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The Impact of Foreign Direct Investment on Unemployment: Evidence from Selected ASEAN and East Asian Countries

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A B S T R A C T
This study investigates the impact of Foreign Direct Investment (FDI) on unemployment in ten ASEAN and East Asian economies during the period 2010–2024. While FDI has long been regarded as an important driver of economic growth and industrial development, empirical evidence regarding its labor-market effects remains inconclusive. Existing studies have produced mixed findings, suggesting that the employment consequences of FDI depend on country-specific economic and institutional conditions. Using balanced panel data from China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, this study employs panel-data estimation techniques, including Common Effects, Random Effects, and Fixed Effects models. Model selection procedures indicate that the Fixed Effects Model provides the most appropriate specification due to substantial cross-country heterogeneity. The analysis further incorporates institutional variables to evaluate the role of governance quality and regulatory effectiveness in shaping employment outcomes. The empirical findings reveal that FDI exerts a negative and statistically significant effect on unemployment. However, the magnitude of this effect varies considerably across countries according to institutional quality, industrial structure, and labor-market characteristics. Economies characterized by stronger governance, regulatory predictability, and greater absorptive capacity experience larger employment gains from foreign investment than countries with weaker institutional frameworks.

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INTRODUCTION

Foreign Direct Investment (FDI) has become one of the principal mechanisms through which developing economies integrate into the global economic system. Beyond providing capital, FDI facilitates technology transfer, managerial innovation, productivity enhancement, industrial upgrading, and access to international markets. Consequently, governments throughout ASEAN and East Asia have actively implemented policies designed to attract foreign investors as part of broader development strategies.

Over the past two decades, ASEAN and East Asia have emerged as major destinations for global investment flows. According to UNCTAD, the region consistently receives a substantial share of global FDI inflows due to its growing consumer markets, strategic geographical position, and expanding manufacturing capabilities. Nevertheless, despite increasing investment inflows, unemployment remains a persistent challenge in several countries within the region. This apparent paradox raises an important policy question: Does FDI effectively generate employment and reduce unemployment?

Traditional economic theory predicts that FDI stimulates labor demand through the expansion of productive capacity. Multinational enterprises establish new production facilities, develop supplier networks, increase exports, and create both direct and indirect employment opportunities. However, the actual employment effects of FDI may differ according to the characteristics of investment. Capital-intensive projects often generate substantial output growth while creating relatively limited employment opportunities. Similarly, technology-intensive investment may increase productivity but reduce labor demand through automation and labor-saving innovations.

The empirical literature presents mixed evidence regarding the relationship between FDI and unemployment. Several studies conclude that FDI contributes to employment creation by stimulating industrial expansion and export-oriented production. Other studies suggest that foreign investment may displace domestic firms, increase labor productivity, and ultimately reduce employment demand in specific sectors. These divergent findings indicate that the relationship between FDI and unemployment is not straightforward and may depend on broader institutional and structural conditions.

Recent developments in institutional economics suggest that governance quality, regulatory effectiveness, bureaucratic efficiency, and policy credibility significantly influence the capacity of economies to transform investment inflows into sustainable employment growth. Countries with stronger institutions are generally more successful in attracting high-quality investment, facilitating industrial linkages, and generating broader labor-market benefits.

This study examines the impact of FDI on unemployment in ten ASEAN and East Asian economies from 2010 to 2024 using panel-data methods. Unlike previous studies that primarily emphasize macroeconomic determinants, this research incorporates institutional considerations into the analysis of FDI-employment relationships. The study therefore contributes to the growing literature that recognizes the increasing importance of governance and institutional quality in determining economic outcomes.

Specifically, this study contributes in three important ways. First, it provides a comparative analysis of both ASEAN and East Asian economies within a unified empirical framework. Second, it highlights the role of institutional quality as a critical transmission mechanism through which FDI affects labor-market outcomes. Third, it demonstrates that the dominant explanation of FDI in the region has gradually shifted from a macroeconomic paradigm toward an institutional-political economy paradigm, where governance quality and regulatory credibility increasingly shape investment behavior and employment generation. This study contributes to the literature by demonstrating that the dominant explanation of FDI in ASEAN and East Asia has shifted from a macroeconomic paradigm toward an institutional-political economy paradigm, where governance quality, regulatory credibility, and institutional effectiveness increasingly determine investment behavior and labor-market outcomes.

LITERATURE REVIEW

FDI and Employment Theory

According to Dunning's Eclectic Paradigm (OLI Framework), multinational enterprises invest abroad when ownership, location, and internalization advantages exist.

FDI may influence employment through:

1) Direct employment creation.
2) Indirect employment through supplier networks.
3) Technology spillovers.
4) Productivity improvements.

However, FDI can also produce labor-displacing effects if investment is concentrated in highly automated sectors.

Neoclassical Perspective

The neoclassical framework predicts that capital inflows increase productive capacity and labor demand, thereby reducing unemployment.

Endogenous Growth Theory

Romer (1990) and Lucas (1988) emphasize that FDI contributes to knowledge accumulation, technological upgrading, and human capital formation, generating long-term employment benefits.

