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# Outcome Evaluation of StartBiz

## How a Governmental Online-Tool Can Quantitatively Assess Its Benefits for SME

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**Abstract.** The following paper presents the results of the outcome evaluation of StartBiz; an online tool for start-ups in Switzerland. StartBiz is provided by the State Secretariat for Economic Affairs (SECO) and allows start-ups to enroll with trade registers, VAT, social insurances and accident insurances without any additional fees directly via the internet. The outcome evaluation was required to learn about generated benefits for start-up companies that have used StartBiz so far. At the same time, the evaluation was aimed at providing decision-makers in the SECO with strategic information for their future e-governmental activities (esp. planned expansion of StartBiz to an electronic One-Stop-Shop for small and medium sized enterprises). The paper contributes to the debate of evaluating e-governmental activities by emphasizing an outcome orientation based on the assessment of quantitative benefits. It underlines the advantages but also the disadvantages of such a focus for future outcome evaluations in the field.

**Keywords:** E-government Services, Outcome Evaluation, Start-up Companies.

## 1 Introduction

The following paper presents the results of the outcome evaluation of StartBiz, an online tool for start-ups in Switzerland. StartBiz is provided by the State Secretariat for Economic Affairs (SECO) and allows start-ups to enroll with trade registers, VAT, social insurances and accident insurances without any additional fees directly via the internet. The intended benefit of StartBiz for its users was to offer them a single portal to complete various government transactions with different administrative offices. Using this portal, start-up companies need to undertake one login exclusively. In this way, they can use the same web-frontend and reuse their previously entered data. This procedure confirms with the “Once-Only” Principle Project (TOOP), which has been launched by the European Commission [1]. Besides start-up companies, other important stakeholders, which might benefit from StartBiz were assessed in a first phase: for instance, trustees or bankers. However, due to their low usage rate, their potential

benefit was not explicitly considered within the presented analysis. Hence, the presented outcome evaluation was applied to learn about the benefits, generated for start-up companies that have used StartBiz so far. At the same time, the evaluation was aimed at providing decision-makers in the SECO with strategic information for their future e-governmental activities – that is an envisaged expansion of StartBiz to an electronic One-Stop-Shop (OSS) for small and medium sized enterprises (SME). The objective of the OSS is to offer companies, in particular to SMEs, the possibility to undertake any public services fully online and through a single portal. To advance with the OSS effectively and to set up an optimal solution for Swiss companies, it was essential to generate know-how on the created benefits of StartBiz so far and on the mechanism behind these benefits. Therefore, the outcome evaluation had to combine summative as well as formative evaluation-elements.

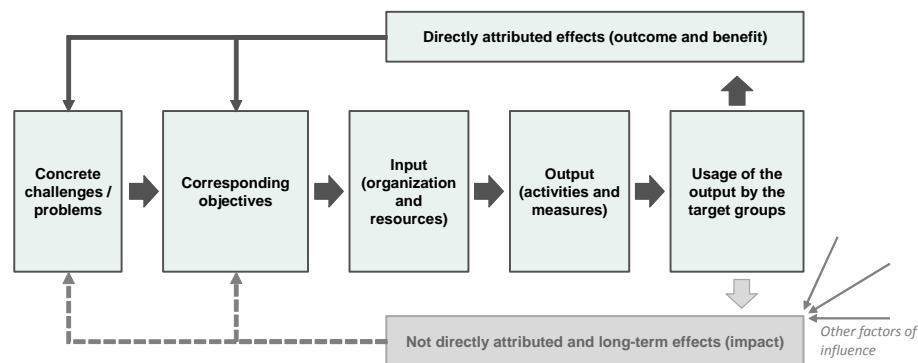
### 1.1 The Rise and the Challenges of Outcome Evaluations

Public managers are under increasing pressure in order to report the outcomes and results of their programs, their activities as well as their investments. With both internal and external demands for information, public managers not only need to provide an accounting for expended resources and for provided services, but also have to report on performances and outcomes [2]. The assessment of generated outcomes gains importance to justify public fund expenditure on the one hand, but also to optimize future projects on the other hand. Consequently, outcome evaluations show an inflationary implementation in many different policy fields and for many different policy tasks [3]. Outcome evaluations assess the effectiveness of a program in producing change. They focus on difficult questions such as: *“what happened to the target groups of a program?”* and *“how much of a difference the program made for them?”* [4]. Thus, in any program the crucial questions are *“what do you want to change?”* and *“how would you know if you have changed it?”*. These evaluation questions are not just bureaucratic requirements, but meanwhile the essence of a good project management [5]. Outcome evaluation mobilizes scientific and statistical tools to follow up on these questions.

