if firm 1 undertakes FDI, the domestic welfare is

$$W^f = \frac{2(a - 2c_2 - t + e + c_1)^2 + (2a - 2t + 2e - c_1 - c_2)^2}{18} \tag{8}$$

We get from Eqs (7) and (8) that  $\frac{\partial W^x}{\partial e} = \frac{\partial W^f}{\partial e} > 0$ . However, it can be shown easily that  $W^f \geq W^x$  for  $(c_2 - c_1) \geq \frac{z}{2}$ . Fig. 1(a) and (b) shows the domestic welfare under export and FDI by firm 1 for  $(c_2 - c_1) > \frac{z}{2}$  and  $(c_2 - c_1) < \frac{z}{2}$  respectively.<sup>6</sup>

It follows from Eq. (6) that firm 1 undertakes FDI if  $e > e'_a$ . Hence, it appears from Fig. 1(a) that the relevant welfare function is  $W^x$  for  $e < e'_a$  and  $W^f$  for  $e > e'_a$ . It then immediately suggests that good governance increases domestic welfare, irrespective of its effect on firm 1's production strategies.

However, Fig. 1(b) shows the possibility of a lower domestic welfare following good governance, if good governance induces firm 1 to undertake FDI. Since firm 1 undertakes FDI for  $e > e'_a$ , the relevant welfare function is  $W^x$  for  $e < e'_a$  and  $W^f$  for  $e > e'_a$ . However, if the level of governance increases from a level between  $K$  and  $e'_a$ , say from  $e_k$  to a level between  $e'_a$  and  $L$ , say to  $e_l$ , good governance reduces domestic welfare.

The following proposition is immediate from the above discussion.

**Proposition 2.** *If good governance reduces domestic transportation cost, thus reducing the per-unit marketing and distribution costs of firms 1 and 2 by the same amount  $e$ , it increases the domestic welfare if  $(c_2 - c_1) > \frac{z}{2}$ , but it can reduce the domestic welfare for  $(c_2 - c_1) < \frac{z}{2}$  by inducing FDI.*

<sup>6</sup> For simplicity, we draw the welfare functions as straight lines.

The reason for the above result is as follows. Good governance reduces the costs of both firms and increases the domestic welfare under both export and FDI. However, since FDI allows the foreign firm to save the international transportation cost, for a given level of governance, on the one hand, FDI helps to rise the total outputs of the firms and therefore, the consumer surplus in the domestic country, but, on the other hand, it reduces the profit of the domestic firm. If the international transportation cost is very small, the former effect dominates the latter effect and creates higher domestic welfare under FDI than under export. However, if the international transportation cost increases, the latter effect gets stronger and, for a sufficiently large international transportation cost, the latter effect dominates the former and creates higher domestic welfare under export than under FDI.

**Propositions 1 and 2** prove the following points. If the per-unit marketing and distribution cost difference between the firms is relatively large compared with international transportation cost, i.e.,  $(c_2 - c_1) > \frac{z}{2}$ , good governance attracts FDI and also increases domestic welfare.

If the per-unit marketing and distribution cost difference between the firms is relatively small compared with international transportation cost, i.e.,  $(c_2 - c_1) < \frac{z}{2}$ , good governance reduces domestic welfare by attracting FDI, unless the marketing and distribution cost reducing effects of governance are very strong. Thus, the welfare reducing effect of FDI may give a strategic reason for poor governance. Alternatively, it suggests that the domestic government may need to complement good economic governance along with other policies, such as hiking tax to extract rents from the foreign investors in order to increase both inward FDI and domestic welfare following good governance.

As a remark, it is important to note that our qualitative results of this section will not change even if we consider that good governance reduces the domestic transportation cost proportionately to  $te$ , instead of  $(t - e)$ .

If we consider  $z$  as tariff imposed by the domestic country, instead of international transportation cost, domestic welfare needs to consider the tariff revenue as well. The absence of tariff may be motivated by appealing to the empirical evidence. **Milner (2005)** shows that even if the tariff barriers have been reduced in recent years, international transportation costs are still significant. Similar conclusion can be found in **Hummels (1991)**, according to whom international transportation cost often represents a greater barrier to international trade than tariffs. The costs relating to international transportation cost (excluding tariff costs), estimated by the **World Bank Report (2010)**, are varying across countries and account for a relatively higher value even in the OECD countries compared with some Latin American and East Asia countries.<sup>7</sup> The inclusion of tariff barrier will not affect our qualitative results relating to firm 1's decision on FDI and export, but it will provide a higher domestic welfare under export by firm 1 than shown in our analysis.

