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Impact of Enabling Environment Drivers on Public-Private Partnership investment in the Transport Sector

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Abstract

The research aims to analyze the impact of some drivers of the enabling environment, represented by the macroeconomic stability index (GDP, inflation, foreign exchange reserves and the ratio of debt reserves to short-term foreign exchange). And the financial market stability index (the amount of credit provided to private sectors, value of shares traded) on public-private partnerships in financing infrastructure in the transport sector for selected countries. The drivers of the enabling environment in general are considered one of the main pillars in the process of partnership between the public and private sectors. And the tangible results of the partnership between the public and private sectors that affect the daily lives of individuals have a clear impact on the economic construction of countries that seek advancement and development in all directions. On the other hand, there is an urgent need to increase the volume of financing infrastructure projects, as a result of the widening gap between the demand for infrastructure and the shortfall in the volume of supply that corresponds to it. Which requires the public sector to move towards partnership with the private sector, which has capabilities and efficiency in implementation and management. The research adopted the ARDL model to perform the regression, using longitudinal data for a group of selected countries (Brazil, Colombia, India, Mexico, Peru, Philippines, China) for the period (2000-2020). It was found that the flexibility of participatory investment in relation to changes in the gross domestic product, the inflation rate, the percentage of credit granted to the private sector, and the value of traded shares was high, while there was no significant effect of foreign exchange reserves and the ratio of short-term debt-to-foreign exchange reserves on investment. Participatory. On the other hand, it was found that the impact of GDP, the percentage of credit granted to the private sector and the value of traded shares were positive, while the effect of inflation was negative.

Keywords: Enabling environment, public-private partnership, transport infrastructure, ARDL model.

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أثر محركات البيئة التمكينية على الاستثمار التشاركي بين القطاعين العام والخاص في قطاع النقل

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المستخلص:

يهدف البحث الى تحليل أثر بعض محركات البيئة التمكينية (Enabling environment) المتمثلة بمؤشر استقرار الاقتصاد الكلي المتمثلة في (الناتج المحلي الاجمالي، التضخم، احتياطي النقد الاجنبي ونسبة احتياطي الدين الى النقد الاجنبي قصير الاجل)، ومؤشر استقرار الاسواق المالية (حجم الائتمان المقدم للقطع الخاص، قيمة الاسهم المتداولة) على الشراكة بين القطاعين العام والخاص في تمويل البنى التحتية في قطاع النقل لبلدان مختارة. ان محركات البيئة التمكينية بشكل عام تعتبر من الركائز الاساسية في عملية الشراكة بين القطاعين العام والخاص، كما ان النتائج الملموسة للشراكة بين القطاعين العام والخاص والتي تمس حياة الافراد اليومية يكون لها الاثر الواضح في البناء الاقتصادي للبلدان التي تسعى للنهوض والتطور في كافة الاتجاهات، من جانب اخر هنالك حاجة ماسة الى زيادة حجم تمويل مشاريع البنية التحتية، نتيجة لاتساع الفجوة بين الطلب على البنية التحتية والقصور في حجم العرض الذي يقابلها، مما يتطلب من القطاع العام التوجه نحو الشراكة مع القطاع الخاص الذي يمتلك امكانيات وكفاءة في التنفيذ والادارة. اعتمد البحث نموذج ARDL لإجراء الانحدار، باستخدام البيانات الطولية لمجموعة من البلدان المختارة (البرازيل، كولومبيا، الهند، المكسيك، بيرو، الفلبين، الصين) للمدة (2000-2020). وقد وجد ان مرونة الاستثمار التشاركي بالنسبة للتغيرات في الناتج المحلي الإجمالي، ومعدل التضخم، ونسبة الائتمان الممنوح للقطاع الخاص، وقيمة الأسهم المتداولة كانت عالية، في حين لم يثبت وجود تأثير معنوي لكل من احتياطي النقد الأجنبي ونسبة احتياطي الدين الى النقد الأجنبي قصير الاجل على الاستثمار التشاركي. من جانب اخر وجد ان تأثير الناتج المحلي الإجمالي ونسبة الائتمان الممنوح للقطاع الخاص وقيمة الأسهم المتداولة كان تأثيرها موجبا بينما كان تأثير التضخم سالبا.

