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IS THERE A NONLINEAR RELATIONSHIP BETWEEN PRIVATE INVESTMENT AND PUBLIC INVESTMENT

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ABSTRACT

The objective of this study is to investigate whether the connection between individual investments and public investment is nonlinear and what nature it takes. Policymakers and economists are interested in this relationship as it directly influences economic growth, productivity, and welfare.

We shall look at numerous empirical investigations, theoretical models, and economist analyses done to perform this review. in economies and settings that are both developed and emerging. We will track how shifts in public investment—infrastructure, spending, government-funded initiatives, etc.—affect the actions of private investors.

According to several studies, public and private investment dynamics are nonlinear. For instance, by lowering company expenses, boosting confidence, and enhancing infrastructure, a rise in public expenditure can encourage private investment. Nevertheless, increases in public investment may have the unintended consequence of decreased returns or even crowding out, in which case private investments are driven out by rising interest rates or declining market confidence.

Further studies emphasize how institutional elements, the formulation of policies, and the state of the economy influence the character of public and private investments.

Keywords: Private Investment, Public Investment, Non-linear relationship

INTRODUCTION

The correlation between private and public investment is crucial in economic analysis and policymaking. Private investment involves spending money on individual assets, such as machinery, equipment, and infrastructure to generate future On the contrary, in terms of income. public investment involves infrastructure, education, healthcare, and other projects to promote economic growth and development.

Traditionally, The interconnection between these two varieties of investment. has been viewed as linear. However, contemporary economics Studies show that this correlation is more complex and can exhibit nonlinearity. Multiple factors possess the capacity to impact both—public and private investments. For instance, when public investments increase, crowding-out effects can occur, leading to elevated interest rates and demand for financial resources. However, public investments can also complement private investments by providing infrastructure facilities, creating a conducive business environment, and lowering production costs, which encourages higher levels of private investments.

This is how public and private investments can mutually advantage one another in the investment process and yield profits.Additionally, the efficiency of public investment in stimulating private investment can vary based on the quality of public spending, the efficiency of resource allocation, and the overall macroeconomic environment therefore, while there may be private and public investment, The essence of the connection. is often context-specific and objects to change over time.

Review of literature

Cecchetti et al., 2011. The debate on whether public spending aids or hinders private investment continues. Classical economists argue that minimal government intervention leads to better economic outcomes. This belief extends to any public investment that might result in a public deficit and the accumulation of public debt, which could impede economic growth.

Afonso & Jalles, 2015; Furceri & Sousa, 2011. Public investment can encroach on private investment by triggering a search for funding, which may increase interest rates in the short term and taxes in the long term

Saeed et al., 2006; Vanhoudt et al., 2000). Moreover, when the public sector procures goods, services, and infrastructure necessitating tax hikes for financing, it can obstruct private investment by diminishing private savings

Barro, 1989. Additionally, if such purchases escalate the demand for funds in capital markets, they can elevate loan costs due to higher interest rates, thereby deterring firms from investing and shrinking the pool of financial resources confirmed crowding-out effects of public investment on private investment have been observed in various macroeconomic settings.

Voss (2002) Discovered that In the United States and elsewhere, Canada, public investment innovations were detrimental to private investment, leading to the conclusion that public and private capital are not complementary in these nations.

Narayan (2004) found similar results in the Fiji Islands, attributing them to political instability and a tendency towards unproductive investments.

Dash (2016) noted crowding-out effects in India, deducing that infrastructure investments could bolster private investment provided the infrastructure quality is assured and the financing does not affect the availability of bank credit or lending rates.

RESEARCH METHODOLOGY

RESEARCH GAP: There can be a non-linear relationship between private investment and public investment, especially in the context of research and development (R&D).

Initially, increasing public investment in R&D can lead to significant returns in terms of knowledge creation, technological advancement, and innovation. This can create a conducive environment for private firms to invest in complementary R&D activities, leading to synergistic effects and further innovation.

NEED OF THE STUDY

Here are a few reasons why studying the relationship between private and public investment is important:

Economic Growth: Understanding how private and public investment interact can provide insights into their combined effect on economic growth. A nuanced understanding of this relationship can help policymakers design more effective strategies to stimulate economic development.

Resource Allocation: Analysing the relationship can shed light on how resources are allocated within an economy. For instance, if public investment crowds out private investment at certain levels, it could indicate A requirement for a more efficient allocation of resources or adjustments in government spending priorities.

