

SOME THOUGHTS ON INDUSTRY-ACADEMIA COLLABORATION

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A WORD FROM THE EDITOR

KJARTAN SIGURDSSON

This is the second Reinvent industry report, which brings together some interesting thoughts on how industry and academia can collaborate. The first essay, by Aldis Sigurdardottir deals with how industry-academia collaboration can be strengthened and extended through negotiation. Anna Ujwary-Gil explains how collaboration between academia and industry can bring new ideas to academia, particularly of use for students. Indro Candi offers a philosophical view of the relevance of real-world experience and the importance of not losing the connection with idealism and theoretical bases. Karolína Rozmus and Magdalena Rzeznik explain how a healthy relationship between academia and industry can lead to positive economic changes and competitive advantage. Marina Candi brings to the table thoughts on how group diversity can contribute to idea generation and new product launch. Michal Jasienski discusses how industry can be a rich source for academic research. Finally, Pia Schildknecht, Heba Hertervig and Joanna Wojcik Bubala suggest recommendations to bridge the gap between industry and academia through successful secondments.



STRONGER TOGETHER THAN ALONE

ALDIS SIGURDARDOTTIR

Globalization has changed the way we view the world, how we access knowledge, and the nature of education, research and commerce. In the face of globalization and strategic changes in the economy, what can industry and academia provide and what can be gained from collaboration between these two parties? According to the European 2020 strategy, one of the key drivers for global competitiveness and

economic growth is increased collaboration between industry and academia. To reap economic growth from the European 2020 strategy, collaboration must meet the expectations of both industry and academia.

Looking at the situation from the perspective of negotiation by listing what both parties bring to the table, we can say that academia offers *credibility, cutting edge knowledge, new ideas, and intellectual and physical resources*. Industry, on the other hand, brings *influence, training, technical know-how, problems that need to be researched further* as well as *financial resources*. Now, imagine, that these two parties are going to negotiate on collaboration between academia and industry and the negotiation table is covered with benefits from both parties. In this scenario it is not difficult to imagine that by collaborating both parties will become better off than if they did not collaborate.

Let's explain this a little bit better. Academia prepares students properly (*credibility*) for industry by using relevant teaching materials and methods (*cutting-edge knowledge*), which hopefully fit with industry needs and then combines theory and practice to develop *new ideas*. Researching particular problems and phenomena, which benefit industry (*intellectual and physical resources*) will, therefore, develop cutting-edge knowledge of value for practice.

Industry creates new research fields (*problems*), or shifts current ones. Industry can also create platforms for new theories and research as well as new teaching methods for academia (*influence, training, technical know-how, financial resources*). Furthermore, through new ways of thinking, industry can develop and implement new business models in particular sectors, which build on global needs (*influence*). Knowledge transfer and collaboration is important for both parties and it is no less important to keep up-to-date and develop new theories that can be tested. Therefore, the core of effective collaboration between academia and industry is knowledge transfer that can lead to changes in academic curricula to better meet the needs of industry and to changes in industry stemming from academic research findings.

To date, collaboration between industry and academia has already resulted in innovation on various issues such as energy production and use, transportation and information technology. In the developing countries, such collaboration has contributed to enhancing the quality of life.

But, despite successes in collaboration, there have been cases of tension between the two parties in relation to intellectual property rights. However, if ideas about intellectual property rights are among the benefits that are brought to the negotiation table from the start, such issues can be mitigated. Ideally, these issues should be negotiated before each project starts and collaboration can thus be built on mutual trust.



CHALLENGES FACED WHEN SWITCHING BETWEEN SCIENCE AND THE REALITY OF BUSINESS

ANNA UJWARY-GIL

Universities are faced with the challenge of how to communicate with industry and identify areas of collaboration. By switching between scientific and business realities, through a series of academia-to-industry secondments, I have had the opportunity to gain knowledge and skills beyond the walls of the university. I have been able to organize practical workshops in some companies, which in addition to being of value for the companies has also brought me new examples and experience that I can bring back to academia. I can use these examples and the experience gained to develop case studies for my students and discuss new ideas with them in class. Students can also use these cases in their projects and be encouraged to seek collaboration with companies, which benefit both the companies and the students.

