



# THE EVALUATION OF SUPPORT FOR THE EXPANSION OF BROADBAND IN SWEDEN

FACTSHEET OF THE EUROPEAN EVALUATION HELPSDESK FOR RURAL DEVELOPMENT - NOVEMBER 2018



## RDP SUPPORT TO BROADBAND EXPANSION

Rural Development Programme (RDP) Focus Area 6C is designed to 'enhance the accessibility, use, and quality of information and communication technologies (ICT) in rural areas'.<sup>1</sup> Under this focus area, RDPs can support investment for broadband infrastructure, including its creation, improvement, expansion and accessibility.

Investments in broadband infrastructure can play an important role in the socio-economic development of rural areas, and their effects are expected to be measured by using common and/or additional evaluation elements, such as questions, judgment criteria, indicators and methods.

For instance, the common result indicator R.25 measures the percentage of the rural population benefiting from new or improved services and infrastructure. R.25 can be used in combination with additional indicators to answer the evaluation question related to the Focus Area 6C, 'To what extent have RDP interventions enhanced the accessibility, and quality of information and communication technologies (ICT) in rural areas'.

This factsheet explores Sweden's approach to the evaluation of broadband support.



## EVALUATION OF BROADBAND EXPANSION IN SWEDEN

In Sweden, the expansion of broadband infrastructure is supported by the RDP and the European Regional Development Fund (ERDF). As managing authority of these funds, the Swedish Board of Agriculture (SJV) and the Swedish Agency for Economic and Regional Growth (TUV) commissioned the Department of Urban and Rural Development at the Swedish Agricultural University (SLU) to evaluate the effects of broadband investments on local enterprises and the effects of the policy model used to deliver broadband investments.

The evaluation aimed to answer nine additional evaluation questions, as well as prepare the evaluation for the Annual Implementation Report (AIR) to be submitted in 2019.

### Working Steps of the Evaluation:

The first part of the evaluation was carried out from Autumn 2017 to Spring 2018 and consisted of a quantitative and qualitative analysis of



## FURTHER INFORMATION

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For additional information on the Evaluation:

[Evaluation of support for the expansion of broadband: Report I](#)



the current situation and a review of the literature on the evaluation of broadband.

The preliminary results were reported and discussed with the reference group<sup>2</sup>, and a selected pool of experts of the Swedish Board of Agriculture. The first interim evaluation report was published in May 2018<sup>3</sup> and answered four evaluation questions.

The second part of the evaluation started in August 2018 and the preliminary results will be presented in December 2018. It updates the baseline situation and analyses the data collected from the [Statistics Swedish](#) (SCB) about rural enterprises. The publication of the second and final report is expected by Spring 2019.

## Evaluation Elements to assess the effects of broadband expansion:

The first part of the evaluation answered four questions. Two were focused on the micro-level and concerned the economic turnover and employment of local enterprises with access to broadband connection with (at least) 100 Mbit/s. The third question relates to how support affects access to IT-infrastructure in rural areas (geographical coverage and the level of connectedness). The fourth question focused on the effects of the policy model for support. Each question was answered through quantitative indicators and qualitative information.

Quantitative indicators were designed to capture the effects on local enterprises before and after, as well as, with and without the support. Two examples are provided as follow:

1. Change in turnover between enterprises before and after receiving access to broadband with at least 100 Mbit/s.
2. Change in comparative turnover between enterprises with and without access to broadband with at least 100 Mbit/s.

Indicators were analysed using specific judgment criteria to measure the effects of the investments. Data was collected through questionnaires sent to local enterprises with access to broadband networks in rural areas. Local enterprises were selected from four municipalities and their register database, from the business and credit reference agency, was used to collect data on their turnover.

Data on the turnover was analysed through statistical matching techniques, namely Difference in Difference (DiD) between two groups. Group 1, consisted of enterprises located in rural areas in four municipalities, with access to high speed broadband and Group 2, enterprises located in the same four municipalities without access to high speed broadband. 3000 local enterprises were surveyed of which 300 answered the questionnaire. In the second evaluation, this data will be enriched with the information from the Statistics Sweden on rural enterprises.

Qualitative information was collected to gain further insights on the cause-effect relationship between the broadband investments and the negative and/or positive experiences of different stakeholders (farmers, enterprises, public officials, and the wider civil society). The qualitative information was collected through interviews, coupled with desk research of public reports and statistics, and fieldwork carried out in eight municipalities. The stakeholders were chosen in consultation with the steering group and reference group to cover all relevant actors in different geographical areas. Around 10 interviews were carried out in each of the four municipalities, in total approximately 40 interviews were conducted. The interviews were semi-structured with questions that allowed interviewees to reflect upon their situation in relation to high speed broadband. The evaluation focused on how these actors described the process of broadband construction, the funding model, and the wider effects of broadband access. The qualitative analysis was conducted with the software [NVivo](#), and complemented with quantitative figures as in Table 1.