The term *‘outcome’* refers in this context to all induced changes that can be causally attributed to a particular activity, as not all observed changes are categorically an intended and direct consequence of the corresponding activity [6]. That is why outcomes are defined by their causality with the interventions carried out. So-called *‘Outcome-models’*, or *‘impact-models’*, attempt to map these causalities on the basis of hypotheses in the form of outcome- or causal action chains, more complex circuits of activity, or also as partially highly complex networks of effects [7]. Thinking in outcome-models, such as in the mentioned outcome-chains, begins from the (policy) objectives over the taken (policy) measures to the generated (policy) outcomes or benefits.

In other words, the identified (policy) problems and their corresponding objectives determine the basis of the outcome-model. They build the reference framework for assessing the outcome in the sense of target achievements as outcome evaluations are undertaken when it is important to know whether and how well the objectives of a project or program were met [6]. On this basis, the model leads to the question whether the respective measures exist for the defined objectives as well as whether they are also

used by the planned target groups accordingly. If measures are used by the target groups, intended benefits are generated [6]. Based on this framework, corresponding variables should be identified to measure – as far as possible – the *output* (i.e. the concrete measure as well as the usage of this measure) and the *outcome* (i.e. the causally justified effects) (see Fig. 1). Ideally, the long-term *impact* should be measured by adequate variables as well. However, the impact is often influenced by other factors, which is why its allocation to the initial objectives is often difficult to determine.



**Fig. 1.** Outcome Chains as the Basis of the Outcome Evaluation: own illustration, 2016.

Consequently, a strict focus on measuring the direct outcomes allows identifying causal outcomes, which can be directly related to the taken measures and their objectives. In this way, the target achievement of these identified outcomes can be assessed and the underlying mechanisms about success factors but also about inefficiencies or other shortcomings can be detected [7]. While outcome models also support the accuracy of outcome evaluations, some main challenges remain, that have to be met by all different outcome evaluations. These challenges had to be considered in the outcome evaluation of StartBiz as well [6]:

- The problem of causality: The central problem is the proof that certain changes (or conservative effects) are causally related to certain activities. For even if the desired condition, the intended effect occurs, other factors can be responsible for it.
- The problem of detectability: Since the comparison with a development without intervention (zero variant) is not possible in start-up promotion and in many other areas, the proof of the effects is a challenge. Counterfactual analyses may offer a resilient approach.
- The problem of time: Most effects occur in the medium to long term exclusively and can then no longer be attributed to a single, concrete activity. The long-term nature of the effects thus makes both the detectability and the causality more difficult.
- The problem of operationalization: Which indicators can be used to reliably quantify outcomes? Do we have the necessary data and information? Actuality, quality, spatial perimeter and comparability of the data are only some of the problems that can become critical here. At the same time, the generic requirements for any kind of

quantitative analysis, such as objectivity, reliability and validity, have to be guaranteed.

- The problem of aggregation: The effects of individual activities / offers cannot be simply summed up due to their partly completely different characteristics. However, individual indicators cannot adequately reflect the overall target achievement of an offer such as StartBiz.

Each outcome evaluation is confronted with these problems and must take them into account. Various strategies have already been discussed how to optimally deal with these challenges. Though, each outcome evaluation has to find its specific solution, considering the specific conditions of its particular evaluation questions. For the outcome evaluation of StartBiz, these challenges emphasized the focus on (i) the causal detection of (immediate short-term) outcomes that can be directly attributed to the services offered by StartBiz, (ii) the measurement and operationalization of these outcomes and (iii) on possibilities of their aggregation [8].