Innovation is seen as one of the main sources to achieve competitive advantage for businesses. To ensure development, and to remain competitive, every company needs a different kind of innovation – new products, services, technology or systems that may arise as a result of new knowledge. Companies involved in industry-academia collaboration can be spurred to boost up their innovation as well as develop and implement new ideas and solutions that may result in competitive advantage. In the case of

the Reinvent project, the innovation focus is on business models that create value and new opportunities for business development.

Transfer of knowledge between academia and industry is a great investment that can benefit all and bring about economic welfare. It can happen by sharing knowledge via secondments between academic institutions and industry.

So, is collaboration between business and science always relevant? Probably not, but in many cases it can pay off and benefit both parties. Many businesses lack sufficient insight and knowledge to develop ideas effectively. By leveraging academic research and the insight brought to the table by academics, business can gain a competitive edge.



INDUSTRY TO ACADEMIA COLLABORATION – WHAT CAN WE GAIN FROM THAT?

INDRO C. ATLASON

John Keats said, „Nothing ever becomes real, ‘till it is experienced“. I feel these humble words articulate my experience as a participant and observer in industry-academia collaboration well.

In the professional environment, we often become detached from our academic roots. Our academic experience becomes a distant memory in the merciless reality of the competitive environment. Like faded photographs in the family album of thin longhaired hipsters looking idealistically into the camera lens in front of a campus administration building, memories of our school years whisper back at us of a simpler life and clearer worldview. Years of competition and bottom lines breed cynicism and the emotional burden of countless unpaid invoices.

Likewise, a purely academic existence risks becoming insular and theoretical. Academia retreats into the safety of circular self-reference,

losing contact with its subject matter, while transforming itself into a self-serving product of academic rhetoric. Industry is labelled adulterated and tainted by the merciless forces of greed and material gain. The product of industry becomes an imperfect copy of the iconic prototype envisioned in the virtual dreamscapes of academic visionaries.

„Nothing ever becomes real, ‘till it is experienced“. How does something gain reality? Self-contained academia has no material focus without the material existence of a field of enterprise. Likewise, an industry endeavor lacks all depth of conviction if it is not based on a clear and even idealistic theoretical foundation. The two only gain reality in association with one another. Experience springs from this interaction. An industry that has lost its academic roots is just as wayward as an academia that lives in disassociation from the real world. Industry-academia collaboration is therefore essential for the meaningful existence of both.

My experience of spending time in the academic environment provided me with the opportunity to step out of my daily routine and revert back into an environment that I had largely forgotten. Rather than gaining from the subject material itself, I gained simply from walking school corridors, eating in school cafeterias and experiencing the atmosphere of youthful excitement and learning.

I believe that our visitors from academia likewise benefit from observing a workplace where the cold practicality of the client rules supreme. Where ideals are depreciated and optimism is no longer a valued commodity.

I think each extreme lacks meaning when isolated, and would therefore state that the gains from collaboration between these two worlds can provide both substance and meaning. Thus, academics need experience and involvement in the real world to gain relevance, and industry needs to avoid losing its connection with the idealism and theoretical base it was founded upon. Without this it will become a hollow shell of materialism.



“THOSE WHO CAN – DO”, BUT CAN THEY ALSO TEACH AND BE TAUGHT? BUSINESS PEOPLE AS TEACHERS AND STUDENTS

**KAROLINA ROZMUS AND
MAGDALENA RZEZNIK**

Should companies and educational institutions collaborate or should they put all their efforts into serving their own interests? A logical answer seems that collaboration between these two fields can lead to real economic changes for both parties. Such collaboration can be based on exchange of knowledge from diverse backgrounds while tackling business activities from different perspectives. Faculty provide students with knowledge on theoretical principles and managers can share their hands-on experience. Students gain a great deal from learning through practice while also bringing their conceptual knowledge to the table.

One of the popular methods practiced in business schools is the use of case studies, which is widely viewed as a practical method to apply theories into business situations. Students are provided with a variety of examples of business challenges and their task is to solve and generate appropriate solutions. The use of case studies requires students to role-play as they face real and difficult problems. In addition to solving the case problems the difficulty increases as students themselves, without any help or suggestions from the instructors, make decisions.