الكلمات المفتاحية: البيئة التمكينية، الشراكة بين القطاعين العام والخاص، البنى التحتية في قطاع النقل، نموذج ARDL.

1. Introduction:

Many countries around the world faced difficulties in providing public services, including infrastructure, because of the global economic stagnation that prevailed during the past decades, which was reflected in the deficit in their budgets, and the accumulation of external debts for many countries. The partnership between public and private sectors (PPP) represents one of the proposed approaches through which countries can address their social and economic problems in the implementation of major projects, such as health, education, and other infrastructure projects.

The issue of (PPP) appeared at the beginning of the eighties of the last century, and it has become a topic of concern to most governments of developed and developing countries. Countries have different experiences in this field, some have made great progress and achieved tangible successes, while others are still groping.

The relationship between the public and private sectors is characterized as a developmental partnership relationship, which has an integrative and replacing nature in the same time, it has a dynamic nature, as well as, it includes a variety of areas, including organizational, legislative, institutional, administrative, executive, supervisory, financing, and investment. The size, nature and importance of the role that each sector plays in this process depends on the nature of the economic system prevailing in the economy, its macroeconomic structure and stability, and its stage of development. The level of economic and social development achieved in any country depends greatly on the consistency and harmony achieved in the relationship and roles entrusted to both of the public and private sectors in the various fields referred to above.

Infrastructure financing represents a bottleneck which causing chronic deficits in infrastructure projects in most countries. Conventional methods of infrastructure financing through the budget and implementing it through direct contracts have proven insufficient and often sloppy. This creates a gap between the supply and the demand for infrastructure in most countries.

The research focuses on the role of the enabling environment drivers, represented by macroeconomic stability indicators, and financial market stability indicators, in stimulating (PPP). And the role played by (PPP) in providing financing for infrastructure projects, to bridge the gap between supply and demand for it.

After the introduction, the relevant theoretical and empirical literature will be reviewed in section 2, section 3 will highlight methodology and data, while section 4 is concerned with presenting regression results, finally we conclude in section 5.

2. A Review of the Theoretical and Empirical Literature

A. **Enabling Environment Components:** The enabling environment has several components, which are called enabling factors. These enabling factors are closely interrelated with each other. The appropriate climate for

the investor, in and of itself, will not guarantee the creation of private investment, but rather requires that the public sector itself be an incubating environment to ensure the participation of the private sector at the lowest cost and greatest benefit to the public sector. Other enabling factors related to public compliance, risk management, and public sector capabilities must be provided to ensure reasonable security and predictability of the private sector's investments. The private sector cannot effectively enter into participatory projects of a complex nature and important commitments to the public sector without the presence of motivating factors (represented by the commitment of the public sector, positive investment climate, effective risk management, and provision of capabilities in the public and private sectors) that require the implementation of the (PPP) (PPIAF, 2009: 83).

