Financial Development and International Trade inside Asia

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Abstract

This study attempts to document the impact of "Financial development" on international trade between selected Asian economies and rest of the Asian region. Financial development index is used to represent financial development level which includes four dimensions from two perspectives; institutional and market. An "overall financial development index" is calculated by combining institutional and market level financial development indices. Effect of market and institutional dimension is measured separately on international trade of Asian economies with rest of the Asia. Different macro-variables are controlled including GDP per capita, total population, Inward FDI flow, Outward FDI flow and real effective exchange rates for modeling. Sample includes data for twenty years ranging from 1997-2016 for 16 large economies of Asia. Panel data modeling technique "fixed effects regression" is used with two different proxies of dependent variable. "Overall financial development" is found to have positive and significant relationship with international trade. Study confirms the robustness of the results to different measures of international trade. Results from fixed effects model confirm positive and significant relationship between all components of financial development and international trade, and between overall financial development and international trade in Asian economies. Singapore, Japan and South Korea represent highest levels of financial development while other countries showed relatively less development financial development level according to measure used in this study. An important policy implication is if a country wants to grow economically by using instrument of trade policy especially exports improvement, then it has to develop its financial system to efficiently fulfill "international trade finance" needs.

Keywords: Financial Development Index, International Trade, Asia

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1. Introduction

Asia is becoming increasingly important as its share in the world trade and GDP is on the rise as compared to other regions according to recent report on "Asian economic integration" (AEIR 2018) of Asian Development Bank (ADB). According to this report, the region in expected to grow at 5.8% in 2019 and main contributor includes "international trade" among others. Due to rising tensions in trade related matters between the largest economies (China & USA) of the world, growth may suffer if trade doesn't get a boost. It is important to know all the factors affecting international trade in Asia, in such a scenario to further policies which facilitate trade growth and openness. One of such factors is "Financial development" which facilitates international trade in many ways. Easy availability of finance is difficult to be made possible without proper/well functioning financial system (financial markets and financial institutions). Financial institutions include banking and non-banking financial institutions (insurance companies, investment companies, modarbas, mutual funds, etc) while financial markets include stock markets and bond markets. Well developed banking system makes it easy to obtain bank loans and well developed stock/bond markets facilitate innovative corporations to secure funds from public and investors directly by issuing shares and bonds (Arestis, Demetriades, & Luintel, 2001; Levine, 1999). After obtaining necessary financing, such corporations can establish, grow, innovate and export. Financing is the most important factor affecting a firm's decision to export as it involves high costs in the form of capacity enhancement, investment in research and development, market research and documentary credits etc. Only a well developed financial system can efficiently allocate necessary resources for such requirements. In a region like Asia which is highly dependent on trade for growth and where financial development levels are not as high as in Western economies, it is interesting to know how financial development affects international trade.

1.1 Aim and scope of the study

This study attempts to determine the impact "Financial development" on international trade volume and direction

between selected Asian countries and rest of the Asian region. Sixteen large economies of Asia are selected and data for twenty years ranging from 1997 to 2016 is included. A lot of studies have checked relationship between international trade and financial development using trade figures to the rest of the world but studies related to dynamics of trade within a region are scarce especially in Asia. Hence we want to test whether the dynamics of trade within Asia are different or not, in relationship with financial development, as compared to established theories for the Western region.

1.2 Significance of the study
This study is the first of its kind up to the best of our knowledge till now as we use "financial development index" (developed by ourselves here) to represent level of "financial development" in a country and trade figures which represent international trade of Asian countries with the rest of All Asian countries, instead of the rest of the world. Results can be extremely helpful for more trade integration and development agenda in Asian region for relevant policy formulation.

World Economic forum published its report on the level of a country's financial development through an index. It was a complete measure of overall financial development including more dimensions from different perspectives. Methodology to calculate financial development index of a country was discussed, but most of the researchers ignored it and kept on using old (one ratio) measures of financial development due to the ease of use. We identified this gap in recent literature, and not only calculated this index for sufficiently large (16) number of countries of Asia, but also studied its impact on the most burning issue of international trade volumes and balances.

