

REVIEW ARTICLE

Academic research freedom in industry–Institute partnership

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Abstract

In the present advanced science and technological climate, the industry–institute partnership is a necessary symbiosis. At the institute level, rigorous research takes place and the industry translates the research into products. Institute researchers are associating themselves with venture capitalist in establishing the industry and marketing the product leading to largest financial benefits. Institute-Industry research partnership poses some problems that need to undergo suitable “strategies and action plan”. The significant problem in this context is research misconduct. The relationship is often biased with commercial tone that promotes subtle or over bias in the interpretation of research data on commercial interest, violation of fundamental values agreed to by many researchers, limitations on academic freedom. Particularly the Institute and Industry commercial connection erodes public trust and financial support for research. Strict regulations can only modify this adverse environment. Academic freedom in conducting Industry related research is not expected to fall into the hands of commercial Entrepreneurs. Therefore Institute-Industry research partnerships should be redirected towards facilitating better research relationship for the welfare of mankind under academic autonomy. This review discusses the above concept with a few case-analyses.

Keywords: Industry–institute partnership, researchers, financial support, academic autonomy, case-analyses.

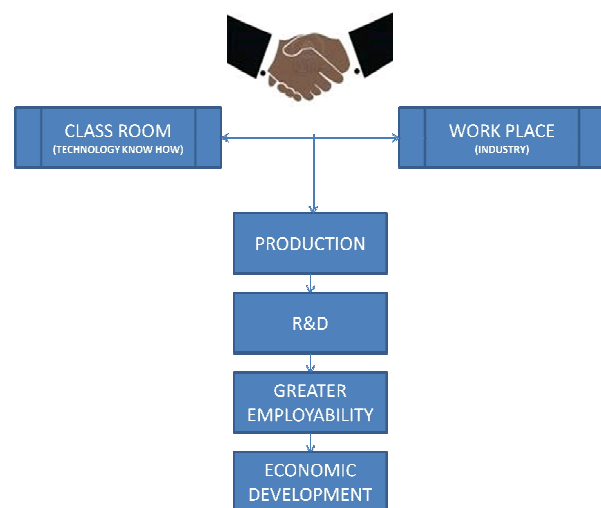
Introduction

The journey of companionship between academic institution and product productive industry has polymorphic ways at different periods. Concerned with history, it starts with simple relationship and eventually it is gaining significant momentum now. There are many types of reciprocal actions experienced among this partnership. The following are some of the interactions with the spirit of drawing mutual benefits (Fig. 1).

- Memorandum of understanding between the institute and industries to facilitate training to students and faculty.
- Develop knowledge and skills to adapt industrial environment.
- Industrial visits by the students.
- Facilitating research and development, consultancy and testing services to solve industrial problems.
- Organizing symposia and workshops with joint participation of faculty and industrial experts.
- Curriculum development.
- Scholarships instituted by industries for students.
- Campus drive and employment.

Therefore, academic and industry partnership is considered as an inevitable progressive relationship for the enhancement of educational system in the wake of privatization and liberal economic policies. Traditionally in India, industries prefer partnership for hiring to train the students and recruitment for apprentice graduates.

Fig. 1. Industry-Institute interactions.



As global economy is shifted by the introduction of GATT companies look academia, who developed cutting edge technology, application to design and promote marketing of the products. The interdependent research partnership between the institute and industry appreciates sustainable offshoot. Companies rely on faculty research for innovation and on the other hand academic circle benefits through grants received as sponsoring from industries and this tie-up strengthens research and development.

Despite mutual efficiency prevails in their working environment, the present situation of Industry-Institute collaborations particularly in research domain are complex and jeopardize academic research values and trustworthy of industrial enterprise through ethics and goal conflicts (Thomas, 2005). Here are some of the advantages and disadvantages explained.

Advantages

There are many favorable benefits that acquire from this research partnership and they are social benefits, institutional benefits and industrial benefits.

Social benefits: Several sponsored research have developed many applications in improved medical devices, new novel drugs, molecular medicine, energy efficiency, alternative energy resources and innovative electronic gadgets, communication technology etc.

