

Evaluation of the KfW Programme „ERP Digitalisation and Innovation Loan“

Executive Summary

Overall Appraisal

The evaluation of the KfW programme "ERP Digitalisation and Innovation Loan" for the years 2017 to 2019 came to a positive result about the programme's effectiveness and efficiency:

- The programme contributes in transferring the **innovative potential** of small, medium-sized and midrange firms into **growth**. The programme constitutes an important element in the innovation support portfolio in Germany. The special role of the ERP Digitalisation and Innovation Loan is to translate new technology, new products, new services and new processes - partly developed by using other public support through schemes like ZIM and the Thematic Programmes - into additional sales and new jobs.
- One of the **unique features** of the programmes is to be open also for **mid-sized firms** and to provide a **substantial amount of funding** per project (up to €25m).
- The handling of applications via the firms' main commercial bank contributes to a **non-bureaucratic programme administration** and results in a high efficiency of the programme management.
- The ERP Digitalisation and Innovation Loan led to positive firm-level as well as economy-wide effects. Innovation expenditure and investment in fixed assets in the German SME sector were significantly raised by the programme. Beneficiaries of the programme were able to increase their employment and sales substantially. As the programme required a rather small amount of subsidies, the **return for public money is very high**.
- These positive results suggest to **expand the programme** so that a greater number of small, medium-sized and midrange firms can be supported in realising growth based on digitalisation and innovation efforts. The programme also has a potential to **combat the Corona crisis**, particularly if the programme's attractiveness is increased by adding a grant component.

Relevance of the Programme

The support offered by the ERP Digitalisation and Innovation Loan shows a number of distinct features within the portfolio of public innovation and digitalisation support programmes in Germany:

- The programme allows firms to finance **innovations and digitalisation projects at a large scale** and furnishes growth-oriented innovative firms with much **higher financing** than in almost all other programmes.
- The programme also targets **mid-size firms** (up to €500 million annual sales), a group of companies that are often not eligible in programmes funding innovation or digitalisation projects (except from pure R&D projects).
- The programme offers financing for **close-to-market projects** and the **transformation of innovations into growth** ('scaling-up'). Such projects are not eligible for funding in most other Federal programmes. At the same time, the financing conditions of the ERP Digitalisation and Innovation Loan are more favourable than those of loan programmes run by State governments.
- Within the Federal government's policy mix, the ERP Digitalisation and Innovation Loan is a **key instrument** to utilise existing technological and innovative capacities of small to mid-size firms **for growth and higher competitiveness**.

Programme Activities

In the three years 2017 to 2019, the ERP Digitalisation and Innovation Loan handed out 1,603 individual loans to 1,164 different firms with a total volume of €3.58 billion.

- The programme mainly reaches out to firms with a **high innovation capacity**. Beneficiaries are more frequently engaged in-house R&D and invest much more in digitalisation, innovation and fixed assets. The ERP Digitalisation and Innovation Loan can hence build upon a high level of technology and innovativeness of the funded firms.
- Compared to the average of small to mid-size firms in Germany, programme beneficiaries are larger and older. The share of firms from the manufacturing sector is disproportionately high while knowledge-intensive services (e.g. IT services, engineering, consultants) participated less frequent in the programme. Firms from **Baden-Wuerttemberg, Bavaria** und **Bremen** used the programme more often than one would have expected given the States' share in the total firm population.
- The activities financed by the programme focus on **continuous improvement** of the firms' products and services as well as their internal processes and on expanding capacity. From an innovation point of view, **incremental innovations** dominate, though

many firms funded in the programme segment "innovation projects" have introduced entirely new products and market novelties.

Impacts

An analysis of causal programme impacts based on a control-group approach and matching techniques reveals a number of positive results which can be attributed to the financing provided by the ERP Digitalisation and Innovation Loan:

- The share of innovation expenditure in sales is 1.6 percentage points higher among funded firms (reaching 4.6% on average) than it would have been in the absence of funding through the programme. This corresponds to **additional innovation expenditure in Germany of €1.2 billion per year**. Investment in fixed assets were 2.3 percentage points higher (at 6.8% on average), resulting in **additional €1.9 billion capital expenditure** per year.
- The support by the programme led to significantly higher process innovation results. Average unit costs were cut by an additional 0.7 percentage points, leading to average unit cost reduction in funded firms of 2.1%. This corresponds to **additional annual cost savings of €0.35 billion per year**.
- The financing provided by the ERP Digitalisation and Innovation Loan helped the beneficiaries to increase employment by additional 8.1 percentage points in a two-year period, leading to **14,500 new jobs**.
- Beneficiaries were able to increase sales as a result of the programme's support by additional 9.7 percentage points in a two-year period, generating **additional annual sales of €1.9 billion**.
- **Compared to other innovation support programmes** (e.g. ZIM, Thematic Programmes, EU programmes, State programmes), funding by the ERP Digitalisation and Innovation Loan contributes to significantly **higher cost savings** and a higher **growth in employment and sales**.

Efficiency

The **administration of the programme is efficient**. The total cost of delivering the programme (at KfW, commercial banks and beneficiaries) were substantially less than 1% of the committed credit volume of €3.58 billion. The high efficiency of the programme was confirmed by a survey of beneficiaries.

The high programme efficiency is strongly linked to the **programme design** which uses commercial banks for distributing the loans to the beneficiaries. The programme can hence build upon the well-established ties between beneficiaries and their main bank, including key infor-

mation on the firms' solvency and investment plans. This keeps additional costs for application, examination and delivery of loans low.

The efficiency in terms of the **return on public money is very high**. The ERP Digitalisation and Innovation Loan has consumed a relatively small amount of subsidies for offering more favourable conditions of financing as compared to a market-based loan (in terms of interest rate, release from liability, grace period, loan period), which can be estimated to a middle two-digit million Euro amount for the entire three-year funding period (2017-2019). This relatively small amount bought substantial positive economic results as described above.

Recommendations

Given the high effectiveness and efficiency of the ERP Digitalisation and Innovation Loan in the time period examined by this evaluation, recommendations focus on **small adjustments to further improve the instrument** and on **future developments**. The basic nature of the programme should remain unchanged.

- The high effectiveness of the programme calls for an **expansion of programme activities** in order to reach out to more small to mid-size companies. Then doing so, the focus on medium-size and mid-range companies should be kept.
- A way to increase the number of beneficiaries without compromising effectiveness is to **more closely interlink the programme with R&D programmes**, particularly ZIM, the Federal Thematic Programmes, and EU R&D programmes. Through funding from these programmes, beneficiaries often have generated new technologies, products, services and business models. The ERP Digitalisation and Innovation Loan can help to leverage this investment into commercialisation and building up new capacity.
- The ERP Digitalisation and Innovation Loan can also help to **conquer the current Corona crises** by linking the recovery of production and distribution activities with an **innovative renewal** of firm activities (particularly by using digital approaches). Given the still low level of interest rates for commercial loans, the programme's attractiveness should be increased by offering a grant component.
- For further improving the programme, access to **release from liability** should be facilitated as this programme instrument has been rarely used yet. Programme activities should be gradually **shifted towards the service sector** and **distributed more evenly across Federal States**. The programme's expansion towards **young firms** should focus on firms with a distinct growth strategy ('scale-ups') and closely interlink with other support measures for this target group.