2. Literature review
2.1 Financial Development
Financial development represents the efficiency of financial system (including financial markets and institutions) of a country in channeling savings into viable investments. It is one of the most important factors of economic development (Omri, Daly, Rault, & Chaibi, 2015; Samargandi, Fidrmuc, & Ghosh, 2015; Valickova, Havranek, & Horvath, 2015). It contributes to economic growth directly and indirectly through influencing other variables like trade openness etc (Kaushal & Pathak, 2015; Rafindadi & Ozturk, 2016). In a financially developed economy, savers and lenders of money can transact easily, efficiently and confidently with minimal transaction costs. This efficient transaction conduct then results in the best allocation of financial resources to the sectors and projects which contribute to the economic development and growth of that country even more. It has two major components: "financial markets development" and "financial institutions development". Each of these concepts is discussed separately below:

2.1.1 Financial markets development
Financial markets are a place where sellers and buyers of all kinds of financial services and products can interact to finalize transactions (Saunders, Cornett, & McGraw, 2006). Financial markets of a country can be divided into two categories depending on the type of financial securities being transacted in these markets; primary markets and secondary markets. Primary markets are a place where financial securities are issued for the first time to the investors (Initial public offerings IPO etc) while secondary markets facilitate trading (buying and selling) of already issued financial securities (stock and bond markets). These primary and secondary markets can further be divided into two categories depending on the maturity term of the financial securities issued there; money market and capital market. Money markets facilitate trading of financial securities whose maturity term is less than or equal to one year (Forex market, Promissory notes, treasury bills etc) while capital markets bear trading of financial securities issued for longer than one year term (stocks and bonds etc).

Developed financial markets should depict features like less market frictions, more liquidity, a large number of buyers and sellers, a large number and variety of financial instruments to be traded, internationalization and easy execution of transactions with no or minimal transaction costs (Greenwood & Smith, 1997). While a rigorous measure can be developed to check the level of financial markets development of a country and some are available also from the recent past, but almost all the previous researches have represented financial markets development of a country with a single ratio (stock/bond market capitalization to GDP) (Arestis et al., 2001; Beck, 2002; Gächter & Gkrintzalis, 2017). Although stock market of a country is the most important among capital markets at least most of the times, still it cannot depict acutely the exact level of financial markets development in a country. A good measure of financial markets development should capture four aspects of financial markets; access, depth, efficiency and stability. Each of these aspects can be measured by using different kinds of financial ratios which depict true level of that aspect's development in an economy.

2.1.2 Financial institutions development
Financial institutions include commercial banks, insurance companies, mutual funds, leasing companies, investment banks, investment companies and venture capital firms etc. Banks are the most important of all financial institutions so "bank development" (Private credit by banks/GDP) has been used extensively in literature to represent financial institutional development of a country (Amo-Yartey & Abor, 2013; Asghar & Hussain, 2014;

Rajan & Zingales, 1996). But this single ratio may not completely represent the level of overall financial institutional development of a country so we have calculated an index of financial institutional development in this study for sample countries.

2.1.3 Financial development measures

As discussed above, four types of approaches can be found in literature to measure financial development. Those include "credit provided by banks to private sector as a percentage of GDP", "Domestic credit to GDP", "Stock market capitalizations as a percentage of GDP" and "Bond market capitalization as a percentage of GDP" (Amo-Yartey & Abor, 2013; Ho, Huang, Shi, & Wu, 2018; Hsu, Tian, & Xu, 2014; Naeem & Li, 2019). First two ratios are a measure of financial institutions development and last two represent financial market development. Some studies report that the measure included represent a specific aspect while others just use one or a combination of these ratios as an overall measure of the level of financial development. Market capitalization to GDP measures roughly the size of the secondary market and doesn't say anything about credit availability to corporations like "Private credit to GDP". Market capitalization to GDP may over emphasize the value of a stock market of a country on the one hand on the other hand it doesn't measure the activity of a stock market. So the nature of sensitivity analysis demands addition of another ratios called "value of shares traded divided by GDP" (value traded) and turnover ratios (value of shares traded divided by market capitalization) (Tsoukas, 2011). Another measure used in sensitivity analysis to capture the overall financial development is "accounting" which measures the comprehensiveness of financial statements like income statement and balance sheet. Higher values available for "accounting" represent well managed records and help corporations secure financing form financial institutions and markets easily.) All of these sensitivity measures have been used in a recent study on Financial development and international trade (Francis, Khurana, & Pereira, 2003; Levine, Loayza, & Beck, 2000).