## **1.2 An Outcome Evaluation for StartBiz – Methodology and Procedure**

Outcome evaluations in the field of e-government face additional challenges [9]. E-Government has emerged as one of several innovative ways for delivering services to citizens and companies. It is providing governments with new opportunities for bringing services closer to (small and medium sized) companies in cost-effective, efficient, and transparent ways [10]. Also Switzerland intends to reduce, with electronic tools, the administrative burden for companies. Its e-government is based on the Federal Council's strategies "Information Society Switzerland" and "E-Government Switzerland" that are jointly pursued by the Confederation, the cantons, and the communes. The first e-government strategy was adopted in 2007. The second and current strategy was signed at the end of 2015 [11]. Simplified electronic licensing, application and registration processes are seen as important for reducing red tape. Electronic services of the authorities are increasingly popular with the economy, not only with regards to digitalizing the processes, but also simplifying them and gearing them towards the customers. That is why the Federal Council considers e-government to be an important pillar of growth policy [12].

For this purpose, various initiatives were undertaken, amongst others also for the small and mediums sized companies in Switzerland. In this context, also StartBiz was created to facilitate the process of setting up a new company ([www.startbiz.ch](http://www.startbiz.ch)). StartBiz offers both informational and transactional services. In the first part (without registration), companies can check their obligations depending on their individual characteristics such as their legal form, their number of employees, their planned turnover or their industry. In this way, StartBiz provides start-ups with relevant information before starting the official registration of the enterprise. This clarification of requirements also allows start-ups to test various scenarios for their enterprise and to find out, which requirements apply in each case.

Once this informational part is completed, StartBiz allows start-ups to create an account and to register their enterprises fully online with the major administrative offices

in Switzerland, which are the trade registry, the VAT, the social insurances as well as the accident insurances. This service, free of charge for the start-ups, is available regardless of the country level and its specific requirements, which are given by the confederation and the cantons.

Unquestionably, an underlying assumption for offering administrative tasks as electronic services is, that these services create benefits for the users of the tool. General advantages and disadvantages of e-government services have already been subject to a wide range of scientific discussions. Usually, by analyzing the potential of e-government solutions, a distinction is made between general and specific benefit potentials. The general benefit potentials are independent of the specific stakeholders. They mainly consist of increased efficiency and effectiveness in the management of administrative procedures. This is reflected in time and financial savings, comfort gains, lower error rates, greater transparency of service provision and expansion of services [13]. The specific utility potentials, on the other hand, are exclusively accessible to the respective stakeholders. These specific benefit potentials were the focus of the present outcome evaluation of StartBiz.

The SECO has already analyzed the benefits of its e-governmental services some years ago. At this time, all e-governmental services were considered at once, so that specific information for certain services were difficult to segregate [14]. Therefore, the purpose of the present evaluation was to provide the SECO with specific insights concerning the generated benefit by each StartBiz service. What kind of benefit has StartBiz generated for its users so far? Is an e-government tool like StartBiz able to cause significant positive outcome for the start-ups? How can these outcomes be assessed quantitatively and qualitatively to legitimize the corresponding public investments? And by which means might the outcomes even be strengthened? What kind of lessons learned can be transferred to the planned OSS?

All in all, the two main objectives of the present study were (i) to develop a theoretical model for analyzing the benefits of the online tool StartBiz and of future e-government services within the planned OSS, and (ii) to summarize the benefits created by StartBiz so far based on this model [8]. To allow resilient answers to the research questions mentioned, the methodology of the present outcome evaluation combined the model of theoretical based outcome-chains on the one hand and a counterfactual analysis on the other hand.

- The outcome-model is essential to assure the causality, to understand the mechanisms of creating the benefits. It is crucial to identify bottlenecks, inefficiencies and to emphasize potential improvements.
- The counterfactual analysis shows simply what would have happened without the given intervention. A comparison group of start-ups, that have not used StartBiz so far, serves as an estimate for this counterfactual. The difference in outcomes between the StartBiz user group and the control group allows the quantification of outcome and impact. Hence, the strength of counterfactual approach lies in quantified estimates of impacts at the micro level: *"how much has changed because of the use of StartBiz?"*.

