

# **Sustainable business**

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## **A way to implement new jobs?**

**Paper presented at the 43<sup>nd</sup> Congress  
of the Regional European Science Association (ERSA)  
Jyväskylä, 27 – 30 August 2003**

Dirk Drenk  
Faculty of Spatial Planning  
University of Dortmund  
Germany – 44221 Dortmund  
Fon: +49 (0) 0231 755 4790  
Fax: +49 (0) 0231 755 2415  
E-Mail: [Drenk@rp.uni-dortmund.de](mailto:Drenk@rp.uni-dortmund.de)

### **Abstract**

The paper gives up a summary about the possible employment effects that can arise out of sustainable business. A high employment rate in Germany has focused the view on new ways to create jobs. Parallel to this the sustainable development has become a major issue for societies all over the world. For that reason the current research standards about employment effects of sustainable business are presented. Further more a new study approach of this topic will be explained, if and to what extend sustainable business by small and medium-sized enterprises generates extra employment.

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# **1 Introduction**

Since the seventies the Federal Republic of Germany has to deal with an increasing unemployment rate. In the year 2002 the German rate reached a record level of more than 4 million unemployed people which made the high unemployment rate to one of the biggest problems in the German society.

In addition the preservation of the natural living conditions belongs to one of the major topics of all societies. With the on the conference for environment and development in the year 1992 adopted document, Agenda 21, the countries of the earth were called upon to transfer their economic and societal bases towards a sustainable development. In reference to this document the sustainable business has increased in importance in the last years.

The aim of this paper is to examine, if and to what extent sustainable business can contribute to the generation of new employment. This will be done with a first look on the current research standards of this topic.

At the beginning an overview will be given about the unemployment development in the last years and its reasons. Further more the idea and development of sustainable business will be presented.

In this context first research results will be explained, which are summarized in statements about the effect of sustainable business on employment. At the end of the paper a new study approach will be shown, that is a major part on the authors dissertation. The planned examination gives answers to the question, if and to what extent sustainable business by small and medium-sized enterprises generates extra employment.

## **2 Unemployment in Germany**

The unemployment has become a major problem in the German society. Since the beginning of the early seventies the unemployment rate has increased continuously. A permanent base of unemployment has been developed, that grew in times of recession and hasn't decreased in the same way in times of cyclical upturn (Franz, 2002).

The major reason for the increasing unemployment value was the decreasing volume of work at the time of increasing labour participation. On the one side labour was replaced by knowledge and capital (productivity) in the production process. On the other side employment decreased by the proceeding international division of labour (globalization) (Kommission für Zukunftsfragen (Ed.), 1996).

With a constant high level of unemployment several problems like long time unemployment, youth unemployment and structural unemployment can be associated. Furthermore increased spatial disparities in Germany occurred, as some regions lost more purchasing power or were affected more by social erosion than others.

The high level of permanent unemployment that can be found in Germany at this time has specific impact on the social security system. The state has to pay the contributions for the unemployed, at the same time there is a lack of regular contributions to the social security system.

All these problems occur because of the high employment rate. For that reason new ways and ideas to create more employment are needed.

### **3 Sustainable Development**

#### **Dimensions of sustainability**

Due to the uncontrolled exploitation of natural resources and the associated increase of environmental pollution since the early eighties a rethinking has occurred in the societies. The protection of the environment has become much more aware to the people. The United Nations have picked up these attempts und bundled them in the final document of the conference for environment and development (Rio de Janeiro in the year 1992) the so called Agenda 21. The preservation of the natural living conditions has been declared a major goal by all societies on earth. It must be an aim to transfer the people's way of acting towards a sustainable development, to enable future generations to fulfil their necessities at the same level as generations nowadays.

The Agenda 21 aims at pushing forward the integration of the economic, ecological and social sustainability. These three dimensions of sustainability have to be coequally tracked and balanced continuously.

#### **Sustainable business**

The sustainable business can be derived by the principles of sustainable development. The Agenda 21 (Bundesministerium für Umwelt (Ed.), 1997) calls for the private businesses to make a contribution to sustainable development. Ecological sustainability should be achieved by an advanced efficiency of resources, an increasing recycling of production residues and a decreased waste amount per production unit.

At the same time the enterprises should have a special societal responsibility in the field of saving the employment. Enough employment is a key factor for social sustainability and saves the social structure in between the national economies.