2.2 Factors affecting international trade

The most famous model to discuss international/bilateral trade determinants is Gravity model which includes "size of economy" (GDP) and distance between the trading centers of the two countries as the primary variables. Extensions of gravity equation have included other factors like current and historical trading costs etc (Athukorala & Yamashita, 2006; Novy, 2013; Okawa & Van Wincoop, 2012). Another famous theory uses bilateral exchange rates as a primary factor to determine imports and exports volume and direction between countries (Dellas & Zilberfarb, 1993).

Linder hypothesis stated that countries with similar levels of per capita income tend to trade more because of possessing similar characteristics. While H-O (Heckscher-Ohlin) model stated that countries prefer to produce and export products that use factors which are extensively and abundantly available in the local market, to those countries which lack similar resources(Hallak, 2010; Slaughter, 1998). Other factors affecting international trade include trade complimentarity, cultural similarities, governance quality, trade agreements and institutional development etc (De Groot, Linders, Rietveld, & Subramanian, 2004; Markusen, 1995)

2.3 Financial development and international trade

Access to finance (a component of financial development) is considered to be a lifeline of growing, exporting and innovative corporations (Beck, 2000). By providing innovative firms with the lifeline (required financing) financial development plays a key role in the economic development and growth of a country. Enhancing (positive) impact of financial development on a countries international trade volumes is well documented in literature (Beck, 2002; Hur, Raj, & Riyanto, 2006).

In an important study, it was reported that pressure groups in the economy who feel uncomfortable from external competition, do not favor opening of the economy and development of the financial system (Rajan & Zingales, 2003). Trade openness promotes banking sector development according to an important study. They found that trade openness is more beneficial for closed economies after opening up to the rest of the world, as compared to more opening by already opened economies (Baltagi, Demetriades, & Law, 2009). This study suggests that trade affects financial development. Nevertheless, there is a concern for endogeneity in studying the relationship of trade and financial development and we address this issue here by using PCA (principal components analysis) methodology to construct "Financial development index".

Studies on trade determinants in Asia are not in abundance and especially in the perspective of "financial development". In a relevant study investigation was made to check for interactions among economic growth, trade openness and financial development through SEM (simultaneous equation modeling) using data on 63 economies from 1960–2007 (Kim, Lin, & Suen, 2012). The authors found a positive and significant impact of financial development on international trade and at the same time a negative impact of trade on financial development in poor countries. However, in rich economies, financial sector development promotes trade openness whereas trade exerts an ambiguous impact on level of financial development. Similarly, another study employed the "Pooled Mean Group" method to check the dynamic impact of trade openness on level of financial sector development in 88 countries from 1960–2005 (Kim, Lin, & Suen, 2010). Their results revealed that, financial development and

international trade mean revert to a long-run relationship (non-spurious) and are hence co-integrated. Interestingly, they found that trade–finance link was different for different levels of economic development. On the basis of literature presented above, following hypothesis have been made:

2.4 Hypotheses
1) There is a positive impact of overall Financial development of an Asian country and its international trade with rest of the Asian region.
2) There is a positive impact of Institutional Financial development of a country and its international trade with rest of the Asian region.
3) There is positive impact of Financial market development of a country and its international trade with rest of the Asian region.