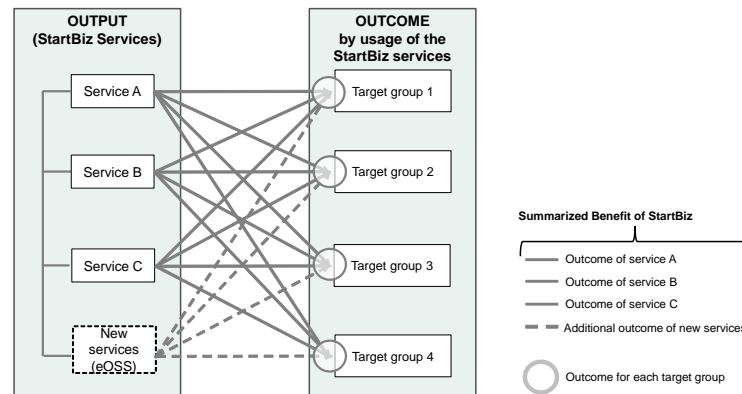
Hence, the two approaches were used complementary [8]: counterfactual methods to quantitatively assess the outcome, theory-based methods to understand the underlying mechanisms, thus helping to identify the need and possibilities for optimizations. The methodology was based on various approaches:

- a series of in-depth interviews with a broad range of experts of the entrepreneurship ecosystem,
- one online survey amongst all start-ups in Switzerland of the last 5 years (sufficient representative response of 500 start-ups) for information with regard to the comparison group and to the embeddedness of StartBiz in the ecosystem,
- data analysis of anonymized user data of the StartBiz tool from the last 5 years,
- another online survey amongst the StartBiz users of the last 5 years (sufficient representative response of 250 StartBiz users of the last 5 years).
- two reflection workshops with the responsible decision-makers of the SECO.

The evaluation was implemented between January 2016 and October 2016. After concerting the results in a workshop, the evaluation was finalized in autumn 2016. Additional measurements and quantifications of the benefits created by StartBiz as well as by the future OSS are planned to be undertaken every two years from now on.

### **1.3 The Developed Outcome-Model**

The developed outcome-model allows the causal deduction of StartBiz-/OSS-benefits by considering specific groups of users, their use of the services offered and the outcome created. The outcome-model for StartBiz is based on the before outlined model of outcome-chains, although it emphasizes the link between the output (specific services of StartBiz and its different components) on the one hand, and the benefit generated by the use of the output on the part of the target groups on the other hand. The further elements of the outcome-chain (problem/need, objective, inputs etc.) are taken into account as well, but are primarily in the way of additional explanation factors. This means that the developed StartBiz outcome-model focused on the three parts (i) output (= specific services of StartBiz), (ii) their usage by the target groups and (iii) the directly attributed and short-term outcome for these target groups.



**Fig. 2.** The developed Outcome-Model for StartBiz [8].

The reason to focus the evaluation on short-term outcomes (in particular savings in time and costs by StartBiz-users) was the following: intended long-term impacts of StartBiz (such as the increase of location quality due to efficient administration processes) could have been influenced by other external factors and would not be meaningful enough in order to assess the online tool. The focus on short-term outcomes, on the other hand, allows the identification of the direct generated benefits for each target group as well as for each of the StartBiz-services separately. In this way, the benefits of StartBiz can be assessed ex-post for the last five years. Due to the counterfactual analysis, the intensity of the benefit and quantification at an individual level of a single company was possible. In order to reach an aggregated scale of outcome based on individual-level information, an aggregated monetarization of the achieved benefits was calculated. This in turn permitted the benefits of StartBiz to be put in relation to the invested costs in the sense of a cost-benefit assessment.

In order to best monetarize the benefits of StartBiz, a methodology was used, which is based on two complementary central pillars and a willingness-to-pay approach as a relativizing third pillar. The following figure shows this threefold hedge of the utility montage of StartBiz.