Policy Implications: Policy decisions regarding taxation, government spending, and investment incentives can significantly influence the relationship between private and public investment. Studying this

relationship can inform policymakers about the potential impacts of their decisions and help them formulate more balanced and effective policies.

Business Confidence: The relationship between private and public investment can also affect business confidence and investor sentiment. A stable and conducive investment environment, with a harmonious balance between private and public investment, is essential for fostering entrepreneurship and attracting investment.

Long-Term Sustainability: Sustainable economic development requires a balance between private-sector initiatives and public-sector interventions. Understanding the non-linear relationship between private and public investment can contribute to the long-term sustainability of economic growth by ensuring that both sectors complement each other effectively.

By studying the non-linear relationship between private and public investment, researchers can contribute valuable insights to economic theory and policy formulation, ultimately leading to more informed decision-making and better outcomes for society as a whole.

PURPOSE OF THE STUDY

Policy Implications: Understanding the nature of the relationship between private and public investment can inform policymakers about the effectiveness of different fiscal policies. For instance, if there's a non-linear relationship, it might suggest that increasing public investment beyond a certain point could either crowd in or crowd out private investment, depending on the specific context.

Economic Growth: Investigating the dynamics between private and public investment can shed light on their combined impact on economic growth. If there's a non-linear relationship, it could imply that there's an optimal level of public investment relative to private investment for maximizing economic growth.

Resource Allocation: A non-linear relationship between private and public investment could highlight the importance of efficient resource allocation. It may suggest that resources allocated to one type of investment beyond a certain threshold might not yield significant returns or might even have adverse effects.

Investment Climate: Studying the relationship Could also offer insights into the overall investment climate. For instance, if public investment crowds out private investment at certain levels, it might signal to investors that the business environment is less conducive to private sector growth.

Macroeconomic Stability: Analysing the relationship can contribute to understanding macroeconomic stability. For example, if there's a non-linear relationship where excessive public investment leads to inflation or fiscal deficits, it could indicate risks to economic stability.

Overall, the purpose of studying the non-linear relationship between private and public investment is to gain insights that can inform economic policies, promote sustainable economic growth, and ensure efficient allocation of resources.

PROBLEM STATEMENT

An important subject in economics and policymaking is the interaction between public and private investment. A rise in public investment causes a corresponding increase in private investment, and vice versa, according to a linear relationship between the two. In actuality, though, this link may be more intricate and nonlinear.

The problem statement might include determining whether there is a linear or nonlinear relationship between public and private investment, as well as comprehending the implications of any nonlinearities.

OBJECTIVES OF THE STUDY

1) Examining the nonlinear relationship between public and private investment seeks to understand how shifts in public spending have an out-of-proportional impact on private investment, which may have different consequences at different public expenditure levels.

2) It is true that the link between public and private investment is frequently nonlinear. Depending on variables including the state of the economy, the nature of investments, and governmental regulations, this connection may exhibit crowding out, crowding in, or no discernible pattern at all.

RESEARCH DESIGN

RESEARCH TYPE: Descriptive in nature

Sampling Technique: A simple Non-random sampling technique was utilized for the study.

DATA COLLECTION METHODS

Primary data: Primary data is gathered through surveys by questionnaire, interviews, and case study observations.

Secondary data: secondary data is gathered from reports, books, articles, or internet databases.

SAMPLE SIZE: 50

SAMPLE UNIT: PATANCHERU

TOOLS USED: Questionnaire, Percentages, Bar graphs

HYPOTHESIS:

H0: There is no significant relationship between the ethical commitment of Institutional investors and stock prices

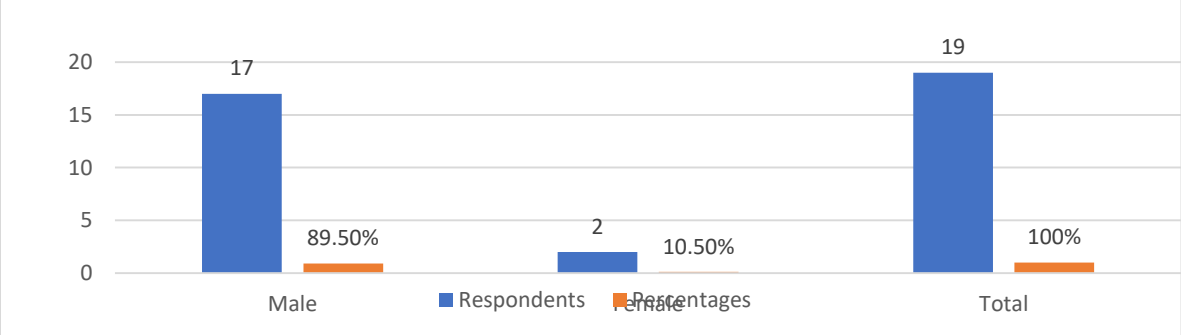
H1: There is a significant relationship between the ethical commitment of Institutional investors and Stock prices

