



## CPS Paper

### Does the Presence of Downstream and Upstream Foreign Direct Investments Affect the Labor Productivity of Domestic Industries?

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#### Presentation File

[abstracts/ottawa-2023\\_3e767004d71b66593833aeb3283cafda.pdf](https://abstracts/ottawa-2023_3e767004d71b66593833aeb3283cafda.pdf)

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#### Brief Description

With the premise that foreign direct investments (FDI) facilitate technology and knowledge transfer to domestic industries, eventually contributing to the country's sustainable economic development, the Philippine Government further liberalized its Foreign Investment Act in March 2022 to attract more foreign investors.

However, recent empirical evidence showing that FDI does facilitate transfer of technology and knowledge and benefit domestic industries remains limited in the Philippines.

This study, based on a balanced panel of industry-level data of manufacturing firms in the Philippines from 2010 to 2017, examines the effect of downstream and upstream FDI presence on the labor productivity of the manufacturing industries in the country.

Empirical results suggest that FDI presence in the downstream industries negatively affects the labor productivity of domestic suppliers, while FDI presence in the upstream industries does not significantly affect the labor productivity of domestic final-goods producers. To reap the positive productivity benefits from FDI, the findings of this study recommend the development of policies and programs to raise the absorptive capacities of domestic industries, upgrade the local quality standards of the domestic suppliers, and strengthen the collaboration between foreign suppliers in the local market and domestic final-goods producers.

#### Abstract

With the premise that foreign direct investments (FDI) facilitate technology and knowledge transfer to domestic industries, eventually contributing to the country's sustainable economic development, the Philippine Government further liberalized its Foreign Investment Act in March 2022 to attract more foreign investors. However, recent empirical evidence showing that FDI does facilitate transfer of technology and knowledge and benefit domestic industries remains limited in the Philippines. This study, based on a balanced panel of industry-level data of manufacturing firms in the Philippines from 2010 to 2017, examines the effect of downstream and upstream FDI presence on the labor productivity of the manufacturing industries in the country. Empirical results suggest that FDI presence in the downstream industries negatively affects the labor productivity of domestic suppliers, while FDI presence in the upstream industries does not significantly affect the labor productivity of domestic final-goods producers.

To reap the positive productivity benefits from FDI, the findings of this study recommend the development of policies and programs to raise the absorptive capacities of domestic industries, upgrade the local quality standards of the domestic suppliers, and strengthen the collaboration between foreign suppliers in the local market and domestic final-goods producers.

