

**TRENDS IN ASIAN EMERGING MARKETS: EVIDENCE OF CORRUPT PRACTICES,  
SHADOW ECONOMY, ECONOMIC AFFAIRS AND ITS SUSTAINABLE  
DEVELOPMENT**

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**Abstract:**

This paper investigates the impact of corruption on shadow economy and sustainable economic growth of emerging and developing Asian economies using the Generalized Methods of Moments (GMM) approach. The yearly data from the World Bank and the International Monetary Fund for the last 20 years is considered to examine whether corruption and the shadow economy impact economic growth of those economies. According to the findings, the corruption index has a statistically significant and beneficial influence on economic growth, while the

shadow economy has a substantial negative impact. This study further suggests that anti-corruption legislation would have a considerable positive effect on economic growth of nations. Likewise, a decrease in the scale of the shadow economy may emerged as more favorable to the growth and development of emerging markets and developing economies in Asia. Thus, these results concluded that political ramifications are desired for regulation of corruption and shadow economy and to maintain sustainability in the economy.

**Keywords:** Shadow economy; Economy affairs; Corruption; Emerging markets; Asian Nations; Sustainability.

### **1. Introduction**

Economists and policymakers have been more interested in the variables that influence economic growth during the past few decades. Many studies have been undertaken on this study issue based on a variety of data, scope, and features. Sleaze and the shadow economy have been linked, but little attention has been paid to the implications. Corruption and the shadow economy are believed to be two disastrous phenomena that coexist, weaken elected governance and the and hinder economic development. Corruption is seen as detrimental to economic growth. (Haque & Kneller, 2015) corruption fosters economic growth by simplifying administrative procedures and increasing the openness of the legal system. The shadow economy's influence on economic growth has been questioned. On the flip side, the shadow economy may cause government spending to fall due to decreased tax revenue generated from this sector. This might also demotivate other taxpayers from carrying out their responsibilities. As a result of increasing this informal sector, economic growth may slow. Furthermore, the shadow economy has been linked to poor productivity levels and weak economic growth.

It is logical to speculate that corruption and the shadow economy are related—corrupt societies are likely to have extensive shadow sectors, as one may benefit the other such as obtaining electrical connections from public sector power firms. However, the underlying formal theoretical reasons (Dreher & Schneider, 2010) and accompanying empirical data are mixed ((Buehn & Schneider, 2012) It is specifically suggested that the shadow economy and corruption may be alternatives when enterprises are shifting to the underground sector, limiting rent-seeking

possibilities for corrupt authorities in the public sector (and thus reducing corruption). As a result, there is now a debate regarding the ethical and economic consequences of the negative impacts of the shadow economy and corruption, particularly in emerging and developing nations where these effects have not been studied. (Caurkubule & Rubanovskis, 2014) the shadow economy pessimistically influences sustainable economy, because if economic growth is impacted, so is sustainable development.

The primary focus of policymakers should be on developing institutions that are trustworthy and transparent, with fewer instances of corruption and its regulations; restoring common faith in public institutions and formulating competent strategy for combating informal activities, which will contribute to the insight of sustainable development by achieving the significant Sustainable Development Goals (SDGs). (Popescu et al., 2018). The advancement of information and communication technology, sometimes known as ICT, is essential to the underground economy. Internet use is generally high and is strongly correlated with the underground economy in a negative way. In addition to this, inflation and poverty are emerging as significant elements that determine the shadow economy. (Nayel et al., 2022)

## **2. Literature Review**

There is a considerable presence and importance to the link between the shadow economy, corruption, tax evasion, tax avoidance, and fraud, among other illegal financial practises. It is possible that it might serve as a foundation for a more comprehensive examination of informal economic transactions in all areas of the economy (health, public services, tax income, etc.), as well as a route for addressing and combating activities that are unlawful. (Koufopoulou et al., 2019). Recent economic turmoil highlights economic volatility. By using system-GMM simulations in 133 countries from year 1991 to 2015 it has been observed that shadow economy increase the rise and fall in GDP. Informal economy is connected to economic insecurity in low- and lower-middle-income nations. An outcome distinguishes between stabilizing and boosting factors (government spending, and FDI inflows). Exports increase while imports minimize economic volatility. (C. P. Nguyen et al., 2020). Economic science provides several methodological ways for analyzing the shadow economy. The article outlines the author's

approach to adjusting GDP to account for the shadow economy. Shadow GDP figures for China and Russia were calculated and interpreted from 2011 to 2017. Economic science offers various methodological techniques for analyzing the shadow economy. Still, the growth of information infrastructure and globalization of economic interactions have produced a new scenario in which conventional research methods lack accuracy and efficiency. The article explains how to modify GDP for the shadow economy. China's and Russia's shadow GDP indicators for 2011–2017 were calculated and analysed. (Bashlakova & Bashlakov, 2021)

