

## Financial Development and Economic Growth; Evidence from Asia-Pacific Countries

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### Abstract

This research examines the impact of financial development on economic growth. Using a sample of 152 observations from 13 countries in the Asia Pacific for the period 2004 and 2020, we find that financial development positively impacts economic growth, supporting the finance-growth hypothesis, especially in the development of the capital market sector. The study suggests that the positive relationship between financial performance and growth should take the necessary steps for policymakers to simultaneously develop the banking sector and the stock market to boost growth.

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## 1. Introduction

The financial sector development is considered as one of the major prerequisites for the sustainable development of the economy (Demirguc-Kunt, 2006). The continuity of investment, economic growth, and poverty reduction is derived from the efficiency of establishing and growing markets, instruments, and institutions. The development of the financial market's size, efficiency, and stability provides a better report about the possibility of profitable investment and drives optimal capital allocation. Therefore, the increase in the level of financial development leads to multiple advantages for the economy (Guru and Yadav, 2018).

Regarding the economic growth variables, good governance is one of the essential pillars. Having necessary elements such as an efficient and transparent public institution, independent judicial system, and stable financial system will be valuable in boosting growth. A comprehensive and stable financial system will encourage individuals to behave in beneficial financial habits and financial inclusivity across the country. Thus, the distribution of productive capital from individuals, households, and corporates will occur effectively to the different stakeholders (Monsura and Villaruz, 2021).

Domestic savings mobilization and efficient capital allocation are the two essential growth functions of the financial sector. Financial institutions should execute these two functions effectively to leverage the economy's stability for achieving sustainable growth. However, for most developing countries where direct financing is poorly evolved, especially in rural areas, indirectly funding through intermediaries is the primary method of distributing capital from savings to investment (Monsura and Villaruz, 2021).

Financial institutions cannot channel credit to potential investments on the flip side. The financial crisis of 1997 and 2008 indicates the financial market's failure to allocate the huge inflow of funds toward lucrative entities. The recent worldwide financial turmoil reflects this massive prudential regulation and supervision failure. Thus, there has been a global response against financial innovation and finance in general after the crisis. Therefore, finance is associated with crisis, credit crunch, and recession rather than economic growth and development triggers (Estrada et al., 2010).

The earliest economists, such as Scumpeter (1912), Hicks (1696), and McKinnon (1973), reckon the importance of the financial system in the economy. Financial stability will ensure the process of economic development (Usifzada & Mammadova, 2015). Nevertheless, Arcand et al. (2015), Cecchetti and Kharroubi (2012), and Law and Singh (2014) discovered a different result. They found that there is such a potential of an inverted u-shape connection among growth and financial development. Furthermore, Gambacorta et al. (2014) stated that the financial development impact on growth was not statistically significant for wealthy countries.



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In this study, we examine the financial industry's role in boosting economic growth following the discussion above. The estimation will be focused on the different effects in developed and developing countries in the Asia Pacific between 2004-2020. This study's empirical results aim to serve an informative conclusion for related stakeholders who need the policy-making process.

Finally, the remainder of this paper is organized as follows—section 2 literature review on financial development and economic growth. Section 3 explains the data, the variables, and the methodology. Section 4 provides results and a discussion, including the robustness test. Section 5 ends this paper with a conclusion.

## 2. Literature Review

The debating theoretical view about the financial development impact on the economic growth has been argued over recent years. The economists' views vary due to their findings in each research. The initial thinking of the financial sector's role in promoting economic growth was popularized by Schumpeter (1911); he argued that better quality and quantity of financial service would boost the growth.

Through long-term banking industry estimation, the recent result from Almahadin et al. (2021) found a positive influence on economic growth in Jordan. The combination of savings, high diversifications, and risk management will affect economic growth, as stated by Camba & Camba, 2020; Kumar & Paramanik, 2020; Ngoc, 2020. Furthermore, Abusharbeh (2017) concludes that the financial sector plays a momentous task in economic growth by enhancing productivity. Following that, (Monsura 2020) finds the indication that financial development, through access to financial education, could translate to higher income. In addition, because of Puatwoe and Piabuo (2017), who observe the financial development in Cameroon, bank deposit and government expenditure positively influence economic growth, both in short and long term periods. The positive relation between financial development and economic growth was also found by Bojanic (2012), Jedidia et al. (2014), and Samargandi et al. (2014), who used time-series approaches in their study. Moreover, the credit flow to the private sector also supports the positive influence of financial development on economic growth (Bist, 2018).

The different relationship results among financial development and the economic growth released by Breitenlencher et al. (2015), wherein long-term financial development positively impacts economic growth. However, they find a considerable negative impact on GDP in crisis periods. Following that, Arcand et al. (2015), who observed 16 African & non-African third world countries, also mentioned that finance negatively impacts output when credit flows to meet a certain threshold to the private sector. Furthermore, through threshold modeling, Adeniyi et al. (2015) demonstrate the negative influence of financial development on Nigeria's economic growth.



