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SMEs and Technological Innovation Policies

Some Country Examples

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Abstract

In this paper, I have dealt with the **common problems** of SMEs, within a certain categorization, in context of **gaining innovation ability**, particularly, **technological innovation ability**, and the **solutions** put forward by the innovation policies. For this purpose, I have looked through the EU and OECD reports related to the subject. In some cases, I have noticed best practices of the countries as explanatory examples. Thus far I have got a general frame for the innovation policies related to the SMEs. It is only a **general** frame because innovation policies of the countries related to SMEs are not identical each other in spite of the fact that there have been many striking similarities amongst the problems of their SMEs. In this regard, by emphasizing the source of divergence amongst the national innovation policies, I have tried to point out that the basic questions in policy design at national level.

Introduction

A recent OECD Report (1998a) emphasizes that *"SMEs* [small and medium-sized enterprises] *play an important roll in all OECD economies: They account for 60 to 70 per cent of jobs in most OECD countries, with a particularly large share in Italy and Japan, and a relatively smaller share in the United States. They also account for a disproportionately large share of new jobs..."*

For that reason, there have been nothing to wonder why the innovation policies of the countries are dealing with the SMEs so much. Furthermore, you may find much more place for the SMEs than the large enterprises have in innovation policies since it has been generally supposed that the large enterprises, by definition, possess innovation ability but, as a reality, the situation for SMEs, in general, has been different. According to another OECD Report (1997):

"Between 30 and 60 per cent of all SMEs can be characterized as innovative, ***but only a relatively small share, approximately 10 per cent, is technology-based.*** [On the other hand] *between 10 and 30 per cent of all SMEs could be categorized as new firms, where 'new' is defined as less than five years old. Assuming that the ratios given for innovative SMEs are also valid for new SMEs, technology-based* ***new*** *firms would account for between 1 and 3 per cent of all SMEs."*

It seems that Christopher Freeman's remark (1991) is still prevalent: *"It is essential to keep in mind the great variety of small firms in industry and to remember that the vast majority do not perform* ***any*** *R&D. This [technologically] innovative small firm is the rare exception, not the general rule."* In respect of this fact, he calls attention to that *"a romantic policy which relied mainly on encouragement of the small inventor-entrepreneur and on 'trust-busting' would be hopelessly naive and ineffective in coping with most of the contemporary problems of industrial innovation"*

It is true that we cannot base our whole innovation policy upon only *'small inventor-entrepreneur',* but it does not mean that any technological innovation policy relating to SMEs is useless. In spite of the very poor rate of technologically innovative SMEs, and also the low rate of innovative SMEs,

the economic reality is evident: ***They account for 60-70 per cent of jobs in most OECD countries* and they are the main agents of new job creation[1],** and so, we are obliged to equip them with necessary tools, in particular, with the technological tools of our era, for a better future. For this reason, we do need innovation policies, technological innovation policies, designed for the concrete needs of SMEs. And, in reality, we do have such policies and programs at several levels: international, national and regional.

According to OECD data (1998a): *"one-quarter of all public support programs in OECD countries primarily target SMEs* [See the 'Table' below]. *More than one-third of all programs have been designed to, at least partly, assist SMEs. Of the programs primarily targeting SMEs, slightly less than 10 per cent were designed exclusively to finance the provision or acquisition of advisory and consultancy services*. *Other programmes addressed SME financing, offering soft loans and guarantees for start-ups, equipment modernization and/or* ***R&D and technological innovation***. [Underlined by us]. *Job creation and training, as well as export promotion, are specified in relatively few programmes. However, several countries (e.g. Germany, Iceland, Japan, New Zealand) dedicated more than 50 per cent of their public support programmes to SMEs"*

Reported expenditures and programmes(*) by policy objective

Policy objective	Programmes	NCG(**) current prices; million US dollars				
		1989	1990	1991	1992	1993
Sectoral	**147**	**4 449**	**4 923**	**5 813**	**5 194**	**3 388**
% Share	10.2	12.1	11.7	12.1	11.1	7.4
Crisis aid	**53**	**1 625**	**668**	**875**	**585**	**3 188**
% Share	3.7	4.4	1.6	1.8	1.3	6.9
R&D & tech. innovation	**269**	**6 369**	**7 864**	**9 102**	**9 976**	**8 677**
% Share	18.7	17.3	18.7	19.0	21.4	18.9
Regional development	**213**	**8.510**	**9.803**	**1 4049**	**14 863**	**15 386**
% Share	14.8	23.1	23.3	29.3	31.8	33.4
Investment	**148**	**2 953**	**2 805**	**2 767**	**2 396**	**2 594**
% Share	10.3	8.0	6.7	5.8	5.1	5.6
SMEs	**359**	**5 432**	**6 031**	**4 340**	**4 693**	**3 750**
% Share	25.0	14.7	14.4	9.0	10.0	8.1
Export & foreign trade	**118**	**6 883**	**8 973**	**9 920.2**	**7 813.4**	**7 267.8**
% Share	8.2	18.7	21.4	20.7	16.7	15.8
Energy efficiency	**64**	**436**	**620**	**840**	**866**	**1 443**
% Share	4.5	1.2	1.5	1.8	1.9	3.1
Environment	**66**	**249**	**338**	**276**	**329**	**333**
% Share	4.6	0.7	0.8	0.6	0.7	0.7
Total	**1 437**	**36 906**	**42 025**	**47 983**	**46 717**	**46 028**

(*) All progammes are categorized according to their primary objectives.
(**) NCG measures the **N**et **C**ost to **G**overnment.

[1] There have been some other roles anticipated for SMEs as in economic crisis discussions: "Under somewhat different historical conditions, we argue, firms using a combination of craft skill and flexible equipment might have played a central role in modern economic life instead of giving way, in almost all sectors of manufacturing, to corporations based on mass production." [Piore, Michael J., and Charles F. Sabel, 1984.] But I am not suggesting such a role for SMEs, at least, in the scope of this paper.

Source: OECD, 1998a.

What is innovation?

In this paper, I will try to deal with the matter of SMEs in context of **technological innovation policies**. To start with, I think that it will be helpful to reach an understanding on '**innovation**' because 'innovation' is crucial point in respect of our discussion. As a concept, 'innovation' denotes both a process and its result. According to the definition proposed by OECD (1992; 1993), innovation, as a process, involves *"the transformation of an idea into a marketable product or service, a new or improved manufacturing or distribution process, or a new method of social service."* On the other hand, when the word 'innovation' is used to refer to new or improved product, equipment or service, which is successful on the market, it denotes the result of the process.

