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ĐỘ MỞ THƯƠNG MẠI VÀ ĐẦU TƯ TƯ NHÂN: BẰNG CHỨNG THỰC NGHIỆM TẠI CÁC QUỐC GIA ĐANG PHÁT TRIỂN Ở CHÂU Á

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Tóm tắt

Bằng phương pháp hồi quy GLS, bài viết nghiên cứu tác động của độ mở thương mại đến đầu tư tư nhân của 26 nền kinh tế các nước đang phát triển ở châu Á trong giai đoạn 2001 - 2019. Kết quả cho thấy độ mở thương mại (được đo bằng tỷ lệ xuất nhập khẩu trên GDP) có tác động cùng chiều và tác động ngược chiều đến hoạt động đầu tư của khu vực tư nhân. Nghiên cứu cũng đo lường tác động của độ mở thương mại (1) trong thời kỳ hậu suy thoái, (2) ở các nước có thu nhập cao và (3) ở các quốc gia theo thể chế hiến pháp đối với đầu tư tư nhân. Nghiên cứu cũng chỉ ra tỷ lệ tín dụng của khu vực tư nhân trên GDP, dòng vốn vào ròng đầu tư trực tiếp nước ngoài, và chỉ số giá tiêu dùng có tác động tích cực đến đầu tư tư nhân. Ngoài ra, tác động ngược chiều được tìm thấy trong các biến chi tiêu công, cung tiền mở rộng, và thời kỳ hậu suy thoái kinh tế. Kết quả giúp đưa ra các khuyến nghị về chính sách cho Chính phủ và các bên liên quan, như mở rộng thị trường xuất khẩu, nâng cao năng lực cạnh tranh của sản xuất trong nước, và điều tiết dòng vốn hiệu quả.

Từ khoá: các quốc gia đang phát triển; châu Á; đầu tư tư nhân; độ mở thương mại; hồi quy GLS.

TRADE OPENNESS AND PRIVATE INVESTMENT: EMPIRICAL EVIDENCE IN DEVELOPING ASIAN COUNTRIES

Abstract

Using the GLS regression, the study examines the influence of trade openness on private investment in 26 developing countries in Asia from 2001 to 2019. The results show trade openness (measured by the ratio of imports and exports to GDP) has both positive and negative impacts on investment activities of the private sector. The study also measures the impact of trade openness (1) in the post-recession period, (2) in high-income countries, and (3) in countries following constitutional rules on private investment. The study also indicates the private sector credit to GDP

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ratio, net foreign direct investment inflows, and the consumer price index have a positive impact on private investment, and the negative impact is found in the variables of public spending, broad money supply, and post-recession period. The results provide policy recommendations to the government and stakeholders, such as expanding export markets, boosting the competitiveness of domestic production, and efficiently regulating capital.
Keywords: Asia; developing countries; GLS regression; private investment; trade openness.

1. Introduction

Asia has quickly emerged as a leader in the private market investment field, notably in the growth stock sector. A record $296 billion was invested in Asian private equity acquisitions in 2021, up over $100 billion from 2020 (Yang et al., 2022). The value of deals in South Korea, Southeast Asia, and Japan more than quadrupled, and each nation in the region established new investment records. Private investment pledges are expected to reach $76.2 billion in low- and middle-income countries in 2021, increasing 49% from 2020 (World Bank, 2022).

Recognizing the synergistic relationship between trade openness and economic development and its effect on private investment, governments have to find the factors affecting private investment and develop them to improve economic efficiency. Private investment in different countries is affected by many different factors and varies from country to country and from period to period. Public investment will have an impact on private investment and sometimes dominate the market economy (Boachie et al., 2020). Besides, credit availability and government investment appear to be strong boosters of private investment in developing economies (Sakr, 1993). However, Tung Le Thanh (2020), in their research, illustrated that the domestic credit variable has a negative and significant effect on private investment. In addition, there is a crowding-out effect showing foreign direct investment drives private investment in developing countries in Asia and Africa. Besides, there are a number of macro factors such as GDP per capita, trade openness, and electricity that also have a positive and statistically significant impact on private investment.