3. Methodology and data
We used "Principal Components Analysis" (PCA) methodology to construct the "Financial Development Index" in STATA 13. And "Fixed Effects Model" is used check impact of financial development on international trade. Use of this modeling technique was confirmed by the "Hausman Test". Different levels of indices are made for "financial market development", "financial institutional development" and finally "overall financial development", constructed through "Principal Components Analysis" (PCA) to be used as independent variables in our model. So there is little to negligible issue of multi-colinearity or endogenity in our results.

Data is extracted on yearly basis from 2007 to 2017 on selected sixteen Asian economies that include Bangladesh, China, Hong Kong, India, Iran, Japan, Kazakhstan, Republic of Korea, Malaysia, Pakistan, Russian Federation, Saudi Arabia, Singapore, Taiwan, Thailand, Turkey, United Arab Emirates. These countries are selected on two basis; 1) being in Asia 2) required data availability. The choice of these countries is exclusively based on data availability for a sufficiently longer time period particularly for the variables of interest such as trade, finance and economic growth. Data is taken from "United Nations" website for trade related data (Comtrade and UNCTAD), World Bank's world development indicators, IMF world economic outlook and International financial statistics and "Global Financial Development Database" of World Bank,

Country level financial development is included by calculating "financial development index" through principal component analysis. This technique is superior to the weighted average index technique as the weights assignment is purely subjective in weighted average technique and there is a chance that researcher may assign the weights to the categories which are actually not the true representative weights of that category to calculate financial development. Principal component technique can overcome this problem and reduces many indicators to one representative variable according to available values.

Two proxies for international trade are included; "trade development" and "trade development ratio". "Trade development" is the log of total imposts plus exports (log imports plus exports) of each selected country to the rest of the Asian region while "trade ratio" is the log of ratio of total exports to total imports (log exports/imports).

Fixed effects regression is used to model data and related regression equations are as follows:

3.1 Financial market development and trade
$logTD_{i,t} = \alpha + \beta_1 FDIMARKINDEX_{i,t} + \beta_2 Control\ Variables + \mu$
$logTDR_{i,t} = \alpha + \beta_1 FDIMARKINDEX_{i,t} + \beta_2 Control\ Variables + \mu$
$logTD_{i,t}$ shows "trade development" (log of imports plus exports) at time "t" for a country "i" to the rest of Asian region, "$logTDR_{i,t}$" is the "trade development ratio (log of exports/imports)", "α" is constant, "$\beta_1 FDIMARKINDEX_{i,t}$" is the coefficient for "financial market development index", "$\beta_2 Control\ Variables$" represents coefficients for control variables (GDP per Capita, FDI Outflow, GDP per Capita average growth rate, FDI Inflow, and total population) and "μ" is the error term which includes the unexplained variation in the model.

3.2 Financial institutional development and trade:
$logTD_{i,t} = \alpha + \beta_1 FDIINSTINDEX_{i,t} + \beta_2 Control\ Variables + \mu$
$logTDR_{i,t} = \alpha + \beta_1 FDIINSTINDEX_{i,t} + \beta_2 Control\ Variables + \mu$
"$\beta_1 FDIINSTINDEX_{i,t}$" is the coefficient for "financial institutional development index", while other variables are according to the explanation above.

3.3 Overall Financial development and trade
$logTD_{i,t} = \alpha + \beta_1 FDIOVERINDEX_{i,t} + \beta_2 Control\ Variables + \mu$
$logTDR_{i,t} = \alpha + \beta_1 FDIOVERINDEX_{i,t} + \beta_2 Control\ Variables + \mu$
"$\beta_1 FDIOVERINDEX_{i,t}$" is the coefficient for " overall financial development index", while other variables are already described above.

4. Results and discussions

"Financial market development" is found to have positive and significant (B = 0.357) impact on trade development after including year fixed effects, while negative and insignificant (B = -0.023, R-squared 0.676) on trade ratio. R-square is good (0.676) and first model explains significant variation in international trade.

"Financial institutional development" has an insignificant influence (B = 0.044, R-squared 0.609) over trade development, while positive and significant (B = 0.071) over trade ratio after including year fixed effects. R-squared is very high (0.986) suggesting a lot of variation being explained by the model presented.