In the definition, the emphasis, either as a process or as a result, is on the '**marketability**'. The created innovation can be incremental or radical, but it has to be marketable.

Another remarkable point in the definition is that there has not been any implication on the '**idea**'. The idea, as long as a marketable result is obtained, can be related to conventional technologies as well as be related to advanced or high technologies. It can never even be related to technology. Nevertheless, in our era, scientific and technological contents of almost all products, methods, or services, which will be the subject for an innovation process, have increased considerably and, it seems that, are increasing continuously on the basis of generic technologies. Under these circumstances, innovation process itself has increasingly become more linked to technology and, of course, to science as the source of modern technology. In other words, the new ideas and new findings in science and technology have become the main source of innovation. So, the innovators are to understand, adopt and use the new technologies, sooner or later.

On that account, we can say that, in the final analysis, **innovation, as a concept, denotes the transformation of science and technology into an economic or social benefit 'just in time' for the market and the needs of society**. In this context, gaining ability in technological innovation is crucial. This is the challenge for both entrepreneur and nation in our era.

It is true that innovative approach differs one firm to another, and it depends on the firm strategy, but if we deal with all the firms of a country and their total performance, i.e. the total performance of the country, we cannot take the matter of gaining ability in innovation apart from its technological context. In fact, almost all innovation policies intrinsically, if not explicitly, involve, as a main aim, or at least as a final aim in the long term, gaining competitive advantage over in technological innovation. This argument is true for the innovation policies related to SMEs as well.

However, to put the matter correctly, it should be pointed out that innovation process is not a technical or linear process, nor is the process of gaining ability in innovation. Even the process of gaining ability in **technological innovation** cannot be limited to learning and absorbing the new technologies -i.e. technology transfer- and gaining the ability to improve them. It is much more complex than this. Gaining ability in innovation also involves many cultural, social, economical and political aspects and components, interactions amongst those components, and mechanisms for interaction; in shortly, it necessitates a specific system, namely, a **national innovation system**, and, therefore, a systemic approach.

Innovation System and Innovation Policy…

In this respect, it should be noticed that the science and technology system and the innovation system are not identical. The innovation system, in a sense, is a product of the interaction between the science and technology system and the production system. If the science and technology system, namely the Research and [Experimental] Development System, has been isolated from production system, we cannot talk about the existence of any innovation system. In other words, innovation system necessitates the very existence of other two systems and the interaction between them. Furthermore, we need some mechanisms -or some interfaces or transition zones- and intermediary agents for this interaction. University-industry corporate research centres, incubators, technoparks, technology centres, technology counsellors, consultants, information networks are the well-known examples of them. But the innovation system is still not so simple and has not completed yet. At these interaction zones, we will encounter the human problem; e.g. 'corporate research' is a matter of culture and we need training. Furthermore, creating the building blocks of the innovation system, such as 'corporate research centres' and 'incubators', and the activities conducted there, need financial support and, generally, public assistance, at least, at the beginning. This requirement list goes on to great extent.

In shortly, gaining ability in innovation, particularly at the level of SMEs, is a matter of new arrangements related to scientific, technological, educational, financial, legal, administrative institutions and infrastructure. As a much more important point than this, it is a matter of restructuring the enterprise itself and transforming the owner himself or herself. Innovation policy should respond all these requirements in a systemic approach.

This is the main frame of the innovation policies, but it does not mean that innovation policies of the countries are identical. It can be found that many differences, even some contrasts, amongst them. As a matter of fact, we can talk about **National** Innovation Policies and **National** Innovation Systems. Globalisation is a reality, but the very existence of National Innovation Policies and the National Innovation Systems is another reality. As M. Porter (1991) has pointed out that:

"… Firms will not ultimately succeed unless they base their strategies on improvement and innovation, a willingness to compete, and ***realistic understanding of their national environment and how to improve it. The view that globalisation eliminates the importance of the home base rests on false premises...*** [underlined by us].

"As globalisation of competition has intensified, some have begun to argue a diminished role for nations. Instead, internationalisation and the removal of protection and other distortions to competition arguably make nations, if anything, more important. National differences in character and culture, far from being threatened by global competition, prove integral to success in it.

"It is the creation of knowledge and the capacity to act, which are the result of a process that is highly localized, that determines competitive success."

And also C. Freeman (1995) has argued that:

"Contrary to some recent work on so-called 'globalisation', national and regional systems of innovation remain an essential domain of economic analysis. Their importance derives from the networks of relationships, which are necessary for any firm to innovate. Whilst external

international connections are certainly of growing importance, the influence of the national education system, industrial relations, technical and scientific institutions, government policies, cultural traditions and many other national institutions is fundamental."

But, we can say that, in National Innovation Policies, there have been some very striking similarities, particularly, in analysing the problems of SMEs, and in the categorization of these problems. All over the world, SMEs suffer, more or less, from the same problems, but the solution of the same problem applied by a certain country may differ to some extent. These common problems of SMEs and the solutions proposed for them can be found all together in the EU policy reports and the resulting programs as well as the OECD policy reports related to the SMEs.

We can consider the policy reports of this kind as the common reflectors of the member countries' national policies and their best-practices to some extent, or, we can consider them as the reports that the proposals that they have put forward will be reflected, generally after an evaluation and adaptation process, by the national policies and programs as well. Of course, the situation for EU is rather different than the OECD because EU represents a regional integration and it can be said that there has been a considerable convergence amongst the policies of member countries, at least, in respect of SMEs.

The Common Problems of SMEs

In regard to the subject to be dealt with in this paper, it will be useful to look through the documents of this kind in order to put forward the common problems of the SMEs and the solutions proposed for, but I will modify, to some extent, the problem categorization extracted from the OECD and EU reports. My categorization will reflect the priorities of the countries like Turkey. Or it may be said that this categorization will reflect the relative importance of our SMEs' problems that they have confronted and the results of our search for solution in respect.

Problem I
Lack of Entrepreneurial Culture, Innovation Culture and Management Skill

According to the European Commission's Report on SMEs (CSE[95] 2087)**,** the lack of **entrepreneurial culture** is a basic problem for the EU SMEs**.** The Report concludes that *"the primary goal must be to recreate and stimulate a truly entrepreneurial culture, based on values such as self-reliance, risk-taking, and a sense of personal commitment"* throughout the EU, if the full job creation potential of SMEs is to be unlocked. In addition to, the Report has pointed out, *"This requires action to change attitudes, starting from the educational and training systems and covering the relationship between the entrepreneur and public administrations, financial institutions and large businesses."*

We know explicitly, in our era, *'entrepreneurial culture to be recreated and stimulated'* should cover, or at least be integrated with, the innovation culture, in particular, technological innovation and research culture, for surviving in the process of 'globalisation'. And also we know that the owners of the SMEs are generally the managers of their enterprises. So, they should be equipped with the management skill together with the entrepreneurial/innovation culture.