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On the other hand, several research results found an ambiguous relation between financial development and economic growth. They found no significant financial development's impact on economic growth in high-income countries, as Gambacorta et al. (2015) reported. Cournede et al. (2015) also stated a similar result for their sample in OECD countries. Samargandi et al. (2015) also mentioned a review of financial development and growth nexus in their 52 middle-income countries samples over 1980 to 2008. They found no significant evidence for the short run. Furthermore, a weak relation between financial development and economic growth in emerging and developed countries was also found by Ductor and Grechyna (2015), meanwhile Ayadi et al. (2015) in northern and southern Mediterranean countries.

### 3. Research Methods

#### Data

The research consisted of national-level bank data between 2010 to 2020 and Asia's developed and developing countries. The countries observed are China, Indonesia, Malaysia, Hong Kong, Japan, Philippines, Singapore, Republic of Korea, Thailand, Taiwan, and Vietnam. Financial Depth, Financial Efficiency, and Financial Access are the indicators used to indicate the level of financial development. Those data are extracted from International Monetary Fund statistics, whereas the economic growth data is retrieved from the World Bank.

#### Research Model

All financial development indicators will be examined in general towards the growth as the dependent variable. The equation is constructed as follow:

$$Growth_{it} = \alpha_0 + \beta_1 FDi_t + \varphi X_{it} + \varepsilon_{it} \quad (1)$$

Where  $i$  represent the country and  $t$  refers to the year.  $FinDev$  is a proxy of financial development, the control variable is represented by  $X$ , and  $\varepsilon$  define the term error.

### 4. Results

#### Descriptive Statistic

Descriptive statistics for each measurement/proxy of the survey variables used are provided in Table 1. In detail, the table displayed the number of observations and the mean, standard deviation, min., and max. value. Measurement of economic growth is the average GGDP (Logarithm of Gross Domestic Product Growth), which is 2.5. The higher the GDP value, the greater the country's economic growth. In addition, the study also uses the logarithm of gross domestic product LG GDP with an average of 27,054.

Meanwhile, this research uses the banking development and stock market development approach in financial development. Domestic credit (DMCREDIT) to the private sector and bank loans (BANKCR) with an average of 4,444 and 4,626, respectively. Meanwhile, market capitalization (MARKCAP) and Stock market total value traded (MARKTR) have an average of 4.475 and 3.81, respectively. This



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study also includes control variables such as the logarithm of government spending (GOVEXP), exports (EXPORT), population growth (GPOPPUL), and inflation rate (INF).

**Table 1. Descriptive statistic**

Variable	Obs	Mean	Std.Dev.	Min	Max
GGDP	152	-2.5	0.894	-5.985	-0.918
LGGDP	152	27.054	1.416	23.752	30.32
DMCREDIT	152	4.444	0.611	3.239	5.47
MARKCAP	152	4.475	0.96	2.354	7.48
MARKTRA	152	3.81	1.387	0.115	6.859
BANKCR	152	4.626	0.669	3.805	6.766
GOVEXP	152	2.415	0.317	1.698	2.955
EXPORT	152	3.875	0.839	2.703	5.434
GPOPPUL	152	-0.107	0.728	-4.02	1.672
INF	152	4.092	3.676	-0.728	23.115

After the data description is considered and the statistical values of all variables follow the conceptual predictions, the next step is to carry out diagnostic tests on the database to ensure that the data in the regression estimation do not experience multicollinearity problems. Several textbooks and previous studies use the VIF or Variance Inflation Factor test and a pairwise correlation matrix to observe this issue.

**Table 2. Pairwise correlation**

Variables	VIF	(1)	(2)	(3)	(4)	(5)
(1) DMCREDIT	2.60	1.00				
(2) GOVEXP	1.85	0.40*	1.00			
(3) EXPORT	2.45	0.37*	-0.40*	1.00		
(4) GPOPPUL	1.32	-0.38*	-0.33*	0.16	1.00	
(5) INFL	1.28	-0.49*	-0.44*	-0.10	0.22*	1.00

Based on the rule of thumb, the research does not show the possibility of multicollinearity problems [1].

### Regression Results

Based on Table 3, the regression estimation results show that DMCREDIT has a significant negative coefficient on GGDP in the model (1). This finding indicates that DMCREDIT or domestic credit is given to the private sector (referring to financial resources offered to the private sector, through purchases of non-equity securities, trade credit, loans, and other receivables, which create claims for repayment) has a negative impact on the economy. This finding is unaligned with Levine, et al. [2]. That finding shows that private sector credit is an essential indicator of financial development, reflecting the banking sector's efficiency in



offering credit sources to the private sectors. However, the growth process tends to deteriorate if lending is for unproductive investments and activities [3]. The result in column (1) is confirmed in column (4), showing that BANKCR has a significant negative coefficient on GGDP. These findings indicate that the higher the loan distribution, the more negative influence on economic growth. The argument of this relationship explains that banks provide an aggressive loan distribution when the economy is growing to impact increasing bank risk. It can disrupt the economy [4, 5].

