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A META-ANALYSIS OF UNIVERSITY TECHNOLOGY TRANSFER EMPIRICAL RESEARCH (SUMMARY)

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≈ SUMMARY ≈

**A META-ANALYSIS OF UNIVERSITY TECHNOLOGY
TRANSFER EMPIRICAL RESEARCH**

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Principal Topics

In 1980, Congress passed the Bayh-Dole Act (P.L. 96-517) which allowed universities to obtain title to inventions created with government funded research and established technology transfer offices (TTOs) to manage the process of patenting and licensing these inventions. Although there is much research about TTOs, there are no comprehensive studies that look at key attributes of TTOs, and how and to what extent these attributes relate to different performance outcomes. Further, much TTO research does not rely on theory to explain why key TTO attributes relate to performance.

We leverage resource-based theory (Barney, 1991) to describe why key TTO attributes might be related to performance. The theory asserts that when organizations possess resources that are valuable, rare, and hard to imitate, higher performance can result.

Method

We conducted a comprehensive literature review of TTO empirical studies. To be included, each study had to contain (1) a measure of a university TTO resource attribute (e.g., university research budget, industry funding, equity licensing, cash licensing, invention disclosures, patents, staff, staff experience, patenting legal expenditures, age of the TTOs, incubators), (2) a measure of performance (e.g., number of startups), and (3) an effect size estimate (e.g., correlation) of the relationship between an attribute and performance.

We then used meta-analysis to aggregate the evidence to reveal whether and to what extent a relationship exists. Meta-analysis yields a weighted average effect of the size of a relationship (Hunter & Schmidt, 2004). Meta-analysis also minimizes the impact that sampling and measurement error have on any given study's results.

Results and Implications

We find that both human and organizational resources are significant relative to patents, licensing, and startups. The effects for human and organizational resources relative to licensing are strongest. Applying the resource based view, this is likely due to the fact that with respect to licensing, the TTO organizational and human resources are valuable, rare and hard to imitate.

Our findings are anticipated to help university TTOs better understand the key resources attributes that impact their performance. Doing so will not only reconcile conflicting findings in extant research, but will also enable university leaders to optimize the use of their scarce resources.

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