World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Impact of Financial Factors on Total Factor Productivity: Evidence from Indian Manufacturing Sector

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Abstract : The rapid economic growth in terms of output and investment necessitates a substantial growth of Total Factor Productivity (TFP) of firms which is an indicator of an economy's technological change. The strong empirical relationship between financial sector development and economic growth clearly indicates that firms financing decisions do affect their levels of output via their investment decisions. Hence it establishes a linkage between the financial factors and productivity growth of the firms. To achieve the smooth and continuous economic growth over time, it is imperative to understand the financial channel that serves as one of the vital channels. The theoretical or logical argument behind this linkage is that when the internal financial capital is not sufficient enough for the investment, the firms always rely upon the external sources of finance. But due to the frictions and existence of information asymmetric behavior, it is always costlier for the firms to raise the external capital from the market, which in turn affect their investment sentiment and productivity. This kind of financial position of the firms puts heavy pressure on their productive activities. Keeping in view this theoretical background, the present study has tried to analyze the role of both external and internal financial factors (leverage, cash flow and liquidity) on the determination of total factor productivity of the firms of manufacturing industry and its sub-industries, maintaining a set of firm specific variables as control variables (size, age and disembodied technological intensity). An estimate of total factor productivity of the Indian manufacturing industry and sub-industries is computed using a semi-parametric approach, i.e., Levinsohn- Petrin method. It establishes the relationship between financial factors and productivity growth of 652 firms using a dynamic panel GMM method covering the time period between 1997-98 and 2012-13. From the econometric analyses, it has been found that the internal cash flow has a positive and significant impact on the productivity of overall manufacturing sector. The other financial factors like leverage and liquidity also play the significant role in the determination of total factor productivity of the Indian manufacturing sector. The significant role of internal cash flow on determination of firm-level productivity suggests that access to external finance is not available to Indian companies easily. Further, the negative impact of leverage on productivity could be due to the less developed bond market in India. These findings have certain implications for the policy makers to take various policy reforms to develop the external bond market and easily workout through which the financially constrained companies will be able to raise the financial capital in a cost-effective manner and would be able to influence their investments in the highly productive activities, which would help for the acceleration of economic growth.

Keywords : dynamic panel, financial factors, manufacturing sector, total factor productivity
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020