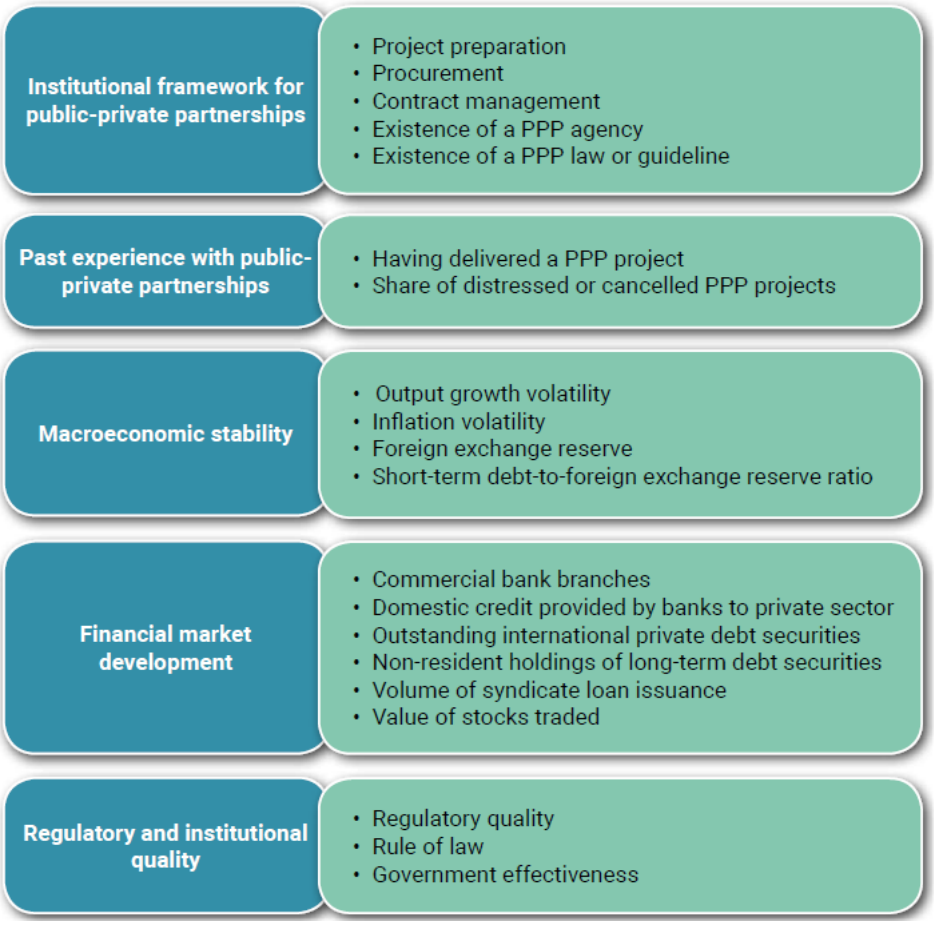
Implementation of PPP in developing countries requires a well-developed enabling environment. This calls governments in developing countries to work on developing some of the key enablers of PPP. This includes, building consensus on PPP, especially in policy-making circles, setting clear accounting rules for PPP transactions, implementing sectoral reforms, and adopting the required regulatory and legal framework for PPP (including mechanisms Effective dispute resolution Building (expert) institutions to manage PPP process, capacity building through trainings and development of a formal PPP body (including guidelines on procurement and bidding, risk transfer, value for money evaluation and project management), Improving governance and anti-corruption measures for PPP, increasing access to long-term financing through domestic and international financial markets, and providing political and legal certainty to investors through financial market incentives. Hence, PPP requires its own infrastructure that consumes efforts, time and resources from the government (Ahmad et al., 2016: 25).

Enabling Environment Drivers is a new composite index that has been adopted in many economies of Asia Pacific countries, which can be used to assess a country's readiness to implement PPP in infrastructure projects in various economies. The PPP Enabling environment index consists of five main indicators, represented by institutional arrangements for PPP projects, past experience with PPP, macroeconomic stability, financial market development, and an economy- wide legal and regulatory

framework. Figure (1) shows the components of the enabling environment (Akhtar et al., 2018: 26).

Empirical studies have shown that the enabling environment indicator is related to the volume of PPP investments in infrastructure. Countries such as (China, India, the Philippines, Republic of Korea, Thailand) have provided a better political environment for PPP projects, regression analysis showed an explanation for the size of PPP investments, it was found that an increase of one unit in the enabling environment index corresponds to (5.1%). from the increase in PPP infrastructure investments (UN, 2018: 5).

Figure (1): Drivers of the Enabling Environment for PPP



source: UN, (2018), Mobilizing finance for sustained, inclusive and sustainable economic growth, P26.

B. **public private Partnership (PPP):** PPP refers to the contractual relationship between a government agency and a private organization, in which resources and capabilities are mobilized, risks are distributed, and returns are shared between the two parties to the contract, with the aim of

providing public services or creating facilities for public benefit. Under this concept, each party offers its human, material and technical capabilities to maximize returns and achieve the agreed goals. In addition, each party bears some risks for the sake of the returns that accrue to it. Partnership in this sense is not an unequal relationship in which one party dominates over another, but rather a relationship of integration between public and private sectors in order to provide public services with higher quality and lower cost (Abu Saree, 2014: 19-25).

