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INNOVATION POLICY IN THE CONTEXT OF NOWADAYS GLOBALISATION

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Abstract. Globalisation poses great challenges for the future of the European countries. New sources of growth are needed as the global competition weakens the profitability of the existing industries. High-level research and education, good infrastructure, and public research and development (R&D) support are identified as promoting mechanisms. Domestic market would support business of SME's significantly. General innovation policy (e.g., tax reliefs for R&D) may provide good starting points for many fields but their growth is often hindered by factors that are specific to one or a few industries. It is essential to analyze variables of a theoretical Brouwer's mathematical model for analysing the sales of new products. A higher R&D intensity results in higher sales of new products. R&D subsidies reduce the fixed costs of introduction. A major R&D policy instrument should be a general tax-credit facility to lower the labour costs of R&D personnel. One of purposes of the innovation policy must be to reduce the R&D costs of companies, in particular those of SMEs. Subsidies, including the tax-credit facility, reduce the costs of introducing new products into the market. Aim of the research is to analyse mentioned above areas of innovation policy in context of Latvia.

Keywords: globalisation, economic system, innovation policy, equation, effectiveness.

JEL classification: C230, F230, L110.

1. Introduction

Globalization poses great challenges for the future of the European countries. In the age of globalization, economic growth and the welfare of nations depends on basic innovations. Innovation policy can support the development of new industries. The goal of innovation policy is to select a desirable future and facilitate its realization.

Entrepreneurship is the driving force of innovations, moreover, it creates welfare and improves the standard of living. Government has a significant role by creating and maintaining the framework, in which enterprises may introduce novelties, as well as by directly providing support when market fails. Small companies play an important role in the innovation systems of Europen countries in the context of globalization.

The internationalization of the small and medium sized enterprises (SMEs) has five stages. During the first stage, firms have a domestic market focus. Next follows the pre-export stage, when the firm evaluates the possibilities to start exporting. The third stage is experimental involvement, when exporting is a marginal activity. The fourth stage is active involvement, when international business is a normal activity. After the fifth and last stage of firms internationalization the comapny can now be called international.

The scientific, research and development resources of Latvia are relively small. A system of creative activity dependent on user-driven innovations should be created. Country should develop the abilities of enterprises to introduce innovative services and products in the market, that satisfy the needs of clients and consumers.

In conditions of globalisation the success of innovation policy of small countries becomes more dependent on the ability to integrate its enterprises in international flows of knowledge. Research and development (R&D) becomes global very rapidly and is becoming an increasingly important service offered in the global market, which is purchased by an incre-asing number of large enterprises. The government should offer financial support to the companies, that cooperate with users in the creation of novelties, for the purchase and integration of R&D services in global networks of R&D.

Economic theory must provide a strong justification for government support for research and development (R&D), including subsidies and incentives for business research. Tax incentives for business R&D have become an important tool

used by countries to build their innovation capabilities and support their growth. A tax credit especially provided for research and development may have a positive effect on the increase in the number of innovations.

A new tax allowance to facilitate research and development (R&D) is introduced in Latvia as of 1 July 2014. Taxable income can be reduced by expenses directly attributable to personnel and costs of research services purchased from specialised scientific institutions, multiplied by 3. The result of the R&D process may not be disposed of for the following three years. These Corporate Income Tax (CIT) Act amendments replace the previous regulation that allowed applying a 1.5 coefficient to expenses of activities resulting in registration of a new patent (Main Amendments to Tax Laws as of 1 January 2014, SORAINEN 2013).

The goals of our paper is to rewiev the international experience accoding R&D tax allowances; the mathematical modelling to determine the effect of economical factors and circumstances for the necessity of tax reliefs for R&D; to work out recommendations for development of innovation system of Latvia in the context of nowadays globalisation.

2. Tax credit experience of different countries

As mentioned above, tax incentives for business R&D have become an important tool used by countries to build their innovation capabilities and support their growth. The essential feature is to describe the R&D tax incentives experience of diiferent countries acording this context.

- **United States of America**

The United States was the first country in the world to introduce a tax credit to support busi-ness R&D. The goal of the credit is to stimulate business R&D investment. Traditional credit of 20% exceeding base and alternative simplified credit of 14% on excess expenditure over 50% of prior three-year average, also special credits for basic research. It is open to all industries at present. Budget 2014 expected to reform and institutionalises the credit (IBEC 2013).