Besides, the studies also show the factors affecting private investment are either positive or negative. Accordingly, countries should invest in environmental development, one of the factors helping expand trade and stimulate investment (Agrawal & Khan, 2011). There are also studies that show not found any evidence regarding the effect of the exchange rate (Dang et al, 2020). In addition, public investment and growth have a positive impact on private investment while real interest rate, state-owned enterprises investment and state-owned capital stock have a negative impact on private investment (Nguyen & Trinh, 2018). According to Olweny & Chiluwe's (2012) analysis for the instance of Kenya, the monetary policy has a favorable effect on private investment. In contrast, the indirect effects of contractionary monetary policy on private investment were investigated through the quantity or bank lending channels. Besides, at the average level of trade openness, financial development promotes private investment. The effect, however, declines and turns negative at higher levels of openness (Boachie et al., 2020).

Generally, previous studies have analyzed the factors affecting private investment. Differences in results are explained by differences in geography, methods of data use, and duration of observations. In addition, studies show long-term and short-term effects to make a difference. However, it is not enough to consider the impact on private investment in only a few countries and two or three representative indicators. Therefore, this article uses a variety of indicators from 26

countries and data spanning 19 years to see sharp differences and comparisons between countries in the same region.

This research also has some advances compared with other research on this problem. *First*, among a few topics investigating this causality, none has gone into deep research at a scale spanning developing economies of Asia. *Second*, two dependent variables corresponding with two ways of measuring private investment, which means 4 models in total, were observed to produce the most accurate result. *Third*, the model is supplemented with interactive variables to clarify the impact of trade openness on private investment in specific situations: before and after the economic crisis in 2008, in high-income developing countries in Asia and in politically stable developing countries in Asia.

Regarding the practical contributions of our study, the research has clarified the relationship between trade openness and private investment in Asian developing economies in the period from 2001 to 2019. This would be a significant contribution in the context that many Asian nations under investigation have been recently emerging as dynamic developing countries and private investment has been proven to play a key role in that development. From the research results as well as the recommendations on the topic, policymakers and businesses in developing countries in Asia will have more references to come up with effective strategies and approaches to make the most of the relationship between trade openness and private investment.

The rest of the article is presented as follows. The relevant literature will be reviewed in section 2 from which the framework of the analysis is provided. Section 3 presents the data system and evaluation method the group has chosen. The results of the method will be presented in Section 4. Section 5 is responsible for making conclusions and recommendations.

2. Literature view

Many researchers have published many scientific works about private investment. According to Marcos (2019), private investment is promoted by the private sector and is considered the purchase of a capital asset that is expected to create profits and add value in the future. Based on the report International Monetary Fund (IMF) Investment and Capital Stock Dataset, 1960-2019, private investment is the investment made by non-government investors, such as companies or financial organizations. While analyzing the determinants of private investment, many researchers assumed trade openness is a potential effector of it. According to the definition from Frankel and Romer (1999), trade openness is calculated by the ratio of import and export to GDP. OECD mentions it as an index used to evaluate the importance of foreign trade in comparison with domestic trade. But Bhuiyan & Beraha (2022) have a different view as they define it as a nation's contribution to the flow of cash and goods worldwide.

On further research about the effect of trade openness, the results vary from one country to another. In some countries, it was found negative. Typical examples are in Kenya, Pakistan and Ghana. Kiptui (2005) in Kenya introduced a variable of trade liberalization that has a negative impact on private investment. Because increasing competitiveness in the world market may affect domestic companies. Bibi et al. (2012) found it negatively affects private investment in Pakistan, because trade openness raises the probability of capital outflows. Obeng et al. (2018) stated about the negative effect of trade openness in both the short and long run for Ghana's private investment. In addition, the negative result has also been found in BRICS economies by Ruzima & Boachie

(2018). In contrast to the above researchers, the positive effect of trade openness is admitted in Ghana by Naa-Idar et al. (2012), in Syria by Mohsen (2015) and in India by Boachie et al. (2020). When there is a rise in trade openness, private investment will respond positively in the following years. This shows the important role of trade openness in motivating private sector investment.

Besides trade openness, researchers also pay attention to other economic and social elements. Public investment which is intimately related to private investment has been observed first. Lesotlho (2006) found out it has a negative effect on private investment in Botswana. Ajide & Lawanson (2012) in Negeria or Al-Badry (1998) in Jordan made the same conclusions. These researches also clarify depreciation of the local currency, external debts and the real interest rate also have negative effects on private investment. In the case of Nigeria, the effect of the real exchange rate is negative in the short run and positive in the long run because the economy cannot timely adjust for depreciation. The devaluation of currency has a negative effect in the short run because the phenomenon limits investment's profit. But in the long run, the industrial production structure will change and benefit private investment (Chibber & Shafik, 1990). Obeng et al. (2018) in Ghana implies high economic growth and interest rate means lower private investment in the short-run.