The economic sustainability can be achieved by a focus on the policy of full employment. The earnings from the employment secure growth for the national economies and welfare for the community. To achieve the goals of economic sustainability not only a quantitative growth has to be postulated but also can a growth of the quality of the living conditions in between the society be sufficient (Leitschuh-Fecht, 1998).

In Germany a concentration on the ecological dimension of sustainability can be found until the middle of nineties. Meanwhile the other dimensions are focused due to the high unemployment rate (Deutscher Bundestag, 1998).

To achieve the goal of sustainable development - as postulated by the government of the federal republic of Germany - a strong cooperation with the business sector is necessary. Not all the goals of sustainability can be realized by laws and decrees. There has to be an own engagement by the businesses to achieve a slight of example status (Mathieu, 2002).

An orientation of the business sector on sustainability will not be done due to the social or economic responsibility of the enterprises, but will be done for economic reasons (Bundeskammer für Arbeiter und Angestellte, 2001). Sustainable business can lead to a reduction of costs in the business sector. For the growth of business revenues cost-savings can be a proved way, which has moved entrepreneurs to a stronger self engagement in the last time (Schulz, 2002).

A recently in the research project “oekoradar.de” published study by the German competence centre for sustainable business of the private university Witten/Herdecke came to the conclusion, that sustainable businesses act much more successfully on the market than other businesses (Oekoradar.de, 2002).

It can be summarized, that enterprises follow the way of sustainability due to cost reasons. In this regard not every dimension of sustainability or a combination among one another will be focused. Effects of sustainability in all dimensions aren't achieved with awareness but because of usual business acting.

## **4 Sustainable business and employment effects**

As presented above an orientation of the enterprises on the dimensions of sustainability occurs only in a few cases due to the convenience of the entrepreneurs, but first of all because of business reasons. For that reason employment effects, which affect the social and economic dimension of sustainability can be only realized in marginal effects.

In the following chapter an overview is given how employment effects in the field of environmental protection are measured. Because of its major focus on ecology this field can be counted to sustainable development.

### **4.1 The scale of employment effects**

#### **Positive and negative effects**

The implementation of environmental protection efforts can lead to a protection of existing workplaces or new jobs can be created. Systems for environmental protection have to be planned, built or operated, so that jobs are created. Some more positive effects can be achieved through an improvement of the competitive position of the enterprises and as a consequence in an increase in sales.

At the same time negative employment effects can be found, if for example environmental constraints force businesses to shut down plants. In addition a crowding-out effect regarding other employment efficient investments can be postulated. The crowding-out effect describes a special problem for the definition of the net employment effects, because it is very difficult to realize if environmental protection investments are taken plus or minus to other employment effective investments. The last case could cause only a shift in the structure of employment (Wiltinger, 2002).

#### **Direct and indirect effects on employment**

Effects on employment in the field of environmental protection can be a direct cause of the demand for environmental protection capital goods and services. For example businesses who produce “End-of-Pipe” technologies or service provider in the field of the implementation of environmental guidelines have achieved positive employment effects in the last years.

Further more the state creates jobs in his administration, because of the implementation of environmental guidelines.

A change in the structure input demand by the enterprises who are investing in environmental protection or sustainability can also be accompanied by indirect

employment effects. On the one hand the demand for energy or waste services can decrease and on the other hand the demand for consulting or repair services of the environmental technologies can increase.

Further more indirect employment effects can grow through multiplier effects due to earned income, wages and price effects and on the negative side through the already characterized crowding-out effects.

### **Short- and long-time effects**

The demand for environmental protection technologies or services and the possibly interrelated production increase provides above all for short-term direct effects on employment. These short-term effects can be positive for the manufactures and suppliers or can be negative when plant shifts or shut downs of plants occur.

Indirect employment effects can be found mostly on the long-term side. Jobs can be lost to countries where environmental protection guidelines are not as strong as in other countries. But also the improvement of the environmental quality at a place can cause a long-term positive employment effect. This place will be preferred by businesses settlements, because of the good location factor “quality of life”.

## **4.2 Measurement of employment effects**

The measurement of employment effects can be differentiated in offer orientated and demand orientated methods. Both research methods will be explained shortly in the following section.

### **Offer orientated method**

In this research method the businesses and service providers provide own information about their number of employees. In the field of sustainable business or enterprises - that are in the broader sense counted to the market of environmental protection - a problem occurs, that businesses can't be detected by the German federal statistics administration (Sprenger, 1989).