H0: ESG (Environmental, Social, and Governance) scores do not affect stock prices.

H1: Companies with higher ESG scores affect stock price

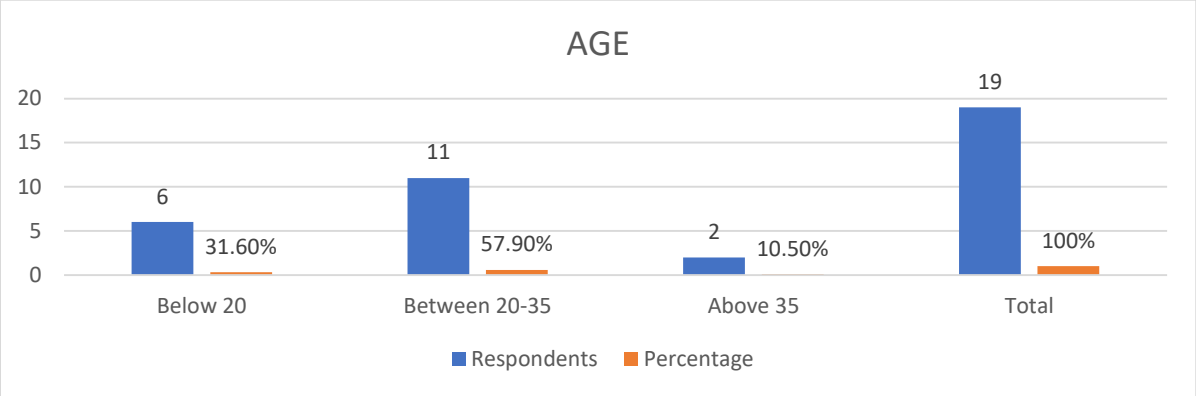
DATA ANALYSIS

Gender	Male	Female	Total
Respondents	17	2	19
Percentages	89.50%	10.50%	100%



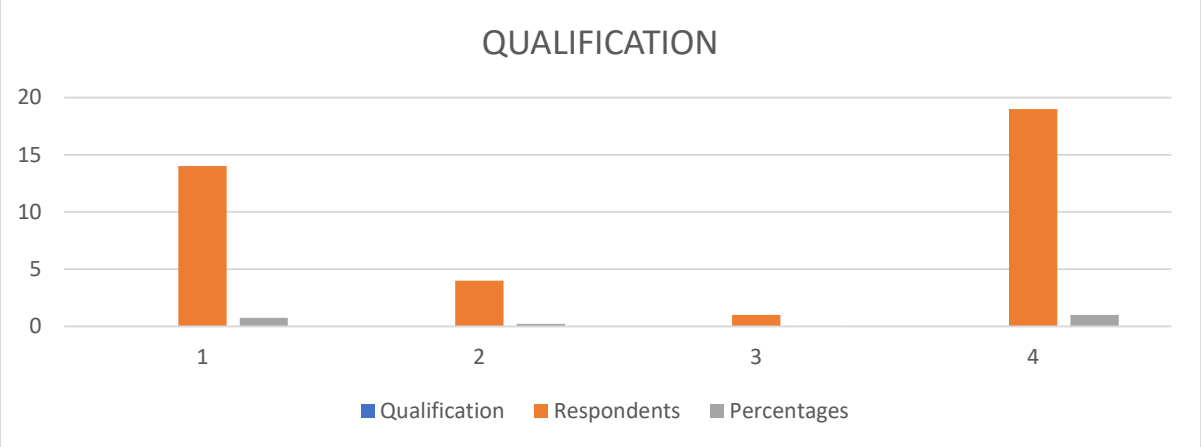
Interpretation: The total number of respondents is 19 out of Which males 89.50% and females 10.50%