"Overall financial development" has a positive and significant impact (0.477***, R-squared 0.893 & 0.006 *, R-squared 0.983) on both proxies of international trade after including year fixed effects.

Inclusion of financial development index presents the level of financial development of a country in a better and more complete way which was missing in literature in such type of studies.

Institutional and market level financial development is found to affect international trade with different magnitude, significance and directions which was not possible to capture without segregating financial development into such components.

5. Conclusion

We conclude by briefly highlighting the key findings of the study. "Overall financial development" has a positive and significant impact on total trade volumes (exports + imports) with rest of the region (Asia). But its impact on Trade ratio (exports/imports) is insignificant which suggests that financial development enhances exports and imports of a country at the same time. Thus using financial development only as a tool to enhance exports or to correct trade imbalances in a country's favor, against rest of the Asian region may not work. But for the countries already with a trade surplus, financial development is the most suitable tool to enhance overall international trade volumes with rest of Asia.

"Institutional financial development" has a positive and significant impact on "trade ratio" but its impact on total volumes of trade is insignificant. This result suggests that if Asian economies want to enhance their exports more as compared to imports, then they have to work for the development of financial institutions. Perhaps the institutional development is linked with increased and efficient credit/finance availability to exporters in need. This is a very important policy implication for the trade deficit countries of Asia.

Once again similar results are found for "financial market development" with Asian countries' international trade volumes and ratios with rest of the Asia region. Market level financial development and total trade volumes of Asian countries with rest of the region have positive and significant relationship. But impact of market level financial market development index on trade ratio (exports/imports) is insignificant. It implies that developing financial market does enhances a countries total trade volume with rest of the region (Asia) but it does not cause greater increase in one variable (exports) relative to other (imports). Again it can be said that financial markets development is good to achieve overall trade openness for a country but it cannot be applied as a policy tool to enhance exports only or increase trade surpluses or reduce trade deficits.

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Table. 1 Selected ratios representing most recent data on financial market development in sample countries

Country name	Market capitalization excluding top 10 companies to total market capitalization (%) (access)	Stock market capitalization to GDP (%) (depth)	Corporate bond issuance volume to GDP (%) (depth)	Stock market turnover ratio (%) (efficiency)	Stock price volatility (stability)
Bangladesh		33.6009			8.58394
China	80.7412	64.9924	6.41272	216.548	17.7913
Hong Kong SAR, China	65.5945		3.53424	52.021	15.9698
India	74.5417	75.7805	0.700956	60.2389	12.7576
Iran, Islamic Rep.		23.7447		11.251	
Japan	84.3708	112.772	1.45699	105.169	21.0581
Kazakhstan	13.9746	27.5705	0.723239	1.78674	15.2692
Korea, Rep.	67.1569	100.448	2.09957	130.848	11.2003
Malaysia	64.5836	128.159	3.13565	34.094	7.72193
Pakistan					12.4439
Russian Federation	40.2739	42.6351	2.43606	21.6353	14.9272
Saudi Arabia	42.6622	65.8914	0.088942	48.4662	17.9108
Singapore	73.4699	220.307	2.31652	30.7757	11.7859
Thailand	66.2457	109.555	3.53658	68.0806	12.1071
Turkey	60.4733	21.656	0.123139	204.706	19.5572
United Arab Emirates	26.3389	60.1647	1.69126	18.6971	14.3192

Source: Global Financial Development report 2017

Table. 2 Selected ratios on most recent data of financial institutions development in sample countries