- The first pillar is the personal assessment of time and cost savings thanks to StartBiz. For this purpose, StartBiz users of the last 5 years were asked in the second survey, how they estimate their time savings (working days) and their additional cost savings (in CHF) thanks to the use of StartBiz. By means of the conversion of the working days into CHF (1 working day = 425 CHF), the calculation of the respective mean values and their summation, a first monetary benefit per company founder could be determined.
- The second pillar of monetarization is based on the counterfactual analysis. It is a calculated difference between time and cost investments between the group of entrepreneurs who have used StartBiz and the group who make the administrative registrations without StartBiz independently or with other support services. By asking the two groups for their work (in working days) and the cost (in CHF) for the formal start-up process, the two groups were again able to calculate the mean values for the



respective categories per founder group. The difference between the two aggregated mean values per group served as a second basis for the calculation of the monetary benefits per company founder.

- The calculated sum from these two pillars was compared to the amount resulting from the willingness-to-pay approach (Pillar 3). In this case, the determination of the benefit of the StartBiz services from the user's viewpoint is classified by the recording of a maximum payment for the benefit achieved [15]. For this purpose, the StartBiz users were asked about their potential willingness to pay, which is what they would have been willing to pay for the use of StartBiz and the resulting benefits [16, 17]. The mean value calculated for this category does not flow into the benefit calculation, but serves as a comparison value to the supplementary interpretation. It shows how much the benefit of the user side is appreciated and perceived.

## 2 Outcome of StartBiz

### 2.1 Usage of StartBiz

Since the relaunch of StartBiz in 2011 until the end of 2015, there was a total of 19'626 company registrations on StartBiz. The number of registrations has remained largely constant since the beginning with about 4,000 per year. Almost half of all registered companies (42%) did not actively use StartBiz to register with trade registers, VAT, social or accident insurances. They remained StartBiz registrars. The rest (58%) of all registered companies has actively made use of one or more services offered by StartBiz. Most of these users used StartBiz only once and for only one service (mainly for registering with the social insurances). Some used two services, only very few StartBiz-users made three or four registrations via StartBiz. The vast majority of StartBiz-users were sole proprietorships (84%). Referring to this legal form, almost a quarter of all new companies in Switzerland over the last years has formally been established by using StartBiz [18].

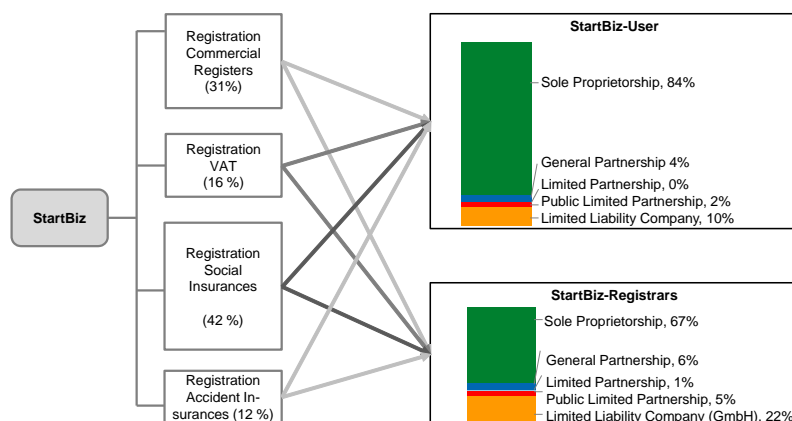


Fig. 3. Specified benefit model for StartBiz according to its user data 2011-2015 [8].

## 2.2 Identification and Quantification of Generated Benefits

What kind of benefits did StartBiz-users derive from using StartBiz services? In principle, companies which had used StartBiz, were highly satisfied with the StartBiz offer. They mainly expected savings of time and money. These expectations were largely met. To quantify these benefits, the three pillars explained in chapter 1.3 were used, encompassing the following three approximations: (i) the personal assessments of time and cost savings by StartBiz-users; (ii) the calculated differences of time and cost requirements for the formal establishment of a new company, indicated by StartBiz-users on the one hand and those who did not use StartBiz on the other hand; and (iii) the willingness to pay, which expresses the value of benefits in terms of money as it is perceived by the StartBiz-users themselves. However, the quantification of the benefit generated over the last five years was only possible for sole proprietorships, since only for this user group a sample of sufficient size was available.