PPP have been known for decades in countries such as UK, US, France, Spain. Since the 1990s, many countries have sought to develop public-private partnership programs to provide infrastructure facilities and services (Babatunde, 2015: 19).

The success or failure of the PPP can depend on the early stages of designing the policies of such partnerships, as well as legislation, directives and other institutional frameworks. On the other side, government must play its role in providing a conducive environment, and a commercially oriented legal and regulatory framework to help these partnerships thrive. The effectiveness of the government in setting standards for PPP is very necessary, especially in developing countries where investor confidence in the state is weak. It is essential to develop the PPP in a sustainable way, and the legal framework must include all participants in the PPP and protect their rights (UN, 2008: 22).

C. **Financing Infrastructure Project:** The demand to develop and sustain existing infrastructure, as a result of increased economic growth and a growing population, has drained the energies of local governments in providing the required financing. Accordingly, in order to avoid increasing the burden on the government, and delay in implementation, and to take advantage of creative structures (sustainable development projects) and implementation strategies, the PPP in infrastructure development has become extremely important (Babatunde, 2015: 48).

It is also preferable for the private sector to participate in these projects if the government lacks the resources to provide important public services such as health, transportation and energy (Regan, 2009: 49).

Several international reports and studies have addressed the issue of governments' inability to raise the massive funding required for large-scale

infrastructure projects and how this can be mitigated through private sector participation.

The International Finance Corporation has shown that developing countries need more than $3 trillion to invest in new infrastructure over the second decade of the new millennium. Growth estimates for the Asian region range from $1-2 trillion, Latin America needs $600 billion, while Eastern Europe also needs large-scale financing for infrastructure development. The required financing in Sub-Saharan Africa to raise infrastructure to a reasonable level during the same period is estimated at about $93 billion annually (World Bank, 2011: a).

D. The Results of Previous Studies: The study of PPP has attracted the attention of many researchers in the political, social and economic fields, and has contributed to defining a clear perception about the importance and determinants of PPP. The applied field of most of the empirical studies was the developed countries with a few in the developing countries. This research focused on the impact of some economic variables on the PPP.

The results of (Hammami, et al., 2006) confirmed that PPPs are greatest in countries where governments have a heavy debt burden, and in countries where aggregate demand and market size are large. It also found that macroeconomic stability is essential for public-private partnerships. Less corruption and effective rule of law are associated with more PPP projects. PPP is more prevalent in countries with previous experiences in PPP. (Galilea and Medda, 2009) found empirical evidence on the importance of the role that the state's experience in the public-private partnership, private investors, and multilateral lenders can play in achieving positive results in the field of public-private partnership in the transport sector. Also, they found that the growth of GDP, and the current account balance as a percentage of GDP affect the success of the PPP project. Corruption is a major obstacle to partnership. On the other side, Authoritarian regimes are better able to assist public-private partnership projects, compared to democracies.

As for the study (Emirullah and Azam, 2014) showed that government debt levels, per capita GDP, market capitalization of listed companies, governance effectiveness, regulatory quality, and anti-corruption tend to have a positive impact on the PPP arrangement in ASEAN countries. An interesting finding is that the legal framework has an

inhibitory effect on the level of PPP. (Lee, et.al. 2018) found that GDP growth is positively correlated with the volume of PPP investment, indicating that countries with rapid growth and high demand for infrastructure tend to stimulate more PPPs.

As for the study (Hyun, et al., 2018), it was shown banks remain the main source of financing for infrastructure projects. It was also found that both of financial market development, inflation, and exchange rate instability negatively affect PPP investment. (Yurdakul, et al., 2021) found that general government balance, population size, money supply and the share of investments in GDP are significant determinants of PPP activity. Are important determinants of PPP activity?