Besides the factors mentioned above, there are other elements in the economy that benefit private investment. In the case of Jordan, Al-Khatib et al. (2012) assume some indexes such as GDP, FDI or human capital positively enhance national private investment. Positive effects also come from some intangible features such as the effect term of trade, the facilitative policy for credit (Al-Khatib et al., 2012) and the development level of the financial sector (Al-Badry, 1998) or financial ratio such as lending rate (Oloyede et al., 2021). Haque (2020) implies a high M2/GDP ratio carries out pessimistic private investment while Marashdeh & Al-Malkawi (2014) come up with a contract conclusion. The structure and characteristics of the economy are believed to have an effect on the determinants of private investment in Pakistan (Sark, 1993). Some certain investment areas bring positive signs for private investment, such as infrastructural investment (Sark, 1993) or construction activities (Al-Abdulrazag, 2003).

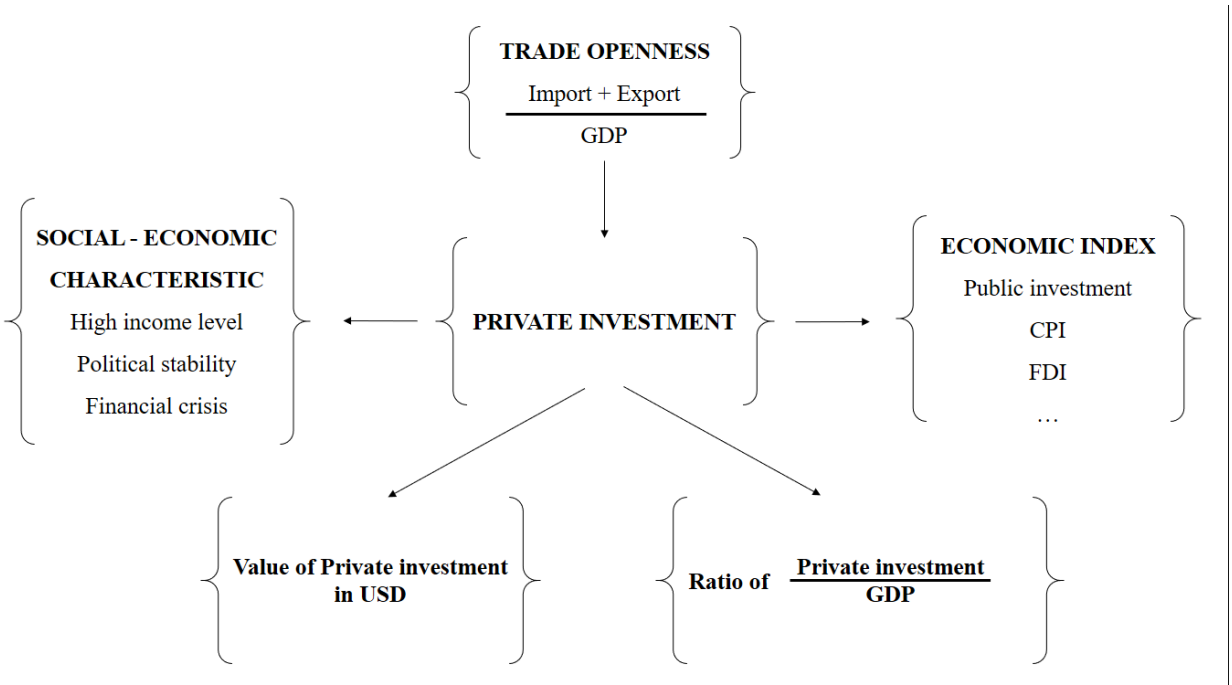

Figure 1. Analysis framework about the impact of trade openness on private investment

Source. Synthesized by the authors (2022)

3. Research method

3.1. Data

To conduct our research, data from 39 developing economies in Asia were collected. According to IMF, countries on the list are: Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei, Cambodia, China, Gruzia, India, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Laos, Lebanon, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Oman, Pakistan, Philippines, Qatar, Saudi Arabia, Sri Lanka, Syria, Tajikistan, Thailand, Timor Leste, Turkey, Turkmenistan, Uzbekistan, Vietnam, Yemen; however, Democratic People's Republic of Korea is not included due to the missing of data. Data was collected from international statistics institutions such as World Bank, IMF and World Population Review to ensure accuracy and consistency of measurement. The majority of data was collected from World Development Indicators of World Bank and World Economic Outlook of IMF.

