



‘When the politicians have good and objective information about important political topics – they will make better decisions.’

Claus Kähler,
Chairman of the Rockwool Foundation 1981-1991

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2014 in Brief

During 2014 the Rockwool Foundation Research Unit worked on 42 projects, 8 of which were completed during the year. Within the area of practical interventions there were a total of 12 new or continuing interventions managed by the Foundation.

In financial terms, the Rockwool Foundation made donations of DKK 50.4 million in 2014, compared to DKK 34.9 million and 34.1 million in 2013 and 2012 respectively. Income before donations was DKK 63.0 million. Net financial assets at the end of 2014 totalled DKK 3.7 billion.

The Research Unit

The Rockwool Foundation Research Unit continued in 2014 to provide input to the public debate through a large number of publications, including four books, fourteen working papers and ten newsletters. In addition, researchers at the Unit published 22 articles in peer-reviewed academic journals. Three press conferences were held to launch publications, with the participation of politicians and experts in the relevant fields.

The year began with the presentation of an analysis of the short-term effects of a recent tax reform on the labour supply of the most highly paid employees in Denmark, whose taxes had been reduced by the tax reform.

Next followed an analysis of the significance of immigration for public finances in Denmark, both today and in the coming decades. The analysis was based on the assumption that immigration and integration would continue as it is. One of the key issues investigated was whether immigration could contribute to resolving the financing problems of a welfare state under pressure from an ageing population, and if so how much such a contribution might amount to.

International research literature had previously offered no clear answer to the question of whether young immigrants who grow up in neighbourhoods where many criminals live display a higher level of criminality themselves. That question was finally answered by an analysis of criminality among young immigrants in Denmark.

The Research Unit published a number of new analyses within its long-established field of interest of undeclared work. These included an analysis of Danes' undeclared work during the recent economic crisis, published just before the summer. At the same time, analyses were published of the importance of undeclared work for the lifetime incomes of people in various educational

categories and of the effects of the 2010 tax reform in Denmark on the supply of undeclared work. Finally, another analysis in the same area investigated whether the 'Home Work Scheme', which provided tax deductions for payments to workers for a number of home improvement and maintenance jobs, had had any effect in terms of limiting the amount of undeclared work carried out in Denmark.

The spring of 2014 saw intensive debate in the Danish media on the problems of time pressure among families with children. This debate became better-informed when the Research Unit announced, at the Bornholm People's Meeting, the findings from a comprehensive analysis of trends in Danes' leisure time, including that of families with children, over the period since 1964.

For many years, Danish education policy and educational research have focused strongly on primary/lower secondary schooling, while upper secondary level education has typically received far less research attention. It was in light of this that the Rockwool Foundation Research Unit set in train a major interdisciplinary research project focused on this educational level, covering both vocational training and general upper secondary schooling and entitled *Styring, ledelse og resultater på ungdomsuddannelserne* (Danish upper-secondary education: Management, administration and results). The findings were published in a book of the same name to coincide with the start of the new school year in August 2014.

The numbers of Danish children and adults diagnosed with ADHD have risen sharply in recent decades, as they have in other developed countries. A Research Unit project analysed the costs to society and to sufferers of untreated ADHD. The project is the first of its kind anywhere, and the results are to be published by Oxford University Press.

Illegal immigration to Europe is accorded high priority in the media today. Such immigration has also played a key role in defining European Union cooperation on external borders. But is there any significant illegal immigration to Denmark, with its tightly regulated labour market and carefully registered population? This issue formed part of the subject matter of a book on illegal immigration to Europe – and to Denmark.

More detailed descriptions of the Research Unit's publications can be found in this Annual Report and on the Research Unit website at www.en.rff.dk/publications (and in Danish at www.rff.dk/publikationer).

Research outside the Research Unit

In 2014 the results from an external research project on Danish CO₂ emissions and the cost of producing electricity in Denmark were published in three reports and two newsletters. The reports were presented at a press conference. They provided information on the differences between CO₂ emissions from production and from consumption, as well as giving insights into the costs and benefits of Danish energy policy.

More detailed descriptions of the project can be found in this Annual Report and on the Foundation's website at www.rockwoolfoundation.org/publications/external+research, where the reports and newsletters are available for download.

Practical intervention projects

The aim of the practical intervention programmes is to generate new knowledge that can form the basis for designing effective solutions to some of the urgent problems facing society today. The interventions are also intended to provide data for new research initiatives.

The practical interventions are organised within four strategic areas: 'Food Security and Poverty Alleviation', 'International Peace Building', 'Social Capacity Building' and 'Health Interventions'.

In 2014, a project was initiated to test whether certain central elements of the Foundation's existing agricultural development approach can be used as a peace-building tool. This project operated across the two strategic areas of 'Food Security and Poverty Alleviation' and 'International Peace Building', since violent conflict is often related to food insecurity. The project was piloted in small-scale farming communities in northern Kenya that have been troubled for a long time with conflicts over cattle, pasture and water, and where the prospects for young people are bleak.

The Rockwool Foundation also continued in 2014 to support the spread of its existing agricultural development approach.

Within the programme area 'Social Capacity Building', the Foundation engaged in a major new project addressing the increasing challenge of youth unemployment in Denmark. During the economic crisis the number of young people affected by unemployment rose dramatically, while the number of young people without an education qualifying them for work has remained high. On the basis of a study of the existing activation

system, the Rockwool Foundation is now investing in the development of a new approach to youth unemployment – an approach that is specifically targeted at a group of young people who are particularly at risk of being permanently outside the labour market.