Country name	Bank branches per 100,000 adults	Private credit by deposit money banks and other financial institutions to GDP (%)	Domestic credit to private sector (% of GDP)	Bank net interest margin (%)	Bank Z-score
Bangladesh	8.44057	39.2167	45.2795	2.42593	6.54312
China	8.78275	149.06	156.82	2.2856	20.8263
Hong Kong SAR, China	21.4319	201.595	203.802	1.45983	15.6788
India	14.0561	48.7585	49.5453	2.84155	18.1719
Iran, Islamic Rep.	31.2994	60.6993	66.0636		6.25432
Japan	34.1043	159.998	161.715	0.760108	15.3319
Kazakhstan	2.95662	34.0449	33.0318	4.58289	3.36728
Korea, Rep.	16.2575	138.499	142.955	1.86405	10.2
Malaysia	11.4852	120.073	123.907	1.92707	16.3132
Pakistan	10.3574	15.4704	16.5251	3.72147	10.5607
Russian Federation	30.1384	56.045	53.37	4.11464	5.82459
Saudi Arabia	8.57954	68.4963	58.1145	2.77864	18.9852
Singapore	8.984	132.319	127.427	1.38574	22.1261
Thailand	12.3722	145.121	145.63	2.93808	7.33277
Turkey	18.1398	64.7433	69.8527	4.00092	8.07206
United Arab Emirates	12.415	83.494	83.8939	2.86537	26.5305

Source: Global Financial Development report

Table 3. Descriptive Statistics (Overall Sample)

	N	Mean	St.Dev	p1	Median	p99
GDPPC	540	13846.76	17045.92	208.4	5622.34	69466.08
GDPPCAGR	539	3.15	5.22	-9.53	3.26	15.95
FDIIF	539	11809.35	23612.31	-3119.8	3332	123985
FDIOF	495	11799.12	26343.17	-1867.07	2189.48	135748.8
POPT	540	146734.3	328591.9	645.66	35560.86	1380000
REERA	472	111.07	26.69	41.04	106.61	233.34
EFFICIENCYM	470	69.64	75.79	1.79	42.11	347.98
STATBILITYM	419	23.13	12.1	7.77	20.8	64.43
DEBTHIindex	485	0	1	-1.28	-.4	2.97
DEBTHMindex	224	0	1	-1	-.35	2.09
ACCESSMindex	160	0	1	-2.1	.08	2.05
ACCESSIindex	147	0	1	-1.74	-.34	2.27
EFFICIENCY~x	428	0	1	-2.24	-.02	5.18
STABILITYI~x	352	0	1	-2.36	.07	2.31
logTD	519	18.47	1.23	15.62	18.63	21.37
logTDR	534	.09	1.42	-3.96	.08	3.18
logTDW	534	18.91	1.3	16.09	19	22.03
logTDRW	534	.68	1.61	-3.26	.53	4.85

Table. 4 Pairwise Correlation (ASIA)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) GDPPC	1.00															
(2) GDPPCAGR	-0.28*	1.00														
(3) FDIIF	0.15*	0.12*	1.00													
(4) FDIOF	0.11*	0.06	0.63*	1.00												
(5) POPT	-0.24*	0.20*	0.54*	0.25*	1.00											
(6) REERA	-0.01	0.04	-0.04	-0.12*	0.02	1.00										
(7) EFFICIENCYM	-0.00	0.08	0.20*	0.09	0.16*	0.01	1.00									
(8) STATBILITYM	-0.21*	-0.05	-0.03	0.03	0.07	-0.07	0.23*	1.00								
(9) DEBTHIindex	0.25*	-0.09	0.38*	0.20*	0.02	-0.05	0.15*	-0.13*	1.00							
(10) DEBTHMindex	0.51*	-0.03	0.03	0.11	-0.19*	0.13	0.27*	-0.22*	0.76*	1.00						
(11) ACCESSMindex	0.17*	0.22*	0.41*	0.36*	0.30*	-0.18*	0.42*	-0.23*	0.74*	0.54*	1.00					
(12) ACCESSIindex	0.08	-0.15	-0.10	-0.30*	-0.12	0.29*	0.00	-0.26*	0.09	-0.03	-0.50*	1.00				
(13) EFFICIENCYIindex	-0.07	0.20*	0.02	0.03	0.05	-0.03	-0.07	-0.11	-0.28*	-0.18*	-0.15	-0.10	1.00			
(14) STABILITYIindex	0.23*	-0.13*	-0.04	-0.01	0.00	-0.12*	-0.23*	-0.04	-0.22*	-0.30*	-0.32*	0.18*	0.25*	1.00		
(15) logTD	0.32*	0.09	0.57*	0.54*	0.29*	-0.07	0.14*	-0.16*	0.47*	0.39*	0.59*	0.00	-0.07	0.13*	1.00	
(16) logTDR	0.19*	-0.17*	-0.06	-0.26*	-0.10*	0.15*	0.32*	-0.03	0.41*	0.78*	0.24*	-0.01	-0.17*	-0.30*	-0.10*	1.00