## 2.2. If governance increases productivity of the sales persons

Now consider another situation where good governance increases productivities of the sales persons by  $e$ . In this situation, the per-unit marketing and distribution cost of each firm reduces by the same proportion  $g_p = \frac{h-e}{h}$ .

For a given level of governance, if firm 1 exports, firms 1 and 2 maximise the following expressions respectively to determine their outputs:

$$\text{Max}_{q_1} (a - q - c_1 g_p - t - z) q_1 \tag{9a}$$

$$\text{Max}_{q_2} (a - q - c_2 g_p - t) q_2. \tag{9b}$$

The equilibrium outputs of firms 1 and 2 can be found as  $q_1^x = \frac{a - 2c_1 g_p - t - 2z + c_2 g_p}{3}$  and  $q_2^x = \frac{a - 2c_2 g_p - t + c_1 g_p + z}{3}$ , respectively. The equilibrium profits of firms 1 and 2 are respectively

$$\pi_1^x = \frac{(a - 2c_1 g_p - t - 2z + c_2 g_p)^2}{9} \text{ and } \pi_2^x = \frac{(a - 2c_2 g_p - t + c_1 g_p + z)^2}{9}. \tag{10}$$

Now consider the case where firm 1 undertakes FDI. In this situation, firms 1 and 2 maximise the following expressions respectively to determine their outputs:

$$\text{Max}_{q_1} (a - q - c_1 g_p - t) q_1 - F \tag{11a}$$

$$\text{Max}_{q_2} (a - q - c_2 g_p - t) q_2. \tag{11b}$$

<sup>7</sup> *Doing Business Survey* by **World Bank Report (2010)** defines the international transportation cost and measures the time and cost (excluding tariffs) associated with exporting and importing by ocean transport, and the number of documents necessary to complete the transaction. The indicators cover procedural requirements such as documentation requirements and procedures at customs and other regulatory agencies as well as at the port. They also cover trade logistics, including the time and cost of inland transport to the largest business city. These are key dimensions of the ease of trading – the more time consuming and costly it is to export or import, the more difficult it is for traders to be competitive and to reach international markets.

The equilibrium outputs of firms 1 and 2 can be found as  $q_1^f = \frac{a-2c_1g_p-t+c_2g_p}{3}$  and  $q_2^f = \frac{a-2c_2g_p-t+c_1g_p}{3}$ , respectively. The equilibrium profits of firms 1 and 2 are respectively

$$\pi_1^f = \frac{(a-2c_1g_p-t+c_2g_p)^2}{9} - F \text{ and } \pi_2^f = \frac{(a-2c_2g_p-t+c_1g_p)^2}{9}. \tag{12}$$

The comparison of the profits of firm 1 under export and FDI (see Eqs. (10) and (12)) shows that firm 1 prefers to undertake FDI if

$$e < h \left[ 1 - \frac{\frac{9F}{4z} - (a-t-z)}{c_2-2c_1} \right] \equiv e'_p, \text{ for } c_2 > 2c_1 \tag{13a}$$

$$e > h \left[ 1 - \frac{\frac{9F}{4z} - (a-t-z)}{c_2-2c_1} \right] \equiv e'_p, \text{ for } c_2 < 2c_1. \tag{13b}$$

The following result follows immediately from Eqs. (13a) and (13b).

**Proposition 3.** *If good governance increases productivities of the sales persons, thus reducing the per-unit costs of marketing and distribution for firms 1 and 2 by the same proportion  $g_p = \frac{h-e}{h}$ , good (poor) governance increases the possibility of undertaking FDI by firm 1 if  $c_2 < (>) 2c_1$ .*

The reason for Proposition 3 is as follows. If good governance reduces the per-unit costs of marketing and distribution for both firms by the same proportion, the absolute per-unit market and distribution cost reduction is higher in the domestic firm than that in the foreign firm, since the former firm has a higher initial marketing and distribution cost. As a result, the effective benefit from good governance is higher in the domestic firm than in the foreign firm. If the per-unit cost difference of marketing and distribution between the firms is very high, i.e.,  $c_2 > 2c_1$ , the effective benefit from good governance is significantly higher in the domestic firm compared with the foreign firm, and reduces the foreign firm's incentive for undertaking FDI. However, if the initial per-unit marketing and distribution cost difference between the firms is not very large, i.e.,  $c_2 < 2c_1$ , although good governance benefits the domestic firm more than that of the foreign firm, it increases the foreign firm's incentive for FDI by reducing its marketing and distribution cost.