Support continued in 2014 for the dissemination of teaching material aimed at promoting social and personal skills among the students in primary/lower secondary schools in Denmark.

The 'Health Interventions' programme area added a new project in 2014 that aims at helping marginalised ethnic women from non-Western backgrounds with lifestyle-related illnesses. The social disadvantages experienced by these women combined with the informal barriers they face to access to health services make them more likely to suffer from lifestyle-related illnesses. The project was developed and implemented in cooperation with the Immigrant Women's Centre in Copenhagen. It is currently undergoing a process evaluation, which will assess the programme with regard to its viability and potential for upscaling to other institutional settings.

The Rockwool Foundation continued in 2014 to support the dissemination and development of interventions and material for Danish primary/lower secondary schools through the Healthy Schools Network initiative.

More detailed descriptions of the achievements of selected projects can be found in this Annual Report. Descriptions of the individual programme areas and the reasoning behind the prioritisation of activities can be found on the Foundation's website at www.rockwoolfoundation.org/programme+areas.

Thanks from the Board and the Management

The Board and the Management wish to express their gratitude to all the external researchers and organisations with whom the Foundation cooperated in 2014, to the members of the Programme Committee, and to the very committed staff of the Foundation and the Research Unit for their fine work during the past year.

Lars Nørby Johansen
Chairman

Elin Schmidt
President

The Members of the Board

... with their extensive knowledge and experience within international business and politics are crucial for the strategic development of the Foundation, working in collaboration with the Management. Each Board member also actively participates in one of the four Board Committees that cover the intervention projects, giving them the opportunity to contribute their broad expertise.



Lars Nørby Johansen
Chairman. Chairman of Copenhagen Airports, Chairman of the Danish Growth Council. Former CEO of Falck, Group-4Falck and G4S.*



Anders Eldrup
Deputy-Chairman. Former CEO of DONG Energy. Former Permanent Secretary of State at the Danish Ministry of Finance. Chairman or member of a number of boards.*



Frank Jensen
Lord Mayor, City of Copenhagen. Former Danish Minister of Justice and former Danish Minister of Research.*



Lykke Friis
Prorector at the University of Copenhagen. Former Danish Minister for Climate and Energy and Former Danish Minister for Equality.*



Bo Kähler
Chairman of the Board of Directors of HEADS AS. Former CEO of Fundator A/S. Former Director of Research, Information Technology and Telematics, SINTEF.*



Lise-Lotte Kähler
Head of Administration, Scandinavian Highlands Holding A/S.



Søren Kähler
Graduate Engineer with a former international career with FLSmidth & Co. and Rockwool International A/S. Member of the Board of Directors of Rockwool International A/S.



Andrzej Kielar
Managing Director of Rockwool Poland.



Jesper Kähler
Managing Director of Sundhedsprofil A/S, Chairman of the Board of FAHU A/S.



Lars Elmekilde Hansen
Senior Project Manager, Group Research & Development, Rockwool International A/S. Member of the Board of Directors of Rockwool International A/S. *Elected by employees.*

* Member of the Executive Committee.

The Members of the Research Programme Committee

... ensure that high academic standards are maintained and that the use of resources is optimised by being applied only to cutting-edge research. The Research Programme Committee is made up of leading Scandinavian professors within the fields of research that are prioritised by the Foundation, and is always consulted before the Board approves a research project.



Torben M. Andersen
Professor, Department of Economics and Business, Aarhus University. Former Chairman of the Danish Economic Council and the Danish Welfare Commission.



Grete Brochmann
Professor, the Department of Sociology and Human Geography, University of Oslo. Former Chairman of the Norwegian Welfare and Migration Commission.



Peter Gundelach
Professor, Department of Sociology, Copenhagen University. Former Chairman, the Danish Social Science Research Council.



Torben Tranæs
Research Director and Professor at the Rockwool Foundation Research Unit. Former Professor at the Danish National Centre for Social Research.

The Management



Elin Schmidt
President.
With a former international career with Novo Nordisk A/S. Chairman of the Danish NGO Mødrehjælpen and advisor to a number of NGOs operating within the social sector.

Fact Act

How we work

The Rockwool Foundation has two primary objectives: to deliver facts about society through reliable research, and to develop interventions in society that have the potential to improve the lives of individuals living in Denmark or in other countries of the world. The Foundation focuses closely on the interconnectedness of these two objectives. We believe that obtaining reliable knowledge of the facts is a prerequisite for successful actions aimed at addressing the challenges faced by society. Knowledge can provide enlightenment, aid policy-makers and form the basis for discovering new solutions to problems. Through our research we aim to make relevant, impartial and reliable contributions to the public debate, providing sound evidence on which to base policy.

The effects of our interventions are systematically evaluated by experts.

The annual report for 2014 presents some of the activities that the Rockwool Foundation has supported over the past year.

An account of the history of the Foundation since its establishment in 1981 was written in 2011. An update is published each year, providing a summary of the year's activities that can be read as a continuation of the historical overview. The history, the yearly summaries and full versions of this and previous annual reports are all available on the Rockwool Foundation website.

- **Work and the Welfare State**
 - **Families and Children**
 - **Migration and Integration**
 - **Undeclared Work and the Law of the Land**
 - **Development Economics**
-

The objective of the Rockwool Foundation Research Unit is to use its independent status to produce new, empirically-based analyses related to current problems faced by modern society. The Rockwool Foundation takes it to be self-evident that a deep insight into the nature of a problem is a prerequisite for its solution.