The Research & Experimentation Tax Credit, was introduced in the 1981 Economic Recovery Act, which contained several temporary measures to boost private demand during an economic slowdown. The credit was created with an expiration date of December 1985 (Tyson, Linden 2012). The credit has been restructured several times, the corporate R&D tax credit includes several distinctive elements. The general idea for the credit is that certain kinds of R&D spending, exceeding some base amount, qualify for partial reimbursement against taxes owed. While this concept is straightforward, its implementation has turned out to be exceedingly complex. To calculate the base amount of R&D spending for companies, the base percentage is multiplied by the average sales for the four tax years preceding the current one. If this amount is less than 50 percent of the research expenses that qualify for the tax credit in the current year, then the base amount is raised to this 50 percent minimum level.

The United States spends more than any other nation in the world on R&D. Business R&D investment is becoming more globalized. Most business R&D is conducted by large corporations, with about half of all business R&D performed by companies with 10,000 or more employees. These companies account for about 27 percent of all private-sector employment. U.S. multinational corporations invest heavily in R&D.

The presence and support of small business are vital components of the U.S. R&D infrastructure. Small companies are more likely to explore technology subfields in which large ones are less active, indicating the important complementary role its play in the U.S. innovation landscape. Small U.S. companies are more likely than large ones to do their R&D in the United States, often in technology clusters around universities and research centers. The high research productivity of small companies, their ability to fill gaps in the domestic technological infrastructure, and their propensity to conduct their research in the United States are all reasons to consider special treatment for them in government policies to support R&D, including the corporate R&D tax credit.

The U.S. corporate R&D tax credit is one of the most carefully studied tax incentives in terms of effectiveness. Policymakers and researchers study the effectiveness of this credit.

- **Netherlands**

There are 3 schemes of R&D tax credit, one of them reduces wage and social security contributions for R&D staff (38% on 1st €200K & 14% on remainder to max €14m; start-ups get 50% on 1st €200K); next one is super deduction of 154% on non-wage costs and third is Innovation box offsets development costs against income.

All of them are open to all industries, activities must be in the Eropean Union (EU) and staff on Dutch payroll; intangible asset must be of benefit to Dutch company (research can be contracted abroad).

Additional tax benefit to new patented and non-patented income from activities eligible in nearest future (IBEC 2013).

- **Singapore**

100% base deduction together with enhanced deduction of 250% (Singapore-based R&D) or 300% (non-Singapore) on €400K p.a. till 2015; further qualifying expenditures eligible for super deduction of 200%.

The key improvements are some changes to definition to better incorporate software; Singapore locations schemes 2009-2015: include certain expenditures (e.g. staff, physical inputs) may qualify for additional 50% relief; R&D activities need not be directly relevant to core business (IBEC 2013).

- **United Kingdom (UK)**

Large companies get 130% super deduction; SMEs (<500 staff) get 225% super deduction (loss making SMEs can claim 24.75% cash credit).

Eligible activities: clinical trials; R&D staff; external staff provision (65% of costs); physical inputs; 65% of outsourced costs for SMEs; large companies can claim relief on outsourced work to them by other large company or person not subject to UK tax.

Key improvements are 'Patent box' for patent royalties (10%); 'above the line' mechanism to be introduced (IBEC 2013).

The UK's focus on R&D activity in the SME sector is particularly noticeable. The UK has become particularly competitive in this area with a lower headline corporate tax rate, a lower marginal personal income tax rate, enhancements to R&D tax credit scheme.

- **Ireland**

Incremental credit of 25% of expenses exceeding base; deductible in year incurred; credit of 25% for R&D facilities; key employee relief.

There are no restriction on industries but restricted to systematic, investigative or experimental activities in science and technology; expenditure includes wage, physical inputs and royalties; outsourced activities limited to the greater of €100K or 10% for external companies.

Key improvements are qualifying expenditure doubled to first €200K to benefit from the 25% R&D tax credit on a volume basis and incremental credit to remain in excess of €200K (IBEC 2013).

Investment in intellectual capital is one of the key building blocks for sustainable economic growth of Ireland. Country has made progress over the past decade but continued improvement will largely depend on the ability to maintain favourable framework conditions. Government continues to invest in research, development and innovation in order to boost its national productivity and economic competitiveness. It is also vital for a small, open economy that Ireland remains an attractive place to conduct research, development and innovation.