Age	Below 20	Between 20-35	Above 35	Total
Respondents	6	11	2	19
Percentage	31.60%	57.90%	10.50%	100%



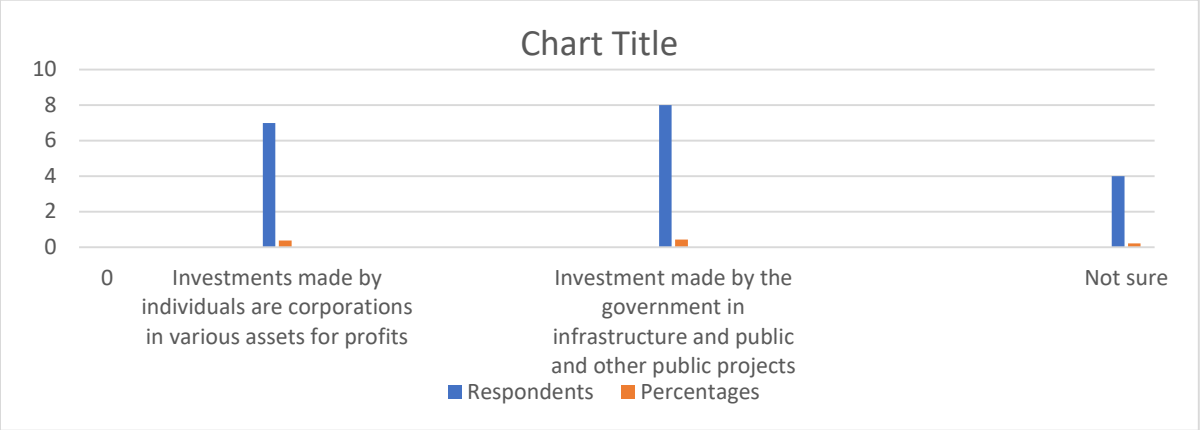
Interpretation: The major responses are from between 20 to 35 57.9%

Qualification	Student	Employed	Unemployed	
Respondents	14	4	1	19
Percentages	73.70%	21.10%	5.30%	100%



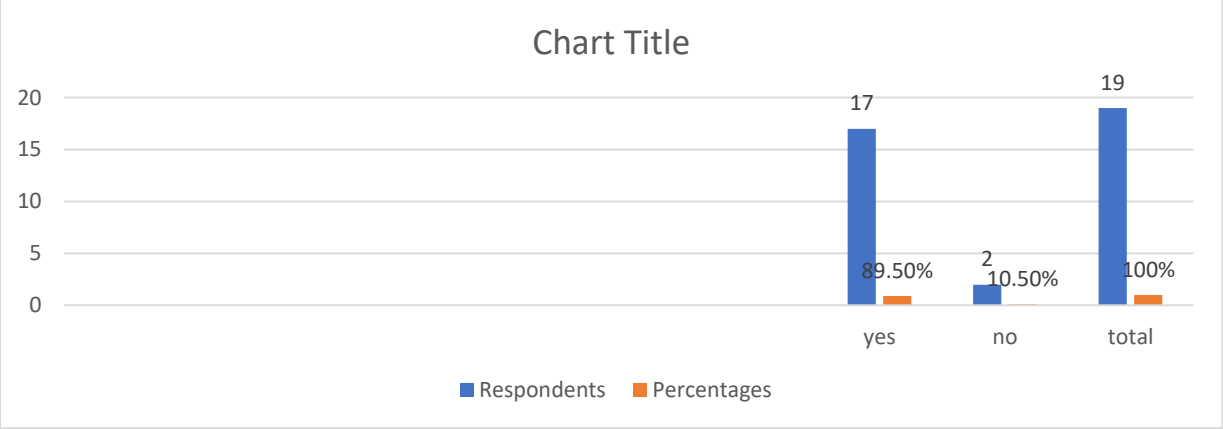
Interpretation: The most responses are from students at 73.70% while the remaining are huge differences.