Institute benefits: Validation of the R and D laboratory and funds generated. Acquiring patent right and IPR on commercialization of the product or technology developed by the faculty. Equipped with sophisticated instruments purchased out of the grant which enhances the faculty research and attract the students.

Company benefits: Industry earns good reputation. It gets current line of research for the improvement of product design, which strengthens to meet the competition and marketing the product. Companies attain a status of leadership. Faculty solves the design and technical problems.

Disadvantages

Although many advantages as described above are result of this collaborative research partnership, there are many disadvantages which have also be encountered. Many normative as well as legal issues may arise in academic business enterprises. Norman Bowie, a professor-cum-business man, who is also an ethics writer says "Institute and industry research partnership gets entangled between two of its compelling interests" (Norman, 1994; Edmondson *et al.*, 2012). This type of conflict result in that faculty is no longer showing any interest to continue the industrial oriented research innovations. Disputes may happen on the ownership or IPR. The social responsibility slowly vanishes as it is targeted solely on commercial increase. The academic faculty may deviate from his core profession of teaching and focus other duties that financed by the companies. The significant disadvantage in this context is research misconduct. The relationship is often biased with commercial tone that promotes subtle or over bias in the interpretation of research data on commercial interest, violation of fundamental values agreed by many researchers, limitation on academic freedom. Particularly the institute and industry research collaboration erodes public trust and financial support for research.

Case analysis

Many past case-studies from industry-institute research collaborations have been exhibited different conflicts of interest, unethical practices and violation of scientific codes in publication of data in professional journals. Following are some such episodes to understand the misbehavior existing in the partnership. Stelfox *et al.* (1998) in their article discussed the connections of cardiologists with the pharmaceutical industry on the safety of life saving drug calcium-channel antagonists. They have revealed the misconduct and found that cardiologists associated with the company discounted the alleged danger of this drug. They favored the drug marketing by publishing wrong data. A similar situation occurred in a case concerned with synthetic medication on hypothyroidism. Academic research council was found that a particular drug was ineffective. But the company and the institute had signed a legal contract, which enabled the company to conceal the real data and promote the sales (Louis *et al.*, 2001). Contradictory to the above, there are certain cases in which restoration of value of faculty research and public trust is exhibited. For example, rejecting research funds by tobacco industries to speak for the cigarette sales promotions. This small action has high impact on the society and academic freedom (Anne Landmann, 2008). Academic freedom is not right of the faculty to do whatever they want. But it is important that academic research workers do not obey the commercial interest of the companies.

Conclusion

The spectrum of institute-industry research partnership should promote economic development, welfare of human kind, more employability and train the students industrially ready graduates. The collaboration should not focus on the generation of tangible wealth and violation of academic freedom. Strict regulations can only modify this adverse environment. Academic freedom in undertaking industry related research is not to fall into the hands of commercial entrepreneurs. Therefore, institute industry research partnership should be redirected towards facilitating better relationship with ethical goals under academic autonomy.

References

1. Anne Landmann. 2008. Without academic partnerships, the tobacco industry loses power. Retrieved from www.prwatch.org/node/7004 on February 18, 2008.
2. Edmondson, G., Lori Valigra, Michael Kenward, Richard Hudson and Haydn Belfield. 2012. Making industry-university partnerships work-lessons from successful collaborations. Science/Business Innovation Board, AISBL, Belgium. pp.1-52.
3. Louis, K.S., Jones, L.M., Anderson, M.S., Blumenthal, D. and Campbell Karen, E.G. 2001. Entrepreneurship secrecy and productivity. A comparison of clinical and non-clinical Life Sciences Faculty. *J. Technol. Transfer*. 26: 233-245.
4. Norman, E.B. 1994. University-Business partnership: An assessment. Rowman & Littlefield Publ. UK.
5. Stelfox, H.J., Chau, G., O'Rourke, K. and Detsky, A.S. 1998. Conflict of interest in the debate over calcium-channel antagonists. *N. Engl. J. Med.* 338: 101-106.
6. Thomas, P.S. 2005. Regulating academic-industrial research relationships-Solving problems or Stifling progress? *N. Engl. J. Med.* 353(10): 1060-1065.