It is true that gaining such a culture and management skill should begin in school and continue lifelong. It is a matter of social development and a generation change indeed. But, as it is also known, social development or the generation change is a matter of time.

Is there any immediate solution for the problem? The remedy is to encourage and canalise the **existing owners/managers** of SMEs for acquiring advisory and consultative services, which will compensate them for the lack of entrepreneurial culture and management skill. But these services, of course, should be available and accessible for SMEs and they can afford the costs. Some public bodies and/or the enterprises having competence in special services and experience of dealing with SMEs can provide advisory and consultative services of this kind. The main role of these '**intermediaries**', as they are generally called, is that, in words of R. Chabbal (1995), *"diagnosing the SMEs' needs... and directing them to the experts who can best meet those needs"* and also *"offering them the degree of specialization that the job may require."*

Setting up such public bodies and creating an appropriate climate for private 'intermediaries' of this kind, and stimulating them for cooperation with SMEs are also the subjects of innovation policies. I will come back the matter of 'intermediaries' below, in respect of the need for 'external services'.

For a last remark, it can be said that the lack of entrepreneurial culture and management skill is much more important for catching-up economies, particularly, for the transition economies. And, solution of the problem is also much more difficult for them because, as a matter of fact, entrepreneurial culture is a mature product of the advanced-market economies.

Problem II
The Matter of 'Scale Economy' and the Absolute Need for External Services

SMEs, in terms of the 'scale economy', cannot economically produce some certain services that they need, in-house or they cannot afford it in those scales. For example, they cannot afford to set up a finance department or a design office; or they cannot afford to employ a senior staff for management, training, auditing, feasibility studies, etc. They, with the exception of some high-tech SMEs, also cannot afford to conduct in-house research and to set up test facilities.

On that account, they absolutely need some external services; in other words, they need some 'intermediaries' that will provide these services.

One of the main categories of these intermediaries covers the **consulting bodies and firms**. Consultative services, that the SMEs need, are generally related to the following special subjects[2]:

- Evaluating the feasibility of new business ideas and assessing the viability of new business opportunities;
- Developing the business strategy/business plans;
- Organizing the funding;
- Introducing business partners/investors;
- Access to financial resources;
- Networking;
- Marketing, particularly operating in international market place;
- Patenting;
- Management development (setting up appropriate records and management information systems; business planning; strategic planning; strengthen the management team, etc.);

[2] For a brief list of services of this kind, in addition to the EU and OECD reports, **Irish Policy Documents** (1998) related to SMEs (http://www.forbairt.ie/) have been taken into consideration.

- Technology auditing to help companies become more competitive in the market place and so enable them to achieve growth and develop their businesses;
- Operations auditing aiming at improving the operational performance of companies and inculcating them a permanent process of continuous improvement;
- Assistance in the implementation of a range of concepts generally referred to as 'Just-in-Time' and 'Total Quality Management';
- Software development, data processing, and/or software and information procurement;
- Innovation management, management and exploitation of R&D, and human resource development;
- Assistance in identifying, gathering and dissemination of information on global best practices, and in developing appropriate benchmarking practices.

Another category of intermediaries covers **research bodies,** such as **contract research centres, corporate research centres** or **corporate research consortia,** meeting the R&D requirements of SMEs. Contract research centres are market-driven research organizations operating on direct contracts with industry. Corporate research centres or consortia are the entities setting up, in principal, by several SMEs, generally with the participation of some local universities and/or public research institutions; and at the start-up, and then, for a certain period, they are supported by public funds. Centres or consortia of this kind, generally, conduct **industrial research** and **pre-competitive development activity.**

Besides, there are some other intermediaries, such as '**technology counsellors**' (See Box I) and '**technology centres**' (See Box II)**,** that will meet the technology requirements[3] of SMEs and carry on the new scientific and/or technological findings to them in a **conceivable form** so that they can use and convert these findings into marketable products.

In this point, I wish to underline the **"conceivable form".** In words of R. Chabbal (1995) again: *"Even when a pool of necessary resources, scientific, financial and market knowledge, etc., is*

[3] What sort of technology do they demand? Technological analyses of 135 enterprises performed in Sweden in 1993 will give a rough idea with their following findings:

New technology requirements among SMEs

Area	**%**
Quality programs	41
New products	36
Development of existing products	33
Marketing	31
New manufacturing methods	24
New manufacturing equipment	20
Organizational development	19
New material	19
Working environment	16
Automation	10
Pay systems	9
CAD/CAM	7
MPS, MA	7

It has been noticed that: "Each enterprise was allowed to choose more than one alternative. 41 per cent of the enterprises stated a need for quality programs. New products and development of existing products came in second and third place. One explanation of the need for quality programs may be that enterprises are keen to obtain ISO 9000 accreditation in order to gain a competitive edge as Sweden comes nearer to the EU." [NUTEK ,1994]

available, that knowledge still has to be adapted and converted into a form usable by SMEs and canalised in their direction."

Almost all regional or national innovation policies or programs related to SMEs contain measures aiming at creating such intermediaries (for a remarkable example on intermediaries, see Box II) and then creating an appropriate climate for their growth, improvement and spread. But the availability of intermediaries of this kind is not sufficient for SMEs. They should be accessible and the SMEs can afford the costs of the services to be provided by these intermediaries. Innovation policies, therefore, do also cover some tools such as financial supports, grants and other incentives for SMEs in order to stimulate and enable them to get external services that they need.

In respect of technology procurement or supply, it is essential to create an **interactive and conducive environment**. "Incubators", "technology development centres", "technoparks", "science parks", and "advanced industry parks" near by the universities or public research institutions are well known examples of such interactive and conducive environments. These environments are also conducive for spreading the entrepreneurial and innovative culture because these environments create the best conditions of an effective interaction at every level.

Demonstration centres, also play a very interactive role especially in transferring embodied technology (new equipment, software, materials etc.).

In addition to, regional and national networks or some **special-purpose networks** also create an interactive and conducive environment. Besides, networks are the most effective tools of quick access to the services, in particular, to the information services that the SMEs need. But networking is not only a matter of infrastructure investment. In regard to SMEs, as users, it is also a matter of enhancing the **computer and network literacy**. The problem of computer and networking literacy is much more important for the developing countries. National innovation policies contain some special programs for enhancing the computer literacy of the nation.