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**Figures/Tables**

**labor productivity**

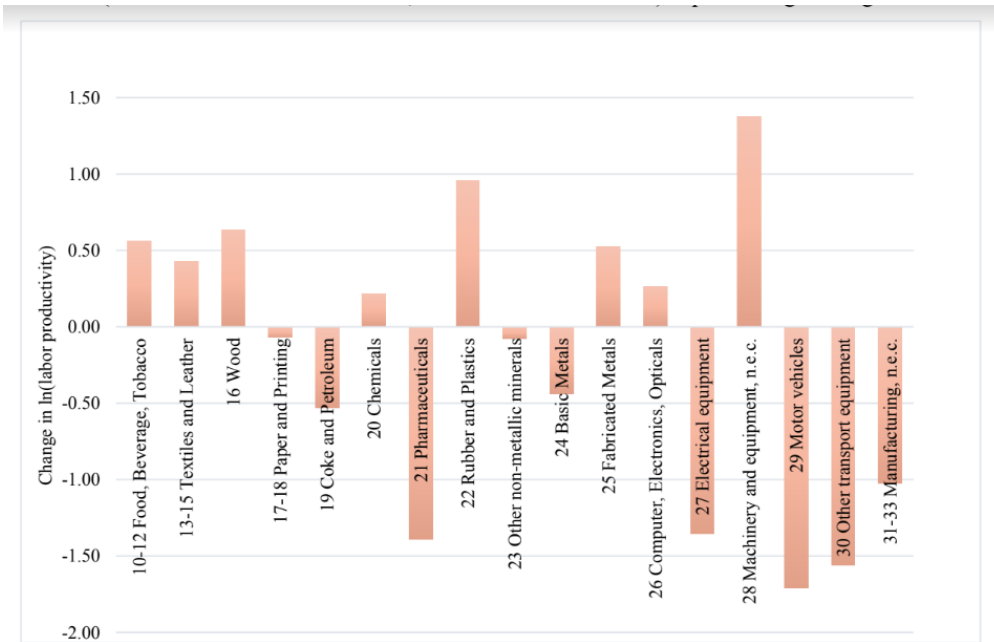


Figure 1. Change in ln(labor productivity) 2010 - 2017

foreign firms

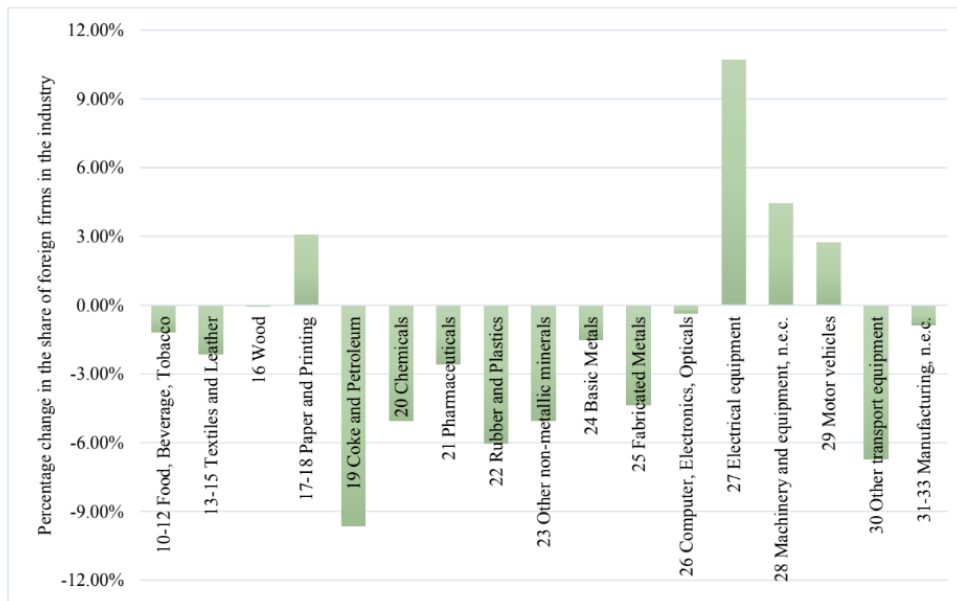


Figure 2. Change in share of foreign firms 2010 - 2017

downstream FDI

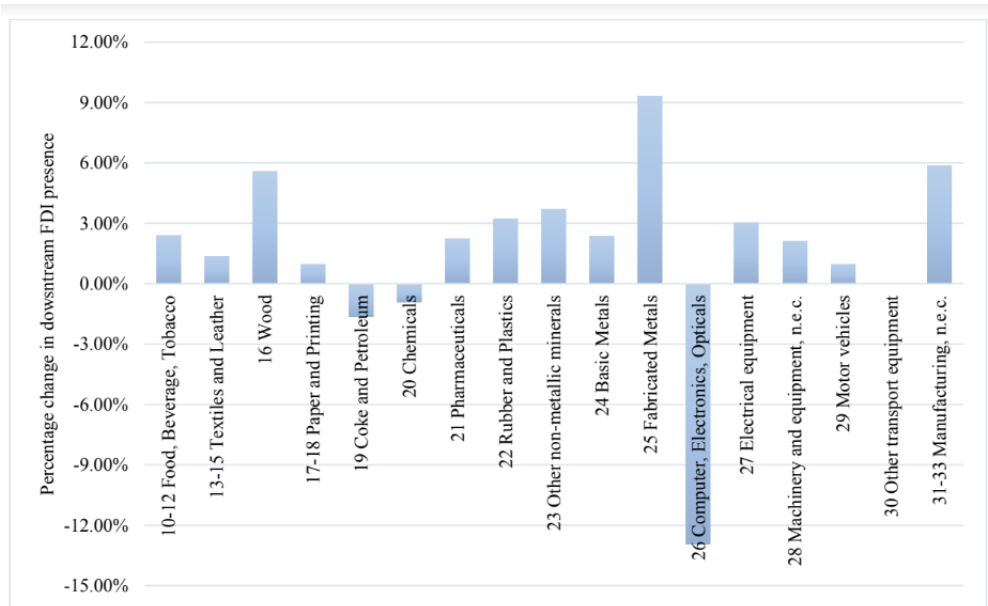


Figure 3. Change in downstream FDI presence 2010 - 2017

upstream FDI

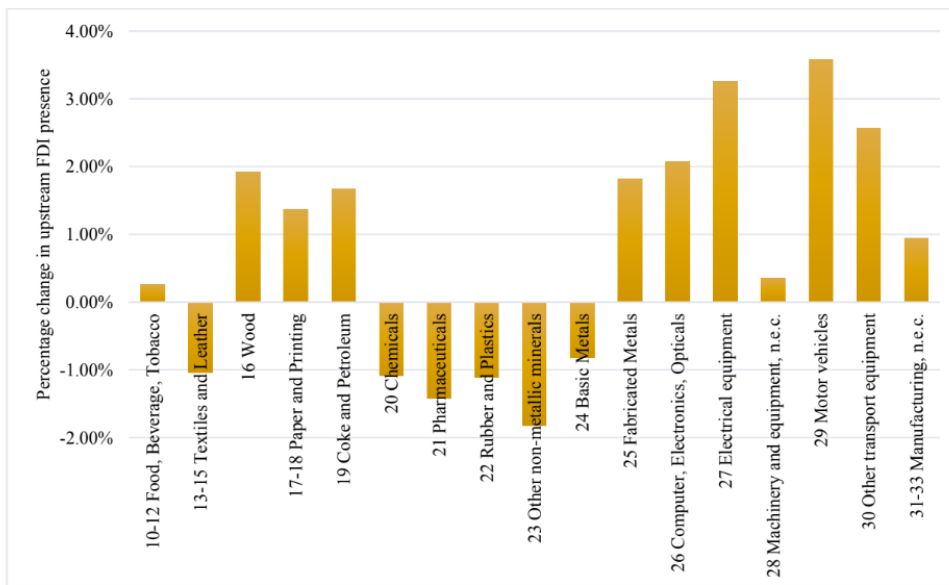


Figure 4. Change in upstream FDI presence 2010 - 2017

results

Table 8. Estimation results

<i>Y = ln(labor productivity)</i>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<i>fdi_downstream</i>	-1.1484** (0.3918)		-1.2401*** (0.3987)	-1.2601** (0.5902)	-1.1160 (0.7996)
<i>fdi_upstream</i>		-0.2049 (1.2771)	-1.0431 (1.5738)		-1.1210 (1.8361)
<i>fdi_own industry</i>	0.1799 (0.2087)	0.1042 (0.2507)	0.3726 (0.3216)	0.2027 (0.2453)	0.3634 (0.3111)
<i>ln(capital intensity)</i>	0.2021** (0.0690)	0.1961** (0.0681)	0.1999*** (0.0656)	0.2050*** (0.0696)	0.2023*** (0.0663)
<i>intangibles</i>	1.8844* (1.0081)	1.7420* (0.9712)	1.9140* (1.0349)	1.8522* (1.0509)	2.0065* (1.1219)
<i>ln(demand)</i>				0.0141 (0.0691)	-0.0187 (0.1031)
<i>ln(labor productivity) lagged</i>	0.6308*** (0.1363)	0.6893*** (0.1306)	0.6073*** (0.1458)	0.6233*** (0.1389)	0.6048*** (0.1465)
<i>constant</i>	2.5115** (1.0078)	1.6373 (1.0160)	2.9228** (1.3304)	2.2187 (1.9278)	3.4019 (3.1988)
<i>year effects</i>	Yes	Yes	Yes	Yes	Yes
<i>No. of observations</i>	85	85	85	85	85