Now consider the implications of good governance on domestic welfare. If firm 1 exports, the domestic welfare is

$$W^x = \frac{2(a-2c_2g_p-t+c_1g_p+z)^2 + (2a-c_1g_p-c_2g_p-2t-z)^2}{18}. \tag{14}$$

If firm 1 undertakes FDI, the domestic welfare is

$$W^f = \frac{2(a-2c_2g_p-t+c_1g_p)^2 + (2a-c_1g_p-c_2g_p-2t)^2}{18}. \tag{15}$$

We get from Eqs. (14) and (15) that  $\frac{\partial W^x}{\partial e} > \frac{\partial W^f}{\partial e} > 0$ . However,  $W^f \geq W^x$  for  $(c_2-c_1) \geq \frac{z}{2g_p} = \frac{zh}{2(h-e)}$ . Fig. 2(a) and (b) shows the domestic welfare under export and FDI by firm 1 for  $(c_2-c_1) < \frac{z}{2g_p}$  and  $(c_2-c_1) > \frac{z}{2g_p}$  respectively. Although we draw these figures separately to show the welfare implications clearly, one can demonstrate it in one diagram with  $(c_2-c_1) \geq \frac{z}{2g_p} = \frac{zh}{2(h-e)}$  depending on  $e$ .

Fig. 2(a) considers the situation where  $(c_2-c_1) < \frac{z}{2g_p}$ , which implies that  $W^f < W^x$ . If we also have  $c_2 > 2c_1$  or  $c_1 < c_2 - c_1$ , it implies that firm 1 undertakes FDI for lower level of governance. Hence, in Fig. 2(a), given the cost of FDI, firm 1 undertakes FDI for  $e < e'_p$  if  $c_1 < c_2 - c_1$ . Hence, the relevant welfare function is  $W^f$  for  $e < e'_p$  and  $W_x$  for  $e > e'_p$ . In this situation, good governance increases the domestic welfare irrespective of the production strategies adopted by the foreign firm.

Now consider the situation where  $(c_2-c_1) < \frac{z}{2g_p}$  but  $c_2 < 2c_1$  or  $c_2 - c_1 < c_1$ . In this situation,  $W^f < W^x$  but firm 1 undertakes FDI for  $e > e'_p$ . Hence, the relevant welfare function is  $W^x$  for  $e < e'_p$  and  $W^f$  for  $e > e'_p$ . This situation is similar to Fig. 1(b) and suggests that there are situations where good governance reduces domestic welfare.

Now consider Fig. 2(b) where  $(c_2-c_1) > \frac{z}{2g_p}$ , which implies that  $W^f > W^x$ . In this situation, if good governance induces FDI, i.e.,  $c_2 - c_1 < c_1$ , the relevant welfare function is  $W^x$  for  $e < e'_p$  and  $W^f$  for  $e > e'_p$ , and good governance increases the domestic welfare, irrespective of the foreign firm's production strategy. However, if  $c_1 < c_2 - c_1$ , firm 1 undertakes FDI for  $e < e'_p$ . In this situation, the relevant welfare function is  $W^f$  for  $e < e'_p$  and  $W^x$  for  $e > e'_p$ . Hence, there are situations where good governance reduces domestic welfare.

The above discussion gives the following result.