**H<sub>01</sub>: Shadow economy variable do not impact the economic growth.**

Using an economic model, researchers examine this subject from 1996 to 2015. The model indicates the Shadow economy hurts economic growth. The shadow economy, rule of law, and regulatory quality have a detrimental influence, according to our research. Tax law indicators and government policies and regulations determine the extent of the informal sector, and its growth is negative. (Mayssa et al., 2021). However, researchers analyze that the shadow economy has a favorable impact on Greenfield investments while harming rest of the world M&As (Cuong et al., 2021). Findings of researcher suggests that it gives a chance to examine the relationship between the informal sector and economic growth also the technique employed is based on the work of (Schneider & Buehn, 2017). For that purpose, researcher empirically explore this matter from 1996 to 2015 using an economic model. The model predicts that the Shadow economy has a negative causal influence on economic growth. According to the findings, the simultaneous impact of the shadow economy and the rule of law factors and regulatory quality is negative. The size of the informal sector is favourably influenced by tax law indicators as well as government policies and regulations, and an increase in the size of the informal sector is adverse to growth. (D. Van Nguyen & Duong, 2021). This research explores whether corruption has aided the growth of Uganda's shadow economy. We establish a positive association between crime and the extent of the shadow economy in both the long- and short-run using an autoregressive distributed lag bounds testing methodology using granger causality econometric methodologies. Furthermore, the causality findings show a bidirectional causal link between the shadow economy and corruption and vice versa. These findings imply that, in the

instance of Uganda, an increase in bribery correlates to an increase in the size of the shadow economy and vice versa. Given the complementary link between corruption and the scale of the shadow economy, tackling extensive informality in the country would necessitate: first, overhauling the political system to address political corruption; and second, managing the size of the shadow economy.(Esaku, 2021). Corruption do effect economy growth of Asian countries Using data from 17 Asian countries with rising and developing economies, this study examines how corruption and the shadow economy are linked to economic development. The International Monetary Fund categorises these countries and selects them based on the available data. An examination of annual statistics from the World Bank, Transparency International, and the International Monetary Fund from 2000 to 2015 is presented in this article to assess whether or not corruption and the shadow economy have an effect on economic progress. Generalized Methods of Moments (GMM) are used in this research. Statistically, corruption has a good effect on economic development, but the shadow economy has a considerable detrimental effect, according to the research. Corruption, rather than sand, "greases the wheel" of economic advancement, according to these studies.(T. A. N.s Nguyen & Luong, 2020).