3. Methodology and Data

A. Data and Model: The research relied on data from seven countries for which the data required for analysis were available (Brazil, Colombia, India, Mexico, Peru, the Philippines, and China). For the period (2000-2020). Using the pane data method. Data were collected based on the International Development Indicators database issued by the World Bank. (World Bank, 2021). To perform the analysis, the following logarithmic model was adopted:

$$Y_{1,it}=\beta_0+\beta_1 X_{1,it}+\beta_2 X_{2,it}+\beta_3 X_{3,it}+\beta_4 X_{4,it}+\beta_5 X_{5,it}+\beta_6 X_{6,it}+U_{it}$$

$$i=1,2,\ldots,10 \; ; \; t=1,2,\ldots,21$$

Where:

Response variable (Y): It represents the volume of PPP investment in infrastructure projects in the field of transport.

Explanatory variables (X): which represent indicators of macroeconomic stability, and financial market indicator within the drivers of the enabling environment, and they consist of:

Gross Domestic Product (X1): Gross domestic product based on purchasing power parity dollars. This variable reflects the size of the market. It is expected that it will have a stimulating effect on PPP investment.

Inflation (X2): reflects inflation and is expressed as the consumer price index. The inflation index reflects the extent of the economy's stability, then high inflation index, has a negative impact on PPP investment.

Foreign exchange reserves (X3): assets denominated in a foreign currency that are held by a central bank. These may include foreign currencies,

bonds, treasury bills, and other government securities. foreign exchange reserves are expected to have a significant and direct impact on PPP investment in the transport sector.

Ratio of Debt reserve to short-term foreign exchange (X4): this indicator was extracted by researchers through two other indicators: the indicator of short-term external debt stocks, and the indicator of total reserves minus gold, according to the following formula:

[(Short-Term External Debt Stocks) / (Total Reserves Minus Gold (Foreign Exchange) * 100 = % Short-term Debt-Foreign Reserve Ratio]

It is expected that ratio of short-term debt-to-foreign exchange reserves has a negative impact on PPP investment in the transport sector, that is because the high rate of indebtedness of any country does not encourage participatory investment.

Domestic credit to private sector by banks (% of GDP) (X5): refers to financial resources provided to the private sector by other depository corporations (deposit taking corporations except central banks), such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises. it is expected to has a positive impact on PPP investment in the transport sector (Emirullah, Azam, 2014).

Value of Shares Traded (X6): The value of shares traded is the total number of shares traded, both domestic and foreign, multiplied by their respective matching prices. Figures are single counted (only one side of the transaction is considered). Companies admitted to listing and admitted to trading are included in the data. Data are end of year values converted to U.S. dollars using corresponding year-end foreign exchange rates. It is supposed to have a positive impact on PPP investment in the transport sector (Hyun, et al., 2018).

B. Methodology: In the case that each of the dependent variable and the independent variables in the current year are affected by their values in previous years, this will lead us to include these lag variables in the model, so we will have a dynamic model. In this case, we are dealing with Lagged Time Models. A good example of these models is the Autoregressive Distributed Lag Model (ARDL).

C. Statistical Tests of Data:

1. Stability Test for Model Variables: Table 1 shows the results of unit root tests for the search variables. It is noticed that all the variables were not stagnation on the level and became stagnation after taking the first difference for them, that is, they became integrated from the first degree I(1).

Table (1): ADF unit root test results for model variables

	Original Variable (Level)			After one Difference		
	None	Individual Intercept	Indiv. Inter. & Trend	None	Individual Intercept	Indiv. Inter. & Trend
$Ln(Y_2)$	5.001	19.663	13.069	11.169	73.409	55.873
	$0.986^{n.s}$	$0.141^{n.s}$	$0.521^{n.s}$	0.000***	0.000***	0.000***
$Ln(X_1)$	4.147	14.599	5.368	27.905	22.476	28.234
	$0.995^{n.s}$	$0.409^{n.s}$	$0.980^{n.s}$	0.015**	0.058*	0.012**
$Ln(X_2)$	1.894	11.314	2.236	27.432	26.358	22.304
	$0.999^{n.s}$	$0.661^{n.s}$	$1.000^{n.s}$	0.017**	0.0325**	0.055*
$Ln(X_3)$	1.254	27.925	4.598	32.112	26.852	22.718
	$1.000^{n.s}$	0.015**	$0.991^{n.s}$	0.004***	0.0271**	0.065*
$Ln(X_4)$	15.945	19.404	6.803	74.760	43.227	33.250
	$0.317^{n.s}$	$0.150^{n.s}$	$0.942^{n.s}$	0.000***	0.000***	0.003***
$Ln(X_5)$	1.182	15.809	12.763	41.389	28.759	18.438
	$1.000^{n.s}$	$0.325^{n.s}$	$0.545^{n.s}$	0.000***	0.011**	0.087*
$Ln(X_6)$	2.013	17.316	7.482	77.039	50.807	45.125
	$1.000^{n.s}$	$0.240^{n.s}$	$0.915^{n.s}$	0.000***	0.000***	0.000***

