Critical Evaluation of the Data Valuation Model by Fleckenstein et al. (2023)

The article *"A Review of Data Valuation Approaches and Building and Scoring a Data Valuation Model"* by Fleckenstein, Obaidi, and Tryfona (2023) presents a thorough and practical exploration of how data can be valued in today's information-driven world. The authors examine existing approaches to data valuation and propose a new model based on dimensions, which aims to be usable in a variety of contexts. Given the increasing importance of data as a strategic asset (Laney, 2017), this study offers timely insights into an area that still lacks standardisation.

Fleckenstein et al. group data valuation methods into three categories: market-based, economic, and dimensional models. Market-based models consider the financial return of data, such as the cost of data acquisition or the profit generated from selling data. Economic models focus on the public value of data, especially in government contexts. For example, open data initiatives often aim to increase innovation and economic growth (Coyle and Manley, 2022). Finally, the dimensional model, which is the main focus of the article, evaluates data across various attributes like quality, usage, privacy, and ownership.

The authors' dimensional model has several strengths. First, it is adaptable and allows different stakeholders to assign weights to dimensions based on their needs. This flexibility makes it practical for organisations with diverse priorities. For instance, a hospital and a government agency may both use COVID-19 data, but their valuation criteria would likely differ. The model also provides a structured way to compare data sets without requiring exact financial figures, which is helpful when data is not traded on the open market.

Another positive aspect is the model's focus on repeatability and clarity. By developing a standardised survey based on their dimensions, the authors attempt to create a method that is easy to use and replicable. This could encourage organisations to start thinking more carefully about how they manage and prioritise their data assets.

However, the model is not without limitations. One of the biggest challenges is its subjectivity. The scoring relies on survey responses, and interpretations of dimensions such as "data quality" or "usage" may vary significantly across individuals and sectors. Also, while the model allows for relative comparisons between datasets, it does not offer a direct way to assign a financial value. This could be a disadvantage for organisations that require economic justifications for investment decisions (Moody & Walsh, 1999).

The lack of monetary valuation also means that the model would need to be combined with market-based or economic models to be useful in financial decision-making. In this sense, it acts more as a decision-support framework rather than a complete valuation tool. Furthermore, the model's development was based on a relatively small number of case studies (COVID-19 data, flight data, and voter data), and broader validation across industries would strengthen its credibility.

Despite these limitations, the dimensional model shows promise, especially in contexts where relative value is more important than exact monetary figures. Its alignment with previous work on information value dimensions and data governance maturity (CMMI Institute, 2022) suggests that it is grounded in existing theory, while also pushing the field toward more practical applications.

In conclusion, Fleckenstein et al. make an important contribution to the ongoing discussion about data valuation. Their dimensional model is flexible, transparent, and well-suited to comparing data assets in specific use cases. While it does not replace economic or market-based models, it offers a useful tool for organisations that want to assess data more

systematically. As data continues to be treated as a valuable asset, frameworks like this one will be essential in helping organisations make informed decisions about how they manage and use their data.

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