Although the authors have made the best effort to gather data, missing data in a few years of some variables is inevitable. The descriptive statistics is presented in Appendix 1. However, appropriate techniques have been adopted to overcome the data problem to ensure an accurate result. That leaves us with 384 observations across 26 countries in the period of 19 years from 2001-2019. The steps of checking, processing, and cleaning data such as removing outliers, descriptive statistics, and standard distribution tests have also been conducted.

3.2. Research models

The quantitative research model for studying the impact of trade openness on private investment in Asian developing countries was adopted from Mbaye (2014), adding the relative price of investment goods, net foreign direct investment inflows and three dummies for high income countries, countries following constitutional rules and the post-recession period. Mbaye (2014) formulated the model based on Jorgensen (1967)'s neoclassical flexible accelerator model because it is the most widely used of all investing theories.

Following is the explicit estimable econometric model, with μ_t reflecting the usual error term, *ln* meaning natural logarithm, and t is time. As this study uses two ways of representing private investment, pri_t can be the natural logarithm of private investment or private investment/GDP. Other variables are described in Table 1.

$$pri_t = \beta_0 + \beta_1 open_t + \beta_2 cpi_t + \beta_3 pui_t + \beta_4 rpi_t + \beta_5 brm_t + \beta_6 fdi_t + \beta_7 prc_t + \beta_8 lnfre_t + \beta_9 hic_t + \beta_{10} ins_t + \beta_{11} yea_t + \mu_t \quad (1)$$

Table 1. Declaration of variables in the model

Variables	Description	Research source
	Dependent variable	
lnpri	Natural logarithm of private sector investment, current US dollars	Oshikoya (1992; 1994); Asante (2000); Ndikumana (2000); Outtarra (2004); Kiptui (2005); Bibi et al. (2012); Hassan & Salim (2011); Obeng et al. (2018).
prig	The private sector investment to GDP ratio	Servén & Solimano (1992)); Mbaye (2014).
	Independent variable	

Variables	Description	Research source
ope	The trade openness, the percentage of total exports and imports to GDP (unit: %)	Hirsch (1976); Servén (2003); Oshikoya (1994); Frimpong & Marbuah (2010); Asante (2000); Ndikumana (2000); Outtarra (2004); Hasan & Salim (2011); Seruvatu & Jayaraman (2001).
int4	Interaction variable, int4 = ope x hic	Greene & Villanueva (1991), Naa-Idar et al. (2012), Kiptui (2005)
int7	Interaction variable, int7 = ope x ins	Mbaye (2014), Naa-Idar et al. (2012), Kiptui (2005)
int8	Interaction variable, int8 = ope * yea	Zubair (2020), Naa-Idar et al. (2012), Kiptui (2005)
cpi	CPI index, the percentage change in the country's consumer price index (2010 = 100)	Frimpong & Marbuah(2010); Attefah & Enning (2016)
pui	Public investment, measured as the percentage of GDP (%)	Blejar & Khan (1984); Aschauer (1989); Greene & Villanueva (1991); Chhiber & Van Wijnbergen (1988); Rossiter (2002)
rpi	The relative price investment divided by consumption	Akpalu (2002)
brm	Broad money supply as the ratio of GDP	Haque (2020)
gdpg	Economic growth rate	Dailami & Walton (1992); Khan & Reinhart (1990); Sakr (1993)
fdi	Net foreign direct investment inflow (as percentage of GDP)	Oloyede et al. (2021).
prc	Private sector credit (as the percentage of GDP)	Al-Badry(1998); Nair (2004); Bhaduri (2005); Ouattara (2004); Frimpong & Marbuah (2004); Erden & Holcombe (2006)

Variables	Description	Research source
lnfre	Foreign Reserve (the natural logarithm of the foreign reserves includes exclusive drawing rights, reserves retained by creditors of IMF and foreign exchange portfolios under the monetary authorities' supervision)	McKinnon (1973); Ronge & Kimuyu (1997); Mbaye (2014).
ins	Political Institution, ins= 1 if Constitutional rule ins= 0 if Unconstitutional rule	Naa-Idar (2012); Mbaye (2014)
hic	Dummy for countries with high level income. hic = 1 if it is high level income hic = 0 otherwise	Greene & Villanueva (1991).
yea	Dummy for the period after 2008 (after the global financial crisis) yea = 1 if it is after 2008 yea = 0 otherwise	Zubair et al. (2020)

