

## p-Watch—A macro view of productivity trends:

## Financial productivity: Convergence of financial and productivity analytics

n terms of productivity measurement, economic growth models relying on production functions with capital and labor as the key traditional variables have expanded to include variables representing innovation capacities, human capital features, technological capabilities, etc. These especially enable total factor productivity analysis. However, what about the productivity of finances per se, which are part of any economic activity? How do we carry out productivity assessments of financing such as public and private fund-based instruments, bonds, mutual funds, treasury bonds, sovereign funds, international finance, etc.? How could we converge financial and productivity analytics to comprehend the concept of financial productivity? In essence, a productivity-oriented assessment of financial instruments holds promise for a more positive orientation toward financing as differentiated from the risk- and return-oriented assessments that have been the most widespread framework and traditionally legitimate norm.

The development of financial analytics has advanced with wide-ranging innovations, as particularly witnessed in applications in the private sector over the past few decades through financial engineering processes. Recently, newer instruments have also emerged in the public finance arena as well. Along with those developments, a steady evolution of commodity markets has been witnessed. In banking, a universal banking system and development finance and its operations are recent innovations. The range and variety of instruments available, which include many more than can be listed here, add to the pros-

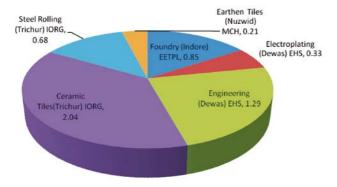


pects for additional productivity assessments to be conducted.

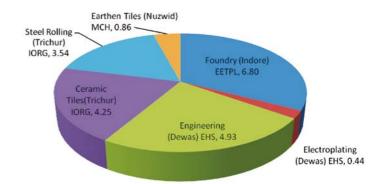
Financial productivity can be analyzed in numerous contexts, for example, as instrument applications at firm level or individual initiative level. Furthermore, it can be assessed by aggregating instruments that reflect financial productivity achievements at the organizational, interorganizational, national, and/ or regional levels. Such analysis can be built upon and assessed in combined frameworks such as those featuring applications to purely financial components or material flows (converted into financial terms or not). Social components may even be introduced into the analytical matrix. A generic perspective of financial productivity could be viewed as a function of financial resources, material resources, and social resources with the appropriate conditionalties and caveats. There is scope for significant insights when more financial productivity measures are added to the framework.

The applications of financial productivity measures can be presented with specific indications with additional thematic examples. These, for example, can be designed and applied for assessing public fundrelated flows and applications. In the Indian context, thematic examples would include various plan and nonplan funds and their budgeted applications across various sectors of the economy. The financial productivity measures can be applied in assessing specific programs and projects by considering outputs and outcomes in first-order or higher-order terms such as multiplier effects achieved. An example of this in pie chart form is shown in Figures 1 and 2. These figures reflect a subset of examples from a waste minimization circle (WMC) project currently being carried out in India. This project aims to achieve higher resource efficiency in groups of manufacturing SMEs. Through strategic partnerships, it is planned to spread the waste minimization movement throughout all industrial sectors. The project has already resulted in the establishment of more than 150 WMCs, reached over 45 representative industrial sectors in about 60 industrial regions, and become a reference for new, improved program and project design. The implementation framework is also increasingly being tailored to the needs of individual enterprises.

The public and private financial components and their ratios within program applications can be analyzed in both joint and segregated financial productivity contexts. The ratios of public and private funds



**Figure 1.** Investment multipliers for selected WMCs as samples of specific sectors and regions.



**Figure 2.** Savings return ratios on public investments in sample WMCs in specific sectors and regions.

## by Harsh Thukral

and their utilization via banking and development finance applications can give useful insights when assessing financial productivity. It should be noted that various environmental factors such as regulatory issues, monetary policy (including money supply aspects), the scarcity or abundance of resources, market structures, and transboundary elements affecting international trade and relations can also be made part of financial productivity analysis. When all of these elements are incorporated into a single framework to assess public finance and expenditures, it will have applications in the areas of corporate governance and administrative reforms.

It should also be noted that the responsibility for further development of the financial productivity analytical framework rests with the professionals in financial analytics and traditional practitioners of resource productivity analytics along with practitioners of socioeconomic analysis. The analysts would thus include economists, econometricians, social scientists, chartered accountants, chartered financial analysts and actuaries, cost-and-work accountants, and a wide range of professionals in various institutions, especially development finance institutions. The traditional analysts of resource productivity include auditors of the use of natural resources and other inputs at firm to national level. Cooperation and consultation between various groups of professionals will bridge and fill in the gaps in their specific analytical frameworks. The APO and NPOs can play a significant role in encouraging such partnerships. This will result in the construction of a new range of financial productivity measures (for example, as featured in material flow cost accounting which is now being assessed in a variety of settings). Those new productivity measures will in turn contribute to the evolution of a broader analytical framework from a financial analysis perspective. Such initiatives will have wide-ranging applications and open up innovative dimensions of productivity analytics for individuals, enterprises, and institutions internationally. They will therefore be able to make better choices on the use of financial and material resources. The resulting financial productivity-related contributions will chart and shape national socioeconomic development pathways.

Harsh Thukral is Deputy Director, National Cleaner Production Centre (instituted by UNIDO and UNEP), attached to the Environment Group, National Productivity Council, India, and has over 18 years of experience in promoting industrial productivity enhancement initiatives via green public-private partnerships addressing SMEs. Thukral has also worked to foster the exercise of institutional will and reforms to strengthen sustainable development processes while working in the public and private sectors. He is currently pursuing a Fellow Programme/PhD in Regional Development (Public Policy and Management Group), Indian Institute of Management Calcutta.