Programme areas for practical interventions

- **Food Security and Poverty Alleviation**
 - **International Peace Building**
 - **Social Capacity Building**
 - **Health Interventions**
-

The Rockwool Foundation initiates and implements practical interventions within four strategic programme areas. The aim is to develop models for lasting and sustainable improvements in both rich and poor societies.

Danish upper secondary education: Management, administration and results

The upper secondary education system in Denmark could teach the same number of students for less money, without compromising on quality as measured in terms of grades and completion rates. This was revealed in a major analysis of the system presented at a press conference in August 2014. The analysis was part of an interdisciplinary project carried out under the auspices of the Rockwool Foundation Research Unit, and it also revealed the importance of different forms of management and of teachers' commitment.

‘In high school there are gains that could be made in mathematics, while in both high school and vocational training the situation could be improved with regard to retention of students, i.e. in the proportion who graduate.’

Professor Jørgen Grønnegaard Christensen, Aarhus University.

Work and the Welfare State

The analysis was presented in a book entitled *Styring, ledelse og resultater på ungdomsuddannelserne* (Danish upper secondary education: Management, administration and results) edited by Professors Lotte Bøgh Andersen, Peter Bogetoft, Jørgen Grønnegaard Christensen and Torben Tranæs.

With regard to high schools, the analysis examined the differences between schools in terms of their relative abilities to improve students' grades. The starting point for the analysis was the students' grades from lower secondary schools and their socioeconomic backgrounds. In other words, the analysis sought to determine the size of the impact on academic achievement made by the various high schools for students who start from precisely the same point.

The findings show consistently that while the differences for Danish studies are not great, there are significant differences for mathematics. The figure on the right shows in more detail the relative abilities of high schools to improve academic achievement. For Danish, the relative ability to raise students' grades for the great majority of schools varies between plus and minus 0.2 of a grade point. This finding can be illustrated by considering a class at an average high school which achieves a class average grade in Danish of 7 on the Danish academic scale. (Grades on the Danish academic scale are 12 (Excellent), 10 (Very

good), 7 (Good), 4 (Fair), 02 (Adequate), 00 (Inadequate), -3 (Unacceptable).) If the students in this class had chosen to attend the best high school in Denmark for Danish studies, their average grade would have been 7.2, and if they had chosen the worst school in the country then their average grade would have ended up as 6.8. In other words, there are no major differences among schools with regard to Danish studies.

The variations are greater in mathematics. A class at an average school with an average grade of 7 would have achieved an average grade of 7.5 at the best school in the country for mathematics and of 6.5 at the worst. This difference of a whole grade point between the best and the worst schools is relatively large.

Despite the greater variation in grades around the average grade of 7, two-thirds of all students taking mathematics at the higher level still achieve grades within the 'normal' range of between grade 4 and grade 10, and thus the differences among schools amount to around 15 percent of this range. For Danish, the difference is equivalent to around seven percent of the range.

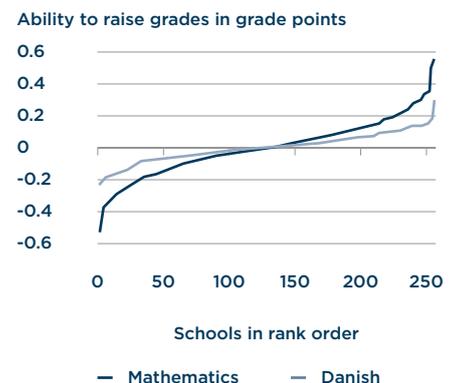
Considerable variation was also found in schools' ability to retain students, once again taking into account the varying compositions of the student body at each school. There are examples of schools that retain 99 percent of their students through

to course completion, while there are others that retain only 84 percent. Such low levels are, however, exceptional; the vast majority of schools retain between 90 and 95 percent through to their final examinations.

Some vocational colleges have excessively high drop-out rates

Turning our attention to vocational colleges, we find that the performance of

Relative abilities of high schools to raise grades in Danish and mathematics, 2008-10



Note: Schools are ranked in terms of their relative abilities to raise grades, i.e. according to the amount of change in students' grades in relation to what one could expect on the basis of students' scholastic and socioeconomic backgrounds.

Source: *Styring, ledelse og resultater på ungdomsuddannelserne*



Research Director Torben Tranæs of the Rockwool Foundation Research Unit presenting the findings of the project at a press conference about the publication of the new analysis of Danish high school and vocational colleges.

average colleges is well behind that of the best in terms of completion rates. In fact, average vocational colleges could improve their retention rates by around 30 percent if they were as good in this respect as the best. This potential for improvement means that a vocational college that currently retains 62 out of every 100 students who begin courses could retain 81 of these students if it performed as well as the best colleges.

On the other hand, there are only small differences among colleges in their ability to turn out qualified students who find jobs. If the worst colleges were to become as good as the best, the employment rates among their students would improve by only five percent.

One of the editors of the book, Professor Jørgen Grønnegaard Christensen of Aarhus University, sums up the findings: 'In high schools there are gains that could be made in mathematics, while in both high schools and vocational training colleges the situation could be improved with regard to retention of students, i.e. in the proportion who complete their courses.'

