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ROLE OF PUBLIC AND PRIVATE SECTOR IN CAPITAL FORMATION OF INDIA: AN ANALYSIS

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ABSTRACT
The capital formation in any country is an important factor behind the growth. Sometimes it plays a role as a barometer for economic growth and development. Capital formation is the addition to the capital stock of a country. It composed of savings by household, public, private sectors, the gross fixed capital formation, and increase in the stocks. Capital formation makes a nation to adopt new ideas and techniques of production. The present study focuses on the role played by public and private sector in the capital formation of India; a necessary factor behind the economic growth.

Keywords: Capital formation, public sector, private sector, gross domestic saving, gross fixed capital formation, change in stock

1. INTRODUCTION
Economic development of a nation depends upon the capital formation. According to Ragnar Nurkse, one of the founding fathers of Classical Development Economics, the meaning of capital formation "is that society does not apply the whole of its current productive activity to the needs and desires of immediate consumption, but directs a part of it to the making of capital goods: tools& instruments, machines &transport facilities, plant & equipment-all the various forms of real capital that can so greatly increase the efficacy of productive effort. The term is sometimes used to cover human as well as material capital: it can be made to include investment in skills, education and health-a very important form of investment". Each and every sectors of the nation contributes its shares to capital formation.

With regards to contribution to capital formation, public as well as private sector of India achieves a greater attention. India is a mixed economy composed of both public and private sectors.

Both these sectors aim at economic development. They should go hand in hand to attain economic growth and economic development of a nation.

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2. IMPORTANCE

Capital is the key growth driver of each and every nation. It governs the quantity and composition of output in a nation. Capital formation is the process of building up the capital stock of a country through investing in productive plants and equipment. Public and private sector of India plays a predominant role in contributing to the economic development of a nation. Capital formation composed of the domestic savings and net inflow of funds from abroad. Apart from these include gross fixed capital formation and increase in stock. Capital formation is the result of a choice between present consumption and saving for future. A nation must make choice in between consumption and saving. The growth of a nation depends upon the development of each and every sector. In a mixed economy like India, the public as well as private play an important role in enhancing the economic growth.

3. OBJECTIVES

- To analyse the contribution of public sector to the capital formation of India
- To analyse the contribution of private sector viz to the capital formation of India
- To compare and contrast the contribution of public sector and private sector to the capital formation of India

4. METHODOLOGY

The present study is based on secondary data. The time series data are selected for the study which comprise the periods from 2000 to 2014. Data were collected from various sources like economic survey 2014-15, Central Statistical Organization survey reports, ministry of finance, government of India, various books, journals, periodicals, articles & newspapers, etc. In order to analyse the collected data, statistical tools like tables, percentages, correlation and multiple regression are used.

5. REVIEW OF LITERATURE

- Dr. Li Tan and Dr. Wei Ge, (2011), in their paper "Sectoral Distribution of Capital Formation and Output Growth: The Cases of China and India", find that China consistently allocated larger proportion of investment in transformation sector than India did, which produced much faster output growth of major transformation industries, and consequently, higher GDP growth in the Chinese case. Thus, the difference in the sectoral investment pattern between the two economies stands as an important source for their GDP growth differentials. From the policy perspective, the study highlights the importance of sectoral distributions of investment. The study also suggests that a gradual adjustment of the sectoral investment pattern may be required in the Chinese case as the economy moves onto higher stages of development.
- Mazumdar (2008) tried to show that a specific investment-growth asymmetry had characterized the growth trajectory of the Indian economy since the 1991 exchange crisis induced shift in the economy policy paradigm. According to him, this asymmetry has created the conditions for cyclical fluctuations in both manufacturing investment as well as output, which in turn has affected aggregate growth.
- Ray (2007) carried out the study on capital formation in the Indian Economy over a period of 34 years between 1970 and 2004. Three measures of capital formation viz. Gross Fixed Capital Formation, Gross Domestic Capital Formation and Net Domestic Capital Formation are studied. Results of the study revealed that there is no statistically significant impact of liberalization on any measure of capital formation.
- S.K.Misra and V.K.Puri, (2006), in their book "Economics of development and planning", claimed that capital formation is often required to play a lead role in economic development in the developing countries. This is on account of the reason that the supply of cooperant factors in these countries often depends on the supply of capital. As the rate of capital formation increases, it exerts an interacting and cumulative effect on the economy of the country leading to a growth in national income, a higher rate of capital formation leading to a still higher rate of growth of national income, and so on. Thus the processes of capital formation and economic development feed one another but the first initial impulse is often provided by a higher rate of capital formation.

6. DATA ANALYSIS

6.1 Analysis of role played by public sector in capital formation

$$GKF_{=}\beta_0 + \beta_1 GDS_{PB} + \beta_2 GFCF_{PB} + \beta_3 \Delta S_{PB} + u_i$$

From the multiple regression analysis, the function becomes

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$$GKF_{=}6.93+ 1.33\ GDS_{PB}+ 2.92\ GFCF_{PB}+2.43\ \Delta S_{PB}+u_i$$

The results make economic sense. Partial regression coefficient of $GFCF_{PB}$ (β_2) on GKF is 2.92, which indicates that marginal effect of $GFCF_{PB}$ on GKF while keeping other variables constant. Partial regression coefficient of $\Delta S_{PB}(\beta_3)$ on GKF is 2.43 by keeping GDS $_{PB}$ and $GFCF_{PB}$ as constants, and Partial regression coefficient of $GDS_{PB}(\beta_1)$ on GKF is 1.33 by holding other variables constant.