How would you define private investment?	Investments made by individuals or corporations in various assets for profit	Investments made by the Government in infrastructure and other public projects	Not sure	Total
Respondents	7	8	4	19
Percentage	36.80%	42.10%	21.10%	100%



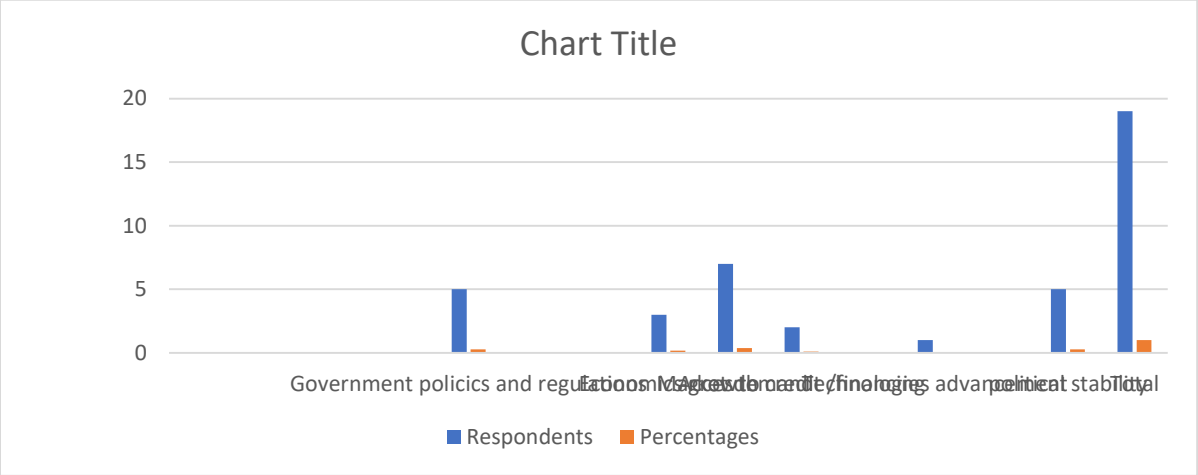
Interpretation: Most of the respondents agree that Investment made by the government in infrastructure and public and other public projects.

Do you believe there is a relationship between private and public investment?	Yes	No	Total
Respondents	17	2	19
Percentage	89.50%	10.50%	100%



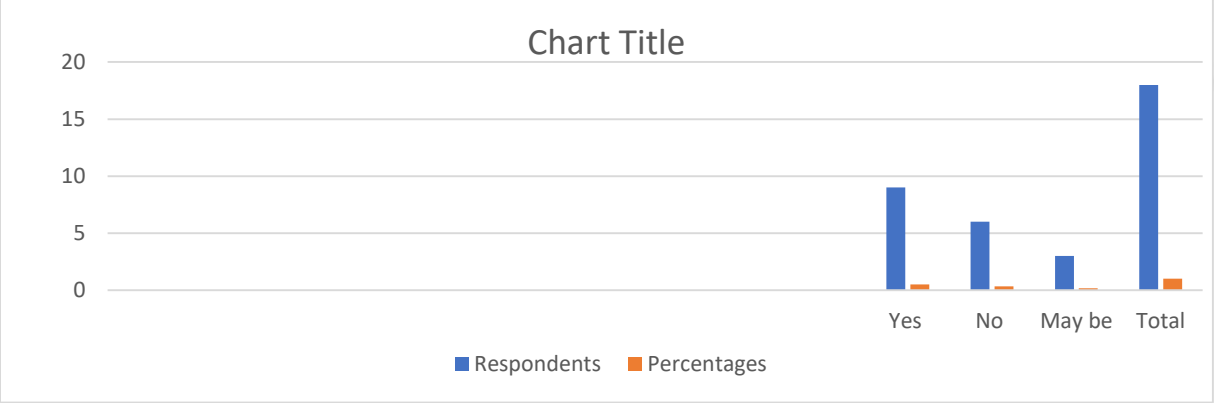
Interpretation: Most of the respondents agree that they believe that the relationship between public and private investment is relative.

What factors do you think influence private investment	Government Policies/ Regulations	Economic growth	Market demand	Access to credit/ financing	Technological advancements	Policy stability	Total
Respondents	5	3	7	2	1	5	19
Percentage	26.30%	15.80%	36.80%	10.50%	5.30%	26.30%	100%



