Workforce pDEI: Productivity Coupled with DEI

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Ranking pertaining to the human-centered tasks – underscoring their paramount significance in these domains such as evaluation and hiring process – exhibits widespread prevalence across various industries. Consequently, decision-makers are taking proactive measurements to promote diversity, underscore equity, and advance inclusion. Their unwavering commitment to these ideals emanates from the following convictions: (i) Diversity encompasses a broad spectrum of differences; (ii) Equity involves the assurance of equitable opportunities; and (iii) Inclusion revolves around the cultivation of a sense of value and impartiality, concurrently empowering individuals. Data-driven AI tools have been used for screening and ranking processes. However, there is a growing concern that the presence of pre-existing biases in databases may be exacerbated, particularly in the context of imbalanced datasets or the black-box-schema. In this research, we propose a model-driven recruitment decision support tool that addresses fairness together with equity in the screening phase. We introduce the term "pDEI" to represent the output-input oriented production efficiency adjusted by socioeconomic disparity. Taking into account various aspects of interpreting socioeconomic disparity, our goals are (i) maximizing the relative efficiency of underrepresented groups and (ii) understanding how socioeconomic disparity affects the cultivation of a DEI-positive workplace.