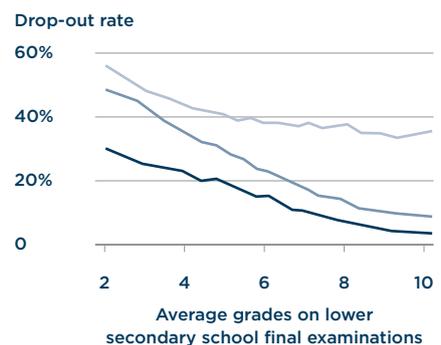
It was not possible to make comparisons of the relative abilities of vocational colleges to improve students' grades, since vocational courses vary greatly from college to college in terms of course content and structure.

The analysis also shows that in general, there is a strong positive correlation between grade average from lower secondary school and the probability of completing any type of upper secondary education. However, the correlation is strongest for high schools, where the relationship applies across the whole grading scale: the higher the grade, the lower the drop-out rate.

The picture is a little different for vocational training. Provided a student has an average lower secondary school exam grade of 4 or above, it makes little difference exactly what that grade is. Grades below 4 are associated with a higher drop-out rate. The reason that the graph line is relatively flat for grades above 4 is due to students dropping out of vocational training, but doing so in order to transfer to a high school.

The analysis also shows that there is a strong relationship between students' social background and the probability of their dropping out of any upper second-

Drop-out rates for students with various lower secondary school grades



- Students on general academic upper secondary school programmes
- Students on commercial and technical upper secondary school programmes
- Students at vocational colleges

The likelihood of young people completing an upper secondary programme is closely correlated with their scholastic background.

Source: *Styring, ledelse og resultater på ungdomsuddannelserne*



The Minister of Education, Christine Antorini (Social Democrat), on the right of the picture, commenting on the findings of the project at the press conference. Other members of the panel were, from the left, Jørgen Søndergaard, Head of Rådet for Evaluering og Kvalitetsudvikling af Folkeskolen (the Council for Evaluation and Quality Improvement of Lower Secondary Schools), Michael Kaas-Andersen, Principal of Selandia Business and Technical College, and Marie Krarup, spokesperson on upper secondary education for the Danish People's Party.

ary course – the more disadvantaged a student's social background, the greater the risk of dropping out. The relationship is most apparent for high schools.

International comparison

The analysis also included an international comparison. This showed that, unlike Danish primary/lower secondary school, which is one of the most expensive in the world, upper secondary education in Denmark is around the middle of the list with regard to cost in relation to a number of comparable OECD countries.

Even though Denmark is not among the highest-spending countries for upper secondary education, there may still be a significant potential to achieve savings, or to obtain more for the money that is spent. By means of a comparison with a large group of wealthy OECD countries, the researchers demonstrated that Denmark could save between 12 and 34 percent of its expenditure. The potential for savings is, however, found to be considerably less if Denmark is compared only with the countries of Northern Europe, which are those it most resembles, and from which it could most easily learn something in

terms of teaching. The potential savings suggested by such a comparison would be at most nine percent.

At the same time, the analysis showed that Danish upper secondary education appears in a good light in terms of the relationship between what it costs to educate a student and the wage that student can subsequently expect to earn. Future wage expectations can be regarded as an expression of the worth to society of a young person who has completed a programme of upper secondary education. While educational costs in Denmark lie in the middle of the range, the wages that young Danes can expect to earn are at the top – higher than in Finland, Norway or Sweden.

The right management style leads to committed teachers

The researchers also presented an analysis of the significance of school management style for teachers' level of commitment. One of the key findings is that school principals whose management style is primarily to lay down rules and regulations have no positive influence on the commitment of teachers – in fact, the reverse may be the case.

The effects are the opposite when the principal is able to create and communicate to the staff a clear vision for the institution. Principals who can do this have teachers with a greater sense of commitment to the institution where they work. This commitment finds expression in a sense of identification and involvement with the institution.

If we isolate the significance of management in itself – examining the effect of active management as opposed to laissez-faire or inactive management – it is found that active management has a positive effect on students' results.

The analysis concludes that if school principals and teachers are in agreement on the fundamental priorities of the school, a committed principal can have a positive influence on the commitment and motivation of the teachers. However, this does require that school managers are very clear in their minds about the school's central visions and goals.

New solutions needed to tackle the growing problem of youth unemployment

Youth unemployment in Denmark is close to 15 percent, and around 60,000 young people are currently neither in education nor employed. Some of those young people face social and personal barriers, and the unemployment rate for this more vulnerable group is up to three times as high as that of young people in general. In the rest of Europe the problem is even bigger. The opportunities and resources lost through long-term unemployment are considerable, and obviously the situation of being long-term unemployed can be devastating for a young person. New solutions are therefore needed urgently.

‘Denmark has endured a long period of economic stagnation. As a result, young people are finding it increasingly difficult to find work, and there is a risk that youth unemployment will become a serious long-term structural problem in Danish society. That is why it is urgent to address this issue now.’

Elin Schmidt, President of the Rockwool Foundation.

Social Capacity Building

In light of the difficult situation faced by a growing number of young people in our society today, in which they have neither a stable job nor an educational qualification for work, there is an urgent need to rethink the employment services offered to unemployed young people. The Rockwool Foundation is therefore currently investing in the development of new social technologies and interventions targeting youth unemployment, with a particular focus on supporting vulnerable young people. This work on developing innovative solutions will be carried out in close cooperation with various partners, including a number of municipal authorities.