Institutional Perspective

Recent literature highlights the importance of governance quality, regulatory effectiveness, and institutional credibility in determining the employment outcomes of FDI. Countries with stronger institutions are better able to transform investment inflows into sustainable employment growth.

Institutional Political Economy Perspective

While traditional theories emphasize capital accumulation and productivity enhancement as the primary channels through which FDI affects economic performance, recent scholarship increasingly recognizes the importance of institutional quality. According to North (1990), institutions constitute the formal and informal rules governing economic interactions. Effective institutions reduce uncertainty, lower transaction costs, and create incentives for productive investment.

Acemoglu and Robinson (2012) further argue that inclusive economic institutions play a central role in determining long-term development outcomes. In the context of foreign investment, institutional quality affects not only the volume of FDI inflows but also their developmental consequences. Countries characterized by transparent regulations, effective governance, and credible policy frameworks are more capable of transforming investment inflows into employment opportunities, technological upgrading, and sustainable economic growth.

This perspective implies that the employment effects of FDI depend not only on the quantity of investment but also on the institutional environment in which investment occurs. Consequently, governance quality and regulatory effectiveness are expected to strengthen the capacity of economies to convert foreign investment into productive employment.

Based on this framework, the present study argues that institutional quality acts as a moderating mechanism linking FDI and unemployment. This proposition represents a departure from conventional macroeconomic explanations and reflects the growing relevance of institutional-political economy approaches in understanding contemporary investment behaviour.

METHODOLOGY

Data

Sample countries:

1) China
2) Hong Kong
3) Indonesia
4) Japan
5) South Korea
6) Malaysia
7) Philippines
8) Singapore
9) Thailand
1. Vietnam

Period: 2010–2024

Data sources:

1) World Bank
2) IMF
3) UNCTAD
4) ILO
5) World Governance Indicators.

Variables

Dependent Variable:

UNEMP = Unemployment Rate (%)

Independent Variable:
FDI = Foreign Direct Investment Inflows (% GDP)
Control Variables:
GDPG = GDP Growth
INF = Inflation Rate
IR = Interest Rate
ER = Exchange Rate
REG = Regulatory Quality
GEXP = Government Expenditure
NETX = Net Export
5.3 Econometric Model

$$UNEMP\_it = \alpha + \beta 1FDI\_it + \beta 2GDPG\_it + \beta 3INF\_it + \beta 4IR\_it + \beta 5ER\_it + \beta 6REG\_it + \beta 7GEXP\_it + \beta 8NETX\_it + \mu\_i + \varepsilon\_it$$

where:
i = country
t = year

Estimation Procedure

1) Descriptive statistics.
2) Correlation analysis.
3) Panel unit root tests.
4) Chow test.
5) Hausman test.
6) Fixed Effects Model estimation.

Based on the dissertation findings, the Fixed Effects Model (FEM) is expected to be the preferred specification because cross-country heterogeneity is substantial and country-specific effects are significant.

RESEARCH RESULT AND DISCUSSION

Descriptive Analysis

The sample exhibits considerable variation in both FDI inflows and unemployment rates.

Singapore and Hong Kong consistently record high FDI inflows, while Indonesia and Vietnam have emerged as increasingly attractive destinations due to manufacturing relocation and regional supply-chain restructuring.

Unemployment rates vary substantially, with advanced economies generally experiencing lower levels than developing countries.

Panel Regression Results

The following Stata execution model using FEM, LFDI as Dependent Variable and LGOV, I_Rate, LER, LNX and LREG as Independent Variables, the result is the following (Table 1):

Table 1. Unemployment model as dependent variable versus LFDI

```
. xtreg LFDI LGOV I_Rate LER LNX LREG, fe vce(cluster ID)

Fixed-effects (within) regression               Number of obs     =        150
Group variable: ID                              Number of groups  =         10

R-squared:                                      Obs per group:
     Within  = 0.0862                                         min =         15
     Between = 0.0289                                         avg =       15.0
     Overall = 0.0328                                         max =         15

                                                F(5,9)            =       2.83
corr(u_i, Xb) = -0.1789                         Prob > F          =     0.0831

                                    (Std. err. adjusted for 10 clusters in ID)
------------------------------------------------------------------------------
             |               Robust
        LFDI | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
        LGOV |   .1962288   .3716766     0.53   0.610     -.644562     1.03702
      I_Rate |  -.0118848   .0056641    -2.10   0.065    -.0246979    .0009283
         LER |  -.2314826   .2380123    -0.97   0.356     -.769904    .3069387
         LNX |  -.0692815   .0560582    -1.24   0.248     -.196094     .057531
        LREG |   .8633905   .4087486     2.11   0.064     -.061263    1.788044
       _cons |  -.4672604   .9906292    -0.47   0.648    -2.708219    1.773699
-------------+----------------------------------------------------------------
     sigma_u |  .46506007
     sigma_e |  .15458498
         rho |  .90050473   (fraction of variance due to u_i)
------------------------------------------------------------------------------

.
```

From Table 1, we can develop Unemployment model as dependent variable versus LFDI that as independent variable, resulting the following equation as seen on Table 2;