Source: Prepared by the researchers based on the outputs of the statistical software EViews.

2. **Johansson's Cointegration Test:** To test and evaluate the existence of long-term integrative relationships among the model variables, the number of vectors, and the nature of the equilibrium relationship between these variables in the long term, Johansson's analysis was used to detect co-integration, Table (2) show the results.

Table (2): The result of Johansson's co-integration test

Hypothesized No. of CE(s)	Trace Test	Prob.	Max-Eigen Test	Prob.
None	8.318	0.8721$^{n.s}$	26.74	0.0208*
At most 1	4.159	0.9944$^{n.s}$	77.84	0.0000**
At most 2	128.9	0.0000**	128.9	0.0000**
At most 3	267.1	0.0000**	168.2	0.0000**
At most 4	147.9	0.0000**	114.0	0.0000**
At most 5	58.55	0.0000**	43.08	0.0001**
At most 6	40.93	0.0002**	40.93	0.0002**

Source: Prepared by the researchers based on the outputs of the statistical software EViews

The results of trace test co-integration indicate the rejection of all null hypotheses that there are at most (6) co-integration relations, at most (5) co-integration relations, at most (4) co-integration relations, and at most (3) co-integration relations For co-integration, there are at most two co-integration relations based on the probabilistic values (Prob.), all of which were less than the level of significance (1%), and accept the null hypothesis that there is at most one co-integration relation based on the probabilistic value of (0.9944), which is greater than (5%). Thus, there is one long-term and equilibrium co-integration relationship between the enabling environment drivers and the PPP investment in financing infrastructure in the transport sector. By relying on the Max-Eigen Test co-integration, the results indicate the rejection of all null hypotheses, and thus this test was not able to determine any co-integration relationship between the variables. In this case, we depend on the trace test result because it is the best (Cheung & Lai, 1993).

We conclude from the foregoing that there is one long-term co-integration relationship, in other words, there is a long-term equilibrium relationship between the enabling environment drivers, and PPP in financing infrastructure in the transport sector.

3. **ARDL Model Estimation:** ARDL model assumes that all variables are either stable at level or on the first difference. Meaning that the degree of integration of the variables is either zero I (0) or one I (1). (Narayan, 2005).

The results of estimating the ARDL model showed that the best rank of the model would be the first difference for all variables. Accordingly,

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the model to be estimated will be ARDL (1, 1, 1, 1, 1, 1, 1), and it takes the following form:

$$\begin{aligned}\Delta Ln(Y_t) = {} & \beta_0 + \alpha_1 \Delta Ln(Y_{t-1}) + \beta_1 \Delta Ln(X_{1,t}) + \beta_2 \Delta Ln(X_{1,t-1}) \\ & + \beta_3 \Delta Ln(X_{2,t}) + \beta_4 \Delta Ln(X_{2,t-1}) + \beta_5 \Delta Ln(X_{3,t}) \\ & + \beta_6 \Delta Ln(X_{3,t-1}) + \beta_7 \Delta Ln(X_{4,t}) + \beta_8 \Delta Ln(X_{4,t-1}) \\ & + \beta_9 \Delta Ln(X_{5,t}) + \beta_{10} \Delta Ln(X_{5,t-1}) + \beta_{11} \Delta Ln(X_{6,t}) \\ & + \beta_{12} \Delta Ln(X_{6,t-1}) + \delta_1 Ln(Y_{t-1}) + \delta_2 Ln(X_{1,t-1}) \\ & + \delta_3 Ln(X_{2,t-1}) + \delta_4 Ln(X_{3,t-1}) + \delta_5 Ln(X_{4,t-1}) \\ & + \delta_6 Ln(X_{5,t-1}) + \delta_7 Ln(X_{6,t-1}) + \varepsilon_{2,t} \quad \dots (2)\end{aligned}$$