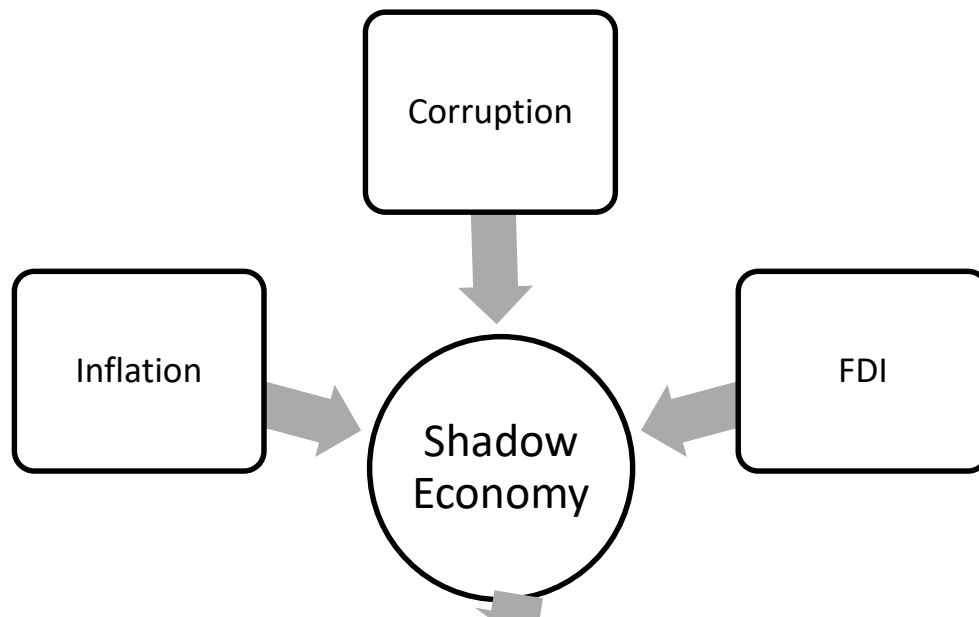
A democracy is more likely to support sustainable development than an autocrat. The report also indicates that, although globalization is expected to influence sustainable development negatively, the link may be tempered by economic development level and institutional quality. These assumptions will be helpful to scholars and practitioners in sustainability and related domains.(Langnel & Pathranarakul, 2020). The shadow economy shrinks when financial development takes place. but has little effect in low per capita income nations .This indicates that countries with a low per capita income (below \$33,600) should increase their access to financial and credit markets, which ultimately results in a higher per capita income and a smaller shadow economy. (Gharleghi & Jahanshahi, 2020). Some supply chain interactions create a "corruption triangle" It analyses implications for supply chain management and gives policymakers and regulators/law enforcers tips on identifying and disrupting supply chain corruption schemes.(Silvestre et al., 2018). Corrupt practices in Asia, Africa, and Latin America and the Caribbean (LAC) are predicted to have a detrimental impact on socioeconomic progress. Asian

and African environmental development is negatively impacted by corruption, whereas the LAC benefits from it. A closer look at the data suggests that the EKC hypothesis only holds for the whole panel and the LAC subpanel, where the per capita GDP thresholds are about \$12,000 USD and \$12,780 USD respectively. However, in the long run, this article shows that corruption and socioeconomic success are not bidirectionally linked in the longer term. For countries with a per capita income of less than \$33,600, this implies expanding financial and credit markets, which will lead to a higher per capita income and a smaller shadow economy. (Murshed, 2018)

**H<sub>02</sub> : Corruption do not mediate the economic progress of Asian nation.**

The shadow economy and FDI are positively correlated. This outcome is conditional. Larger shadow economy variations don't affect FDI. Negative and positive shadow economies have the same consequences. (Ali & Bohara, 2017). A one-percentage-point rise in the shadow economy to GDP ratio is connected with a 0.15-point increase in inflation and a 0.67-point fall in the tax burden to GDP ratio. (Mazhar & Méon, 2017)

**H<sub>03</sub>: There is no significant affect by shadow economy variables i.e FDI and Inflation on economy growth.**



### Figure 1 Proposed Model

#### 3. Research objective

- 1 - To identify the elements that influence the shadow economy and economic growth.
- 2- To investigate the impact of the corruption on economic growth in the Asian nations during the last 20 years.
- 3- To investigate the impact of the FDI and Inflation on economic growth in the Asian nations during the last 20 years.

#### 4. Research Methodology

The present study is based on the proposed model which focus to find the effect of corruption, foreign direct investment and Inflation on Asian economies growth through the Corruption Index sample categorized by the International Monetary Fund. This study draws on yearly secondary data of emerging and developing Asian economies between the years 2000 and 2020.

**Table 1- ASIAN COUNTRIES**

S.no	Country	Population (2020)
1	<u>China</u>	1,439,323,776
2	<u>India</u>	1,380,004,385
3	<u>Indonesia</u>	273,523,615
4	<u>Pakistan</u>	220,892,340
5	<u>Bangladesh</u>	164,689,383

**Source:** <https://www.worldometers.info/geography/how-many-countries-in-asia/>

In the above Table 1 Countries are selected for analysis based on the data that may be found on different websites. The UN lists 48 Asian nations. Five populous nations were chosen. The information on the corruption perception index (CPI) was obtained from the sources by estimating Medina & Schneider (2018) and Transparency International (2016), respectively. The

data were taken from the World Bank (2016) - World Development Indicators. This study examines how corruption affect economic development. GDP per capita from the World Bank (2016) shows economic growth.

