



Description

During the past few years, the demand for highly qualified researchers in the industry has increased considerably. This has led to an increased need to prepare PhD students for a career outside academia. While most traditional PhD programs do not offer this kind of "industrial" or "business" training, the fundamental skills and techniques developed as a graduate student or a postdoc are extremely valuable for working at a high-profile company.

Many firms are therefore interested in combining the hard skills and basic knowledge acquired during a university-based PhD with user-oriented research and business skills needed to work in an industry. This has led to <u>several types of industry-partnered</u> PhD programs, which are now becoming more and more popular.

A Clear Goal

The type of PhD that is better suited for you depends on your goals. If you love fundamental research and know that you would like to work at a university or a research institute, or if you want to teach others what you have learned and maybe even become a full-time professor, then a traditional PhD might be the best option for you. However, staying in academia is getting more difficult and the path up to tenured faculty positions is becoming narrower.

If you are starting a PhD because you are fascinated with a subject and its applications and want to have many opportunities to work in that area, then an <u>industrial PhD could open the door</u> to all those possibilities.

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PhDs in Industry

A high percentage of PhD holders in developed countries work in industry—not in academia—and about 60% of research and development in Europe is conducted at companies instead of universities. Some countries, such as Denmark and France, have well-established PhD cooperation programs



involving academia and industry. In Germany, about 16% of all doctoral students took up a company-based PhD in 2013, and in Italy, the International Doctoral School in Human Capital Formation and Labor Relations, promoted by <u>ADAPT</u>, has granted hundreds of scholarships to PhD students as a way to promote academic and scientific exchange between universities and enterprises.

Students who take part in industrial doctorate programs usually are highly demanded and valued by employers. Many of them are able to access the labor market shortly after finishing their PhD. Although there is no job guarantee in an industry-based doctorate, many companies offer their PhDs a position on course completion.

A Win-Win-Win Situation

Promoting industrial PhDs can be beneficial for all parties involved:

- Universities receive financial support from the companies involved.
- Doctoral candidates gain expert know-how in the private sector and learn how to succeed in a business environment. The relationships and experiences earned during their PhD can also boost their employability.
- Companies are able to develop their human resources by training and supporting the next generation of researchers. They also enhance their competitiveness and innovation through knowledge transfer with universities and research institutions.

Understanding the Difference

Before making a final decision, it is important to understand the differences between an academic PhD and an industry-supported one. Academic PhDs are usually more flexible, allowing students to refocus their research as they gain more experience in the field. Publishing their work or presenting it at conferences is a normal part of all academic programs.

This is not the case for industry-based PhDs where the company sponsoring the program usually has well-defined goals and deadlines. In some cases, students have to sign confidentiality agreements preventing them from disclosing any information related to the project they are working on. Publishing their results may be prohibited or would—at least—require a special permission from the company. This could have repercussions for graduates who want to apply for academic jobs after their PhD. On the other hand, companies may encourage their PhD students to patent the results of their work.

As with many things in life, before deciding which type of PhD is the best one for you, it pays to explore all the options, think about your personal and professional goals, and then weigh all the pros and cons.

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