Table 1. Perceived effects of getting access to high speed broadband, by businesses in rural areas.

<b>Have you been able to streamline your business by gaining access to high speed broadband</b>	<b>Yes</b>		<b>No</b>		<b>Don't know/Don't want to answer</b>
	45%		53%		3%
<b>Has broadband had an effect on costs in your business? (Besides the cost for broadband)</b>	Yes, reduced costs	Yes, able to delimit increased costs	No		Don't know/Don't want to answer
	30%	11%	55%		4%
<b>Does broadband have an effect on the turnover for your business?</b>	Increased turnover	Retained turnover	Delimit loss in turnover	No	Don't know/Don't want to answer/Other
	9%	17%	1%	68	5%
<b>How big is the impact of broadband on the number of employees?</b>	Large impact	Rather large impact	Small impact	Very little or no impact	Don't know/Don't want to answer
	4%	2%	5%	88%	1%

Source: Compilation of tables in "Utvärdering av stöd till utbyggnad av bredband - Delrapport 1" based on "Effekter av bredbandsstöd" by Stelacon 2018



## LESSONS LEARNT AND RECOMMENDATIONS

The results of the quantitative analysis showed an overall positive effect from broadband expansion on the turnover of local enterprises, although the limited data availability does not allow one to draw statistical significant conclusions. The possible benefits from the access to high speed broadband of 100 Mbit/s or over, seems to be highly dependent on the quality of the earlier alternative infrastructure for internet connections in rural areas. Several enterprises interviewed answered that they would not be able to run their business without access to high speed broadband, however, these numbers were not statistically significant. Further statistically significant results are expected to be obtained in the second follow-up evaluation.

Findings from the qualitative assessment indicate that the management and coordination of the support for the construction of fiber optic networks is crucial, especially, when the support comes from two different distinct sources. Equally important, is the involvement and engagement

of different stakeholders at the local level, regardless of the nature of the project (private or public). Moreover, geographical circumstances within a given region or local area need to be taken into consideration when formulating policies for broadband support.

For the evaluation of the effects of broadband expansion, the evaluator recommended to use both qualitative and quantitative methods to get stronger evidence for the results. The involvement of different experts along the evaluation process brings value to the overall quality of the evaluation. Finally, it is important to be aware of and consider the previous delivery methods for the internet (DSL, Cable, Wireless, Satellite, etc.) to rural households or enterprises when drawing conclusions of the importance of high speed broadband. In this case, users who already had relatively fast internet did not find the difference or importance of high speed broadband as relevant as those users who had much slower and more unreliable connections previously.

### MAJOR CHALLENGES:

- To present results not only in numbers but also possible explanations.
- Lack of expertise in certain subjects within the evaluation group.
- Risk of jumping to conclusions.
- To isolate the effects of support for broadband towards increased turnover and employment, as well as access to IT-Infrastructure.

### SOLUTIONS TAKEN:

- Use both qualitative and quantitative methods to get stronger evidence for the results.
- Involve different experts along the evaluation process to increase the overall quality of the evaluation findings (validity, usability, etc.).
- Draw conclusion and recommendation on the importance of broadband investment by taking into account also other possibilities to deliver internet and increase connectivity for rural households or enterprises.
- Formulate interviews and questionnaires in a clear, concise and factual manner. Use statistics from areas where support has been granted.



Send your questions to:

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<sup>1</sup> European Network for Rural Development – Contact Point (2017) Rural Development Programmes 2014 – 2020: Key facts & figures. Focus Area 6C: Access to and quality of ICT. Factsheet. Retrievable on [https://enrd.ec.europa.eu/sites/enrd/files/focus-area-summary\\_6c.pdf](https://enrd.ec.europa.eu/sites/enrd/files/focus-area-summary_6c.pdf).

<sup>2</sup> The reference groups consists of the Swedish Post and Telecom Authority, the Swedish Broadband Forum, Doing Rural AB: An association of rural researchers and developers, A local village group, Stelacon: A consultancy company with expertise in smart cities, regional development, digital services and policy & regulation and Two regional broadband coordinators.

<sup>3</sup> <https://webbutiken.jordbruksverket.se/sv/artiklar/rapporter/utvarderingar/index.html>.

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The Evaluation Helpdesk works under the supervision of Unit C.4 (Monitoring and Evaluation) of the European Commission's Directorate-General for Agriculture and Rural Development.

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## EVALUATION WORKS!



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