Therefore businesses work with the principle of “self-declaration”, so that voluntary directories of contractors are not significant. This can lead on the one hand to an overestimation because enterprises count themselves for image reasons to the environment market. On the other hand businesses will not be counted who don't feel associated to the market or can't contrast parts of their production that have environmental protection character by their whole range of articles.



In this context the “Multi-Purpose-Products” have to be addressed, that are used for other purposes than only environmental protection and that can lead to false statements according to the calculation of employment effects of businesses.

A major disadvantage of the offer orientated examination of employment effects in the environmental sector is the missing possibility to count the indirect employment effects that result out of changing input demand or unknown multiplier effects (Wiltinger , 2002). To solve that problem the demand orientated method can be used.

### **Demand orientated method**

Demand orientated research methods can be used above all to describe the indirect employment effects. In this method sales figures for environmental protection investments are used to count the direct and especially the indirect effects.

The indirect employment effects can be counted with the so called “Input-Output-Tabloids” of the German federal statistics administration or the European Union. A problem related to the demand orientated method is the fact that the environmental protection investments or expenses are not completely included in available statistics. Sales figures are often not released by small and medium sized enterprises and aren’t subject to the obligation of the federal statistic administration. Due to this problem the use of demand orientated methods to study the employment effects often leads to an underestimation of employment effects (Wiltinger, 2002).

To compensate the advantages and disadvantages of both research methods on counting employment effects, a combination of both research methods is the best way (Sprenger; Knödgen, 1983). But there is still a danger of “double counts”, that can affect the results.

## **5 Employment effects of sustainable business – literature review**

The introduced research methods were used in the last years to present effects of environmental protection on employment. In contrast businesses working according to the principles of sustainability have not been examined. Thereby has sustainable business a special importance for the future, because an exclusive orientation on traditional environmental protection goals does not really necessarily unfold a sustainable protection of resources.

### **5.1 First research results**

The federal chamber for workers and clerks in Vienna has presented in 2001 results about employment effects for enterprises who are engaged in integrated environmental protection measures (Bundeskammer für Arbeiter und Angestellte (Ed.), 2001).

In this analysis not only the traditional maintenance environmental investments and measures at the production of good and services were considered but rather the integrated environmental protection.

Integrated environmental protection means a change in the business production process to use energy and raw materials much more efficient. In the meantime a reduction of waste and harmful substances comes along.

An efficient use of resources complies with the principles of sustainability, so that businesses with integrated environmental protection concepts can be called a sustainable business. Although all dimensions of sustainability (social and economic) are not realized at the same time.

In the framework of the study a combined research method with a demand and offer orientated approach was selected. With the help of a standardised questionnaire enterprises in Germany, the Netherlands, Sweden, Spain and Austria were asked, who implemented so called environmental management systems (EMAS or ISO 14001 - Principles) in their business. Further more businesses from Austria were asked, who took part in local or regional environmental management programs (e.g. ÖKOPROFIT). As most of the examined enterprises have the EMAS or ISO certification, it can be postulated that small and medium sized businesses are not listed proportional in the random sample (Bundeskammer für Arbeiter und Angestellte (Ed.), 2001).

In a second step the spending for integrated environmental protection measures is analyzed with an “Input-Output-Tabloid” to estimate the indirect employment effects.

Direct positive employment effects have only been counted in a few of the examined businesses. But for most of the enterprises the integrated environmental protection had a great impact to safeguard the employment, what above all means a lot during the last negative cyclical trends in the last years. In contrast to the increase of unemployment over all enterprises only 1,5% of the respondents registered negative employment effects.

Indirect employment effects emerge in a high degree due to equipment investments, which are needed for integrated environmental protection concepts. In addition to the promotion of the employment at the business suppliers, that can be estimated with an Input-Output-Analysis, the earnings multiplier contributes positive employment effects.

The savings on the side of the businesses that can be achieved with a better input from resources can guide in higher earnings of the employee and business households. Private consumption has a higher adding value and employment intensity than spendings on energy and raw materials (Kosz, Michael, 1996).

Through this survey it can be postulated that sustainable businesses achieve only a few employment effects on the direct way, but multiplier effects and an increasing supplier demand create and safeguard jobs in other branches.

As already pointed out only large enterprises were examined in the survey of the Austrian researchers. For this reason a question occurs in this context: What kind of employment effects can be realized by small and medium sized sustainable businesses? This question will guide to a new research approach that will be explained in the following section.