Pillar 1	Pillar 2			Benefit of StartBiz for one SP	
Estimated difference	Calculated difference			Averaged difference	
SP by using StartBiz Survey 2 (n=130) Arithmetic mean	SP without StartBiz Survey 1 (n=111) Arithmetic mean	SP by using StartBiz Survey 2 (n=130) Arithmetic mean	SP with & without StartBiz Based on indicated expenses (Survey 1 & 2)	Pillar 1 & Pillar 2	Savings by using StartBiz
4.7 WD 820.- CHF	4.3 WD 2'125.- CHF	2.8 WD 710.- CHF	1.5 WD 1'415.- CHF	~ 3 WD ~ 1'100.- CHF	2/3 of WD 1/2 of CHF
				Total (monetized): ~ 2'200.- CHF	

**Fig. 4.** Time and cost savings (in working days / WD or CHF) by formally establishing a sole proprietorship (SP) with StartBiz [8].

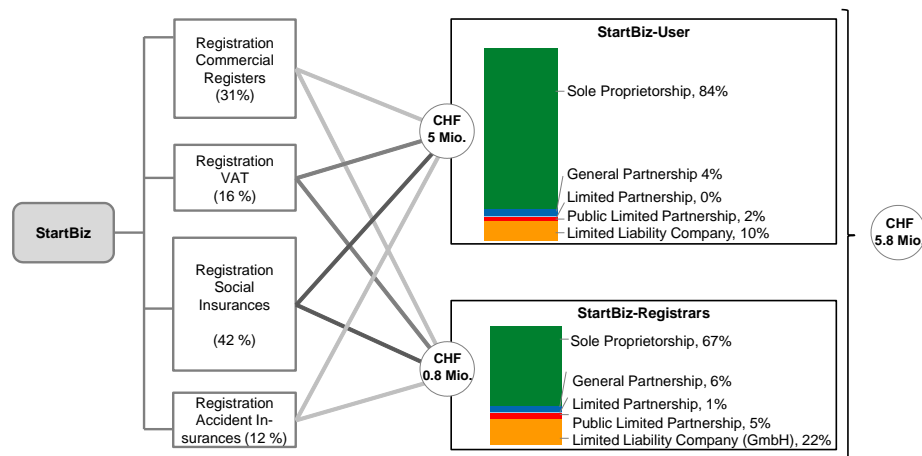
The calculations show that the use of StartBiz reduces the time required for formally establishing a sole proprietorship by approximately two-thirds. In addition, the costs for the formal establishment of a sole proprietorship is cut down by half in case of using StartBiz compared to the procedure without StartBiz. Hence, Swiss sole proprietorships can save time and money by using StartBiz, which they can invest otherwise. Especially during a company's founding phase when resources are usually scarce, their saving is important, since investments have to be carefully taken in order to succeed.

To make these benefits comparable and summable, a monetarization was undertaken. It has to be considered that this monetarization represents only a partial benefit, since only the two parameters (time, costs) can be assessed in monetary terms. Consequently, the calculated benefit in terms of money indicates only the order of magnitude. An exact indication in Swiss francs would represent a spurious accuracy that is not reliable.

Based on the three abovementioned approximations, time and cost savings for formally establishing a sole proprietorship by using StartBiz can be assessed with approximately CHF 2,200.-. With regard to 9'448 sole proprietorships in the years 2011 to 2015 using StartBiz, StartBiz has generated a total benefit of about CHF 21 million over these past five years. This results in an average benefit of CHF 4 million per year by sole proprietorships using StartBiz. Since 84% of the current StartBiz users are sole proprietorships, this amount already represents the largest share of the generated benefit [8]. Further calculations show that the benefit of StartBiz for companies with different legal forms seems to be at least as high as that for sole proprietorships – a distinction

between different types of legal forms was undertaken, because the number of possible service uses depends on the legal form of a company due to legal conditions. However, for all legal forms of start-up companies other than sole proprietorships, the sample sizes were not large enough. Yet, assuming a similar benefit like that realized by sole proprietorships, one can estimate a total benefit of almost CHF 25 million generated by the total of 11'293 companies (irrespective of their legal form) using StartBiz for formally establishing their company in the years 2011-2015. This results in a total benefit of almost CHF 5 million per year generated by the use of StartBiz services.