<i>No. of instruments</i>	12	12	13	13	14
<i>Hansen test</i>	0.24	0.351	0.28	0.252	0.278
<i>AR(2)</i>	0.131	0.136	0.133	0.132	0.133

Robust standard errors in parenthesis

\*\*\* significant at 1% level, \*\* significant at 5% level, \* significant at 10% level

Table 9. Robustness check: using lagged FDI variables

<i>Y = ln(labor productivity)</i>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<i>fdi_downstream (lagged)</i>	-1.1357** (0.3906)		-1.2171*** (0.3840)	-1.2722** (0.5695)	-1.1454 (0.7602)
<i>fdi_upstream (lagged)</i>		-0.1643 (1.3892)	-0.9592 (1.6380)		-1.0033 (1.8758)
<i>fdi_own industry (lagged)</i>	0.1881 (0.1995)	0.0988 (0.2468)	0.3691 (0.3198)	0.2149 (0.2317)	0.3636 (0.3046)
<i>ln(capital intensity)</i>	0.1985*** (0.0667)	0.1894** (0.0673)	0.1940*** (0.0635)	0.1999*** (0.0671)	0.1955*** (0.0642)
<i>intangibles</i>	1.8851* (0.9662)	1.6984* (0.9268)	1.8944* (0.9754)	1.8282* (1.0259)	1.9480* (1.0701)
<i>ln(demand)</i>				0.0180 (0.0640)	-0.0109 (0.0962)
<i>ln(labor productivity) lagged</i>	0.6366*** (0.1325)	0.6999*** (0.1263)	0.6169*** (0.1391)	0.6307*** (0.1336)	0.6152*** (0.1388)
<i>constant</i>	2.4061** (0.9818)	1.5077 (0.9741)	2.7926* (1.3163)	2.0107 (1.8578)	3.0744 (3.0841)
<i>year effects</i>	Yes	Yes	Yes	Yes	Yes
<i>No. of observations</i>	85	85	85	85	85
<i>No. of instruments</i>	12	12	13	13	14
<i>Hansen test</i>	0.213	0.298	0.23	0.224	0.235
<i>AR(2)</i>	0.135	0.136	0.134	0.139	0.136

Robust standard errors in parenthesis

\*\*\* significant at 1% level, \*\* significant at 5% level, \* significant at 10% level