In addition to using the case study method, faculty may invite guest lecturers to present information about the challenges faced by companies. Usually, this takes the form of a manager or an industry representative sharing insights on a company's activities and objectives with students and perhaps even sharing information that is not publicly available. For students, such presentations might seem very interesting, but most importantly they become

more familiar with the company's situation and it is easier for them to analyse the specific problems in play.

Working on real examples allows students to broaden their perspective of the business environment and gain experience in different areas. Projects could focus on issues such as value propositions, sales effectiveness, performance optimization, marketing plans or digital strategies. Considering the fact that not all managers have a business background, students as young aspiring business professionals could provide a lot of interesting ideas that may help managers to improve their business activities. Learning becomes more interesting when students work on real problems in companies with real employees. Together, students and managers may come up with completely fresh perspectives and bring new opportunities that had not been noticed in the company.

Nowadays, many business schools often recruit former managers or entrepreneurs who can apply theoretical concepts based on their own practical experience to their faculty. For students, this presents an opportunity to gain interest and develop an appetite for making it in the business world. The experience that managers and entrepreneurs share with students might exert great influence on their future careers. Guest lecturers not only tell stories about their work, they also share their passion for what they do and can motivate and inspire young people. Students have a chance to absorb know-how about methods, technologies and tools applied in real life. As the business field is very broad, for students this is also a chance to gain an "inside scoop" of what it would be like to become a professional in a particular field.

However, how can we make sure that managers teaching students will provide the same quality input as experienced academic teachers? There is a reasonable fear that managers will concentrate more on the practical sides of problem-solving techniques rather than teaching students methods of critical and precise thinking. Managers are often not as qualified as people who paved their way through the higher education system to become professors and therefore might be less able to provide research-based knowledge. The best solution in teaching aspiring managers and employees is to offer them an academic education that includes a strong practical element, one which features different perspectives of business conduct and

highlights the importance of conceptual knowledge in real case scenarios.

When it comes to teaching business there might be the same number of opinions as there are experts, each with a different approach. There is a possibility that a scholar might put too much emphasis on principles, concepts and theories, whereas a manager may rely on tall tales with ambiguous connotations or on difficult tasks to generalize anecdotes. Those managers who can spare their time to teach are often older and experienced, but have graduated from school years ago and often have had little or no formal education in the academic field; many are busy managers who are not able to keep up to date with the latest trends, methods and tools.

In today's rapidly changing environment it is extremely important to continue education and apply a lifelong learning philosophy. In order to gain competitive advantage within industry, ambitious employees and experienced managers should take advantage of professional workshops or MBA programs. This can give them new ideas about how to take a critical look at their business and enhance their way of thinking about business practices and can help them to reach their full leadership potential. Just like in sports, where a fraction of a second can determine success, commitment and an attitude to develop one's career path could determine professional success.

The arguments above tell us that there are more pros than cons in industry-academia collaboration and the opportunities are out there to be bridged and sustained in a relationship of collaboration. Some mechanisms are available to support the bridge building initiative. These programs are formed to create opportunities for both academic staff and employees of companies to enrich their educational paths and gain valuable experience. They also afford optimal opportunities for mutual exploration of these two worlds and suit well for strengthening cooperation through knowledge transfer and intellectual cross-pollination.

Building up and developing healthy relationships between the academic environment and the business world is important because such relationships can lead to positive economic changes and competitive advantage on both sides.



STICKING TO THE SCORE, OR PLAYING IT BY EAR? HOW TO GET THE MOST OUT OF DIVERSITY FOR INNOVATION

MARINA CANDI

According to popular opinion, the more diverse a group is in terms of education and past experience, the more likely the group is to come up with novel ideas for new products and services. In research on the relationship between founder team diversity and innovation performance, Kristinsson, Candi and Saemundsson focus on what is referred to as *informational diversity*. This refers to diversity in terms of education and past experience. They find that founder team informational diversity is positively related with both idea generation and the implementation of ideas into new products or services. Extrapolating these findings to the diversity that exists in industry-academia collaboration might be warranted, although until the research is actually replicated in this particular setting, any generalization of results must be done with caution.