$\delta_1, \delta_2, \delta_3, \delta_4, \delta_5, \delta_6, \delta_7$ are the coefficients of the long relationship, and through them it is possible to arrive at the so-called co-integration equation, that is, the equation of the long-term relationship between the dependent variable and the independent variables. As for the coefficients:

$(\alpha_1, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}, \beta_{11}, \beta_{12})$

represent the coefficients of the short-term relationship, that is, they are responsible for the existence of the short-term relationship between the independent variables and the dependent variable, ($\varepsilon_{(2,t)}$) representing the error term in the model. Table (4) presents the results of estimating ARDEL model.

Table (4): ARDL Model Estimation Results (1, 1, 1, 1, 1, 1, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long Run Equation				
$Ln(X_1)$	6.222995	0.956111	6.508653	0.0000
$Ln(X_2)$	-6.401988	0.676493	-9.463491	0.0000
$Ln(X_3)$	-0.504631	0.426540	-1.183080	0.2401
$Ln(X_4)$	-0.458120	0.273557	-1.674678	0.0977
$Ln(X_5)$	2.538191	0.928596	2.733365	0.0076
$Ln(X_6)$	1.010341	0.196153	5.150776	0.0000
Short Run Equation				
COINTEQ01	-0.846176	0.169373	-4.995929	0.0000
$\Delta (Ln(X_1))$	-0.007039	6.707502	-0.001049	0.9992
$\Delta (Ln(X_2))$	-8.646585	10.34155	-0.836102	0.4054
$\Delta (Ln(X_3))$	0.766826	1.472876	0.520632	0.6040

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long Run Equation				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Long Run Equation				
Δ (Ln(X_4))	-0.050374	0.749067	-0.067249	0.9465
Δ (Ln(X_5))	-3.008799	3.013398	-0.998474	0.3209
Δ (Ln(X_6))	-0.302176	0.399492	-0.756401	0.4515
C	-54.79134	10.89403	-5.029485	0.0000
Mean dependent var	0.089167	S.D. dependent var		1.438548
S.E. of regression	1.111012	Akaike info criterion		2.787432
Sum squared resid	104.9196	Schwarz criterion		4.048703
Log likelihood	-142.8763	Durbin-Watson Stat.		1.56356
R-squared	0.637555			
Adjusted R-squared	0.605098			
S.E. of regression	1.035760			
F-statistic	19.64265			
Prob(F-statistic)	0.000000			

Source: Prepared by the researchers based on the outputs of the statistical software EViews

The results of Table (4) show that the majority of the enabling environment drivers has a significant effect on the PPP in financing infrastructure in the transport sector in the long term. The elasticities of these drivers can be explained as follows:

GDP (X1) has a significant positive effect on PPP in financing infrastructure in the transport sector at (1%). The results show that the elasticity of PPP investment in relation to the change in GDP is high. As an increase GDP by (1%) leads to an increase in PPP investment in the infrastructure of the transport sector by (6.2%). So, market size plays a stimulating role for PPP investment in the transport sector. This result matches the hypothesis of the research, as well as the results of previous empirical research.

Inflation (X2) plays a significant negative effect on PPP investment in the transport sector at (1%). A high responsiveness of PPP investment in the transportation sector to changes in the rate of inflation was found, as an increase in the inflation rate by (1%) leads to a decrease in PPP investment

in the transport sector by (6.4%). This result reflects the importance of economic stability in providing an appropriate environment for participatory investment, which is usually a long-term investment. This result is consistent with the theoretical literature and with the empirical research's results.