* shows significance at the .05 level

Table. 4 Financial market development index with total trade and trade ratio (fixed effects model)

VARIABLES	(1) logTD	(2) logTD	(3) logTD	(4) logTDR	(5) logTDR	(6) logTDR
FDEVmarkindex	0.592***	0.355***	0.357***	-0.025	-0.024	-0.023
	(0.091)	(0.084)	(0.085)	(0.033)	(0.034)	(0.034)
GDPPC	-0.000	0.000**	0.000**	-0.000**	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
FDIOF	0.000***	-0.000	-0.000	0.000***	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GDPPCAGR		0.092***	0.092***		-0.004	-0.004
		(0.031)	(0.031)		(0.009)	(0.009)
FDIIF		0.000***	0.000**		-0.000	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
POPT			0.000			0.000
			(0.000)			(0.000)
Constant	18.788***	18.315***	18.307***	0.176	0.316	-0.207
	(0.913)	(0.772)	(0.777)	(0.207)	(0.297)	(2.044)
Year FE	YES	YES	YES	YES	YES	YES
Country FE	NO	NO	NO	YES	YES	YES
Observations	131	131	131	131	131	131
R-squared	0.534	0.675	0.676	0.983	0.984	0.984

Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$, logTDR = log of trade ratio (exports/imports) with rest of Asia logTD = log of total trade with rest of Asia, REERA = Real effective exchange rates annual, GDPPCAGR = GDP per capita average growth rate, FDIOF = Foreign Direct Investment inflow, POPT = Population total FDIIF = FDI inflow, FDEVmarkindex = Market Financial development index, Year FE = Year Fixed Effects (= 1 if controlled for otherwise 0), Country FE = Country Fixed Effects ((= 1 if controlled for otherwise 0)

Table. 5 Financial institutional development index with total trade and trade ratio (fixed effects model)

VARIABLES	(1) logTD	(2) logTD	(3) logTD	(4) logTDR	(5) logTDR	(6) logTDR
FDEVinsindex	0.187*	0.209*	0.044	0.072*	0.070*	0.071*
	(0.111)	(0.108)	(0.100)	(0.037)	(0.037)	(0.037)
GDPPC	0.000	0.000**	0.000**	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
FDIOF	0.000***	0.000	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GDPPCAGR		0.033	0.057**		-0.001	0.000
		(0.028)	(0.025)		(0.005)	(0.005)
FDIIF		0.000**	0.000***		-0.000	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
POPT			-0.000***			-0.000
			(0.000)			(0.000)
Constant	18.238***	17.939***	17.750***	-0.197*	-0.204*	1.080
	(0.434)	(0.463)	(0.404)	(0.112)	(0.119)	(1.459)
Year FE	YES	YES	YES	YES	YES	YES
Country FE	NO	NO	NO	YES	YES	YES
Observations	87	87	87	87	87	87
R-squared	0.423	0.475	0.609	0.985	0.986	0.986

Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$, logTDR = log of trade ratio (exports/imports) with rest of Asia, logTD = log of total trade with rest of Asia, REERA = Real effective exchange rates annual, GDPPCAGR = GDP per capita average growth rate, FDIOF = Foreign Direct Investment inflow, POPT = Population total, FDIIF = FDI inflow, FDEVinsindex = Institutional Financial development index, Year FE = Year Fixed Effects (= 1 if controlled for otherwise 0).