**Table 2 Corruption scenario in selected Asian COUNTRIES (2017-2018)**

Country	2017	2018	CPI-RANK 2017	CPI-RANK 2018
Bangladesh	28	26	5	5
China	41	39	1	2
India	40	41	2	1
Indonesia	37	38	3	3
Pakistan	32	33S	4	4

Table 2 provides the CPI and corruption rankings for Asian nations. It's no secret that corruption is a pervasive problem in many parts. The Transparency International (TI) corruption rankings of most Asian countries have declined between 2015 and 2016, which raises worries about the region's sustainable development difficulties (Transparency International, 2016a). In 2016, Bangladesh topped the list of Asian areas in terms of being substantially more corrupt than India, China, Indonesia, and Pakistan, according to the Corruption Perceptions Index (CPI). To put it another way, according to the Corruption Perceptions Index (CPI) numbers for 2017-2018, Bangladesh is the most corrupted area in South Asia. Since most of the ASEAN member nations score highly in corruption, it has been estimated that roughly 1% of total yearly economic development is lost as a result of corrupt activities (ASEAN Studies Program, 2016).

**Table 3 Descriptive statistics**

	GDP	INFLATION	FDI	CPI
Mean	30.19870	5.944152	3.95E+10	13.24400
Median	30.48944	5.572948	2.38E+09	3.250000
Maximum	46.66012	20.28612	2.91E+11	41.00000
Minimum	14.12063	-0.731971	-2.05E+10	0.000000



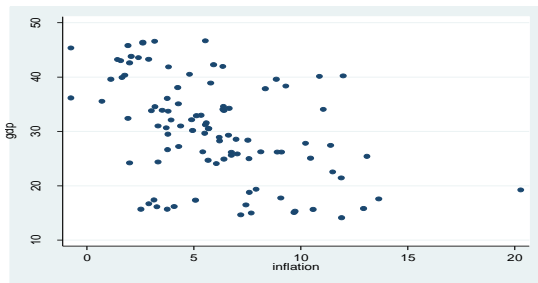
Std. Dev.	9.296676	3.523300	7.69E+10	15.46367
Skewness	-0.044216	0.922594	1.970837	0.738266
Kurtosis	2.033519	4.587355	5.681982	1.705808
Jarque-Bera	3.924609	24.68507	94.70761	16.06283
Probability	0.140534	0.000004	0.000000	0.000325
Sum	3019.870	594.4152	3.95E+12	1324.400
Sum Sq. Dev.	8556.389	1228.951	5.85E+23	23673.39
Observations	100	100	100	100

Table 3 offers a brief summary of the five Asian nations in the study. The mean value of indicators for the maximum population in the emerging markets and developing economies. As measured by real GDP per capita, which ranges from 14.12063 to 46.66012, the mean value of economic growth is around 30.1987 real GDP per capita from zero to 100, according to Transparency International (2016) statistics on Corruption Perceptions Index. The estimate of corruption has been rescaled such that 0 represents for non-corrupt and 100 stands for completely corrupt in order to offer a clear explanation of empirical results. Compared to the average of 30.4, the mean value of the corruption index is 13.244, which indicates a high degree of corruption impact as compared to FDI and inflation.

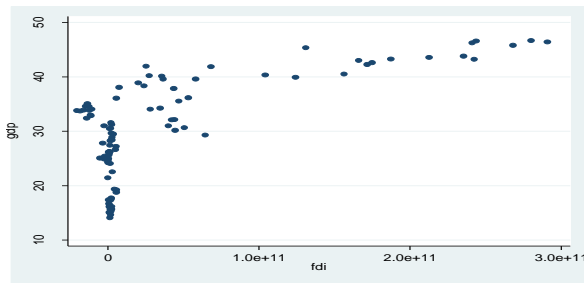
**Table 4 Correlation Matrix**

	GDP	INFLATION	FDI	CPI
GDP	1.000000	-0.453665	0.684309	0.179991
INFLATION	-0.453665	1.000000	-0.395781	-0.228242
FDI	0.684309	-0.395781	1.000000	0.198860
CPI	0.179991	-0.228242	0.198860	1.000000

As per table 4 with 1<sup>st</sup> difference it signifies there is a moderate correlation between GDP and FDI which is 0.68 whereas there is a low correlation of GDP with inflation and CPI which is 0.45 and 0.179.