## **6 Employment effects of small and medium sized businesses**

At this point a new research method will be explained who will answer the question what kind of employment effects arise from small and medium sized sustainable businesses. This examination will be done in the context of the author's dissertation.

### **6.1 Small and medium sized businesses**

Small and medium sized businesses have a strong impact on Germany's national economy. All together 99% of all enterprises can be named small and medium sized. This group produces roughly half of the gross value added by the business sector and employs mostly 70% of all employees (Deutsche Ausgleichsbank (Ed.) et al., 2003).

Small and medium sized businesses have at the same time a special potential for the implementation of innovations and technical progress. Small business units release process or product innovations faster or can achieve market value earlier than big businesses. Further more the group of the very innovative founders can also be counted to the group of small and medium sized businesses. All these facts emphasize the important role of the small and medium sized enterprises in the German national economy.

### **6.2 The ÖKOPROFIT-Initiative**

For this reason it is especially interesting to study the employment effects of sustainable business in the group of small and medium enterprises. At the beginning of the nineties the initiative "ÖKOPROFIT" (Ecological project for integrated environmental protection) was created in Graz/Austria. It has been the aim to lead small and medium sized businesses towards integrated environmental protection that means of course sustainable business. Until this point above all only major enterprises took first steps by certifications with EMAS or ISO 14001 to gain a sustainable way of business.

ÖKOPROFIT is a cooperation project where local administrations, enterprises, chambers of commerce, chambers of handicraft, organisations and advisers work together, to give small and medium sized businesses scientific advice and financial aid to implement environmental management systems (Grothe-Senf; Ludwig, 2002).

The advice and information takes place in different phases and all time inside a same group of business representatives on a local level. In doing so the group membership will be granted as a special advantage of the ÖKOPROFIT-Initiative because a feeling

of togetherness, a growing motivation and different synergy effects come along with it (Wirtschafts- und Beschäftigungsförderung Dortmund (Ed.), 2003).

Along to the advice in the group the local ÖKOPROFIT-Initiatives offer a business specific advisory service, which leads to a greater dimension of savings in resources and business costs. The advisory services of the ÖKOPROFIT-Initiatives in Germany are funded by local and federal governments in the context of the Agenda 21 programs.

First evaluations show, that investments on the business sides amortises themselves almost after an average of three years. Reduces in business costs are valued at approximately 5 % of the total revenues of a year (Grothe-Senf; Ludwig, 2002)

### **6.3 A new approach**

What kind of consequences for employment effects these reduced costs and the already presented competition advantages have on small and medium sized businesses hasn't been examined in much detail yet.

For this reason an empirical examination and research is intended by the author to locate employment effects of sustainable small and medium sized businesses. This will be done with a combination of a demand and offer orientated research method.

A complete inventory count of all sustainable small and medium sized businesses can't be done because of a lacking database. As a random sample the businesses of the ÖKOPROFIT-Initiative will be used because these enterprises work partly with sustainable principles for several years now. In Germany for example already approximately 1.000 businesses can be surveyed, so that a representative return can be expected (Baum Consult GmbH (Ed.), 2003)

An examination of this group with the help of a standardised questionnaire will give first insights which economic effects can be expected with sustainable business in the group of small and medium sized enterprises.

It will be analyzed if a positive employment effect, which means the creation or safe guard of workplaces, has been achieved in the businesses. The cyclical employment effects are taken into account by analyzing databases on employment development of the participating branches at the same time.

Further more it is a special interest, if savings in business costs and resources have a causal effect on employment or if the competition advantages through ÖKOPROFIT have a higher influence.

According to the direct employment effects the indirect effects will be examined too. In a part of the questionnaire about the direct employment effects the volume of the investments for the integrated environmental technologies will be questioned. In this regard the author does not expect any non-responses by the questioned businesses, because they were already asked in ÖKOPROFIT-Initiatives about their investments that have to be done for the certification.

With the help of these databases and the latest tabloids of the german “Input-Output-Calculations” by the German federal statistics administration the indirect employment effects can be stated.

At the end of this new research approach it can be postulated if sustainable business by small and medium sized enterprises generates new employment. Further more local and federal administrations will get answers if public funding for sustainable businesses will have more effects regarding the dimensions of sustainability than only an ecological value.

## 7 Literature

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