Coming up with ideas is only the first step in successful innovation, and the notion that a diverse group will come up with more and more novel ideas than a homogenous group is intuitive. What is even more interesting is what happens when we come to the next step, namely that of translating an idea into a new product or service launched on the market. Here, the value of diversity really comes into its own. This finding may seem counter-intuitive, since one might think that to develop, implement and launch a new product or service, the best strategy is to have a team of people that share the necessary specialist knowledge. But according to the research mentioned above, a team of people with high informational diversity is actually likely to perform better.

For further insight, an additional variable was entered into the equation. This variable is how decisions are made during the innovation process. Do managers stick to the score or play it by ear? The findings suggest that when managers stick to the score – following pre-defined goals – diversity is related to more ideas generated than when managers play it by ear. Thus, although diversity seems to be a good thing to have for idea generation, freewheeling is not; the diverse team needs to be working towards a clearly articulated goal in coming up with ideas.

The opposite shows up when it comes to implementing new ideas and launching new products or services. Thus, we can surmise that a diverse team will be successful at launching a greater number of new products/services if new ideas, perspectives and directions are allowed to emerge during the development process than if a plan is set up front and followed without diversion. Again, as established earlier, diversity is desirable, but unlike in the idea phase, here playing it by ear leads to better performance in terms of new product/service launch.

So what can be recommended for industry-academia collaboration when the goal is to develop and launch new products or services? First, the diversity inherent in a group including persons from both industry and academia is likely to give a starting advantage in terms of successful outcomes. Second, involve everyone in idea generation, but work towards a pre-defined goal. If the goal is for the industry contingent to launch new products or services, the goals should be defined by the business or businesses involved, and vice versa for the academic contingent. Third, again involve everyone in the development, implementation and launch of the new products or services, and once the idea is clear, manage the process by playing it by ear. For example, keep your eye on developments in markets and technology. Changes that happen in these realms while development is in process should not be ignored, because they might call for a radical change of course.

Reference:

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FROM INDUSTRY TO ACADEMIA AND BACK: BI-DIRECTIONAL INSPIRATIONS AND VERSATILE TOOLS

MICHAL JASIENSKI

Industry can be a rich source of inspiration for academic researchers. It provides the crucial element of any empirical research – the, so-called, reality check. What is most important is that it brings a „real” reality check, in contrast to pseudo-knowledge about organizational behavior generated largely by studies conducted on student groups. Characteristically, the duration of such studies is usually shorter than one college semester.

Students’ level of creativity, attitude and approach to problem solving may not necessarily be representative of adult employees. Students are, to some extent, free from the stresses of grown-up lives, such as debt, the needs of their own children, medical bills, etc. They are likely to lack the sense of responsibility necessary for being motivated to participate in teamwork. They collect their honorarium for participation in, what is in their view is only some silly experiment, and they know that their livelihood does not depend on the outcome.

So, when looking for empirical evidence to verify or validate management concepts, researchers should resist the temptation of college-student studies and (re)establish friendships with managers of real companies. Ideally, they should blend in among companies’ employees during long-term secondments, just like Jane Goodall did with the chimpanzees in Tanzania.

After all, it was Elton Mayo’s real-life study at the Western Electric’s Hawthorne Works in Illinois that brought revolution to our knowledge of what employees really do at work and started the discipline of organizational

behavior. Similarly, without real-job experience obtained at steel works by Frederick Winslow Taylor in the US and by Karol Adamiecki in Poland and Russia, these people would not have been able to develop the field of scientific management.

If we now reverse the direction of influence, pure (i.e. not applied) research can teach managers and entrepreneurs something useful. Currently, most business ideas are somehow related to scientific results and entrepreneurs must locate crucial developments in research and turn them into innovative and commercial products or services as fast as possible. Innovative managers face pressures to utilize and implement the latest research results in fields relevant for production management, industrial engineering, logistics, robotics, ergonomics, etc.

However, to gain competitive advantage from commercializing research results, entrepreneurs need strong intuition about which of these results are likely to prove important before they become common knowledge (because then it is too late). So, how are business-educated entrepreneurs to know where the exciting developments happen in such advanced fields as bio- or nano-technology or telecommunications?