**Table 3. Baseline regression**

	Dependent variable=GGDPP			
	Model 1	Model 2	Model 3	Model 4
<u>Independent variables</u>				
DMCREDIT	-0.2445*** (0.0573)			
MARKCAP		0.0613** (0.0250)		
MARKTRA			0.0497** (0.0199)	
BANKCR				-0.1795*** (0.0373)
<u>Control variables</u>				
GOVEXP	-0.1000*** (0.0324)	-0.2160** (0.0903)	-0.2071** (0.0789)	-0.1606* (0.0899)
EXPORT	0.0860* (0.0413)	0.1354** (0.0459)	0.1598*** (0.0458)	0.0738 (0.0443)
GPOPPUL	-0.0120 (0.0127)	-0.0071 (0.0111)	-0.0153 (0.0108)	-0.0072 (0.0112)
INFL	0.0077*** (0.0017)	0.0142*** (0.0020)	0.0114*** (0.0017)	0.0126*** (0.0022)
Constant	1.0613** (0.3782)	-0.2332 (0.3029)	-0.2506 (0.3144)	0.9825*** (0.2751)
N. Observations	186	191	190	193
N. Country	13	13	13	13
<i>R-squared</i>	0.3800	0.2977	0.3131	0.3081

Notes: Fixed effect cluster country is included in all estimations. Robust t-statistics are in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% levels respectively.

Meanwhile, the size of financial development in the capital market sector shows a positive nexus between finance and economic growth in models (2) and (3). The total amount of all listed and traded shares in a stock market exchange affects the economic growth rate in Asia Pacific countries. This finding supports prior research, finance-growth nexus hypothesis [2, 3, 6]. The capital market is the



financial health indicator in the economy. It shows the mood of investors in a country. Thus, capital market development is essential for growth [7].

Turning to the control variable, which is government expenditure, it negatively affects economic growth. The higher government expenditure impacts the lower the economic growth. The opposite finding is on the level of exports and inflation. In addition, regression results in Table 4 show the relationship between financial development and economic growth. This section measures economic growth by the logarithm of gross domestic product. Regression estimate shows that domestic credit (DMCREDIT) to the private sector, market capitalization, and credit significantly affects the gross domestic product. This finding is in line with previous research [2, 3, 6].

**Table 4. Changing variables of interest**

	Dependent variable= Logaritma GDP			
	Model 1	Model2	Model 3	Model 4
<u>Independent variables</u>				
DMCREDIT	1.7104*** (0.2179)			
MARKCAP		0.3255** (0.1099)		
MARKTRA			-0.0002 (0.1139)	
BANKCR				1.2217** (0.5266)
<u>Control variables</u>				
GOVEXP	-0.2031 (0.1222)	0.4267 (0.5736)	0.5650 (0.6425)	0.3933 (0.7314)
EXPORT	-0.7147* (0.3406)	-1.1645*** (0.3781)	-1.1756** (0.4044)	-0.6627 (0.5230)
GPOPPUL	-0.0004 (0.0375)	-0.0258 (0.0769)	-0.0349 (0.0668)	-0.0476 (0.0685)
INFL	-0.0075 (0.0078)	-0.0208 (0.0123)	-0.0345** (0.0130)	-0.0457*** (0.0143)
Constant	22.5751*** (2.1010)	28.9813*** (2.4469)	30.1845*** (2.6987)	22.9798*** (4.0994)
N. observations	197	203	202	206
N. country	13	13	13	13
R-squared	0.6540	0.4256	0.3784	0.4016

Notes: Fixed effect cluster country is included in all estimations. Robust t-statistics are in parentheses. \*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% levels respectively.





## 5. Conclusion and Suggestion

The financial sector plays an essential role in a country's economic development, triggering the growth of economic, alleviation of poverty, distribution of income, and stability of the financial system through their intermediary function. An advanced financial market distributes the savings to profitable investment and leads to better capital allocation. However, the financial crisis of 1997 and 2008 shows that the financial market failed in allocating the massive inflow of funds toward lucrative entities. Thus, the evolving financial market should be preconcerted from the failure of monitoring and regulating as it may have severe implications for the economies.

It is interesting to examine the financial development's role on economic growth in Asia Pacific countries in this context. This research examines the relationship between financial development and the growth of economic, but also the differences between emerging and developed countries from 1990 to 2020.

This research confirms that financial development affects economic growth, supporting the finance-growth hypothesis, especially in the development of the capital market sector. This research provides policy implications that positive relationship between financial development and economic growth suggests that policymakers must decide the necessary moves towards the simultaneous development of both the stock market and the banking sector to stimulate growth.

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