

flow from the universities in its country.²⁶³ A study in the nanotechnology field has noted that over the past ten years, the model for public to private transfer of technology has changed to a Bayh-Dole fostered scheme of universities to industry.²⁶⁴ The success of this Act has shown that a Bayh-Dole-type statute can succeed to an extent in other developed countries, even if the university structure is not identical to that of the U.S.

B. Europe

European countries wishing to emulate the success of United States technology transfer have attempted to adapt statutes mimicking Bayh-Dole. Currently, Germany, the UK, France, Denmark, Austria, Norway Portugal, Spain and Finland either have or are considering legislation similar to the U.S. BDA.²⁶⁵ Further, the Council of the European Union has noted that "the overall innovation environment of the EU remains weak in a number of key respects," especially with respect to R&D.²⁶⁶ While some commentators wish to see a pan-European BDA,²⁶⁷ others believe that substantive differences between the U.S. and Europe would render a European BDA ineffective.²⁶⁸ Thomas Siepmann notes substantive differences between the U.S. and European university systems, notably that European researchers are not as interested in the exploitation of their research in the private sector.²⁶⁹ Also notable is the difficulty in harmonizing the technology transfer sys-

263 See Mireles, *supra* note 75 , at 273. For an analysis of major differences in the university structure of the United States versus other countries, see Chapter I, *supra*.

264 See J. Steven Rutt and Stephen B. Maebium, *Technology Transfer Under Japan's Bayh-Dole: Boom or Bust Nanotechnology Opportunities?* 1 Nanotechnology Law and Business (Issue 3, Art. 8), at page 9. Though benefits of this scheme are yet to be conclusively studied, the shift in technology transfer from the former scheme of Government to industry (which focused on a very small number of companies) has much potential for success.

265 See Mireles, *supra* note 75, at 260.

266 *CEU Report on Research and Development*, at 42-46, CEU 5402/1/02 REV 1, (22 January, 2002) **A81** While the CEU falls short of stating that a Bayh-Dole Act should be passed throughout the EU, it seems to recommend similar actions to be taken to increase research and development across the union. Specifically, "the appropriate framework conditions" should be in place, and the "effectiveness of public research" should be improved. *See id* at pages 42 and 46.

267 See University Inventions – Europe Needs a Bayh-Dole Act, <http://www.ipeg.eu/?p=1567> (August 7th, 2010). The writers note that "stronger protection for the results of publicly funded R&D would accelerate their commercialization and the realization of these economic benefits." The authors note that a full European Bayh-Dole Act would better encourage "more effective exploitation of university inventions."

268 See Thomas J. Siepmann, *The Global Exportation of the U.S. Bayh-Dole Act*, 30 DAYTON L. REV 209, at 218 (2004).

269 *See id*. Other differences between the systems are noted in Chapter I-B, *supra*.

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

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."²⁷¹ 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.²⁷² 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."²⁷³ 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.²⁷⁴ 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.".