



Targeting and mid-term effects of the SME grants aimed at technological development

Executive Summary

Economic stimulus programmes seem to be of increasing importance in the upcoming strategic period 2014-2020 in Hungary. Hungarian programme designers put great emphasis on grant schemes aimed at development and growth of small and medium-sized enterprises (SMEs) in Hungary, especially on non-refundable grants.

The Budapest Institute evaluated the targeting and the midterm effects of the EU co-funded grant schemes managed within the framework of the Economic Development Operative Programme (EDOP 2.1.1¹) and of the Central Hungary Operative Programme (CHOP 2.1.2²). The study was commissioned by the National Development Agency (NDA) and focused on the implementation period between 2007 and 2011.

The project had two major objectives. Based on statistical and econometric methods, i) it analysed the specificities of the beneficiary firms and assessed the selection effect, ii) mapped the application preferences of the Hungarian enterprises. We used three estimation methods based on counterfactuals for identifying programme effects. The impact assessment was based on a linked dataset provided by the National Tax and Customs Administration of Hungary³ (NTCA) and the Unified Monitoring and Information System⁴ (UMIS, cohesion policy database).

Main findings

- Grants offering lower amounts of financial support (EDOP-2.1.1.'A') reached the most disadvantaged micro-regions in a significantly larger proportion than those with larger amounts (EDOP-2.1.1.'B' and 'C'). The programme has to some extent contributed to the reduction of regional inequalities.
- Most non-repayable funds were used to finance asset development projects at firm level primarily in the trading sector and manufacturing. A considerable number of companies engaged in professional, scientific or technological activities received small grants in Central Hungary.
- A large number of beneficiary firms submitted their repeated application for additional grants though dominantly not more than twice, and cross application between SME-measures of the EDOP and between different operational programmes was not usual.

¹ In Hungarian: *Gazdaságfejlesztési Operatív Program, GOP.*

² In Hungarian: *Közép Magyarország Operatív Program, KMOP.*

³ In Hungarian: *Nemzeti Adó és Vámhivatal, NAV.*

⁴ In Hungarian: *Egységes Monitoring és Irányítási Rendszer, EMIR.*



- While larger firm size (measured in terms of capital stock and net revenue) increased the likelihood of receiving grant, this causality is on the reverse in case of liquidity indicators. This means, firms in better financial situation did not opt for the grants.
- The programme did not reach its main goal: according to our estimates, beneficiaries did not perform better than the control firms after the investments completed - in terms of net revenue and productivity (labour productivity) the programme had no positive effects, though the employment effect turned to be small, but significantly positive (as compared to the control firms).

Description of the measures and dataset

The EDOP-2.1.1. and the CHOP- 1.2.1 measures have been launched in 2007. They provide non-refundable financial support primarily to small and medium-sized enterprises in order to upgrade their technologies. The programme manager authorities have announced the first calls in 2007. There is one unique component combining grants with microcredit scheme (EDOP 2.1.1-M and CHOP 1.2.1-M), which has been launched in 2011.

The amount of the grants is ranging from min. EUR 3.000 up to amounts above EUR 500.000. The subsidy has covered 50, 40 or 35 % of the total costs of the firm-level investment projects - in dependence of the official co-financing shares varying in accordance of the regional aid intensity map.⁵ Typical costs re-financed by the support scheme may be related for example to asset acquisition, information technology developments, introduction or certification of new quality assurance, eco and other management systems, patenting, and to development of human resources (limited to max. 10 % of all project costs).

Table 1. Details of the EDOP measures

Component	Grant type and amount ⁶	Main target group	Allocation period and method	Expected results
EDOP 2.1.1.A (CHOP 1.2.1.A)	Small grants (EUR 3-166.000)	Micro and small enterprises	2007 onwards Automatic procedure	Increase in sales
EDOP 2.1.1.B (CHOP 1.2.1.B)	Medium grants (EUR 16.000-500.000)	SMEs	2007 onwards Project-level evaluation	Increase in sales
EDOP 2.1.1.C	Large grants (above EUR 500.000)	SMEs and large firms	2007 Project-level evaluation (unique procedure)	Increase in sales and employment

⁵ For official source, see: <http://eugo.gov.hu/doing-business-hungary/investment-incentives>

⁶ Calculated at official EUR rates published by the Hungarian National Bank, December 31 2011.



EDOP 2.1.1.M (CHOP 1.2.1.M)	Grants combined with microcredits (min. EUR 3000)	Micro firms and SMEs	2011 onwards Project-level evaluation	Increase in sales
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The linked and anonymous NTCA-UMIS database provided by the NDA contained data on the supported enterprises (ca. 24.500 firms) and financial and performance data of a share of the registered Hungarian companies as potential control population (appr.108.000). Due to data limitations and to the fact that the implementation of the different measures was in delay in the first half of the programming period, the impact assessment could be performed only for those companies which have completed their development project by the end of 2009, had less than 100 employees, and all their key financial and performance indicators were available.

In contrast to our planned estimation strategy, we had historical data prior of the programme period only for one financial year (2006) before the programme starting date. Descriptive statistics and analysis of selection effects was run for the total population of beneficiaries between 2007 and 2011.

Comparison of the treated and control companies

Distribution by region: Based on our dataset, Hungarian companies are predominantly located in the Central Hungarian Region. Almost half (47.7%) of the companies have their residence in this region, while the rest of the sample is evenly distributed among the convergence regions. Due to the asymmetric proportions of the available funds between the EDOP (convergence regions) and CHOP (Central Hungarian region) programmes, a small portion of the beneficiary firms is coming from Central Hungary. The regional distribution has not showed a particularly large dispersion among the EDOP participants either. It is interesting to observe though that while the share of companies in the most disadvantaged regions is negligible in case of the EDOP-2.1.1. 'B' and 'C' components, it reaches almost 10% in case of the 'A' component. This share is almost the double of the share found in the control sample (5%).