Ireland strives to join the ranks of European innovation leaders. While Ireland had originally signed up to meeting the ambitious European target for total R&D expenditure to reach 3% of GDP by 2020, the present economic circumstance has made this difficult to achieve. Ireland has now committed to a revised R&D investment target of 2.5% GNP (equal to 2.0% of GDP) by 2020. This target will be achieved by both public and industry direct contributions. This will require more support to facilitate the emergence of technologically-based local companies and encouraging innovative activities in less intensive sectors.

Participation in the R&D tax credit also has other major additionalities in terms of companies behaviour, employment, turnover and R&D spending. These include:

– The R&D tax credit is important to employment growth in Ireland as 62% of companies say the credit is important to their firm creating new jobs, while a further 67% said it was important to the retention of jobs in the country (IBEC, 2013).

– The credit is important to future investment in Ireland, almost 70% of firms state the credit is important in their decision to invest in R&D in Ireland.

– Participation in the scheme has led to improvement of R&D process in companies, 70% of them improved on the recording of their activities, while 69% improved in how they retained their R&D related documentation.

Model which is developed for SMEs of Ireland include the use of pro-forma templates for R&D project management, recording R&D activity and calculation of eligible costs and revenue benefit associated with the credit. Simple online calculators demonstrating the benefit and eligibility rules of the credit are a useful resource for SMEs and also greatly improve awareness and promotion of the scheme. The planned improvements of scheme:

a. Reducing the audit period for the scheme.

b. Allowing firms to allocate the credit in a tax efficient manner on a team based approach rather than just to 'key employees'.

c. Introduce a lower R&D time activity threshold for SMEs – the current 50% requirement remains too high for smaller business.

R&D tax credit forms a central part of Ireland's strategy to stimulate innovation and promote R&D activity in the country at the company level. The task of R&D tax credit of Ireland is to maintain pace with the evolving national innovation policy environment in the nearest future.

- **India**

200% super deduction for inhouse R&D activities in biotech and certain manufacturing sectors; 100% reduction for expenses falling outside super deduction; 125% to 200% for certain entities conducting R&D in India; salary and material costs for three years prior to business commencement (IBEC 2013).

- **Tax credits of other counties**

China and several other emerging economies in Asia have been particularly aggressive in offering a wide array of incentives—including expense de-ductions, tax credits, tax holidays, and special economic zones—to attract R&D investment from companies headquartered in the United States, Europe, and Japan, which together account for about 94 percent of global R&D (IBEC 2013).

Finland does not operate schemes to directly incentivise R&D activities through taxation-based schemes. Finland offers a range of non-repayable cash grants to companies for research projects. This is reflected in its high level of government spending on R&D compared to other competitor locations (IBEC 2013).

Singapore has tax incentives in place for innovative activities in the services sector. The change in innovation policy has led to the development of a range of innovation-support programmes by national and regional innovation support agencies targeted specifically at industry. These include both direct (e.g. grants) and indirect supports (e.g. taxation) (IBEC 2013).

3. Internationalization of SMEs

To achieve the goal of paper to issue the recommendations for the Innovation process in Latvia in the context of globalisation, it is necessary to review the process of internationalization of SMEs in European Union.

The most important barriers for internationalization of SMEs are:

Internal barriers: price of their own product or service and the high cost of internationalisation.

External barriers: the lack of capital, the lack of adequate information, and the lack of adequate public support and the costs of or difficulties with paperwork associated with transport. Both barriers are more important the smaller the SME is.

The present situation is following: A considerable number of European SMEs are engaged in international activities yet only a small percentage is involved in internationalisation beyond the Internal Market. The two most common modes of internationalisation are exports and imports (European Comission, 2010):

- 25% of SMEs within the EU27 export, of which about 50% also go beyond the Internal Market (13%);
- 29% of SMEs within the EU27 import, again 50% import from countries outside the Internal Market (14%);
- 7% of SMEs within the EU27 are involved in technological co-operation with a foreign partner;
- 7% are a subcontractor to a foreign partner;
- 7% have foreign subcontractors;
- 2% of SMEs are active in foreign direct investment.

There is a direct link between the level of internationalisation and size of the company. The larger the company, the more it tends to internationalise. This applies to any single mode of internationalisation. The smaller the country, the more its SMEs are internationalised, but the SME's proximity to a national border does not have much effect on its level of internationalisation. There is a negative correlation between the size of the SME's home country population and its level of international activity.