The pace of change in industry and the complexity of contemporary business environments force business people, whether they like it or not, to communicate with experts. Since hiring experts may be costly, it is essential that only those specialists whose advice is state-of-the-art be used. How to find them? How are business people to determine who the significant researchers are? To succeed, managers and entrepreneurs must face the challenge of assessing the quality of academic researchers who could provide know-how or serve as potential business partners, collaborators or consultants.

I suggest that bibliometric analysis of citation data can tell outsiders (i.e. managers, journalists etc.) who is worth paying attention to in the world of research. Counting citations to a given paper found in other academic papers has been found to be an extremely good measure of the paper’s scientific value. There are quantitative tools aimed at evaluating academic quality of institutions or of individual researchers and at discovering new research fronts and technological trends.

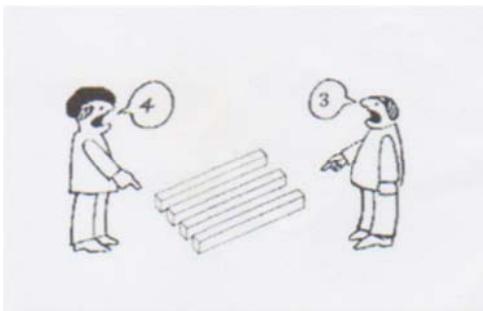
Tools such as, for example, the Hirsch index, provide quality information that is easily

accessible and comprehensible even to science-naive managers. The simplicity of bibliometric indexes means that anybody interested in the evaluation of the quality of research, can apply it for their own purposes. I argue that they should become standard measures used by executives and managers when searching the academic world for experts or external advisers. Importantly, the indexes are based on true merit, i.e. they are independent of such confounding information as titles, academic ranks, age or gender.



BRIDGING THE GAP BETWEEN ACADEMIA AND INDUSTRY: NEW CHALLENGES AND CULTURAL DIFFERENCES

**PIA SCHILDKNECHT, HEBA HERTERVIG
AND JOANNA WOJCIK BUBALA**



Two important fields, academia and industry, face challenges as well as advantages from secondment agreements. The transfer, or exchange, of people between academia and industry can be defined as a temporary relocation and a swift thorough collaboration between academia and industry. Secondment is all about sharing new technology and knowledge, which makes the idea of secondment

exciting for both fields. From the industry perspective the academic secondee provides great advantages and value through academic experience and different views on everything from daily challenges to the business and the organization as a whole. From the academia perspective, the value is the possibility to verify theses, collect data for academic research and to observe business reality first-hand.

It is interesting to delve into hosts' and secondees' thoughts. Secondments can result in great benefits for both academia and industry. Therefore, the idea of a secondment should be of a win-win situation for both sides.

The actual reality for an academic secondee

Secondment means a new country, new company, new people, new language – everything is new. Somehow people mentally prepare themselves for secondment to industry – for how to act, participate, share knowledge, collect data and gain new experiences. It is an academic adventure into the world of industry and people can't wait.

The first day the secondee arrives to a company she/he brings a whole metaphorical suitcase filled with academic tools that could make a real difference in the company. The secondee is provided a workstation and greeted in a polite manner. However, the new life can be a little bit strained in the beginning, especially when something happens in the company and the secondee is just left aside and feels forgotten and suddenly the excitement gets blurry and strange. Sometimes, and it can happen early on, reality strikes and all the preparation is blown out the window in the turbulent changes that happen in the company. The company can move on to the next task, and people can be insanely busy with critical projects and customers. This means that the secondee needs to check her/his course to adapt to the new situation.

A secondment means that people spend extended time in a different (sometimes very different) environment and culture. The business reality is different and almost opposite to the academic reality; simply due to the different ideas on how to achieve goals and measure success. Cultural differences also play an important part in this situation – we can't forget that people are in a new country. This means that people need to deal with new ways of living and understanding things like language barriers as well as other differences that are difficult to

prepare for before entering into a new industry and a country.

Being a part of a hosting company, people might come to realise that money matters to the organization more than they thought in the beginning. Time is money for the company, which can be in the way of opening up the academic's suitcase of tools to use for new exciting ideas. The secondee soon realizes that the time and effort away from a customer or project is expensive for the company and can be seen as time they cannot invoice.