Distribution by sector: Most of the enterprises in our big sample (60%) are active in the following four sectors: commerce and automotive industry (27%), professional, scientific and technological activities (12.4%), followed by processing industry (11%) and construction (9%). The EDOP-2.1.1. beneficiaries are mostly active in the commercial and processing industry (approximately 52% in case of the 'A', and 71% in case of the 'B' and 'C' components). The sectoral distribution of beneficiaries is slightly different from the control sample regarding the order from most frequent to least frequent sectors. For example, companies active in the professional, scientific and technological sector have a relatively larger share among treated firms than in the control group – as opposed to construction industry which is under-represented in the treatment group.



The same distribution is observed in the sample of the CHOP, with the minor addition that the share of participant firms active in the professional, scientific and technological sector exceeds 10% (reflecting plausibly the very centralised structure of Hungarian economic networks).

Tendering preferences of bidding firms

Approximately 30% of the participants (EDOP-2.1.1. 'A' component) was successful in more than one tender. The share of companies which re-applied and also won a grant at least once is exceptionally high in case of the EDOP-2.1.1.'B' and 'C' measures (exceeding 50%), while it is significantly lower in case of the CHOP programme (23%). The share of applicants applying over and over again is lowest in case of the 'M' component of the EDOP-2.1.1. measure.

Results also show that those winning in the EDOP-2.1.1. 'A' component rarely applied simultaneously for another one too. Few participants of the EDOP measures in general received further subsidies from other regionally targeted measures (107 companies) and from the Environment and Energy Operational Programme (EEOP, 14 enterprises). Further investigations in the later phase of the programme implementation is necessary to analyse the business characteristics of those preferring and receiving multiple subsidies across the various programmes.

Selection effects

We analysed the influence of firm attributes on i) the likelihood of grant application, and ii) that of winning. The results show that firm size positively influences the winning odds. The larger the fixed asset stock and net revenue of the applying company, the more likely it is to receive the requested grant. Firms from the most disadvantaged micro regions are supported with a higher probability.

The impact of liquidity and capital intensity on selection is significant, but smaller in magnitude. The smaller these indicators are, the greater is the probability of receiving grants. We also tested the impact of other firm attributes (i.e. the impact of net revenue, number of employees and productivity) on the winning chances, but the results led to inconsistent conclusions across the various estimation procedures. Therefore, it is ambiguous how these characteristics influence the firm-level decision to apply for a grant and the chances of receiving support.

Programme impacts

Taking into consideration the previously listed observations, the impact of the treatment has been estimated in various model specifications. The main result is that the treated companies have built up significantly larger capacities than those in the control group. This is demonstrated by the increase in the number of employees and in the stock of fixed assets of the treated firms.

These results have proven to stay significant in case of a narrower set of beneficiaries (firms with more than 5 employees), as well as in case of a wider group (firms with more than 3 employees) of the treated firms. Panel estimations



show that the treated companies of both subsamples have on average 2.5-3% more employees than their controls. The estimation also shows that increasing capital intensity was coupled with an increase of the number of employees in the case of the treated companies. This could indicate that the investments contributed to an increase in sales and revenues, though we have found no evidence for that.

While fixed assets and capacities increased, other post-treatment performance indicators did not differ significantly from those of the control firms. Therefore, the expected increase in sales revenue – the strategic goal of the intervention – has not been confirmed. This allows us to conclude that even though the treated firms did build up additional capacities, they were not able to increase either their sales revenue or their net income compared to the control firms. Notably, these results may also indicate the deterioration of firm-level productivity among treated firms, though this should be investigated following access to more detailed firm-level data (esp. that of detailed balance sheets).

Recommendations for possible extensions of the impact assessment

The abovementioned results should further be explored based on observable firm-level data in quantitative and in interview-based, qualitative analysis. In order to know the limitations of these results, it is important to add that due to the lack of appropriate data, the potential substitution effect – indicating the phenomenon of the treated firms employing additional workforce, building up extra capacities and technologies at the cost of other enterprises on the local market – could not be measured. In case the substitution effect does play a role, the incidental and the intended effects can put out each other on the macro level. In addition to that, the estimated positive impacts are upwards biased because we cannot exclude the option of self-selection- meaning that enterprises applying for this subsidy had better growth potentials than the ones not applying for the grant in the first place.

Timing of this impact assessment did not allow us to cover the whole programming period. It would be necessary to prepare an ex-post assessment of the EDOP-2.1.1. measure after closure of the programme, as early as 2015. In order to improve the targeting of the next EDOP in the period

2014-2020, fine segmentation of the Hungarian SMEs is strongly recommended. Further analysis of variations in firm-level performance indicators and that in unique support needs, broken down by sectors, geographic location, and/or gender and age of majority owners, number of employees is recommended. Finally, although this study could not confirm findings of earlier studies on the role of self-selection due to the lack of historical, firm-level data from the pre-treatment period, it would be crucial to test self-selection by using pre-treatment performance indicators of both treated and control firms. We strongly assume that historically better-than-average performing companies are more likely to opt for these grants and be selected, as well. Consequently, the programme attracts and prefers companies with expectedly better growth potential rather than those



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meeting in effect real challenges in access to external financial resources in general.

The National Development Agency commissioned the Budapest Institute for Policy Analysis for conducting this assessment between March 2012 and March 2013.