6.2 Analysis of role played by private sector in capital formation

$$GKF_{=}\alpha_0+ \alpha_1\ GDS_{PV} + \alpha_2\ GFCF_{PV}+ \alpha_3\Delta S_{PV}+u_j$$

From the multiple regression analysis, the function becomes

$$GKF_{=}4.25+ 0.019\ GDS_{PV} + 1.15\ GFCF_{PV}+1.07\ \Delta S_{PV}+u_j$$

Over the period of study, holding GDS_{PV} and ΔS_{PV} as constant, a 1 percent increase in $GFCF_{PV}$ led on 1.15 percent increase in the GKF . Similarly holding GDS_{PV} and $GFCF_{PV}$ as constant marginal influence of ΔS_{PV} on GKF is 1.07 percent.

6.3 Comparison of role played by public sector and private sector in capital formation

Table 1. Statistical analysis

Regression statistics	Public sector	Private sector
Multiple R	0.877443414	0.988985604
R square	0.769906945	0.978092525
Adjusted R square	0.707154294	0.972117759
Standard error	2.479100419	0.764959655
Observations	15	15

A comparison is made between public sectors and private sectors contribution to gross capital formation. From the purely statistical view point, the estimated regression lines fit both data quite well. The R^2 value of public sector is 0.7699 means that about 77 percent of the variation in the gross capital formation is explained by the (logs of) GDS_{PB} , $GFCF_{PB}$ and ΔS_{PB} . But in case of Private sector, the R^2 value of is 0.9780 means that about 98 percent of the variation in the gross capital formation is explained by the (logs of) GDS_{PV}, $GFCF_{PV}$ and ΔS_{PV}.

In case of public sector the adjusted R^2 tell us that, after taking into account the number of regressors, the model explains 71 percent of the variation in gross capital formation. But in private sector the adjusted R^2 tell us that, the model explains 97 percent of the variation in gross capital formation. Both figures are high i.e. the models are well and good.

7. FINDINGS

- Partial regression coefficient of $GFCF_{PB}$ (β_2) on GKF is 2.92, which indicates that marginal effect of $GFCF_{PB}$ on GKF while keeping other variables constant.
- Partial regression coefficient of $\Delta S_{PB}(\beta_3)$ on GKF is 2.43 by keeping GDS_{PB} and $GFCF_{PB}$ as constants, and Partial regression coefficient of $GDS_{PB}(\beta_1)$ on GKF is 1.33 by holding other variables constant.
- Holding GDS_{PV} and ΔS_{PV} as constant, a 1 percent increase in $GFCF_{PV}$ led on 1.15 percent increase in the GKF. Similarly holding GDS_{PV} and $GFCF_{PV}$ as constant marginal influence of ΔS_{PV} on GKF is 1.07 percent.
- The R^2 value of public sector is 0.7699 means that about 77 percent of the variation in the gross capital formation is explained by the (logs of) $GDS_{PB,}$ $GFCF_{PB}$ and ΔS_{PB}.
- In case of Private sector, the R^2 value of is 0.9780 means that about 98 percent of the variation in the gross capital formation is explained by the (logs of) GDS_{PV}, $GFCF_{PV}$ and ΔS_{PV}.

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- In case of public sector the adjusted R^2 tell us that, after taking into account the number of regressors, the model explains 71 percent of the variation in gross capital formation.
- In private sector the adjusted R^2 tell us that, the model explains 97 percent of the variation in gross capital formation. Both figures are high i.e. the models are well and good.

8. CONCLUSION

The public sector as well as private sector plays important role in the economic development of India by enhancing the capital stock of the nation. It is clear from the analysis that private sector in India plays an indispensable role in the capital formation of India compared with public sector. In both these sectors, the gross fixed capital formation plays a vital role. As a mixed economy, both private as well as public sector should go hand in hand in hand by contributing a massive amount of surplus to the nation.

9. REFERENCES

[1] Ray, Achintya (2007) A Time Series Analysis of Long Term Capital Formation in India. Vidyasagar University Journal of Commerce12: 21-31.
[2] Dr. Li Tan and Dr. Wei Ge, (2011), "Sectoral Distribution of Capital Formation and Output Growth: The Cases of China and India "International Journal of Business and Social Science Vol. 2 No. 6; April 2011
[3] Mazumdar, S. (2008) Investment and Growth in India under Liberalization—Asymmetries and Instabilities. Working Paper No.: 2008/07, Institute for Studies in Industrial Development, New Delhi.
[4] S.K.Misra and V.K.Puri,(2006), "Economics of development and planning", Himalaya publishing house, 12 th revised edition