Youth unemployment has been a persistent problem for decades, but since the onset of the economic crisis in 2008, Denmark has been facing a growing challenge in absorbing and integrating young people into education and the labour market. The number of young people aged 15 to 24 years who are not in education or employment doubled during the economic crisis, and remains today at a significantly higher level than in the years before the onset of the recession. The structural

changes affecting the labour market have accelerated, with ever fewer unskilled jobs being created and a growing demand for an educated and skilled labour force. At the same time the number of young people without an education that qualifies them for specific jobs remains high, with up to 20 percent not completing upper secondary level schooling or vocational training. A growing number of young people have difficulties in coping with an education system and a labour market that demand increasing independence and autonomy.

Successfully tackling youth unemployment is not only a question of meeting young people’s aspirations for a better life, but also a necessity for enhancing the welfare of society in general. With young people having paid the highest price during the economic downturn, there is a renewed sense of urgency in Denmark to integrate them into the labour market and the education system. This is evidenced by the large number of education and labour market reforms implemented in recent years with the core aim of increasing the number of young people who take courses

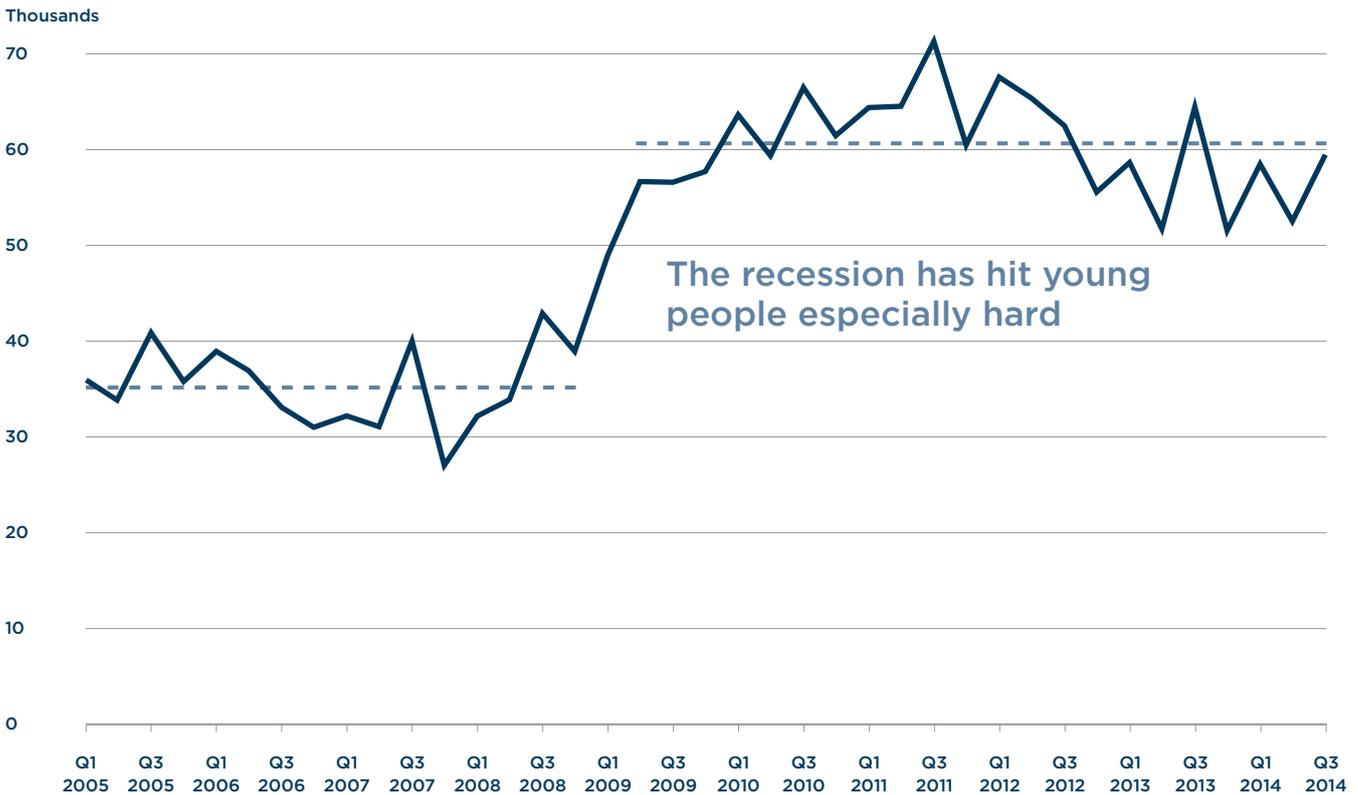
of education to qualify themselves for jobs in the 21st century labour market.

In particular, there is a group of vulnerable young people who are neither in education nor employment and who are struggling to find a path towards a stable work situation that will enable them to fulfil their own personal aspirations and build a secure financial future for themselves and their families. ‘Vulnerability’ in this sense is a complex concept, but it is often emphasised in the research literature that vulnerable young people typically come from weak social backgrounds, are often involved in risk behaviours such as drug abuse or criminal activities, and are often affected by psychological disorders or mental fragility. They generally suffer from loneliness and isolation due to weak family and social ties, and thus lack social networks to support them during ups and downs in their education and as they start their career paths.

The need to rethink youth employment services

The growing number of vulnerable young people who are not in education, employ-

Numbers of people in Denmark aged 15-24 not in education or employment



Source: Statistics Denmark

ment or training indicates that the current employment services, which should build up skills, competences, relationships and networks, often do not work for them. These young people frequently face multiple barriers to completing their education and finding permanent employment. All too often they are sent back into an educational system that did not work for them the first time round. In many cases work is more immediately appealing to them than education and they tend to think that they will be able to go on to further education later, but they often also lack the core capabilities needed to sustain them in the work opportunities on offer – emotional resilience, networks, and a sense of direction.

