Does Agency Funding Affect Decisionmaking?: An Empirical Assessment of the PTO's Granting Patterns

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Patent scholars have paid significant attention in recent years to the granting practices of the United States Patent and Trademark Office (PTO) and have emphasized the importance of those practices to the optimal balance between innovation and consumer welfare. In this paper, we explore the extent to which the granting behavior of the PTO may deviate from this optimum as a result of the structure by which the agency is funded. Since 1991, the PTO has been funded entirely through user fees—that is, fees collected by both patent applicants and patent recipients. We first set forth a theoretical model predicting that certain elements of this user-fee funding / budgeting structure will create incentives for the PTO to grant additional patents. Such structural elements include (1) the presence of "back-end" fees, such as issuance and maintenance fees, which are only collected in the event that patents issue, and (2) the insufficiency of examination-related fees in covering the costs of patent examinations. Moreover, the degree to which the PTO will act upon these incentives may depend upon such other considerations as (1) the objectives of the agency and (2) the degree to which the agency is otherwise financially constrained (and thus in need of additional sources of revenue).

Using a rich database of patent grant rates, we then empirically test the predictions of the theoretical model. We treat various reforms of the PTO's funding mechanisms, including the 1991 reform that substantially increased patent fees and left the agency completely user-fee funded, as natural experiments by which we can test the relationship between that fee structure and the PTO's granting practices. For these purposes, we estimate "difference-in-difference" specifications commonly employed in the economics and law & economics literatures. We find evidence generally consistent with the predictions of the model and with the idea that the PTO's grant rates are influenced by the manner in which the agency is funded, to the potential detriment of social welfare. Moreover, we find that this distortion in PTO decisionmaking plays out differentially across different types of patents. For instance, with respect to those types of patents for which the PTO is likely to profit the most from granting patents (e.g., patent classes that are most likely to renew or maintain their patents), we estimate a relatively stronger sensitivity to the PTO's funding structure. However, we also find that these distortions are more likely to occur during times when markers are present indicative of a underfunded PTO. As such, a more general implication of this analysis is that the PTO does not appear to seek a universal expansion of its budget. Rather, the evidence is more consistent with a view of the

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PTO as a benevolent (i.e., not self-interested) agency whose decisionmaking may only be influenced by the fees that it collects during times in which it is most financially constrained. Finally, we discuss the implications of these findings to ongoing funding policies of the PTO and to the state of affairs following the recent passage of the America Invents Act.