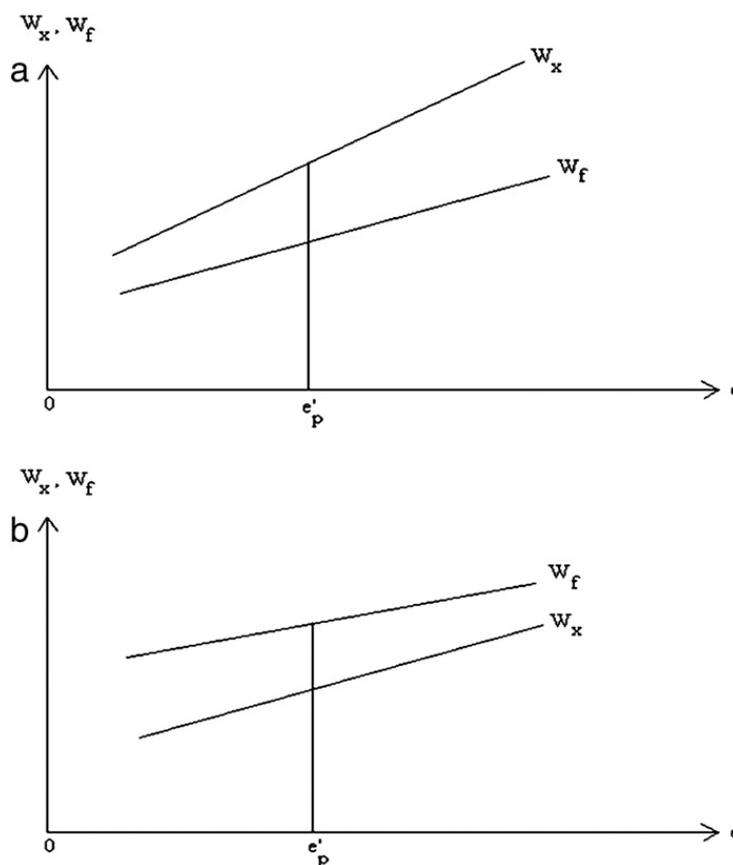


Fig. 2. (a): The effect of governance on domestic welfare when  $(c_2 - c_1) < \frac{zh}{2(h-e)}$ . (b): The effect of governance on domestic welfare when  $(c_2 - c_1) > \frac{zh}{2(h-e)}$ .

**Proposition 4.** If good governance increases productivities of the sales persons, thus reducing the per-unit costs of marketing and distribution for firms 1 and 2 by the same proportion  $g_p = \frac{h-e}{h}$ , it increases the domestic welfare if either  $c_1 < c_2 - c_1 < \frac{zh}{2(h-e)}$  or  $c_1 > c_2 - c_1 > \frac{zh}{2(h-e)}$ . Otherwise, good governance may reduce the domestic welfare.

The reason for the above result is similar to the trade-off mentioned in Proposition 2. The trade-off between a gain in consumer surplus and a loss of domestic profit under FDI compared with export by firm 1 is responsible for this result.

Like subsection 2.1, Propositions 3 and 4 show that the usual perception, i.e., good governance attracts FDI and also increases domestic welfare, occurs if  $c_1 > c_2 - c_1 > \frac{zh}{2(h-e)}$ , which shows that the per-unit cost difference of marketing and distribution between the firms is sufficiently large compared with international transportation cost. Propositions 3 and 4 also show that good governance reduces domestic welfare by attracting FDI, unless the marketing and distribution cost reducing effects due to improved governance are very strong. This happens if  $c_1 > c_2 - c_1$  and  $c_2 - c_1 < \frac{zh}{2(h-e)}$ , which shows that the marketing and distribution cost difference between the firms is sufficiently small compared with international transportation cost. Thus, the welfare reducing effect of FDI may give a strategic reason for poor governance. Alternatively, the domestic country may need to complement good economic governance with other policies, such as tax policies, to extract rents from the foreign investors in order to increase both inward FDI and the domestic welfare followed from the improved governance.

Propositions 3 and 4 provide further implications, which are absent in subsection 2.1.

Interestingly, we get another strategic reason for poor governance. If  $c_2 - c_1 > c_1$ , which implies that good governance reduces the incentive for FDI, and  $(c_2 - c_1) > \frac{zh}{2(h-e)}$ , which implies that FDI by the foreign firm provides higher domestic welfare compared with export by the foreign firm, good governance may prevent FDI by making the domestic firms more efficient, while FDI could increase domestic welfare compared with export by the foreign firm. Thus, it may justify the Chinese situation. If the Chinese firms are sufficiently cost inefficient than the foreign firms, good governance in China, even if it makes the Chinese firms more efficient, may reduce Chinese welfare by reducing inward FDI. Therefore, if other FDI-attracting policies remain the same, poor governance may help the Chinese economy by attracting more FDI.

Finally, Propositions 3 and 4 show that good governance may increase the domestic welfare by preventing FDI, and this happens if  $c_1 < c_2 - c_1 < \frac{zh}{2(h-e)}$ . This result provides a caution. It suggests that a country with poor governance may attract more FDI by making the domestic firms more cost inefficient, but that may not be good for the domestic welfare. Hence, if  $c_1 < c_2 - c_1 < \frac{zh}{2(h-e)}$ , a country may need complementary FDI policies along with good governance in order to maintain FDI flows and higher welfare.