Networking should also obtain a simplified and user-friendly access environment for the SMEs. The '**first-stop-shop**' or '**one-stop-shop**' concept covers this requirement (COM[96] 98 final). A specific information centre or a specific network consisting of several information centres may take over the 'first-stop-shop' mission at the national or regional level. The 'first-stop-shop' helps SMEs find their way more easily about the various existing networks and service providers and directs each request to the relevant network or service provider.

It is explicit that an innovation policy is to cover some regulations or legislative and institutional arrangements, and some financial supports for setting up all these facilities.

Box I

Technology Counsellors in France

"The role of the technology counsellors in various regions in France is to identify firms within the region, primarily SMEs, which might benefit from a transfer of technology, to put them into contact with the agencies involved in such a transfer (universities, consulting firms, laboratories, technical centres), to help the enterprise complete the necessary administrative formalities (particularly for funding arrangements, given the complexity of the aid system), and to monitor and follow up the transfer (by organizing the project and by checking that it proceeds smoothly)."[Drilhon, Gabriel and Marie-Florence Estimé, 1997.]

Box II

Regional Centres for Innovation and Technology Transfer in France

"The French CRITTs (*Centres Régionaux d'Innovation et de Transfert de Technologie*; Regional Centres for Innovation and Technology Transfer), the first of which were set up in 1983, are highly original examples of such centres. They are designed to meet the demand for skills in relatively new fields of technology (for example, factory automation and biotechnology) which traditional industrial research has failed to take adequately into account. There are now some 150 CRITTs in France, whose activities vary widely according to the region in which they are located and the areas of technology that they covered. Funded jointly, for the most part, by the state and regional authorities, some have developed highly advanced skills and R&D capacity, while others have limited their scope of action to being interfaces for the transfer of existing skills." [Drilhon, Gabriel and Marie-Florence Estimé 1997.]

Box III

A Multipurpose Intermediary in Turkey:
KOSGEB (Small and Medium Industry Development Organization)

KOSGEB, established by a special law in April 1990, is public body acting as both a consultancy services provider and a technology supplier for SMIs, at the national level. Her objectives are as follows:

- Improve the efficiency of SMIs and their competitiveness;
- Improve the performance of SMIs by means of the technical assistance programmes, including training;
- Help SMIs in adoption of new technology as well as in specialization, product design, and quality management methods;
- Promote strategic alliances between large manufacturing enterprises and SMIs as subcontractors;
- Support innovation and encourage entrepreneurship.

To achieve these objectives, KOSGEB has established several kinds of centres such as:

Consulting and Quality Improvement Centres

Consulting and Quality Improvement Centres give services to SMIs in order to improve their quality level and reduce costs. Consultative services cover process and product development, increasing productivity, quality assurance systems, cost accounting, labour process analyses and feasibility studies. In these centres, experts on engineering, business administration, and marketing are available for SMIs as well as some test laboratories and process control equipment, which cannot be afforded by them. Test laboratories meet the needs of SMIs in Mechanical Testing, Non-Destructive Inspections, and Spectral, Metallurgical and Chemical Analyses.

KOSGEB's consulting support is not limited to her own experts. It is possible to hire experts whenever needed.

Training Centres

KOSGEB offers effective training services to SMIs at her Training Centres. Short-and long-term training programmes are also organized in a wide range of subjects. The Training Centres have

been equipped with Applied Training Laboratories in the subjects of Electricity, Electronics, Hydraulics, Pneumatics, Computers, CAD/CAM, Welding Techniques, Non-Destructive Inspection Methods, Flexible Manufacturing Systems (FMS), Computer Numerically Controlled (CNC) Machine-Tools, Cold Manufacturing Processes and Heating-Cooling-Ventilation.

Technology Development Centres

These Centres have been set up at university campuses, under the cooperation protocols signed between individual universities and KOSGEB for the following purposes:

- To support technology-based entrepreneurship in a working environment having the infrastructure needed for knowledge-intensive production,
- To strengthen cooperation between the university and the SMIs, and, in this way, to enable SMIs to gain ability in transformation of new ideas in science and technology into marketable products,
- To promote innovative enterprises using advanced technologies and creating high value added, and so, to create new jobs for skilled labour.

SMIs taking place in these centres are expected to be able to stand on their own feet within three to four years, and, at the end of this period, to leave room for new entrepreneurs.

Common Facility Workshops and Laboratories

Common Facility Workshops put those pieces of equipment, machinery and tools at disposal of SMIs that they need for but cannot afford to buy individually. Some of them act as 'Sectoral Development Centres' and help SMIs establish their quality assurance systems and obtain ISO 9000 accreditation and CE marks.

Information Centre

KOSGEB Information Centre offers enterprises fast, accurate and cost-effective information as well as business cooperation services, and acts as the national focal point of:

- Business Cooperation Network (BC-NET),
- Correspondence Centres of Bureau de Rapprochement des Enterprises (BRE),
- Euro Info Correspondence Centre Network (EICC).

KOSGEB Information Centre

- Acts as a communication channel between local and foreign companies,
- Gives information about Turkish SMIs;
- Compiles necessary information about the Turkish market, sectoral trends and Turkish Legislation.

Problem III
Lack of Financial Resource

Almost all of the SMEs generally suffer from the lack of financial resource resulting, in the last analysis, as lack of human resources, information and knowledge accumulation, technical and technological facilities and new fixed capital investments. So, the consequence is weaknesses in innovation capability and competitiveness.

As it is known, there are considerable differences in financing SMEs and larger enterprises (OECD, 1998a): *"The variance of both profitability and growth decreases with firm size. The second source of divergence is that smaller enterprises have a lower probability of survival than larger enterprises. In a normally functioning financial market, these differences should be reflected in higher interest rates or less favourable terms of debt financing."* Another fact is that there have been some important differences in financing of start-ups and existing SMEs as well as the differences in financing of the SMEs growing rapidly and slower growing ones.

With regard to these facts, measures proposed for the solution, generally, involve financial contribution by the government or any public body, or, in some cases, by foundations; but in certain cases, it may be preferred that: *"to focus on improving the financial environment through the elimination of constraints and better access for SMEs to financial instruments"* as highlighted in the **Third Multiannual Programme for SMEs in EU (1997-2000)**. However, national innovation policies generally cover both financial contributions and the indirect arrangements.