Existing efforts by the employment system to give vulnerable young people practical experience and to bring them into settings where they have the opportunity to create networks and expand their social

relations to a wider group of people are often inadequate. Rather than perceiving unemployed young people as passive recipients of services, the employment system should aim to offer young people a developmental journey, providing them with opportunities and allowing them to make choices based on their needs. Initiatives that actively involve the private sector, getting enterprises to take a more proactive role in supporting vulnerable young people in finding direction and purpose, are unfortunately few and far between, even though many of these young people are craving for practical experience.

Vulnerable, marginalised young people struggling to find motivation, engagement and purpose need a new kind of experience in order for them to progress towards the ultimate goal of completing an education and finding a stable job – experiences that will foster positive development and build up their capabilities, experiences

that can be provided by taking a holistic approach to their life situations, resources and challenges. This has become evident from a number of in-depth interviews with unemployed young people who feel stuck in the employment system, making no progress towards either education or a stable job. On the basis of the insights we obtained through interviews with this group of vulnerable young people, the Rockwool Foundation has concluded that they need help in areas such as:

- building connections to the wider community in order to create new ways of meeting potential employers
- finding direction and meaning through involvement in practical settings where they can feel that their contributions are genuinely valued
- getting to know their strengths through practical experience
- forming useful peer networks that will provide supportive relationships with others who are a few steps ahead of them



The number of students who drop out of upper secondary education in Denmark remains persistently high. Up to 20% of each youth cohort never complete a course of education that would qualify them for a job. Many of these young people drop out of several educational or vocational training courses; they feel increasingly alienated by mainstream society, and find it ever harder to bounce back from each setback they suffer. See also the presentation of the research on the upper secondary education in Denmark on page 10.

- engaging in an ongoing reflection process on the above experiences that helps them to build up an idea of where they want their lives to go
- building emotional resilience through therapeutic techniques and tools embedded into real life activities and contexts.

Developing a new approach

Under the auspices of its Social Capacity Building programme, the Rockwool Foundation has carried out a review of the existing activation services that young unemployed people are offered, in order to obtain a better understanding of the problems that young people face in the current employment system. In addition to extensive interviews with a broad range of actors in the employment system, including case workers and administrative staff from selected job centres, a number of interviews in detail have been carried out with vulnerable young people from a wide range of backgrounds about their ex-

periences, needs and aspirations. All these young people have already experienced difficult challenges in their lives, and a recurring and strong need felt among them is a desire to belong. They want to be recognised for making valuable contributions, and to forge new identities that will allow them to leave behind the associations that currently hold them back. However, they struggle to find and sustain participation in appropriate courses of education or meaningful employment, and there is disconnection between what they need and aspire to and what the current employment services offer. Seen through their eyes, the current employment system is a series of fragmented activities with little meaning or purpose, and little consistency or progression. It is not a developmental journey, nor one that connects them to the wider community in any meaningful way.

In the next phase of developing a new youth employment service, the Rockwool Foundation will be working with a larger

group of young people, employers and local community organisations to design and test a new employment service, provided in partnership with municipalities but delivered through various contexts. The youth employment service should be anchored in a municipal setting to make it sustainable and scalable, and the Foundation has teamed up with selected municipalities to work closely with them in developing and testing the intervention. With the strong involvement of private businesses, we aim to build a platform that will engage young people in meaningful experiences in the wider community and through which they can build up the connections, and sense of belonging that will strengthen both their employability and the capabilities they need to create their own opportunities.

Illegal immigration to Europe – and to Denmark

Illegal immigration to Europe is accorded high priority in the media today. Such immigration has also played a key role in defining European Union cooperation on external borders. Increasing illegal immigration is a difficult issue to deal with and is associated with great uncertainty; it seems to be linked to globalisation in general. However, the topic is not as high on the political agenda in Denmark as legal immigration.

Migration and Integration

A study by the Rockwool Foundation Research Unit has analysed for the first time ever the number of illegal immigrants living in Denmark.

The analysis shows that the number of illegal immigrants is larger than hitherto assumed, indicative of a considerable rise in such immigration in recent years. While the number of illegal immigrants in Denmark is estimated to have been around 15,000 in 2008, it had increased to more than double this in 2013, totalling approximately 33,000.

The analysis is based on police records of illegal immigrants. Calculations of the

total number are based on registrations of immigrants that the police have encountered and charged with illegal residence or illegal working. Statistical methods have been used to extrapolate from these figures in order to calculate how large the population of illegal immigrants can be surmised to be in Denmark.

As the figure on the opposite page shows, it is not possible to provide a very precise estimate on the basis of the available information, but only to indicate a range of figures – a *confidence interval*, which can be used as an estimate of the probable maximum and minimum sizes of the population. In 2008 the number is estimated

to have been between 9,000 and 21,000, while in 2010 the population of illegal immigrants was smaller, probably between 9,000 and 16,000. Thereafter the level increased rapidly, so that in 2013 there were between 20,000 and 49,000 illegal immigrants in Denmark.