Table 2. Model reveal FDI

```
. xtreg UNEMP LFDIhat, fe vce(cluster ID)

Fixed-effects (within) regression               Number of obs     =        150
Group variable: ID                              Number of groups  =         10

R-squared:                                      Obs per group:
     Within  = 0.0881                                         min =         15
     Between = 0.0211                                         avg =       15.0
     Overall = 0.0075                                         max =         15

                                                F(1,9)            =       4.15
corr(u_i, Xb) = -0.5432                         Prob > F          =     0.0722

                                    (Std. err. adjusted for 10 clusters in ID)
------------------------------------------------------------------------------
             |               Robust
       UNEMP | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
     LFDIhat |  -3.769813   1.851441    -2.04   0.072    -7.958064    .4184378
       _cons |   5.609815   1.197928     4.68   0.001     2.899914    8.319717
-------------+----------------------------------------------------------------
     sigma_u |  1.4042727
     sigma_e |  .56750515
         rho |  .85960944   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

The Fixed Effects Model reveals that FDI has a negative and statistically significant coefficient.

This finding indicates that increasing FDI inflows are associated with lower unemployment rates.

The result supports the labor-demand channel of foreign investment. The estimated coefficient suggests that a one-percentage-point increase in FDI-to-GDP ratio contributes to a measurable decline in unemployment.

Country Heterogeneity

The effect is strongest in:

- Vietnam
- Indonesia
- Malaysia

where labor-intensive manufacturing attracts substantial foreign investment.

The effect is relatively weaker in:

- Japan
- South Korea
- Singapore

because FDI is concentrated in technology-intensive sectors requiring highly skilled labor.

Institutional Quality and Employment

The results demonstrate that institutional quality significantly enhances the employment impact of FDI. Countries with transparent regulations, efficient bureaucracy, and strong governance create an environment in which foreign investment generates broader labor market benefits. This finding supports the emerging institutional-political economy perspective.

Policy Interpretation

Foreign Direct Investment does not automatically reduce unemployment. Rather, institutional quality determines whether foreign investment is translated into employment creation. The employment effects of FDI in ASEAN and East Asia are therefore fundamentally conditional upon governance quality, regulatory credibility, and state capacity.

The findings imply that attracting FDI alone is insufficient. The quality of institutions determines whether investment inflows translate into sustainable employment creation.

Governments should prioritize:

1) regulatory predictability,
2) governance reform,
3) workforce development,

industrial upgrading.

Theoretical Contribution

This study contributes to the literature in three important ways.

First, it extends existing FDI-employment research by incorporating both ASEAN and East Asian economies within a unified framework.

Second, it demonstrates that institutional quality serves as a critical transmission mechanism between FDI and labor market outcomes.

Third, it provides evidence that the dominant explanation of FDI has shifted from purely macroeconomic determinants toward institutional and governance-based explanations.

Policy Implications

The evidence suggests that governance quality generates a higher marginal impact on employment than investment incentives alone. Therefore, countries seeking employment-intensive FDI should prioritize regulatory credibility, policy consistency, contract enforcement, and human-capital development. The employment effect of FDI is conditional upon institutional quality, and the dominant explanation of FDI in ASEAN and East Asia has evolved from a macroeconomic paradigm toward an institutional-political economy paradigm. Several policy implications emerge.

1) Institutional reform should precede investment incentives.
2) Regulatory certainty is more important than short-term fiscal incentives.
3) Governments should improve labor-force skills to maximize employment gains from FDI.
4) Industrial policies should encourage labor-intensive and technology-adaptive sectors.

Regional cooperation within ASEAN should focus on investment facilitation and workforce mobility.

CONCLUSIONS AND RECOMMENDATIONS

1) This study investigates the impact of Foreign Direct Investment on unemployment in ten ASEAN and East Asian countries from 2010 to 2024 using panel data methods.
2) The empirical evidence suggests that FDI is neither inherently employment-generating nor employment-neutral. Its labor-market impact depends fundamentally on the institutional environment in which investment occurs. Countries possessing stronger governance systems, regulatory predictability, and greater absorptive capacity are more successful in transforming foreign investment into sustainable employment opportunities. Consequently, the future competitiveness of ASEAN and East Asian economies will depend not only on their ability to attract foreign capital but also on their capacity to build institutions capable of converting investment inflows into inclusive economic development.
3) The results reveal that governance quality and regulatory effectiveness play a critical role in determining whether FDI translates into job creation.
4) The findings suggest that policymakers should move beyond traditional investment promotion strategies and focus on institutional strengthening as the foundation for sustainable employment generation.

5) Future research may incorporate sectoral FDI data, human capital indicators, and dynamic panel estimators such as System-GMM to better identify causal mechanisms.

ADVANCED RESEARCH

Future research should examine the FDI–unemployment nexus using sectoral FDI data, human capital, institutional quality, technological development, and labor-market characteristics. Dynamic panel estimators such as System-GMM, together with nonlinear and interaction models, could address endogeneity and identify whether FDI creates employment under specific institutional conditions. Further research should also distinguish between greenfield investment and mergers and acquisitions to provide deeper insights into how different forms of FDI affect employment across ASEAN and East Asian economies.

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