Source: Synthesized by the author (2022)

4. Result

From the Wooldridge test, the White test, and the VIF test, the models have the autocorrelation, heteroscedasticity, and no multicollinearity. With the model with the dependent variable lnpri, the FEM model is more suitable, and with the model with the dependent variable prig, the REM model is more reliable. After performing the tests, it shows that two models have heteroscedasticity and autocorrelation.

In previous research on the determinants of private investment, such as Mbaye (2014) and Khanal & Shrestha (2008), endogeneity does not appear and is not mentioned in the relationship between private investment and its determinants. Therefore, the GLS regression was conducted. The regression results are shown in Table 2 and Table 3.

Trade openness. Its regression coefficient is negative and significant at the 1% level in Model 1 and Model 3, implying increasing trade openness reduces private investment in developing nations' economies in Asia. According to Frimpong & Marbuah (2010), overexposure to foreign competition through increased trade liberalization has had a negative impact on private investment. This is consistent with the findings of Obeng et al. (2018), which explain opening up the private sector to international trade can reduce innovation in production. This result is similar to the findings of Oshikoya (1992, 1994), Asante (2000), Ndikumana (2000), Outtarra (2004), and Hassan & Salim (2011) gave similar results for Bangladesh.

According to its coefficient in Model 2 and Model 4, *trade openness* increases private investment at a 1% significance level. One possible explanation is when economies open up, such as via trade liberalization, attracting private investment becomes more convenient and effective. This shows trade openness helps boost private sector investment by encouraging exports and making imports of intermediate, capital goods, and technology, pushing industries to grow and enhancing innovation and manufacturing. This is similar to Asante (2000), Ajide & Lawanson (2012), Naa-Idar et al. (2012), Mbaye (2014), and Mohsen (2015), but differs from Oshikoya (1994) and Servén (2003).

Table 2. Model regression measures the impact of trade openness on private investment

	(1)	**(2)**
VARIABLES	**lnpri (without interactive variables)**	**prig (without interactive variables)**
ope: Trade openness	-0.315***	0.0720***
	(0.103)	(0.0229)
cpi: Consumer price index	1.013***	0.235***
	(0.112)	(0.0215)
pui: Public investment (%GDP)	-1.288***	-0.146**
	(0.271)	(0.0582)
rpi: Relative price of investment goods	0.0688	-0.0342
	(0.123)	(0.0239)
brm: Broad money (%GDP)	-0.898***	0.0334
	(0.139)	(0.0273)

VARIABLES	(1) lnpri (without interactive variables)	(2) prig (without interactive variables)
gdpg: Economic growth rate	0.394	-0.0345
	(0.308)	(0.0552)
fdi: Net foreign direct investment inflows	0.0286	0.286***
	(0.346)	(0.0665)
prc: Private sector credit (%GDP)	1.851***	0.141***
	(0.185)	(0.0361)
lnfre: Foreign exchange reserve	0.663***	-0.0213***
	(0.0253)	(0.00425)
ins = 1 if constitutional rule	-0.928***	-0.148***
	(0.131)	(0.0255)
hic = 1 if high income level country	-0.0344	0.00682
	(0.113)	(0.0157)
yea = 1 if in the period after 2008	-0.237***	0.00306
	(0.0405)	(0.00829)
Constant	7.843***	0.521***
	(0.569)	(0.0964)
Observations	384	384

Standard errors in parentheses

(***) 1% significance level, (**) 5% significance level, (*) 10% significance level

Source: Synthesized by the authors (2022)

To better understand the impact of trade openness on private investment, the authors examined *the interaction of trade openness and some control variables, namely income level, political institution, and the period after 2008*, and the influence of these interactive variables on private investment. In model 3, the interactive variables trade openness x high-income nations and trade openness x constitutional rules are statistically significant at the 1% level. The regression coefficient is positive indicating both factors have the same influence on the dependent variable. In particular, the variables int4, int7 are interacting variables that signal trade openness in high-income economies and trade openness in nations with constitutional political structures. Then, when trade openness improves in high-income nations, the value of private investment in the economy rises. Furthermore, increased trade openness in nations with constitutional political systems boosts private investment.