Financial contribution by the government or any public body, or, in some cases, by foundations, essentially covers (in terms of **Uruguay Round Final Act**):

(i) Direct transfer of funds (e.g. grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);

(ii) Fiscal incentives such as tax credits;

(iii) Providing certain services without any charges or with affordable charges for SMEs;

(iv) Payments made by the government to a funding mechanism, or entrusting or directing a private body to carry out one or more of the type of functions illustrated in (i) to (iii) above.

Financial contributions can be categorized according to their objectives as follows:

- Assistance or some grants for technologically innovative, high potential start-up projects.
- Feasibility study grants.
- Providing **seed capital[4] funding** to highly skilled individuals or teams, and new businesses with relatively long development phase, often involving new technology.
- Grants for mentoring or assistance by means of mentor programs.
- Grants for encouraging SMEs to employ young technical degree or diploma graduates that they need.
- Incentives for technological innovation investments of SMEs.
- Exceptional grants to encourage promising SMEs to employ a senior staff for in-house R&D activities.
- R&D grants in a certain percentage of the expenditures on the in-house R&D activities of SMEs, including the software development / application development activities of them, as well as on the R&D activities conducted by Contract Research Companies/Centres, Cooperative

[4] Seed capital is a kind of venture capital invested in start-ups. (For 'venture capital' see the following footnote.)

Research Centres, Cooperative Research Consortia, etc., for the use of SMEs **(**for an example on 'R&D Grants', see Box IV).

- Some grants in a certain percentage of the expenditures on the external consultancy services used by SMEs.
- Some exemptions from taxation and charges incurred in transactions for the intermediaries contracting with SMEs.
- Assistance or some grants for setting up contract research companies or centres meeting the R&D and technology requirements of SMEs.
- Assistance or some grants for setting up cooperative research centres or consortia and for encouraging SMEs to conduct corporate research and to participate in corporate research programs (see Box V).
- Assistance or some grants for creating interactive and conducive environments such as incubators, technoparks, demonstration or exhibition centres, information centres and networks.
- Sharing the risks of the SMEs, on the base of their technologically innovative and creative projects, through credits repayable provided that the resulting product is commercialised successfully.
- Provision of additional equity funding through the **venture capital[5] funds** for the growth-oriented SMEs.

Box IV

R&D grants for SMEs in Turkey

In Turkey, R&D grants, for the industrial enterprises including the SMEs, from the government cover 50 per cent (max.) of the costs of R&D activity based on a certain, eligible project. TUBITAK (The Scientific and Technical Research Council of Turkey) has been charged with the evaluation of the project proposals for the government grants.

The grant is limited to:

a. Costs of researchers, technicians, and other supporting staff employed exclusively in the research activity.

b. Costs of instruments and equipment used exclusively in the research activity.

c. Costs of consultative and equivalent services used exclusively in the research activity, including bought-in research, technical knowledge, etc.

d. Expenditures of Patent, Useful Model, and Industrial Design Registrations.

e. Costs of materials incured directly as a result of research activity.

R&D activity to be supported involves:

a. Concept development or conceptual formulation.

[5] "Venture capital is risk finance, usually provided in the form of a long-term equity investment, to fund generally the expansion or buy-out stages of the enterprises. Venture capital financing is usually provided without collateral or guarantees in the private equity market.
"Investment of US and Canadian venture capital funds have a high concentration in technology... In particular, outside the US, the funding of new technology-based firms seems to pose problems; there are indications that venture capitalists are investing significantly less in the technology sector. Reasons include risk aversion by investors and lack of expertise to operate complex ventures" [OECD, 1998a].

b. Technological and economical feasibility study.

c. Laboratory tests and analyses.

d. Design of products, processes and services.

e. Creation of a first prototype, initial demonstrations or pilot projects.

f. Design modifications related to after sales services.

In addition to, Technology Development Foundation of Turkey (**TDF**; founded by the joint afforts of private and public bodies on 1991) makes available a certain amount of cash contribution to the technological innovation and/or technological development activity based on a certain, eligible project. This contribution does not exceed the total amount of cash contribution of the partner. A sum not less than that of the contribution of TDF is paid back to TDF provided that the commercialisation of the new or improved product has been succeeded. As an important point, a certain SME can use both government grants and TDF's contribution for the same eligible R&D project at the same time.

Box V

Cooperative Research Programmes / Centres

"National policies focus on promoting cooperation between SMEs and Research Centres to facilitate innovation in SMEs, and on direct and indirect financial support for R&D.

"In **Germany**, the federal research cooperation programme promotes links between enterprises and research establishments, including cooperative research and exchanges of research personnel. **Austria** has also established a programme for industry-research cooperation. In the **UK**, the LINK programme supports collaborative R&D between higher education institutions and SMEs. In **France**, the Technology Diffusion Network links SMEs with specific research needs to the research centres best able to address their need. In **Finland**, the TEKES national network coordinates contacts between SMEs, universities and research institutes and a world-wide network of technology centres."[CSE (95) 2087, Annex I]

In **Turkey**, TUBITAK, within the scope of an assistance program, makes available a certain amount of cash contribution for setting up University-Industry Cooperative Research Centres, and for the R&D activity to be conducted there. This contribution does not exceed the total amount of cash contribution of the partners and goes on five years, max.

The indirect arrangements are as follows (COM[94] 435 final; COM[96] 98 final; BEST 1998):

- **Improving access to loan financing** by means of bringing into operation effective **loan guarantee schemes** and encouraging the **mutual guarantee schemes or companies**[6] as well as

[6] "Access to adequate finance at reasonable cost is a persistent problem encountered by SMEs. **The Mutual Guarantee Company**, whereby several enterprises club together in order to provide mutual guarantees for finance, is seen as a possible solution to these problems. It permits the re-appraising of risk by companies with direct experience in the

finding new ways of bringing even relatively small amounts of capital into promising smaller enterprises.

- **Reducing late payment problems** by means of improving the financial management capabilities of SMEs.
- **Facilitating the development of specific financial instruments** such as **factoring** and **credit insurance** in helping to meet SMEs' need for working capital and reducing their problems linked to late payment.
- **Facilitating the conditions and improving the related legislation** to create an appropriate environment that will stimulate the setting-up of seed capital and venture capital companies investing in promising SMEs.
- Facilitating the introduction to **business angels,** those are in general ready to invest equity in SMEs, by organizing easily accessible networks and providing better communication between projects seeking equity and angels.
- **Stimulating the development of capital markets for fast-growing, high-tech SMEs** enabling them to raise the external equity capital they need (US stock market, NASDAQ, is a well known example of such capital markets).
- **Forging closer ties between banks and SMEs** through better SME-related training for bank staff, and improvement of the banking products adapted to the needs of SMEs.

