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A voucher system to encourage international innovative collaborations – why and when does it work?

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In this article a short theoretical background to voucher systems will introduce the practitioner's view on incentives and barriers for setting up successful voucher systems to encourage international innovative collaborations. Finally it will be described how successful voucher systems can be powerful instruments to encourage international innovative collaborations, when implemented with care by experienced cluster organizations.

What is a voucher system? Theoretical background

Originally voucher systems have been developed in order to install market mechanisms in sectors that did not exist or that were dominated by a single actor for too long, for example to replace the monopoly of a state-owned company. The theoretic assumption behind it is to install a market mechanism there where there previously are no possibilities or habits for 'exit' (opt out when services are not delivered properly) or 'voice' (comment services or product in order to obtain improvements).[1] Giving vouchers to consumers or consumer companies will encourage a market diversification and optimization, as the consumers will choose the best value. Indeed, with the minimized risk of the voucher they have a choice to 'opt out' when services are not delivered correctly. Also, they will voice their comments for improvements, and this will encourage a competitive and quality offer. The voucher system will thus structure the providers and they'll gradually adapt to a market mechanism.

Today voucher systems are more and more often being implemented in a slightly different way. The objective is still to encourage the establishment of new or non-existent market, but merely by supporting a fragile or promising group of consumer companies, more than structuring the providers. The vouchers are directly

[1] Hirschman, A. O. (1986), "Exit and voice, an expanding sphere of influence", *Rival views of market society and other recent essays* (pp. 77-101), Cambridge, p.78-79.

allocated to the users rather than to the service providers.[2] For example to encourage small and medium sized enterprises (SMEs) to engage in international innovative collaborations. This is called demand-side innovation policy.[3] How does it work? The voucher entitles the owner (consumer company) to approach a knowledge institution or innovative company abroad (provider company) to obtain services for innovation projects. The consumer company is thus incited to use services abroad and for innovation, with a limited risk. Why? In order to understand we need to ask the following question: why do we consume, or interact economically? That is because we *choose* to do so. And in our choice for economic behavior there is always the action of weighing. The assumption is that consumers / companies are guided in this decision making process by utility and profit maximization with the lowest risk.

This is exactly what we see in successfully implemented voucher systems: utility and profit maximization for promising or fragile companies at lowest risk. According to the theoretical framework that A. Hirschman set up for voucher systems, vouchers work best under the following conditions:

- when the consumer companies have widespread preferences, which are all recognized as legitimate,
- when consumer companies are well informed about the quality of goods and services and they can easily compare them,
- when purchases are relatively small, and soon delivered, so that buyers can quickly learn from experience,
- when there are many competing suppliers.[4]

In the voucher systems that we implement at Biopeople, as many other cluster practitioners in the European Union, vouchers are relatively small financial incentives that are given to encourage collaborations / contracts in fragile or promising groups of SMEs, usually because we estimate that their maximum utility and profit are weighed out by a high (financial) risk. For example because they are small companies involved with small financial resources, or the collaborations they need are

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[2] OECD (2011), "Policy instruments for regional innovation", *Regions and innovation policy* (pp.215-261), Paris, p. 247.

[3] Cunningham, P. (2009), "Demand side innovation policies", *Policy Brief no. 1*, Manchester Institute of Inoovation Research, Manchester.

[4] Hirschman, A. O. (1986), "Exit and voice, an expanding sphere of influence", *Rival views of market society and other recent essays* (pp. 77-101), Cambridge, p.88.

international, with unknown partners, involving very innovative or disruptive technologies, or within a different industry. Part of the financial risk is taken away by the voucher, and paves the way for maximum utility for the consumer.

However, there is one major obstacle. As explained by Hirschman's framework above, vouchers work best when consumers are well informed. This is of course possible, also for the fragile group of consumers that we are talking about, but at high costs, as it implies a lot of time. This is especially a problem for small companies, where this is often the major resource. That means that a voucher system alone is not sufficient for paving the way to maximum utility and profit at low risk. The consuming companies are still encountering too much risk when engaging in international collaborations or in new industries. Also, the 'exit' and 'voice' options are scaring them off, because it might take a lot of time, instead of giving value.

The solution is to install a voucher system with quality controlled participants, both on the provider and on the consumer side. It is here that cluster organizations give real added value to the system. They will quality check the participants, as they are in close contact with the companies on consumer and provider side. Setting up a voucher system with quality-controlled participants reinforces the maximum utility and profit even more, by taking away other types of risk such as the difficulty of finding a trusted partner in another country or sector, on top of the time consumption that would diminish the utility factor.

View of the practitioner: a successful voucher project - In2LifeSciences.