Awareness of public support programmes among SMEs is low. SMEs are generally not well aware of the existence of public support programmes for internationalisation that could be used by their enterprise. Step one in adequately supporting SMEs to access international markets opportunities, is to raise the rather low awareness of business support programmes among SME.

The results of the study of innovation internationalization confirm that there is a strong link between activities on international markets and different forms of innovation. These findings on the link between innovation and internationalisation do suggest that it is a good thing to design and present policy support measures aimed at stimulat-

ing innovation and internationalisation in conjunction.

3.1. The innovation thereshold

As mentioned above, the internationalization of the small and medium sized enterprises (SMEs) has five stages. After the fifth and last stage of company's internationalization it can now be called international. We would like to analyze the innovation process in the first stage, when companies have a domestic market focus, as the basis for the process of internationalization.

Among the companies that have R&D as a permanent activity, there is a group of firms did not have sales of innovative products during a lasting period. The reason for not introducing new products might be a lack of capabilities needed to introduce new products, difficulties entering a market in which competitor innovations are protected by strong propriety rights, or companies might even wait and see whether a major change in product-market combination is actually accepted before introducing their own new products.

Step one in adequately supporting SMEs to access international markets opportunities, is to raise the low awareness of business support programmes among SME. The factors that affect the costs of introducing new innovative products into the market are: implementation of several strategies to mini-mize the fixed costs of introduction, increase the role of knowledge spillovers.

The market, including the market for new products, is determined by demand, supply and market conditions and other determinants such as institutional factors. There is an assumption that individual companies are capable of adapting to changes in market conditions only by changing their own products, considering the supply-side factors. There is a direct relationship between the sales of innovative products and market structure.

According to the product life cycle, there are many small companies that compete in the combinations of product and market. On a micro level, small ones have a strong incentive to create a niche market, in which they have to change in order to survive competition with current competitors. The factor affecting the costs of introduction of new innovative products into the market is, for example, implemented several strategies to minimize the fixed costs of introduction. In this situation the role of knowledge spillovers is very important, because innovation is all about developing (technical) knowledge.

A theoretical mathematical model of Brouwer, created in 2008 for analysing the sales of new innovative products, shows that the innovation is introduced if, and only if, the expected discounted return exceeds the fixed cost of introduction. The fixed costs of introduction are a major concern in this model for the decision-making process. An indicator of innovative output is examined in the regression model, i.e. the sales of products 'new to the firm'. R&D intensity, competition, and market structure all have a positive impact on the sales of new products. The most important factors that reduce the fixed cost threshold of introduction are product-related R&D investments, R&D subsidies, and knowledge spillovers.

A company must incur fixed costs in order to introduce a product innovation. When considering introducing a new product, the firm will compare fixed costs with expected (net) revenues over the economic lifetime of the product, and only if revenues exceed fixed costs, will the firm introduce the product. A company must incur fixed costs in order to introduce a product innovation.

The equations of the mathematical model are (Bouwer *et al.* 2008):

$$y = \mu(s^{opt}) + \nu; \tag{1}$$

$$\frac{y = (\mu(s^{opt}) + \nu) \cdot (1 - e^{-f \cdot T})}{r} > c, \tag{2}$$

where:

s – R&D spending;

s^{opt} – optimal R&D spending;

y – annual sales of the innovative product;

μ – expected annual sales of the innovative product;

c – fixed cost of introducing the innovative product;

T – economic lifespan of the innovative product;

r – discount rate;

γ – mark-up of the price over variable cost per unit;

ν – prediction error.

Equation (1) and inequality (2) specify a threshold regression model: if the expected revenues exceed the threshold costs (in inequality (2)) then sales are given in equation (1). This simple theoretical model implies that the optimal level of R&D spending and hence the expected sales of the new product, are independent of the cost of introduction. This does not mean that the R&D effort is independent of the costs of introduction. R&D effort in the empirical model is an explanatory variable and not a dependent variable, i.e. we

model the sales of innovative products given (past) R&D effort.

3.2. Tax or subsidy

Mathematical research methods can help to determine when to apply tax and when subsidy, to determine the necessity of tax allowances of R&D. According Segerstrom (1998) and Li (2003) solutions it is possible to examine the optimal government policy towards R&D. Their conclusions shown in solutions (3) and (4), where first examined the optimum implementation using a tax or a subsidy to R&D.