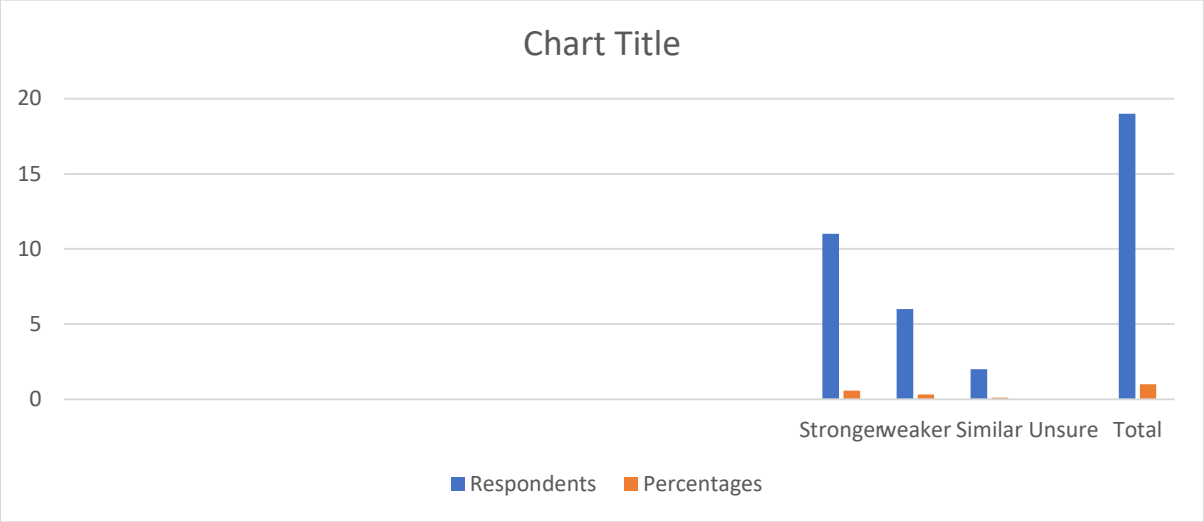
Interpretation: They concluded that there is a market demand for influencing private investment with a percentage of 36.8%

In your opinion, does an increase in private investment typically lead to an increase in public investment?	Yes	No	May be	Total
Respondents	9	6	3	18
Percentage	50%	33.30%	16.70%	100%



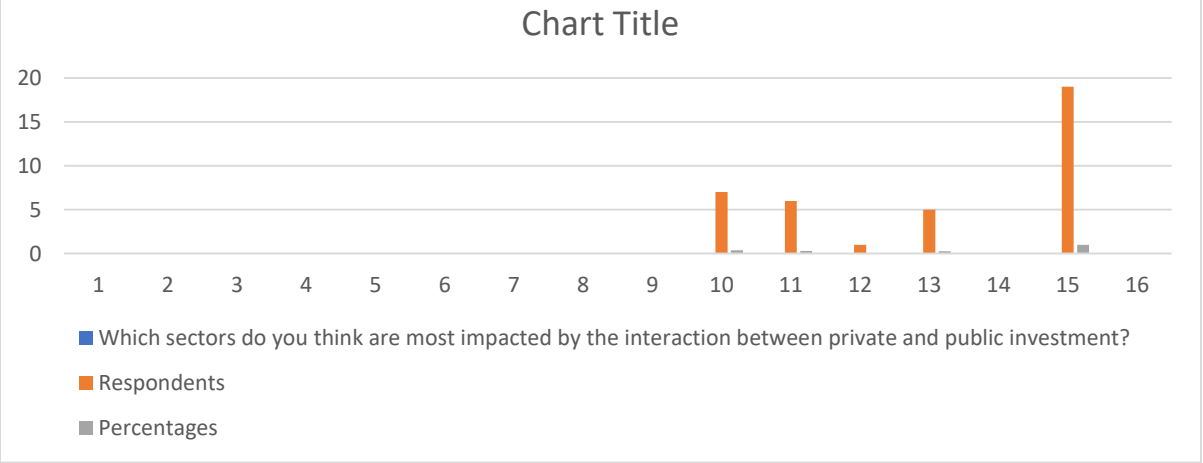
Interpretation: increases in private investment can increase public investment the majority is on the yes side a percentage of 50%

How do economic conditions affect the relationship between private and public investment?	Positively	Negatively	No impact	Unsure	Total
Respondents	8	6	5	0	19
Percentage	42.10%	31.60%	26.30%	0%	100%