In model 4, the *interactive variable of trade openness x post-recession period* is statistically significant at 10%, with a negative coefficient indicating a negative influence on private investment/GDP. This implies that the post-recession increase in trade openness will lower private investment. This might happen because it takes time for economies to recover after a recession, and private investors' investment demand will fall, leading to the decline in the quantity of private investment in those economies.

Table 3. Model regression measures the impact of trade openness on private investment with country groups by income, political institution with interactive variables

VARIABLES	(3) lnpri (with interactive variables)	(4) prig (with interactive variables)
ope: Trade openness	-0.868***	0.101***
	(0.163)	(0.0332)
int4: Trade openness x high income countries	0.784***	-0.0380
	(0.236)	(0.0496)
int7: Trade openness x constitutional rule	0.602***	-0.0415
	(0.213)	(0.0461)
int8: Trade openness x post-crisis period	-0.0308	-0.0329*
	(0.0898)	(0.0198)
cpi: Consumer price index	0.998***	0.231***
	(0.103)	(0.0214)
pui: Public investment (%GDP)	-1.085***	-0.152***
	(0.261)	(0.0584)
rpi: Relative price of investment goods	-0.0271	-0.0300
	(0.119)	(0.0241)
brm: Broad money (%GDP)	-0.908***	0.0284
	(0.112)	(0.0267)
gdpg: Economic growth rate	0.478	-0.0438

VARIABLES	(3) lnpri (with interactive variables)	(4) prig (with interactive variables)
	(0.324)	(0.0568)
fdi: Net foreign direct investment inflows	-0.0881	0.286***
	(0.379)	(0.0672)
prc: Private sector credit (%GDP)	1.796***	0.146***
	(0.160)	(0.0359)
lnfre: Foreign exchange reserve	0.695***	-0.0210***
	(0.0219)	(0.00421)
hic = 1 if high income level country	-0.748***	0.0350
	(0.268)	(0.0457)
ins = 1 if constitutional rule	-1.408***	-0.101**
	(0.232)	(0.0507)
yea = 1 if in the period after 2008	-0.224**	0.0281
	(0.0929)	(0.0183)
Constant	7.610***	0.495***
	(0.520)	(0.0972)
Observations	384	384

Standard errors in parentheses

(***) 1% significance level, (**) 5% significance level, (*) 10% significance level

Source: Synthesized by the authors (2022)

Several other control variables have been shown to be statistically significant in explaining private sector investment. *The consumer price index* (which reflects inflation) has a positive effect on private investment at the 1% significance level, as Table 2 and Table 3 show. This outcome contradicts the majority of empirical studies. According to Bigsten et al. (1999), in Africa, uncertainty has a negative impact on private investment, and inflation is commonly seen as a proxy for uncertainty. However, it is consistent with Frimpong & Marbuah (2010) and Attefah et al. (2016), who suggest inflation encourages private investment in Ghana. Higher prices helped to stimulate production, explaining the positive link between inflation and private investment. Furthermore, the increasing output will result in larger earnings. Income growth has since raised private investment. Acosta & Loza (2005) obtain similar results for Argentina. Moreover, Jin & Zou (2005) argue inflation has the ability to encourage saving and investment, and Adams (2009) discovered prices' increasing can boost the investment capital of private-sector projects in Sub-Saharan African countries.

The public investment to GDP ratio has a negative coefficient and is statistically significant at 1% in all models. This demonstrates in developing Asian economies, government investment decreases private investment. According to Ajide & Lawanson (2012) in their research on Nigeria's situation, this might be due to ineffective public investment implementation, as infrastructures like transportation, water supply, and roads being in poor conditions caused most enterprises to close and relocate to other countries to avoid the increased production costs, resulting in lower private investment. This finding is similar to Acosta & Loza (2005) in their research in Argentina, as well as Ghani & Din (2006) in their study of Pakistan, and the research of Lesotlho (2006), and Ajide & Lawanson (2012). However, this finding contradicts Asante (2000), when public investment increases private investment at 1% significance level.

The regression model findings demonstrate a negative link between *the broad money supply to GDP ratio* and private investment. This is consistent with Haque (2020) and contrasts the findings of Marashdeh & Al-Malkawi (2014), who found a positive link between M2/GDP and private sector investment in Saudi Arabia. The negative impact of M2/GDP might be ascribed to the undeveloped financial industry, the financial sector's inadequate regulatory framework, and the lack of suitable investment conditions required for enhancing private investment.