Problem IV
Complexity of the Business Environment for SMEs

As an OECD Report **(1998a)**, mentioned before, has pointed out, *"While some regulations may deliberately favour SMEs (many regulations exclude the smallest firms), in general, the adverse impact on regulations on SMEs can be particularly harmful. This is because SMEs are less equipped to deal with problems arising from regulations since they have less capacity than larger firms to navigate through the complexities of regulatory and bureaucratic networks.*

"Furthermore, due to its 'fixed-cost' nature, the cost burden of regulation is larger for small firms than for larger firms: i.e. administrative cost entailed in compliance have a disproportionate effect on small firms... This means that average compliance costs per employee are much higher for small firms."

On that account, there has been now a general trend towards the simplification of the business environment for the SMEs. In other words, it is aimed at simplifying regulations, legislation and all the business procedures to make them user-friendlier for SMEs.

What can be done to create such a user-friendly environment for SMEs? It is possible to find the answer in European Commission's Report presented to the Madrid European Council of 1995 (CSE[95] 2087) and the related programs those are the 1996 Integrated Programme (COM[96] 329 **final)** and the Third Multiannual Programme for SMEs in the EU (1997-2000) (COM[96] 98 final) specifying the policy put forward in Commission's Report in terms of concrete actions. But it seems to me the proposals recently put forward by **The Business Environment Simplification Task Force (BEST)** set up by European Commission due to the invitation of the Amsterdam European Council in June 1997 will give a better idea about the solution.

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relevant sector, spreads the risk amongst more parties, reinforces the negotiating power of the members and favors an effective allocation of public subsidies."
[http://Europa.eu.int/en/comm/dg23/guide_en/mgc.htm]

The proposals of the BEST (1998), related to **the simplification of administrative procedures**, in brief, are:

(i) **Simplification and regulatory reform should be made central to public policy**. A group or unit should be created under the direct responsibility of decision-makers at the highest political level. Its objective will be to carry out regulatory review and reform, and to ensure that the point of view of SMEs has been taken into account in legislative proposals.

(ii) The impact of legislation on business must be an important consideration in determining its form and content. **The 'think small first' approach should be the guiding principle of regulatory reform.**

(iii) Administrative procedures faced by SMEs need changing. The institutions and agencies need to both simplify and standardize procedures **to increase transparency**, so that enterprises know what to expect and what is required of them.

(iv) The creation of enterprises [starting up a business] should be facilitated.

(v) Good information and advisory services are a valuable support in the creation of businesses and in helping them at critical stages of their development.

Integrated information and advisory services should be created out of the existing public provision. The ideal would be for enterprises to have only one place [as it is known '**first-stop-shop**' or '**one-stop-shop**' system] to contact in order to have access to these services. The availability of the services should be promoted vigorously and there should be regular monitoring and evaluation of the quality of services delivered.

Necessary measures proposed by the related European Commission Recommendation (EC, 1994) in order to facilitate the transfer of SMEs and thus prevent their liquidation should be added to the BEST's proposals. According to this Recommendation, the transfer of SMEs is a very important matter because *"thousands of economically sound businesses, mainly SMEs, disappear every year because they fail to overcome the difficulties involved in the transfer of ownership. It is estimated that the second most important reason for bankruptcies in the Member States of the EU is a badly managed succession. This destroys at least 30.000 businesses and 300.000 jobs a year."*

BEST Report mentioned above also covers some proposals related to simplification of the financial environment, employment and working conditions, and, at last but not least, **research and innovation environment**.

In respect of gaining ability in technological innovation, the complexity of the research and innovation environment is a serious trouble for SMEs. The costs for R&D, and for the acquisition of new technology and responding the necessities of the standards associated with those new technologies, furthermore, are very high and increasing rapidly. This means that, SMEs, due to the shortage of their resources in addition to that complexity problem, are increasingly subject to the danger of being excluded from R&D and the new technologies; in the last analysis, to the danger of being excluded from the world marketplace.

Within the framework of business environment simplification, the proposals put forward in an OECD Report (1998a) cited before, for the policy makers' consideration, against this danger, are:

(i) It should be ensured that, wherever possible, compliance procedures associated with R&D and [acquisition of] new technologies [and the use of patents by SMEs] are not unnecessarily costly, complex, or lengthy;

(ii) And those competition regulations do not prevent SMEs from achieving economies of scale in R&D through [corporate research] consortia.

Problem V
Bottlenecks in Internationalisation and Globalisation of SMEs

It is a great challenge for SMEs to keep up with internationalisation of the production and globalisation of the markets. The target, in respect of 'globalisation', is to be competitive not only in the domestic market, but to gain the same ability in the world marketplace. For gaining this ability, they, in the first place, should be able to cope with all of the troubles spoken above, and then, with the other troubles in access to international markets. For this reason, the problem, in that point, is much more complex than the other problems confronted by SMEs.

SMEs of the EU countries experience this problem just now as the problem of 'Europeanasation'. And, in devising the EU innovation strategies and policies, Europeanasation of SMEs has been taken into consideration as a concrete problem in context of facilitating access to the international markets. So, the specific measures proposed for 'Europeanasation' are also reasonable, in essence, for all the countries under the impacts of the globalisation process.

Information networks and business partnerships are the main instruments for SMEs in access to international markets. For this reason, almost all of the specific measures put forward by EU reports are related to developing the information infrastructure and the telematic services, and creating a suitable environment and direct contact opportunities for business partnerships or cooperation. The measures spoken about are listed below:

(i) Develop user-friendly information networks and telematic services

- The information about the regional and global market, and the information about the cooperation opportunities are crucial. So, we need information generators serving for this purpose. And these generators should be accessible on the telematic services networks.
- In this point "first-stop-shop" concept comes into effect once more. In accessing to regional or world market information and to the business partners information "first-stop-shop" will help SMEs find their way easily and get a rapid response to their requests (see Box VI).
- Information related to specific businesses and industries, and the information about environmental issues as well, should be accessible on the telematic services networks.

It is very important, and in many cases, is determinant to have exact information about environmental regulations come into force. In this point, I wish to point out that the importance of the information and **knowledge** about the cleaner products, cleaner production processes, cleaner energy and energy saving methods, for the SMEs eager for success in the world market.