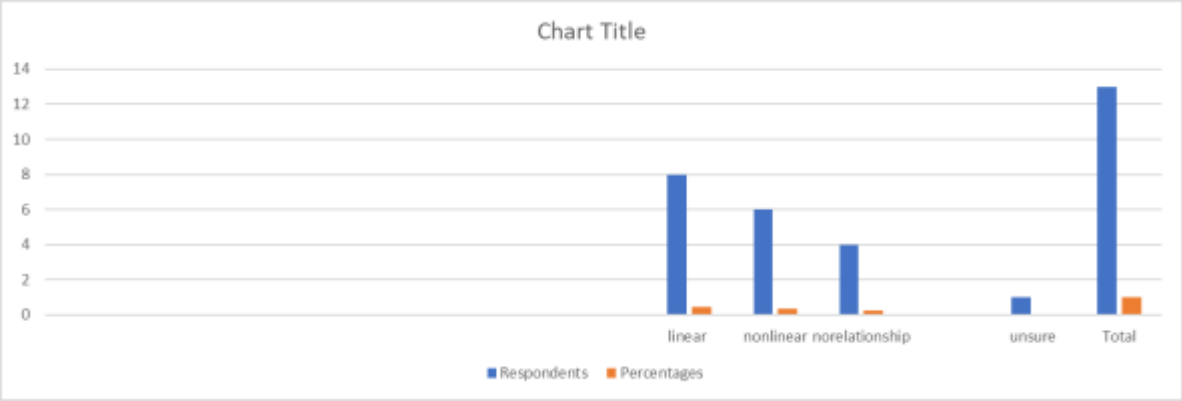
Interpretation: In these, we have to conclude that there is a high percentage on the stronger side with a percentage of 42.10%.

Which sectors do you think are most impacted by the interaction between private and public investment?	Energy	Health care	Infrastructure	Technology	Finance	Total
Respondents	7	6	1	5	0	19
Percentage	36.80%	31.60%	5.30%	26.30%	0%	100%



Interpretation: in these the sector that we think impacted the energy sector will impacted more with a percentage of 36.8%

How would you describe the relationship between private and public investment?	Linear	Nonlinear	No relationship	Unsure	Total
Respondents	8	6	4	1	13
Percentage	42.10%	31.60%	21.15%	5.30%	100%



Interpretation: The relationship between private and public investment is a 42.10% linear outcome.

STATISTICAL TOOLS FOR ANALYSIS

H0:- there is no relation between private and public investments.
H1:- there is a relation between private and public investments.

Gender	Yes	No	Total
Male	12(11.63)[0.01]	5(5.37)[0.03]	17
Female	1(1.37)[0.010]	1(0.63)[0.21]	2
Column total	13	6	19

The chi-square statistic is 0.3511. the p-value is 0.553516. the result is not significant at $p<0.05$. Since the P value is less than 0.0, H0 rejects and accepts H1. So, there is an impact of the influence of brand reputation on financial performance.

Age	Yes	No	Total
Below 20	2(2.21)[0.02]	1(0.79)[0.06]	3
Between 20-35	10(9.58)[0.02]	3(3.42)[0.05]	13
Above 35	2(2.21)[0.02]	1(0.79)[0.06]	3
Column total	14	5	19

The chi-square statistic is 0.2227. the p-value is 0.894621. the result is not significant at p-0.05.

FINDINGS

- The total number of respondents is 19 out of Which males 89.50% and females 10.50%
- The major responses are from between 20 to 35 57.9%
- The most responses are from students at 73.70% while the remaining are huge differences.
- Most of the respondents agree that the government makes investments in infrastructure and public and other public projects.
- Most of the respondents agree that they believe that the relationship between public and private investment is relative.
- They concluded that there is a market demand for influencing private investment with a percentage of 36.8%
- Increases in private investment can increase public investment the majority is on the yes side a percentage of 50%
- In these, we have to conclude that there is a high percentage on the stronger side with a percentage of 42.10%.
- In these, the sector that we think impacted the energy sector will impacted more with a percentage of 36.8%
- The relationship between private and public investment is a 42.10% linear outcome.

SUGGESTIONS

- In these the differences between private and public investment is a linear because it depends on the one-to-one.
- If public investments are more then the public can invest money in private investments because it's interrelationship between these two parties.
- These investment depends on one-to-one because there a connections between different companies so the relations are sometimes the same and sometimes different.
- In this one company is investing in the SEVA programs and the other is investing in the public programs these days of investment because of its publicity.
- In the investment process one thinks that private investment is lower than public investment.
- In my point of view the process between these two investments is equal but has some edge in public investment because it's legal all the time.

