

Intangibles, Market Capitalisation, and the Measurement of Data Value - A study on select Indian Companies in Chemical Industry

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Introduction:

The data are most precious and invaluable asset in the present era of ICT, AI and robotic technology. By character the data and data base containing various information can be treated as an intangible asset and the same continue to generate social and economic values as well as returns over its fixed and operational cost of collection, acquisition, structuring, restoration, digitalization and deliverance to its stakeholders over time. But the valuation of data involves a complex process as there is scarcity of standard markets for the exchange of data. Interestingly the valuation of data or data base as an intangible asset has currently occupied a tremendous intensive and growing interest on the part of the economists, social scientist, researcher, corporate bodies , general public and the government as well as policy makers across the globe. In fact, the data and its analysis act as drivers of the digitalization of growth and general performances of the economies and also as the driver of the productive activities of the business as well as household sectors from the point of view of chalking out the policies towards allocation of resources and social and economic progress. Further data as digital economy resource act as prospective guiding knowledge about the markets for products, potential investment behavior, and consumption behavior on the part of the business as well as household sectors. The valuation of data however depends on its nature, sources, uses and its accessibility etc. Various kinds of data are collected, structured and restored by the govt, private organizations, corporate bodies and also by data driven firm such that it may classified as, public data which are open to access, private data, the own account data of business sectors and households.

Literature:

Although the interest on valuing data is of recent origin , the literature in this area is not scarce (Coyle,D &Diepeveen, S. 2021;Coyle,D and Manley, A. 20021,2022; Coyle and Li, W., 2021; Belleflamme, P.,2018; Fontana,G et al,2019; Slotin,J., 2018;Snaith,B., 2018; Mawer, 2015; PWC, 2019;Deloitte, 2017; Statistics Canada, 2019; Open Data Science., 2019; Jones,C andTonettic,C.,2018 and so on). In the existing literature the most commonly used methods adopted for the valuation of data are: cost based , income based and market based methods. However, the literature widely acknowledges the potentials for differences in the valuation of data when it is closed, shared or open. Interestingly the current approaches to the valuation of data emphasize the determination of the taxonomies of data that might allow for better valuation strategies. Alongside the Global Partnership for Sustainable Development in its report to the value of data to the measurement of the goals of sustainable development has emphasized on two additional methods of valuation of data viz; the monetization of benefits associated to the data product and the impact-based method i.e. the value based on the assessment of the causal effect of the data on outcomes. Interestingly there is no unequivocally acceptable unique method of value of data or the value chain of data.

Our Study:

Under the above backdrop our study centers round the valuation of open accessible data as intangible asset of some select Indian companies under chemical industry by using market-based approaches. It is true that all organizations starting from micro sized business to multinational corporations generate and also collect digital data in their daily operations. They create databases for financial, operational, sales (including number of customers , volumes and type of products) , logistics, purchases and expenses and provide support for multiple reports generated across the organization. There is ample evidence that digitization projects have resulted in increased efficiencies, enhanced productive capabilities and the creation of new digital products and services. The AI and machine learning tools are increasingly used to automate processes for significant and permanent cost savings. Therefore for the purpose of maximization of total wealth of the companies there has been a growing trend towards the development and acquisition of intangible assets in the form of patent right, software, copy right ,trademark, brand etc such that the same may lead to steady increase the rate of return and market value of the business. All these also help enhancing the value of non-purchased goodwill of the business which eventually are reflected in the value of the stock of the companies and their credit ratings.

Methodology and Data:

The valuation methods of different types of intangibles and the estimation of their prospective returns are different as per accounting standard (AS26). So, we will use fair value of intangibles as recorded in the financial statements of the companies for the purpose of our analysis. In case of patent innovated by company itself we will estimate the value of such patent on the basis imputed cost such that the imputed cost will be the cost incurred by similar companies operating in the same market for acquiring the same. It is worth mentioning that the value of benefits from intangible assets will be derived as the sum of the present value of the incremental cash inflow after tax. Now for the purpose of discounting we may use the inflation rate or the treasury bill rate as discounting factor. Since the value of intangibles actually involves cash inflow, it also leads to increase the value, operating capacity and market size of business thereby making other companies more competitive. After estimating the discounted value of intangibles of our sample companies we will also investigate the impact of such assets on their stock. After selecting the sample companies on the basis of the credit ratings of CRISIL data base, We will use the data on the financial statements and balance sheet of the sample companies from the CMIE PROWESS database, CAPITAL LINE database.