### 3. Discussions

This section discusses implications of some assumptions considered in our model. We have considered that governance does not affect production costs but affects non-production costs related to marketing and distribution of the products. Our focus on the marketing and distribution costs is highly motivated by the existing works done by [Nocke and Yeaple \(2007\)](#), [Qiu \(2010\)](#) and [Ishikawa et al. \(2010\)](#), and this assumption helps us to consider that good governance benefits both the domestic and the foreign firms in the similar fashion, irrespective of export and FDI decisions of firm 1 (the foreign firm). It is trivial to note that if good governance reduces production costs, it benefits firm 1 more under FDI than under export, since firm 1 produces in the domestic country under FDI. In this situation, good governance increases firm 1's incentive for FDI more than that has been discussed in our analysis. Hence, if better economic governance benefits the foreign firm more under FDI compared with export, the negative effect of governance on inward FDI is lower than our analysis. If better governance reduces production costs, it also increases the possibility of higher domestic welfare compared with our analysis by increasing production efficiency in the industry. Hence, good governance is more desirable for the domestic country if it affects production costs. At the minimum, our analysis suggests that, when determining the relation between good governance, FDI and domestic welfare, it is important to see the effects of good governance on production and non-production activities along with the factors highlighted in our paper.

Even if good governance does not affect production costs but reduces the cost of undertaking FDI, good governance provides firm 1 more benefit under FDI than under export. In this situation, good governance increases the possibility of FDI compared with our analysis. However, since the cost of undertaking FDI does not enter into the calculation of the domestic welfare, the effects of economic governance on the domestic welfare remain the same whether or not it affects the cost of undertaking FDI.

We have considered constant returns to scale technologies generating constant per-unit costs. Hence, the scale in the concerned industry does not play any role within our results. If there are economies or diseconomies of scale in marketing and distribution technologies, the scale of production in the industry may be an important factor along with the factors highlighted in our paper. However, our qualitative results would definitely hold even in this situation, because the driving force for our result is laid on the relative benefit of the domestic and foreign firms arising from good governance. If good governance benefits the domestic firm more than that of the foreign firm, it may reduce the incentive for inward FDI. Otherwise, good governance increases the incentive for inward FDI. Similarly, like our analysis, whether good governance is desirable for the domestic country depends on the trade off created between the consumer surplus and domestic profit.

It may also be useful to discuss the implications of market structure on our results. We have considered a given market structure for our analysis. However, good governance may encourage some domestic firms to enter into the market by reducing their marketing and distribution costs, thus increasing product-market competition in the domestic country. It is then immediate that, entry by the domestic firms will further reduce the foreign firm's incentive for costly FDI, and this intuition follows from [Mukherjee and Sinha \(2007\)](#). Hence, if good governance encourages entry by the domestic firms, it may reduce the foreign firm's incentive for FDI even if good governance reduces the marketing and distribution costs of the firms by the same amount. This seems to be an interesting observation. Further, higher competition due to the entry of the domestic firms increases the possibility of higher domestic welfare under good governance.

### 4. Conclusion

It is a general consensus that good economic governance encourages the firms – from micro-enterprises to multinationals – to invest more due to a better investment climate. While several branches of economics literature widely discussed the implications of economic governance for the development of a country, the literature on international trade and FDI did not pay much attention to this aspect.

In a simple model, we show the implications of good economic governance on the incentive for inward FDI and domestic welfare. We show that the effects on FDI depend on the way good governance affects the per-unit domestic transportation costs and labour productivities. Further, whether good governance increases domestic welfare is ambiguous and depends on the factors such as the per-unit marketing and distribution cost difference between the firms, international transportation cost and the extent of marketing and distribution cost reduction. Thus, our analysis shows that the usual perception, i.e., good governance attracts FDI and also increases domestic welfare, is not obvious, and there may be strategic reasons for maintaining lower level of economic governance.

Whether good governance affects per-unit marketing and distribution costs by the same amount or by the same proportion is important for our results. It is worth pointing out that this type of effects prevails in other aspects of the economic analysis with asymmetric cost of firms. For example, whether the governments impose unit taxes/subsidies, which affect the marginal costs by the same amount, or they impose ad-valorem taxes/subsidies, which affect the marginal costs by the same proportion, may have significant implications for trade and industrial policies. Hence, the basic mechanism of our analysis has broader applicability than the context of this paper.

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