This implies that the optimal R&D fiscal policy is:

$$\text{subsidy } (\tau R > 0) \text{ for } \frac{k(s)}{\xi(s)} < \Gamma(s)$$

$$\text{tax } (\tau R < 0) \text{ for } \frac{k(s)}{\xi(s)} > \Gamma(s) \qquad (3)$$

The innovation fiscal policy is no longer autonomous but depends on the level of the innovation radicality level. It is can consider an important property of $\kappa(s)$ and $\xi(s)$:

$\xi(s) + \kappa(s) = 1$ the reexpresson the above inequalities is:

$$\text{subsidy for } \frac{1}{1+\Gamma(s)} < \xi(s)$$

$$\text{tax for } \frac{1}{1+\Gamma(s)} > \xi(s) \qquad (4)$$

where:

τ – time of consumers positive decision

ξ – non effective attempt to introduce innovation

s – the level of innovation's radicality

R – successfully introduced innovation

k – competition thereshold

Next question after the use of the theoretical research methods could be about the practical examples according the effectiveness of tax reliefs for R&D.

3.3 The effects of R&D tax credit on innovation

A significant number of investigations examines the effect of R&D tax credits on firms' R&D expenditure and demonstrates the necessity of this credit. The main questions of the investigations are how tax credit affects companys R&D activity and what are the mechanisms. Economic theory and examples of empirical evidence from different investigations support the view that R&D plays a significant role in raising productivity on a sustainable basis. The social return on R&D investment very often is not enough, the private return is necessary to the investing firm. Many of countries have tended to rely on fiscal policy incentives to promote R&D spending in the business sector. R&D incentives are designed in many different ways. One of the R&D incentives is the tax credit.

There is a number of good examples about the best tax incentive of R&D practices in different countries.

Example 1

Kasahara *et al.* (2014) describes the example of Japan demonstrating the necessity of tax credit in terms of effectiveness as the capability of producing a desired result. The effect of R&D tax credits on companys R&D expenditure by exploiting the variation across companies in the changes in the eligible tax credit rate within one year is examined in this investigation. Researchers used the panel data of Japanese manufacturing companies and paid particular attention to the role of financial constraint to investigate the effect of R&D tax credits on companies R&D expenditure. Estimating the first-difference equation of the linear R&D model, they found the estimated coefficient of an interaction term between the eligible tax credit rate and the debt-to-asset ratio is positive and significant, indicating that the effect of tax credit is significantly larger for companies with relatively large outstanding debts. They found that an increase in the tax credit has a positive effect on R&D expenditure especially for companies with higher debt-to-asset ratios in their investigation. They also found that the financial constraint of companies with outstanding debts would play a small but non-negligible role to explain the effect of these counterfactual policies on the aggregate R&D expenditures.

Example 2

Cappelen *et al.* (2012) describes the Norwegian government efforts to stimulate private R&D investment by introduction of R&D tax credit scheme for small and medium-sized enterprises (SMEs), which became available to all firms instead the traditionally used direct R&D subsidies.

The tax credit scheme provides a volume-based tax credit to firms with R&D project that the Research Council of Norway has approved. A tax credit of 18% (20% for SMEs) of R&D costs for the approved project was cosidered deductible from the firm's income tax, with a project cost cap roughly equal to half a million Euros. If the firm does not pay any tax or pay less tax than the tax credit, the credit is paid to the firm as if it is a

grant. The scheme provides an incentive for increased R&D mainly to firms with small R&D projects for which the cap in the tax credit is not binding.

Findings of researchers are based on an elaborate empirical model which controls for self-selection and endogeneity in a two-equation setup: one new tax credit scheme participation-equation and one innovation outcome-equation. The model also allowed for firm specific heterogeneity in the effects of participating in the tax credit scheme.

An important advantage of their data was the possibility to test the exclusion restrictions used in order to identify causal effects of R&D tax credit scheme on innovations. For that purpose they used the innovation survey from the three-year period preceding the new R&D tax credit scheme for small and medium-sized enterprises and the conclusions are following:

1. The new R&D tax credit scheme contributes to the development of new production processes and to a lesser extent to new products for the company.

2. Companies that collaborate with other ones are more likely to have successful innovations.

3. The scheme targets firms with little or no previous record of R&D activities as the marginal cost of R&D is lowered by the tax credit only for firms whose R&D spending would be below the cap in the absence of the scheme.