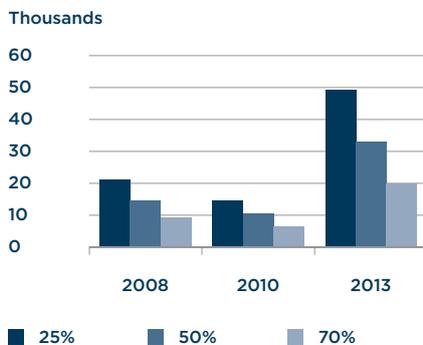
‘Until now, the only figures available have been police estimates. We have now gone a step further in our estimates of the figure, which are made on the basis of these police records. This does not remove the uncertainty inherent in the estimates, but it does provide a more reliable figure. We have used a tried and tested statistical method that is applied in many contexts

'Until now, the only figures available have been police estimates. We have now gone a step further in our estimates of the figure, which are made on the basis of the police records. This does not remove the uncertainty inherent in the estimates, but it does provide a more reliable figure. We have used a tried and tested statistical method that is applied in many contexts where the size of a hidden population is to be calculated.'

Torben Tranæs, Research Director at the Rockwool Foundation Research Unit.

where the size of a hidden population is to be calculated,' explains Torben Tranæs, Research Director at the Rockwool Foundation Research Unit.

Estimated numbers of active illegal immigrants in Denmark



Assumed annual turnover of the population

There is a degree of uncertainty in the estimates of how many illegal immigrants there are in Denmark. The best estimate is that there is an annual turnover in the illegal population of 50%. This would mean that in 2008 there were around 15,000 illegal immigrants in the country, falling to 11,000 in 2010. Thereafter there was a heavy increase, and a likely figure for 2013 is 33,000.

Note: Active illegal immigrants are those who either work illegally, or reside illegally in the country and break other laws and regulations.

Source: *Den illegale indvandring til Europa – og til Danmark (Illegal immigration to Europe – and to Denmark)*, Rockwool Foundation Research Unit and Gyldendal, 2014.

One in five of the illegal immigrants charged with offences comes from Russia, Pakistan or Kosovo

Registrations by the police of illegal immigrants constitute the sample on which the researchers' calculations are based.

In terms of places of origin, the list is topped by people from Russia, Pakistan and Kosovo. The largest of these groups in 2013 comprised people from Russia and the Russian Federation, who accounted for 7.7 percent of the illegal immigrants registered by the police. Almost as many, 7.5 percent of the total, came from Pakistan, and a further 6.3 percent of those apprehended by the police were from Kosovo.

Of people caught working illegally in Denmark in 2013, two nationalities were especially prominent: nearly 30 percent came from either Nigeria or from China. It is remarkable that these two countries accounted for such a large proportion of the people working illegally, since in contrast to Russia, Pakistan and Kosovo, neither of these two nations is particularly strongly represented among people simply found residing illegally in Denmark. Less than three percent of all those charged with being illegal immigrants to Denmark were of Nigerian origin, and less than two percent were from China.

A European overview

The analysis of the number of illegal immigrants in Denmark forms part of the book

Den illegale indvandring til Europa – og til Danmark (Illegal immigration to Europe – and to Denmark) by Torben Tranæs and Bent Jensen. As the title indicates, the book aims to give a concise yet comprehensive overview of illegal immigration to Europe. Who are the illegal immigrants, and how many of them are there? What economic forces are instrumental in causing these people to migrate? Where do these immigrants come from, and what routes do they follow on their journey to Europe? What conditions of life await them in the affluent Western European countries, and what is the significance of illegal immigration for the European welfare states and their populations?



The book on illegal immigration to Europe and to Denmark was published at the end of 2014, when it attracted substantial media attention. Representatives of virtually all the Danish parliamentary parties commented on the findings.

Den illegale indvandring til Europa – og til Danmark. Årsager, omfang og betydning (Illegal immigration to Europe – and to Denmark. Causes, extent and significance), by Torben Tranæs and Bent Jensen. The Rockwool Foundation Research Unit and Gyldendal, 2014.

Ethnic Women's Health Camp

According to the Danish National Board of Health, people with little or no education, low incomes and weak social networks are more likely than other groups to suffer from lifestyle-related illnesses such as cardiovascular diseases, type 2 diabetes, certain cancers, and musculoskeletal disorders.

Health Interventions

Non-Western ethnic minorities are often overrepresented among the members of the population who have the social disadvantages listed above. These problems, in combination with the informal barriers to access to health services that these ethnic minorities encounter in Denmark (structural, cultural and/or linguistic factors), are critical in determining the behaviour and understanding of the target group in relation to their own and their families' health.

The relatively poor state of health among socially vulnerable individuals, including women from ethnic minorities, carries not only high personal costs but also generates great costs to society in the form of

the expenses of health treatment, lower levels of employment, lower productivity and negative social inheritance.

The Rockwool Foundation, in cooperation with the Immigrant Women's Centre, has developed a concept project that aims to improve the state of physical and mental health of socially vulnerable women from ethnic minorities. This is achieved through the implementation of a diet and physical exercise programme especially designed for the target group, taking into account the specific socioeconomic challenges that they face.

A central success criterion for the project is to bring about fundamental lifestyle changes among a significant proportion of the participants. This is assessed through continuous monitoring of various physical and mental measurements. The physical parameters measured include cholesterol, fat percentages, visceral fat, muscle mass, metabolic age, blood pressure and BMI. The women's mental state of health is measured using WHO's wellbeing index. The mental state of health is particularly important, as incentives to make fundamental lifestyle changes depend on a person having good mental wellbeing and a positive outlook. Another important success criterion for the project is that a



Having fun during a cooking session at the Immigrant Women's Centre in the Nørrebro district of Copenhagen.

'In Denmark, there is great inequality with regard to health, and the target group of the Immigrant Women's Centre suffers particularly from the social imbalance in this respect. For this reason, health is one of the Centre's key focus areas.'