(ii) Develop the Environment for Finding Business Partners and Cooperation

SMEs need assistance and new facilities to find business partners abroad. Providing necessary information about the firms searching partners is crucial. For the reason that the needs of SMEs for partnership or cooperation may differ in a wide range, the services to be provided will differ accordingly.

Improving the business search networks will be helpful, but it is also necessary to improve and support the partnership and cooperation programs giving the opportunity for direct contacts. International cooperative research programs are the well-known instruments for setting up lasting partnerships, but it is necessary to encourage SMEs participation in international cooperative research programs, too.[7]

In this point, I wish to emphasize once more, the importance of being innovative, technologically innovative, for the SMEs. Immediate access to information about the world market or finding partners -indigenous and/or foreign partners- having experience about the world market is crucial, but, it is quite explicit that, technologically innovative SMEs have much more chance in introducing into new markets and keeping their competitive position provided that the other conditions remain the same. However, even the technologically innovative SMEs need to be encouraged and assisted to participate in international trade. Such assistance can only be achieved through some special mechanisms developed on that purpose (see Box VII).

Box VI

First-Stop Shop

A remarkable example is G7 Information Society Initiative Pilot Project: 'A Global Marketplace for SMEs' (http:// www.gin.sme.ne.jp/). The goal of the Global Information Network for SMEs created with in the framework of this project is to improve SMEs access to information on both domestic and foreign markets, and to contribute to developing an environment where SMEs can exchange information on their products, technologies, and human resources, thereby overcoming obstacles of distance and borders. This network also helps SMEs to find partners through contact addresses and enable customers to find SMEs. On some home pages, accessible through this network, it is even possible for SMEs to perform certain types of transactions, such as ordering particular items, as taking a step towards electronic trade.

Box VII

Assistance for Access to International Markets: A Best Practice from Japan

"Japan has the most developed policy and institutional set-up for this purpose… The philosophy in Japan is based on non-discriminatory measures, which seek to support efforts made by SMEs themselves. Policy seeks to tackle the disadvantages, which SMEs experience through their lack of access to human resources, to external markets and to technology. Japan has established Local Industry Promotion Centres in which groups of SMEs in similar industries in a particular locality collaborate for their common goods. These are established by local governments with finance being provided through long-term, low-interested loans from central government." [OECD, 1998a]

Problem VI
Restrictions for the Women Entrepreneurs in SMEs

[7] For example the **Fifth Framework Program of the European Community for Research, Technological Development and Demonstration Activities (1998-2002)** puts forward some measures for this purpose.

According to the OECD reports, women, in increasing numbers, are accepting the challenge of creating and managing their own businesses, and this new phenomenon calls for some change in the innovation policies.

In the **OECD Conference on Women Entrepreneurs in SMEs** (16-18 April 1997, Paris), it has been pointed out that (OECD, 1998c): *"Women-owned SMEs are reported to be growing at a faster rate than the economy as a whole in several OECD countries. For example, in the United States, in the last few years, the number of firms created and managed by women has grown twice as fast as those set up and managed by men. Further more, women in the transition economies are increasingly turning to entrepreneurship. Their contribution could become even more significant if a number of restrictions were removed so that their potential could be fully tapped."*

In the same conference, by emphasizing the fact that great majority of businesses run by women were in the service sectors, it has been put forward that women encountered specific barriers, due in part to persisting discriminatory practices and to their household responsibilities, and they could find themselves excluded from corporate business opportunities as they were not part of *"boys' clubs"*.

So, we need some policies to ensure that removing the restrictions creating discriminatory for women. Innovation policies should create the circumstances of having educational opportunities, access to information, access to consultative services and mentoring programs, and access to markets for women equally.

Conclusion

I have tried to make clear the **common problems** of SMEs, within a certain categorization, in context of **gaining innovation ability**, particularly, **technological innovation ability**, and the **solutions** put forward by the innovation policies. For this purpose, I have looked through the EU and OECD reports related to the subject. In some cases, I have noticed best practices of the countries as explanatory examples. Thus far I have got a **general** frame for the innovation policies related to the SMEs. It is only a **general** frame because, as I emphasized before, innovation policies of the countries related to SMEs are not identical each other in spite of the fact that there have been many striking similarities amongst the problems of their SMEs. The reason of the divergence is that the starting points of the countries, in responding the needs of SMEs, are different due to their social, economical, scientific, technological and industrial inheritance; due to their institutional and political traditions, and their legislative structure; due to their actual capacities and capabilities in science, technology and industry; and due to their innovation culture, maturity level of their innovation systems, and their attitudes towards change (OECD, 1998d).

For example, in terms of Slavo Radosevic (1997), *"in transition economies* [i.e. the economies being converted to market economies] *we still cannot talk about national or regional systems of innovation. The only emerging systems of innovation seems to be those around business groups and sectors… The reason for the non-existence of systems of innovation other than these two is the still chaotic process of industrial transformation where national or regional responses are not articulated yet."* Furthermore, since they have inherited a science and technology system isolated from the production system, they have to transform the former into an interactive one to be able to create their own indigenous innovation system. So, in transition economies, responding the technology requirements of the industrial enterprises including the SMEs, emerging as a result of the industrial transformation, will depend on the success in transforming the existing science and technology system. In other words, the starting point is different for a transition economy according to an advanced economy having a mature national innovation system, and this difference will find

its expression in her national policy. As a result, the scope and the involvement of the national innovation policies of these two countries will be different.

In respect of the starting point, the role of the government also changes, and the differences that we have seen in national policies, for the most part, are related to the role of government in fact. The role of the government, moreover, may differ from one region to another, even in the same country, according to socio-economic divergence between them.

It has seen that, in all countries, governments have been playing a considerable role in policy design and implementation (see Box VIII). In all the problem categories mentioned above, beyond the policy design, governments have also taken some responsibilities to supply the needs of SMEs. However, these responsibilities may differ in a wide range from steering the activities -it can be red as 'achieving the orchestration'- by means of some policy instruments such as incentives, public grants, and/or legislative arrangements, to establishing some public bodies for consultative services and/or technology supply.

With regard to the role of the government, the basic questions are:

- To what extent should the government make financial contribution to the SMEs?
- To what extent should the government be selective, and what will the priorities and criteria of the government be, in financial contribution:
  - Existing sectoral strengths and/or prospects for the future,
  - Or technological preferences at national level,
  - Or the performance of individual firms and the feasible projects of them?[8]
- What kind of instruments should the government use for realizing its financial contribution?
- What should be the government role in creating private funding mechanisms other than the public's funding mechanisms?
- To what extent should the assistance to SMEs been focused from a subsidy-based approach to a commercial and loan-based approach?
- To what extent should the inherent risk of R&D activities been shared by the government?

