

tem of multiple countries, which would be necessary if a full European BDA was announced.<sup>270</sup>

Irrespective of the concerns inherent in creating a full European Bayh-Dole Act, numerous countries have created Bayh-Dole-like legislation, and the effects of the legislation remain to be seen. For example, Germany enacted an amendment in 2002 which states that a university "now can lay claim to inventions created by its employees with government funding on its campus."<sup>271</sup> This amendment includes distinct stipulations regarding how much of the profits should go to specific employees, which may prove to resolve some issues that the U.S. Bayh-Dole Act leaves open.<sup>272</sup> While it will take decades to see the effect of the German amendment, the Max Planck Society technology transfer division has noted an increasing demand "from young scientists who want to start their own companies."<sup>273</sup> This could lead to the increase in collaboration and a growth in startups that would mirror the successes in the United States.

### *C. Bayh-Dole in Developing Countries? The Indian Bayh-Dole Debate*

While Bayh-Dole has its critics, few can disagree with the contention that the United States university technology transfer industry has exploded in the last quarter-century, to which Bayh-Dole is at least partially responsible. The aforementioned research points in the direction of at least moderate success for technology transfer in developed countries. What remains to be seen, however, is if Bayh-Dole could have a beneficial effect in developing countries where the university system is much less structured, or if Bayh-Dole provisions may actually be detrimental for these countries.

India has been arguing about the merits of a BDA for years. The Utilisation of Public Funded Intellectual Property Bill 2008 is still being considered by the parliament, and includes protection and utilization requirements for publicly funded inventions.<sup>274</sup> This would effectively allow the Indian contractors to commercialize

270 See generally *id.* at 219. Siepmann also notes prohibitive costs in patent protection, and weak intellectual property laws in some EU countries would further inhibit the possibility of a true EU Bayh-Dole Act.

271 *Id.* at 222.

272 For example, employees must receive 30% of the profits stemming from commercialization. See *id.* Though this doesn't by any means preclude universities from needing to contract with employees for ownership rights, the rigid rule granting profits to an inventor may make an employee less likely to attempt to contract with an outside company, thus limiting the prevalence of a *Stanford v Roche*-type ownership problem.

273 *Id.*

274 See Rahul Vartak and Manish Saurastri, *The Indian Version of the Bayh-Dole Act*, INTELLECTUAL ASSET MANAGEMENT, March/April 2009, at 62, *hereinafter* "Indian Bayh-Dole."

their research and patent their inventions, which is not possible under the current scheme.<sup>275</sup>

The bill's supporters consider the act an improvement as it provides greater clarity on title, and an interface between funding agencies, academia, and industry.<sup>276</sup> Proponents note the success of Bayh-Dole in the U.S., and believe this "copycat" bill will lead to similar results. However, the bill's critics see fundamental differences between the U.S. and India, and maintain that the "hastily drafted" copycat bill does not take into account the complexities of the Indian technology transfer industry.<sup>277</sup>

The Indian Bayh-Dole proposal has been attacked in two ways. Some note the shortfalls of the U.S. BDA and decide that it would be unhelpful to bring similar problems to India. The second school of thought acknowledges successes of the U.S. BDA, but that India's technology transfer is a "serious disconnect" from the United States and transplantation of an American statute would fail.<sup>278</sup>

## 1. Shortfalls of the United States Bayh-Dole Act

Annette Lin et al. criticize the Indian Bayh-Dole bill by alluding to assumed failures of the United States BDA.<sup>279</sup> The authors see the U.S. BDA as too narrowly focused on patenting and licensing, while failing to recognize publishing, teaching, and other collaboration.<sup>280</sup> They further state that U.S. BDA has not generated consistent revenues, noting that profitability numbers have been skewed by several "blockbuster" inventions for some universities, while others fail to profit whatsoever.<sup>281</sup> The authors also echo many American critics who feel that the Bayh-Dole model and its increased incentive to patent early will threaten access to life-saving drugs.<sup>282</sup> With India's large generic drugs international market, a Bayh-Dole bill may effectively harm consumers worldwide. The authors finally fear that the Bayh-Dole scheme may have a "chilling effect" on the exchange of knowledge, because financial gain has replaced "recognition and esteem" as the basic tenet that re-

275 See Indian Bayh-Dole, *supra* note 274. The scheme in India is similar to the United States pre-Bayh Dole scheme with respect to Government title of publicly funded inventions.

276 See *id.*

277 See *id.*

278 See Shamnad Basheer and Shouvik Guha, OUTSOURCING BAYH-DOLE TO INDIA: LOST IN TRANSPLANTATION? 270 *available at* <http://ssrn.com/abstract=1546403>.

279 See Annette Lin et al., *The Bayh-Dole Act and Promoting the Transfer of Technology of Publicly Funded-Research Universities Allied for Essential Medicines*, *available at* <http://essentialmedicine.org/sites/default/files/archive/uaem-white-paper-on-indian-bd-act.pdf>.

280 See *id.* The authors feel that broader focus would better achieve the objectives and needs of India.

281 See *id.*

282 See *id.*

searchers follow, and inherent in this is added secrecy and potential withholding of knowledge.<sup>283</sup>

## 2. Differences between India and the United States

Shamnad Basheer and Shouvik Guha attack the bill on the grounds that success in the United States would not necessarily lead to success in India.<sup>284</sup> The authors contend that legal transplantation is "often unsuccessful if external forces, such as international institutions, assume institutional, cultural, or political realities that in fact are not present or properly developed."<sup>285</sup>

The authors note that aspiration of the Bill is to "create wealth." Basheer and Gupta agree with the contention of Lin et al. that legislators have exaggerated the United States Bayh-Dole bill's success in this regard, but further extend their analysis by considering particular aspects in the Indian market that could lead to a Bayh-Dole failure. For example, the Council of Scientific and Industrial Research in India (CSIR) is actually losing money on its patents, which is evidence pointing to the conclusion that Bayh-Dole provisions would have a very limited effect.<sup>286</sup>

The authors further attack specific provisions of the bill as unable to effectively promote technology transfer. For example, the proposal "assumes that patents are always the best way to incentivize innovation and requires patent application in all cases."<sup>287</sup> In India, the cost of patents are prohibitive at times, and the inability to make an ex ante determination of what inventions will benefit from patents will unduly inhibit effective transfer under the Indian scheme.<sup>288</sup>

The authors ultimately conclude that for a bill like Bayh-Dole to be effective in India, it should include "more public interest safeguards," and an "affordable pricing scheme," among other changes.<sup>289</sup> While Basheer and Lin et al. differ on reasons that the Indian Bayh-Dole Bill would be a concern if passed, they agree that the United States BDA would not be beneficial if superimposed on India without much

283 *See id.*

284 *See* Basheer and Guha, *supra* note 278.

285 *Id.* at 278. The others define legal transplantation as "the transfer of laws and institutional structures across geopolitical or cultural borders." *See id.* at 277.

286 *See id.* at 282. The CSIR is a "network of government laboratories" and one of India's largest patent filers. By noting that this government organization is not profiting off patents it has title to, the authors believe that shifting the title to universities will lead to the same result as CSIR has attempted to commercialize its patents just as a university would.

287 *Id.* at 284.

288 *See id.* at 285.

289 *Id.* at 298-300. The affordable pricing scheme would be similar to what some American scholars believe is inherent in the US Bayh-Dole Act, and others believe do not exist at all. For more on this question, please see Section *V-A-4, supra*.