Another factor impacting private investment is *the private sector credit/GDP ratio*. The private sector credit/GDP variable has a positive and 1% statistically significant coefficient, indicating financial sector expansion will stimulate private investment. While this conclusion contradicts Nair (2004) and Bhaduri (2005), it agrees with Al-Badry (1998), Ouattara (2004) and Frimpong & Marbuah (2004). Credit to the private sector, according to this research, enhances private investment in Senegal and Ghana. Erden & Holcombe (2005) also present evidence for 19 industrialized nations.

According to model 3, *the foreign exchange reserve* variable has a positive effect on private investment in both models (with a significance level of 1%). This finding is similar to Mbaye (2014)'s analysis for the Kenya national case. *Political institutions* decrease private investment. At the 1% level, the dummy variable representing political institutions has a negative sign and is statistically significant. This result is comparable to that of Mbaye (2014) in his study in Kenya. On the other hand, model 4 demonstrates a negative effect of the *foreign exchange reserve* variable

on private investment at the 1% significance level. This is consistent with the findings of Obi (2020) study on the situation of Nigeria.

Although insignificant in model 1 and model 3, *the net foreign direct investment inflow* has a positive effect on private investment in both models and is statistically significant at 1% in model 2 and model 4. As Agosin & Machado (2005) discover, FDI appears to have "overwhelmed" private investment in emerging nations. This discovery is also consistent with the findings of Morrissey & Udomkerdmongkol (2012).

The dummy variable for *the post-recession period* is another element influencing private investment as revealed by the model regression findings. According to the findings, the post-recession era has a negative impact on private investment at the 1% significance level (model 1) and 5 (model 3). This discovery is quite similar to the findings of Zubair et al. (2020), indicating private sector investment in the Netherlands fell during and after the financial crisis.

5. Conclusion and recommendation

5.1. Conclusion

The study has demonstrated how trade openness influences the investment activity of the private sector. In that process, other variables can have an impact on the private investment. The study uses GLS regression and 26 Asian emerging economies were studied for the period between 2001 and 2019. This group of nations has several economic development features as well as certain demographic and social traits.

Regression results for the model with private investment as the dependent variable and the model with private investment/GDP as the dependent variable reveal trade openness can have a positive or negative influence on private sector investment activity, implying trade openness increases private investment, as capital is circulated, private investment is recruited, and sustainable development goals are achieved through boosting import and export activity. Increased trade openness, however, might lower private investment activity because when domestic private investors compete with international investors, or when the economy suffers, or if the economy lacks sufficient effective regulations, institutions, and strategies to govern capital, private sector investment will decline.

For other control variables, the article found the private sector credit/GDP ratio, foreign direct investment net inflows, and consumer price index had a positive influence on private sector investment. On the contrary, the result reveals government expenditure, broad money supply, and the post-recession period have a negative impact on private investment. Furthermore, the study finds the foreign currency reserve variable has both positive and negative effects on private sector investment activity.

The study of private sector investment is practical because long-term growth will be dependent on a move to private investment associated with efficiency, change, and innovation. Furthermore, for the first time, the authors performed a regression for the interaction variables int4 (ope*hic), int7 (ope*ins), and int8 (open*yea) to show the linkage between trade openness in countries with high income, countries with the constitutional political rule, and the trade openness of economies in the post-recession period. Investigating and identifying the variables influencing private sector investment also helps with the development of suitable policies for the government and stakeholders.

5.2. Policy recommendations

To make the most of the positive impact and minimize the threat of trade openness, the following policies should be placed on top priority:

First, Diversify export markets.

Most of the developing countries in Asia have adopted an export-led strategy. However, both South Asia and Southeast Asia, where the majority of developing nations lie, still rely on the United States and China for both export and import, which means these nations have yet to exploit the advantage of Free Trade Agreements (FTAs) they involve. Nevertheless, Southeast Asian countries have performed well in internal trade as their commerce within the block outperforms that of South Asia. Therefore, they should speed up the process of exploiting other potential markets that allow preferential conditions thanks to FTAs they involve such as Australia, New Zealand, and other European countries. These countries should also increase trade within Asia-Pacific Areas, the one emerging as a dynamic developing economic area in the last few years. For South Asian countries, they need to better exploit the advantage of The South Asian Free Trade Area (SAFTA). In addition, countries involved in the Asia-Pacific Trade Agreement (APTA) (such as India, Bangladesh, and Sri Lanka) should place their focus on this area as it is easy to access geographically and economically. Moreover, nations need to make their best efforts to propose more FTAs and bring those under negotiation to a conclusion to create more market opportunities for their domestic business.