The other questions on the role of the government will focus on the intermediaries. We know the key role of intermediaries in policy implementation and acquiring the targets. In this respect, policy makers have to reply to the following questions:

- What are the critical lacks and requirements of SMEs, and, what kind of intermediaries do we need in order to respond these requirements:
  - Individual intermediaries specialized in a certain field,
  - Or some multipurpose intermediaries, especially, having a convenient structure to the 'one-stop shop' concept,
  - And/or some intermediaries giving service at national or only regional level?

[8] "A major policy issue was the extent to which governments should identify particular sectors/firms in encouraging them to sell overseas. In some countries the focus was on existing sectoral strengths and encouraging enterprises in those sectors to expand overseas. In others, the strategy was to identify overseas markets with growth potential and seek to encourage indigenous firms to make progress in those markets." [OECD, 1998b]

In this respect;

- To what extent should the government set up intermediary bodies responding the existing requirements of SMEs, and to what extent should the government encourage the private sector to set up them?
- Which intermediary services should be funded by the government and to what extent?
- To what extent should the government take the responsibility of training owners/managers of SMEs?

And also, there should be some questions related to strengthening the links between large enterprises and the SMEs. For example, it should be replied, by the policy makers, whether the government would have any role in promoting the development of closer links between large enterprises and the SMEs.

In addition to those, as it is explicitly known, the role of the government is very crucial in simplification of the business environment. In this point, the central questions are whether we need deregulation, and, if we need, to what extent it should be; or the questions may be, for some countries at least, whether there have been any fields that the regulation is necessary in fact, and, if it is necessary, to what extent it should be.

The variables involved by these questions are the main variables of the national innovation policies related to SMEs. In reality, the decisions on these variables constitute a certain national innovation policy. The decision, which is a political one indeed, on a certain variable, as it has explained above, is not arbitrary. It depends on the starting point, for example, the level of maturity or perfection of the existing national innovation system. And, in all national innovation policies, whatsoever the starting points of countries are, the focal point is to create an indigenous science and technology base for economic growth and prosperity. We should never forget that *" imported technology is not a substitute for a sound science base and domestic innovation capacity in determining long-run technological performance. The emphasis must be on assimilation of know-how through learning by doing and learning by research."* (OECD, 1998d) □

Box VIII

Support for SMEs: Some Examples from the OECD Area (OECD, 1998e)

Austria has recently implemented a number of initiatives to aid SMEs: a soft aid programme for SMEs as of 1 January 1996; the establishment of a new stock market segment for SMEs, which is designed to improve their access to equity capital; the development of a comprehensive management consultancy service aimed particularly at SMEs; and the passing of a law to promote SMEs, which provides a uniform legal basis for all SME-related support activities.

Policies in **Canada** acknowledge the importance of small businesses for job creation. Assistance to SMEs is being refocused from a subsidy-based to a commercial and loan-based approach. The 1997 budget increased the ceiling under the Small Business Loans Act from C$ 12 billion to C$ 14 billion, as this programme fills an important need.

In **Denmark**, a task force has been established to develop proposals that reduce SMEs' administrative burdens. The initiatives include deregulation, improved co-ordination of public authorities, reporting via Internet or other ICT-based means, and the development of new services

for outsourcing administrative burdens. The government has also introduced a guarantee scheme to promote the provision of venture capital to SMEs, and has reformed stock markets in order to open access to them.

In **France**, several initiatives aim to support SMEs. Since 1990, the Commission de Simplification des Formalités has taken several initiatives to reduce administrative formalities. Furthermore, several measures are in place to stimulate R&D by SMEs or to promote technology diffusion. Measures have also been taken to enhance SMEs' access to information and specialist advice, including audits. Some support is also provided to enable SMEs to attract more qualified personnel.

Germany's policy of "Innovation Assistance to Small and Midsize Enterprises" seeks to create favourable framework conditions for SMEs in business, research and education as they are considered crucial links in innovation networks. The federal government also assists where market failures limit innovation, where there are shortcomings in infrastructure, or where the risk involved is too high for private industry.

Greece feels that SMEs constitute the backbone of its economy. A range of policy measures has been implemented over the past years, many in collaboration with the European Union, to improve the competitive position, flexibility, and adaptability of SMEs. The measures aim to strengthen the internal workings of SMEs by improving organization, management, and the application of modern technologies; to help provide greater access to markets and technologies and stimulate collaboration; and to stimulate upskilling of the workforce.

In **Ireland**, specific initiatives for SMEs include a local partnership initiative to provide advice, mentoring, and seed capital; subsidized and low-interest loan schemes; a programme of administrative simplification; legislation for prompt payments to SMEs applying government agencies; and an information programme to help small businesses gain access to public procurement programmes.

Korea has placed substantial emphasis on SMEs over the past decade. Recent policies emphasize measures that support SMEs by eliminating red tape, simplifying procedures, and strengthening links between large and small firms. In 1997, the government also established the Venture Business Promotion Act to accelerate the start-up of technology-and knowledge-based SMEs.

Luxembourg has recently established an action plan for SMEs that aims to promote start-ups and to strengthen existing firms. The plan includes measures to reduce regulatory burdens, enhance SMEs' access to private capital, promote co-operation among enterprises, and strengthen the relevant skills among SMEs' entrepreneurs.

New Zealand has recently refocused its Business Development Programme, which aims to assist SMEs in three ways, namely: providing economic and regulatory information; improving business capabilities; and enhancing co-operation among SMEs, and between SMEs and other relevant parties. Policies to improve business capabilities include a - partly subsidized- capability assessment by the Business Development Board; measures to improve practical business skills; a grant scheme to provide assistance regarding business strategy, innovation and R&D, and implementation (e.g. market research and advertising); and initiatives to promote business best practices.

Industrial policy in **Sweden** includes a wide range of initiatives to support SMEs, many at the regional level. In recent years, several initiatives to improve the access of SMEs to risk capital have been introduced, as the Swedish economy still lacks a properly functioning venture capital market.

Several tax breaks have been introduced to promote SMEs, and employers' fees have been reduced in a way that is favourable to SMEs. Support to SMEs also includes assistance with marketing and information. Finally, a Small Business Delegation has been recently appointed to propose concrete ways to cut red tape.

In **Turkey** a programme of the Small and Medium Industry Development Organization aims to train new entrepreneurs and provide financial, technical and management consultancy services to projects started by them. Policies are also aimed at improving access to financial resources, including risk capital.

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