4. Since the probability of a process innovation relative to that of a product innovation (i.e., a new product to the market) is highest in the process innovation group, it is not surprising that the scheme favors process innovations over product innovations.

5. For stimulation of major product innovations, other research policy instruments such as grants from the Research Council of Norway are probably more relevant. It has been argued, that the Norwegian innovation system has been built around large companies engaged in traditional, more mature resource intensive industries.

6. Smaller firms operating outside these industries have less access to outside funding and the tax credit scheme could be interpreted as an attempt to reduce this lock-in.

4. The necessity of tax credit in Latvia

The situation in economics of Latvia is different from above mentioned countries but despite this a new tax allowance to facilitate research and development (R&D) is introduced in Latvia as of 1 July 2014 (SORAINEN 2013). According the equations of theoretical model (1) and (2) Bouwer *et al.* (2008) and Segerstrom's (1998) and Li (2003) solutions (3) un (4) we can conclude what optimal R&D tax credit application conditions are when satisfied the simplified inequalities (5) and (6).

A company must incur fixed costs in order to introduce a product innovation. When considering introducing a new product, the company will compare fixed costs with expected (net) revenues over the economic lifetime of the product, and only if revenues exceed fixed costs, will the firm introduce the product (ineq. 6).

$$\frac{1}{1+a(s)} < b(s) \tag{5}$$

where:

s – the level of innovation radicality;

a – effective attempt to introduce innovation;

b – non effective attempt to introduce innovation.

$$\frac{\sum x}{r} > c \tag{6}$$

where:

c – fixed cost of introducing the innovative product;

r – discount rate;

x– expected revenues of sale of the innovative product.

Conditions of inequality (5) could encourage decision-makers to take into account the level of innovations radicalness. Radical innovations are characterized by creating new-to-theworld markets with novelty for both customers and manufacturers, such innovations are commonly the result of an effort of a larger number of R&D organizations and scientists and characterized by radicalness.

Incremental (product- and process-related) innovations in existing production and consumption systems may lead to further improvements of performance. Incremental innovations don't lead to a globally optimal system configuration in a multi-dimensional production and consumption system space. When inequalities (5) and (6) are satisfied, the R&D tax credit would be recommended.

5. Conclusions

The central question of the investigation is how to increase an efficiency of the innovation performance in Latvia.

As mentioned above, the smaller the country, the more its SMEs are internationalised. To achieve good results of innovation policy in context of novadays globalisation, the first step is to control, plan and develop the innovation processes

in the first stage of internationalization of SMEs, when firms have a domestic market focus.

R&D tax credit may provide good starting points for innovation activities of SMEs. R&D tax credit allocation requires feasibility of different factors as capabilities of company needed to introduce new products, effectiveness of introduction of innovative products. The size of R&D tax credit might depend on the level of innovations radicalness.

The decisions of policy makers must help to companies to overcome external barriers for internationalization of SMEs such as lack of capital, lack of adequate information, and lack of adequate public support and the costs of or difficulties with paperwork associated with transport. Step one in adequately supporting SMEs to access international markets opportunities, is to raise the low awareness of business support programmes among SMEs.

It is important to learn from an experience of other countries. Good instructive example is the mentioned above experience of Ireland, where estimations of researchers show a substantial increase in R&D spend by firms as a result of using the R&D tax credit. R&D tax credit forms a central part of Ireland's strategy to stimulate innovation and promote R&D activity in the country at the firm level. The task of R&D tax credit of Ireland is to maintain pace with the evolving national innovation policy environment in the nearest future.

The scientific, research and development resources of Latvia are relively small. A system of creative activity dependent on user-driven innovations should be created. Country should develop the abilities of enterprises to introduce innovative services and products in the market, that satisfy the needs of clients and consumers. An important step woul be direct (e.g. grants) and indirect supports (e.g. taxation) for innovation policy of Latvia.

The complex approach to planing of innovation processes of country takes into account the required R&D intensity, competition, and market structure. All of them have a positive impact on the sales of new products. The most important factors that reduce the fixed cost threshold of introduction innovatiove products are product-related R&D investments, R&D subsidies, and knowledge spillovers. These improvements are important as they may lead SMEs to greater returns to R&D in the future.

The providing of the research project according the companies innovation performance would help to find how the receiving tax credits result in the development of new production processes and how it promotes the development of new products for the company in a given period after the introduction of a new tax allowance to facilitate research and development (R&D) in Latvia.

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