Country FE = Country Fixed Effects ((= 1 if controlled for otherwise 0)

Table. 6 Financial development overall index with total trade and trade ratio (fixed effects model)

VARIABLES	(1) logTD	(2) logTD	(3) logTD	(4) logTDR	(5) logTDR	(6) logTDR
FDEVoverallindex	0.605***	0.476***	0.477***	-0.054	-0.036	0.006
	(0.152)	(0.127)	(0.130)	(0.064)	(0.065)	(0.069)
GDPPC	-0.000***	-0.000***	-0.000**	-0.000***	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
FDIOF	0.000**	-0.000**	-0.000**	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GDPPCAGR		0.064**	0.064**		-0.007	-0.011
		(0.029)	(0.030)		(0.008)	(0.008)
FDIIF		0.000***	0.000*		-0.000	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
POPT			-0.000			0.000
			(0.000)			(0.000)
Constant	18.327***	17.728***	17.722***	0.049	0.913	-36.675
	(0.476)	(0.407)	(0.420)	(0.439)	(0.856)	(24.541)
Year FE	YES	YES	YES	YES	YES	YES
Country FE	NO	NO	NO	YES	YES	YES
Observations	43	43	43	43	43	43
R-squared	0.817	0.893	0.893	0.979	0.981	0.983

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1, logTDR = log of trade ratio, (exports/imports) with rest of Asia, logTD = log of total trade with rest of Asia, REERA = Real effective exchange rates annual, GDPPCAGR = GDP per capita average growth rate, FDIOF = Foreign Direct Investment inflow, POPT = Population total , FDIIF = FDI inflow, FDEVoverallindex = Oveall Financial development index, Year FE = Year Fixed Effects (= 1 if controlled for otherwise 0), Country FE = Country Fixed Effects ((= 1 if controlled for otherwise 0.
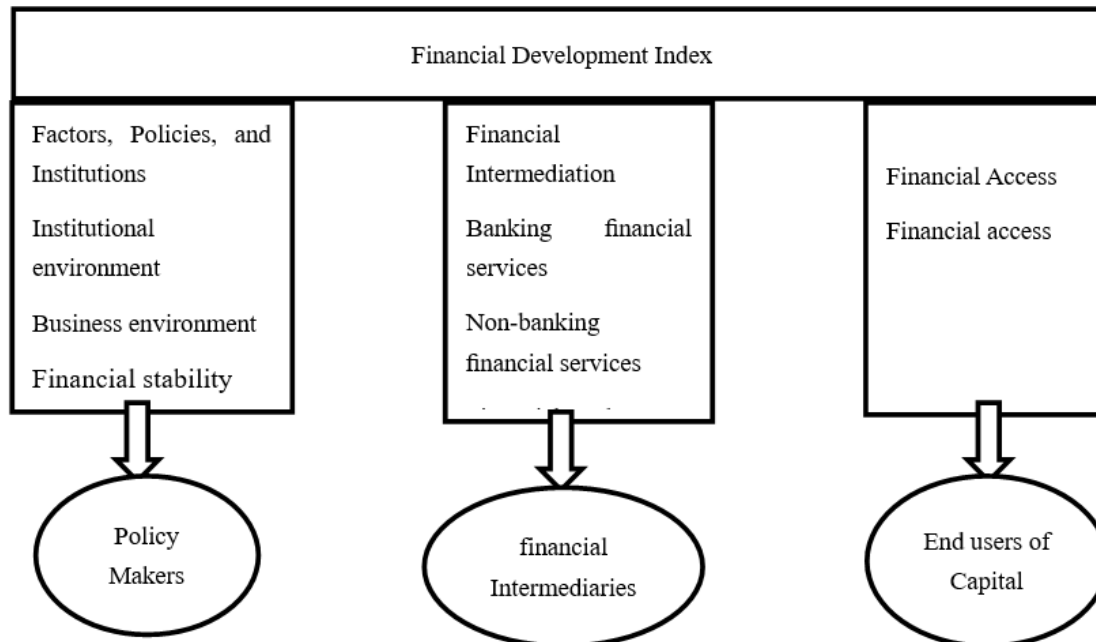

Figure 1. Financial Development Index
Source: World Economic Forum (2011)