An example of a successful voucher project with quality-controlled participants is the In2LifeSciences project. The objective for the In2LifeSciences project is to accelerate innovation and internationalization for SMEs in the life sciences sector through new, and preferably long lasting collaborations. [5]

Why is it necessary to help SMEs with this? The life science sector –and especially the bio-pharma part of it, is characterized by a few very large global corporations, next to a multitude of very small, flexible and innovative companies. The large corporations can spread their risks; they have the staff and financial means for it. And they do this very well. This is different for the small companies. As they do not have a lot of in house competences, they need to outsource a lot, and are

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[5] www.in2lifesciences.eu

continuously looking for high quality trusted partners. The fact that they are often working and meeting with new partners also has a big advantage. It will encourage innovation. Innovation happens more easily when we meet new views, new ideas, new methods, etc. Therefor these small companies are creating a continuous flow of innovation. But they have a relatively high risk, and use a lot of time to find the right partners and the financing for it. This slows down their innovation capacity.

In the In2LifeSciences project, eight organizations in five different countries working with innovation and internationalization in small companies, created together a voucher system with quality controlled consumer companies and providers. Vouchers can be applied for online 2 times per year. In between, the partners organize brokerage events, where selected companies can meet each other. The partners also created a database where the SMEs can search trusted and approved providers, as all profiles are pre-approved by the project partners. The application form is short, and the deadlines for approval are very short too. After the call deadline, the partners involved in the project have two weeks for getting in touch with both providers and SMEs to check that the project applications will install new, innovative and international collaborations. If approved, the consumer companies and providers sign their contracts two weeks after the call's deadline and they can start their work.

How do we know that it works? Here are the facts:

- In 2 years (4 calls) more than 200 successful international collaborations between innovative SMEs and innovative providers were established
- 85% of the participants indicated that they will continue to collaborate in the future

What are the conditions for success?

A lot of voucher systems have been initiated over the last few years. Not all of them with the same outcome as In2LifeSciences. In this paragraph the conditions for success will be indicated. The next paragraph will give some explanations about the barriers. As practitioners at Biopeople we have participated and implemented several voucher schemes and can come with validated feed-back and well documented facts. So, what is the recipe for success? Some ingredients are listed below, without order of priority. However, with regards to the theoretic framework described above one condition will be highlighted afterwards.

- the amount of the voucher needs to be high enough for it to take away the risk,
- there needs to be a critical mass of companies and providers,
- the voucher allocation and administration needs to be simple and quick,
- the attribution of the vouchers needs to be fair and based on objective criteria in line with the voucher system's goal,
- sufficient communication around the project in order to install a basis for trust about the quality of the partners, the reality of the short deadlines, and the actual payment,
- well documented but no time consuming feed-back from the participants through evaluation forms and questionnaires,
- the 'matchmaking' between the SMEs and the providers needs to be of high quality, either through an updated and selective database or through direct contact with a network organization who can recommend, or both!

Even if most of the elements on this list seem obvious, there are still voucher projects implemented by cluster organization that fail, because:

- there is not enough critical mass, both in terms of consumer companies and providers,
- administration is time consuming or complicated for the participants (one critical note here: it might sometimes be very difficult to avoid this because the cluster organisations themselves are subject to very complicated and extensive audits by their financial controllers),
- errors made by the administration of the project leading to unsatisfied participants and negative feed-back,
- non existent or little communication around the project, which takes away a large part of the trust factor,
- too many early stage companies or too early development of the sector,
- non existing 'matchmaking' service, which makes it difficult and time consuming, and thus too risky, for the companies involved to find a good partner.

As a practitioner we have experienced both successful and less successful voucher schemes. We also know now what makes the difference. In line with Hirschman's theory described above we can confirm that voucher systems with quality-controlled participants give the best results in number of established collaborations, degree of satisfaction from the participants and percentage of partners that will establish long term collaborations in the future. Setting up a voucher system with quality-controlled participants is not easy. For the first it demands a lot of time from the cluster organizations. Secondly, if the voucher system involves several cluster organizations, all of them need to be able to spend this amount of time to build up trust with the participants, and with the other partners, as well as to spend time for the matchmaking service. If one of them fails, this can crack the whole system. Therefor it is very important to involve cluster organizations that have experience in setting up these systems. They can avoid most of the pitfalls described above, and instruct the organizations with less experience.

Conclusion

This article stresses two major findings. First of all it shows that a voucher system is an excellent tool to structure both provider and consumer markets. Secondly, it explains that successful voucher systems to support international innovative collaborations need to quality control the participants and preferably offer matchmaking services. These tasks are very well carried out by cluster organizations, thanks to their close contact and excellent knowledge of the local companies. We also need to underline that involving experienced clusters will increase the chances for success.

The ingredients outlined above seem to be easy to implement. This is far from true. Organizations that have never cooperated are likely to fail. Biopeople has cooperated and initiated quite a few voucher systems now. This means that we have a savoir-faire that benefits Danish life science companies, and that we continue to apply for money for voucher systems and continue to convince local, regional, national and European authorities to support these voucher systems financially.