Considering furthermore all StartBiz-registrars, who used the online tool for information reasons exclusively, additional generated benefits by StartBiz could be identified too. Pursuant to the above mentioned procedure among StartBiz-registrars from the years 2011-2015, a generated benefit by StartBiz of additional CHF 800,000 could be approximated.



**Fig. 5.** Generated Benefits by StartBiz per Target Group and Year [8].

These benefits are offset by costs for the development of StartBiz and its operation as well as personnel costs for its maintenance and care. Between 2010 and 2015 SECO has invested around CHF 440,000 per year. Thus, the benefits for start-ups exceed the public investments by far. If these costs are taken into account in the benefit assessment, the total benefit of StartBiz amounts CHF 5.36 million per year [8].

### 3 Conclusions and Implications for the Planned OSS

In summary, StartBiz exhibits a constant number of users per year who are very satisfied with the StartBiz offer and have a proven benefit from the use of StartBiz. Nevertheless, it should also be pointed out that StartBiz addresses a comparatively small group of users. This is due to the limitation of its services only to the formal establishment of companies out of all the various phases that a start-up company has to go through. In addition, one has to note a limited degree of brand awareness for StartBiz.

The great potential to increase the target group is not yet fully exploited. In particular, there is no possibility to use StartBiz under mandate (potential use by third parties such as trustees, lawyers or consulting companies on behalf of founders). This aspect restricts the positioning of StartBiz as a «tool» and fuels the reservation of other institutions in the start-up community, who perceive StartBiz as a competitive offer. In this regard, a clear and active communication of StartBiz (as well as of the future OSS) as an online tool seems advisable, which intends to facilitate administrative obligations of companies. Such a communication could sharpen the profile, reduce perceptions of StartBiz as a competitive offer, and could address additional user groups. In this sense, it should be a matter of course, that the future OSS also enables the use of its services under mandate.

In order to be able to identify the specific benefits generated by the use of StartBiz / OSS, more information on individual target groups would be necessary. For this purpose, a standardized, automated feedback loop could be established in order to measure customer satisfaction of all users promptly after they have used a certain service either of StartBiz or of the future OSS. This feedback may provide essential information specifically for each target-group as well as important strategic knowledge for required adjustments and optimizations of the services offered. At the same time, this may help to document reliable and sufficiently robust feedback information – so that in the future, amongst other things, one will be able to evaluate the benefits of each StartBiz-/OSS service and each user group separately.

In general, for outcome evaluations of e-governmental offers we see, that benefit models can significantly help to identify and quantify the benefits generated for the specific target groups. At the same time, it has to be taken into account that quantified benefits alone only show one puzzle piece in the vast fields of outcomes. So it is of great importance that all discussions emphasizing monetary effects of e-governmental services always underline their embeddedness in a broader field of qualitative outcomes and benefits. Public investments in e-government can no longer be legitimized only by cost-benefit ratios. In many areas, e-governmental services have become a matter of course as the low willingness to pay shows clearly. In this context, it is also clear that e-government solutions are increasingly of interest to companies. Simple and fast administrative processes, as promoted through e-government solutions [19], are gaining in importance as a location criterion. In a time of increasing location competition, in which many of the infrastructural location factors are now largely ubiquitous, such e-government approaches can certainly make a significant contribution to keeping companies at the location or gaining a location [20, 21]. Thus, the question, what kind of e-governmental services have already to be seen as a matter of course on the one hand, and what kind of respective services constitute an additional offer on the other hand, will gain importance during future outcome evaluations of e-governmental activities.

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