Additionally, governments should launch many programs to help firms exploit preferential conditions of FTAs. Most small and medium enterpriseS (SMEs) in developing countries are ambiguous about those policies; therefore, they easily miss these opportunities. The states need to have a platform publishing information on FTAs along with preferential offers and how to gain them. They also need to have regular programs to inform and instruct firms in a detailed manner. Furthermore, supporting kiosks need to be set up in strategic foreign markets to provide timely support. Along with efforts made by the authorities, firms need to actively research those preferential conditions, establish relationships with supporting kiosks, and constantly keep up with the trade policies of other countries as they will be regularly updated.

Second, Improve the competitiveness of domestic manufacturing.

The government needs to have relevant measures to protect and support their domestic industries in a way that could help firms generate competitive advantages. The export subsidy, though being a common promotion measure in the past, might have become an inefficient one as the number of cases where countries use anti-dumping and countervailing measures has increased recently. Instead, authorities should save their effort for supporting measures focusing on capital, technology, human resources, and innovation, which would be significant support for SMEs. Firms, along with the efforts made by states, need to constantly develop competitiveness using preferential offers provided by authorities. They need to place their emphasis on improving labor skills and productivity and invest more in research and development activity, which remains a weakness of SMEs, to create more attractive and high-quality products in domestic and global markets.

In addition, governments need to restrict the imports of raw materials and products that could be domestically produced to ease the rivalry burden faced by domestic firms. Instead, they should

allow for imported products carrying innovation and technology advances to keep up with the development of other countries. In this way, domestic firms could learn from these advances to renovate their products into better ones, which would help them capture more market share and make their business more attractive in the eyes of investors. The states also need to develop the domestic supporting industry of strategic industries to help firms save time and reduce cost, which would directly generate more quantity at cheaper prices and raise the competitiveness of domestic firms in international markets.

Third, Regulate the capital market to support strategic industry.

The states need to establish financial institutions in dynamic economic areas to efficiently regulate capital from developed industries (such as agriculture) into strategic developing industries (such as manufacturing). These establishments should diversify their financial services and offer interest incentives to mobilize idle capital. Along with that, firms need to abide by regulations and provide transparent and trustworthy information when calling for capital.

5.3. Limitations and suggestions for further research

In our research, there are still objective and subjective limitations:

First, due to the missing data, our research only includes 384 observations across examined countries. Due to the nature of data, our model also has autocorrelation though being fixed. Therefore, we suggest statistics institutions collect more data so further research could increase the number of observations and avoid the problem of autocorrelation and heteroskedasticity.

Second, due to the availability of data, our study has not taken the differences between the developing countries, which might have an impact on the causality under investigation, into consideration, such as geography, legal system, and education level. Thus, we suggest further research should include variables presenting those differences in the model.

APPENDIX

Appendix 1. Descriptive statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
lnpri	560	23,68523	2,009834	18,87535	29,37461
prig	560	0,3466016	0,176018	0,0161153	1,049613
ope	665	0,8297461	0,3626325	0,118554	2,103743
int7	665	0,2753973	0,5255307	0	2,103743
int4	665	0,1625841	0,3883358	0	1,918725
int8	665	0,4662183	0,4707511	0	1,918725
cpi	680	1,021765	0,4152296	0,1815468	5,509294
pui	579	0,1255502	0,086272	0,008444	0,496177
rpi	722	1,188734	0,4408033	0,3026811	3,751372
brm	670	0,6285414	0,4485591	0,0786544	2,606183
gdpg	740	0,0539798	0,0550191	-0,366582	0,5338179

Variable	Obs	Mean	Std.Dev.	Min	Max
fdi	646	4,135506	5,764467	-37,17265	55,0703
prc	591	0,4636286	0,336612	0,0126693	1,653904
lnfre	678	22,79291	2,207756	17,58754	28,98401
ins	741	0,2051282	0,404068	0	1
yea	997	0,6870612	0,4639224	0	1
hic	741	0,1417004	0,3489782	0	1

Source: The authors (2022)

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