Domestic credit to private sector by banks (% of GDP) (X5) has a significant positive effect on PPP investment in the transport sector at (1%). It was found that the response of PPP investment to changes in Domestic credit to private sector by banks ratio, is highly flexible, as an increase in the ratio of credit to the private sector by (1%) leads to an increase in PPP investment in the transport sector by (2.5%). So, the ease of access to bank credit is a strong motive for the private sector to expand its PPP investments. This result support the research hypothesis, and the findings of a previous research.

Value of Shares Traded (X6) has a significant positive effect on PPP investment in the transportation at (1%). The results showed that the PPP investment response to the value of shares traded index is highly flexible, as an increase in the value of traded shares index by (1%) leads to an increase in PPP investment in the transport sector by (1.01%). This result provides evidence that improving the performance of financial markets has a stimulating effect on participatory investment in the transportation sector. This coincides with the research hypothesis and previous research.

It was found that both foreign exchange reserves and short-term (X3) foreign exchange debt reserve ratio(X4) has no significant impact on PPP investment in the transport sector.

It also appears that there is a long-term relationship between the model variables, where the coefficient of integration appears with a negative and significant value at (1%) and its estimated value is (-0.846176), which means that (84.6%) of the short-term errors can be corrected in the next period In order to return to the long-term equilibrium situation, in other words, (84.6%) of the imbalance in the relationship of the enabling environment drivers with the PPP investment in infrastructure in the transport sector in the short term is corrected in the long term and the correction is every year Almost because $1/0.846176=1.18\cong1$.

Table (4) also show that (63%) of the changes in PPP investment in the transport sector are explained by enabling environment drivers (GDP,

inflation, foreign exchange reserves, Ratio of Debt reserve to short-term foreign exchange, Domestic credit to private sector by banks (% of GDP), the value of traded shares). F-statistic also reflects the ARDL model overall significance at (1%), as well as the low value of the standard error of the model (1.03576), reflected the high convergence between the actual PPP investment values and its predicted values through the model.

4. **Conclusions and Economic Policy Implications:** Regression results showed a significant effect of most of the enabling environment drivers on the PPP investment in infrastructure in the transport sector in the long run. The effect of GDP, Domestic credit to private sector by banks (% of GDP), and the value of traded shares, on PPP investment in the transport sector is significantly positive, and that the elasticity of PPP investment in relation to the above explanatory variables was high. While foreign exchange reserves and the Ratio of Debt reserve to short-term foreign exchange had no significant impact on PPP investment in the infrastructure of the transport sector.

It was found that the response of PPP investment in infrastructure of the transport sector was very large for macroeconomic stability. The elasticity of change in PPP investment in the transport sector in relation to changes in GDP and inflation rate was (6.2% and -6.4%), respectively.

The response of PPP investment in the transportation sector to the changes in the development of the financial market was also large, but less than its response to macroeconomic stability drivers. The elasticity of change in PPP investment in the transport sector in relation to changes in the Domestic credit to private sector by banks (% of GDP), the value of traded shares amount (2.5% and 1.1%) respectively.

The results reflect the high quality of the regression equation, as 63% of the changes in participatory investment are explained by the enabling environment drivers. The low value of the standard error of the model (1.03576) reflected the great convergence between the actual values of PPP investment and the values predicted through the model.

Economic Policy Implications:

The need to start thinking in a practical and realistic way, and planning to activate PPP system in financing infrastructure, due to the success achieved by the PPP in most countries through the experience of implementation and joint operation. The PPP meets the need of developing

countries to mobilize financing to develop and strengthen their infrastructure in the transport sector, as well as their need to create more employment opportunities and address unemployment.

Directing government economic policies towards achieving macroeconomic stability in the long term to achieve targeted and sustainable economic growth in accordance with adopted strategic plans. This would provide the appropriate climate to attract PPP investments in the infrastructure sectors that serve economic and social development.

Develop appropriate solutions to limit the increase in the rate of inflation, to be within acceptable limits through which to create an investment environment in the long run.

Developing the performance of financial markets in developing countries in accordance with international standards that guarantee capital rights and facilitate access to it by providing credit and loans for infrastructure projects that require large financing that is sometimes difficult for the public and private sectors to implement.

Coordinating government program in parallel with the plans and programs of grants, loans, implementation and joint operation, and partnership contracts for the concerned sectors.

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