CONCLUSION

The question of what kind of effects public investment has on private investment has been studied extensively, but the empirical findings remain unclear. The conflicting results have been explained in a number of ways, but not much thought has been given to the qualitative shift in this relationship that can happen when distinct macroeconomic variables surpass a certain tipping threshold. The empirical results show that one of the two regimes produces higher crowding-in effects of public investment in private investment and that the existence of both regimes cannot be statistically rejected in all circumstances.

For all threshold factors, the influence was found to be greater in the lower regimes, suggesting that the law of diminishing returns may play a part in this relationship. Through the use of dynamic panel models that allow for the occurrence of endogeneity among the various variables, the robustness of the static estimations was verified.

In terms of policy implications, the current empirical analysis advocates that an increase in public investment acts as a decisive stimulus for private investment. Private agents seem to react to what usually are major infrastructures by increasing their investment, responding at once to the new facilities that are created for their own business and to the boost in demand that is the result of increased public expenditures. Firms seem to need incentives when what is at stake is to increase their productive capacity through the acquisition of physical capital, a risky activity involving short-run costs and long-run returns. Policymakers aware of the positive answer to public investment from firms, and having to deal with a new crisis, can use it as a way to boost private

BIBLIOGRAPHY

1. Blanchard, Olivier Jean. "Debt, deficits, and finite horizons." Journal of Political Economy 93, no. 2 (1985): 223-247.
2. Barro, Robert J. "Government spending in a simple model of endogenous growth." Journal of Political Economy 98, no. 5 (1990): S103-S125.
3. Aschauer, David Alan. "Is public expenditure productive?." Journal of Monetary Economics 23, no. 2 (1989): 177-200.
4. Romp, Ward E., and Jakob de Haan. "Public capital and economic growth: a critical survey." Perspektiven der Wirtschaftspolitik 4, no. 1 (2003): 5-22.
5. Rodrik, Dani, Arvind Subramanian, and Francesco Trebbi. "Institutions rule the primacy of institutions over geography and integration in economic development." Journal of Economic Growth 9, no. 2 (2004): 131-165.
6. Eisner, Robert. "Comments on the optimal taxation and optimal tax systems papers." National Tax Journal 57, no. 3 (2004): 705-721.
7. Evans, Paul. "How responsive is a private investment to tax policy? Evidence from developing countries." Journal of Development Economics 70, no. 2 (2003): 791-816.
8. Aizenman, Joshua, and Reuven Glick. "Military expenditure, threats, and growth." Journal of International Money and Finance 24, no. 2 (2005): 249-272.
9. Canning, David, and Esra Bennathan. "The social rate of return on infrastructure investments." Policy Research Working Paper (2000).
10. Ramey, Valerie A. "Identifying government spending shocks: It's all in the timing." The Quarterly Journal of Economics 126, no. 1 (2011): 1-50.

Annexure

QUESTIONNAIRE

1. How would you define private investment?
    - Investments made by individuals or corporations in various assets for profit.
    - Investment made by the government in infrastructure and other public projects.
    - Not sure.
2. Do you believe there is a relationship between private and public investment?
    - Yes
    - NO
3. What factors do you think influence private investment?

- Government policies/regulations
- Government policies/regulations
- Market demand
- Access to credit/financing
- Technological advancements
- Political stability

4. Do you believe governments should actively encourage private investment?
    - YES
    - NO
    - UNSURE
5. Do you believe there's a relationship between private and public investment?

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

6. How would you describe the relationship between private and public investment?
    - Linear
    - Nonlinear
    - No Relationship
    - Unsure
7. In your opinion, does an increase in private investment typically lead to an increase in public investment?
    - YES
    - NO
8. How do economic conditions affect the relationship between private and public investment?
    - Positively
    - Negatively
    - No Impact
    - Unsure
9. Do you think private investment is riskier than public investment?
    - Yes

- NO

10. Which sectors do you think are most impacted by the interaction between private and public investment?
    - Energy
    - Healthcare
    - Infrastructure
    - Technology
    - Finance
11. How should governments prioritize their investment allocation between private and public sectors?
    - More towards private investment
    - More towards public investment
    - Balanced allocation
    - Depends on economic conditions
12. How do you think the relationship between private and public investment in your country compares to other countries?
    - Stronger
    - Weaker
    - Similar
    - Unsure