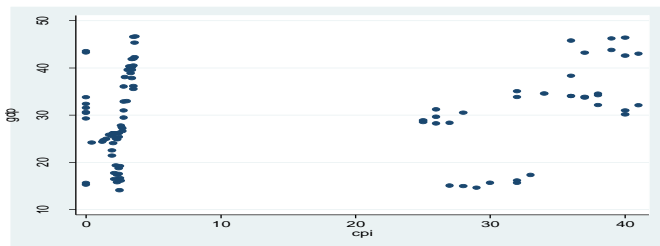


**Figure 2- GDP against inflation**



**Figure 3-GDP against**

**FDI**



**Figure 4 – GDP against CPI**

**Table 5- Regression matrix**

Source	SS	df MS	Number of obs	= 100
		F( 3, 96)	= 33.05	
Model	4347.11961	3 1449.03987	Prob > F	= 0.0000
Residual	4209.27004	96 43.8465629	R-squared	= 0.5081
		Adj R-squared	= 0.4927	
Total	8556.38965	99 86.4281783	Root MSE	= 6.6217

Gdp	Coef.	Std. Err. t	P>t	[95% Conf.	Interval]
Cpi	.0073973	.0445326 0.17	0.086	-.0809992	.0957938
inflation	-.5662621	.2085804 -2.71	0.008	-.980291	-.1522333
Fdi	7.22e-11	9.50e-12 7.60	0.000	5.33e-11	9.10e-11
_cons	30.61861	1.730443 17.69	0.000	27.18371	34.05351

In Table 5 relationship between corruption and economic development that is GDP is seen which is is 0.7 . In general, it is evident that GDP correlates positively with cpi , P value is 0.08 where as other independent variable i.e FDI and inflation P value is 0.08 and 0.00. R square in this table is 0.50 which shows 50% of the variable in this study with dependent variable i.e GDP is explained by linear relation with independent variables which is CPI , Inflation and FDI and 50 % is due to other factors.

$$\text{ECO GROWTH(GDP)} = \alpha^{\circ} + \beta_1\text{CPI} + \beta_2\text{INF} + \beta_3\text{FDI}$$

In light of this, an additional explanatory variable in the form of a lagging dependent variable has been included into this empirical study via the use of the GMM estimator technique.

**Table 6 GMM MODEL**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	1.06297	0.037324	28.47926	0
INFLATION	-0.064502	0.058195	-1.108383	0.2706
FDI	-0.328551	0.338521	-0.970547	0.3343
CPI	-0.049917	0.019625	-2.543586	0.0127
R-squared	0.968337	Mean dependent var		30.45849
Adjusted R-squared	0.967293	S.D. dependent var		9.368424
S.E. of regression	1.694274	Sum squared resid		261.2214

Durbin-Watson stat	1.877017	J-statistic		0.668
Instrument rank	4			

If there is a substantial connection between the measurement error and the unobserved explanatory variable, it is possible that this will have an effect on the regression estimations. In this estimation, it is believed that different GMM techniques will offer diverse conclusions. On the other hand, there is a connection between all of the variables in the model that may be considered statistically significant. According to the findings of this research, there is one dependent variable and three independent variables. The probability value that is calculated using the GMM approach is less than 5 percent, which means that it is significant. This indicates that the corruption index, inflation, and FDI all have a statistically significant and positive impact on economic development. The fact that the J statistics are so near to 0 that is 0.668, indicates that the model is a strong match.

### **5. Conclusion**

This study looked at the impact of corruption on Asia's growing markets and developing nations over the period of 2000-2020. According to the previous research it is confirmed that economic growth and development is aided by corruption. Corruption does not stand but greases the wheels of economic progress, which validates the opinion (Wei,2020). Corruption has also been proven to promote economic development in Asian nations and eliminate obstacles to economic expansion, affecting the informal sector. For those economies who implemented the required incentives and reduce the shadow economy's scale by formulating laws that diminish corruption, the conclusions for those study shows the most significant political impact. According to current study Corrupt practices, inflation and fdi have a favorable effect on economic development in Asian nations. In future research other ASIAN nations' shadow economies, such as social security, transfers, and the like, might be studied. Although the conclusions are based on rigorous empirical exercises, future research might use theoretical models to understand further how the link between taxes and inflation, and the shadow economy, is influenced by corruption.

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#### **WEB LINKS**

<https://www.worldometers.info/geography/how-many-countries-in-asia/>

<https://www.imf.org/en/Data>

<https://data.worldbank.org/>