The key to success is finding ways to contribute to the business in practical and useful ways. Thus, the secondee can help bridge the gap that might otherwise lead to passivity and, at the same time, gain valuable experience.

The actual reality for the hosting company

Being a host to a secondee means sharing knowledge about the company. Everyday challenges are amazing and new ideas depend on how the company can be taken to the next level. This can also be seen as a challenge and a perfect opportunity for the hosting company to get some outside help.

After meeting all the new people inside the company the excitement takes over and the secondee cannot wait to open the suitcase filled with academic tools and goodies to start a new chapter in the company's history. However, this excitement can be short-lived. The company may seem reluctant to participate in new projects in the secondee's eyes. Companies are out there to make money and the thought of losing a customer has more weight than new ideas from a secondee. Thus, the secondee is faced with dealing with the dilemma of a fast-moving industry. Businesses need to be on their toes and aware of how important it is to run with a vision in mind and able to establish deals, get things to move and make money.

Time flies when you are busy with everyday work. In some cases you manage to get a sneak peek into the suitcase of academic goodies and realize some changes, albeit small ones. However, it should be kept in mind that little changes are still changes that might prove valuable in the big picture. Thus, the secondee can be happy to have achieved something, even if it may not be of the scale originally envisioned.

How can we do this better?

The Reinvent project is based on industry-academia secondments. Halfway through the project we have a few practical recommendations for making secondments a success for both sides.

- Manage expectations between the secondee and the hosting company.
- Make sure the confidentiality agreement is signed, so that communication can be open and honest.
- Get prepared for the secondment as well as possible. Plan the work, and prepare a plan B in case plan A fails.

Secondment tips for the secondees

- Manage what you can influence and don't worry about the rest.
- Bear in mind that in business time is money; every hour can be sold to the customers.
- As the external person, you are like an external consultant. People might not be aware of what you can do or what you expect. Let them know.
- Respect the business's decisions; the company may not be willing to implement your suggestions.
- Be as independent as possible. A small company will be unlikely to have resources to take care of you full time.
- Define clear objectives, which will help in case plan A fails.
- Big changes are more spectacular and require a strategic shift and change in management and commitment. Even a small change that results in a positive outcome matters, so do not become frustrated.
- Respect local culture, even if it is very different than in your country, and even if you do not like the difference. Respecting local culture also applies to the corporate culture.
- Prepare yourself to use all available tools, such as Google Translate, or other applications to address language challenges.
- Build relationships. Irrespectively of the culture and country, if people like you they will do much more for you and make your life more interesting.
- Be proactive in searching for and suggesting ideas for how to improve the business. You have a fresh perspective.

- Proactively search for the opportunities that you can have in a new country. It will surprise you how many things are interesting just by opening up your eyes to the fullest.

Secondment tips for the hosting organization

- Before secondment: Prepare the team for hosting the secondee and making them feel welcome and a part of the team.
- Prepare the working space and complete administration procedures (access cards, computer, email address, internet access etc.).
- Develop ideas about how the secondee can help in the business, and talk to him/her about it.
- Involve people into daily business work as much as possible.
- Introduce them to the company culture and outside work activities.
- Dedicate resources to support the secondee in daily life.
- Leverage the opportunity of having an external person to bounce ideas off.
- Schedule regular meetings with the secondee.
- And by any means, find time to open up the suitcase of academic goodies. The time spent might be priceless for the company.

References and interesting reading

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ABOUT THE REINVENT PROJECT

Business model innovation has to do with inventing and implementing new models for doing business and creating value. As such, business model innovation can be viewed as a process of transformation and reinvention (hence, the acronym for the project).

Because of the unique importance of small and medium-sized enterprises (SMEs) and the creative sectors for Europe, Reinvent has SMEs in creative sectors as its focus.

The aim of the Reinvent project is to develop and share knowledge about how SMEs in creative sectors – SMEs operating in both digital and non-digital markets – can implement business model innovation as a means to enhance competitive advantage. Reinvent creates opportunities to evaluate and validate business model innovation as a competitive tool for European SMEs through empirical research among SMEs in the three partner countries: Iceland, Poland and Denmark.

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You can follow the Reinvent Project here: <http://bmreinvent.com/>