Mirka Mozer, Director of the Immigrant Women's Centre, Copenhagen

model is developed which can be upscaled in the future.

The project is based on the Rockwool Foundation's existing Cool2BFit programme, which is aimed at young people with unhealthy lifestyles and their families. The women's programme is multifaceted and combines exercise, nutritional counselling, cooking lessons and health checks, as well as providing child care and assistance with children's homework while the women participate in the courses offered by the programme.

The Immigrant Women's Centre is a social organisation that has been based in the

Nørrebro district of Copenhagen since 1982. As a result of its many years of work in the field, the Centre has built up unique knowledge of the needs and resources of its target group. This knowledge forms the basis for the many specialised services offered by the Centre today.

The target groups for the Ethnic Women's Health Camp programme are made up of women, all of whom are socially vulnerable and come from non-Danish backgrounds. Naturally, the activities in the Ethnic Women's Health Camp programme are planned to take account of the needs of these specific target groups. The resources of the Immigrant Women's Centre

form a central element in the programme. On some occasions, the state of health of some of the women participating might be assessed as being so poor that a nurse will be associated with the project to perform the health checks before, during and after the course.

The project is currently undergoing a process evaluation, which will assess the programme with regard to its achievements and viability, and also its potential for upscaling for use in other institutional settings.

Untreated ADHD costs Denmark nearly DKK 3 billion per year

For the first time ever, the financial cost of untreated ADHD to individuals and to Danish society has been analysed. The full analyses will be published by Oxford University Press in 2015. This article discusses some of the key findings of the research.

Families and Children

An analysis of what untreated ADHD in adults costs Danish society and individuals was completed in 2014 on behalf of the Rockwool Foundation Research Unit by a team consisting of researchers from the Copenhagen Business School, Aarhus University Hospital and the University of Nottingham.

The principal finding from the research was that the total cost is DKK 2.8 billion per year, or nearly DKK 150,000 per adult ADHD sufferer. This cost was calculated for people who are first diagnosed with the disorder when they are adults. Thus, it is the cost incurred when no treatment is given, calculated for those people who are badly enough affected by the condition for it to be discovered.

The basis of the research was an analysis of the situation of people first diagnosed with ADHD in adulthood with regard to their education, labour market experience, income, etc., compared with their siblings who did not suffer from ADHD. This enabled the isolation of the effect that ADHD has on the lives of sufferers.

This was the first research study ever to calculate the financial costs of untreated ADHD. The analysis included all those Danes who had been diagnosed with or prescribed medicine for ADHD, and in whom the disorder had manifested itself clearly enough to be discovered. Adults with ADHD in whom the disorder had not been diagnosed, and who were typically reasonably well able to function, were not included in the analysis.

Number known to have ADHD is rising steeply

The relevance of this study should be seen in terms of the fact that the number of Danes diagnosed with ADHD is rising steeply. The disorder was almost unknown 15 years ago; however, since the turn of the century there has been a remarkable increase in the number of both children and adults diagnosed with ADHD. In 2013, 1.4 percent of all Danish children (ages 0 to 19) were being prescribed medicine for ADHD, compared to 0.1 percent in 1999. In adults, too, there has been a substantial increase. In 2013, 0.5 percent of Danish

adults were taking medicine for the disorder, but in 1999 the figure was virtually zero. The rise in the number of people with the diagnosis is illustrated in the figure on the opposite page.

The explanation of the high costs

The explanation for the high costs – amounting, as noted above, to DKK 2.8 billion per year – is not that ADHD costs the Danish health services a great deal. There are expenses linked to treatment, of course, but the greatest costs by far arise because people with ADHD experience significantly more difficulty than others in finding employment, and also exhibit a higher rate of criminality. For example, only half as many people with ADHD are in employment as compared with similar people in the population without the disorder.

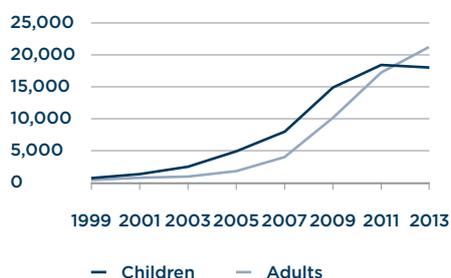
These costs are unnecessarily high, explains Professor Anders Sørensen of the Copenhagen Business School, who headed the research team. 'Our calculations are for adults with ADHD who were not treated



Clinical psychologist Anne-Mette Lange (left), one of the authors of the report, stressing that insufficient research has yet been carried out on the treatments practised today for people with ADHD. Also in the photograph are co-author Jeanette Walldorf (centre) and Professor Torben Tranæs, Research Director at the Rockwool Foundation Research Unit.

for the condition as children. Thus, they indicate what society and individuals lose if appropriate treatment is not provided early in life.'

Numbers of adults and children taking medicine for ADHD in a given year



The numbers of both children and adults diagnosed as having ADHD have grown explosively since the beginning of the century.

Notes: Medicine for ADHD is defined as pharmacological preparations with Anatomical Therapeutic Chemical codes NO6BA04, NO6BA09 and NO6BA12. Children are defined as individuals aged 0 to 19.

Source: www.medstat.dk

Future research should be able to reveal whether the efforts made today to treat children and young people with ADHD will enable them to have better lives as adults than was the case in the past. At present, there is no research that documents an overall positive effect of the treatment typically provided today.

Treatment with medicine is recommended in the Danish clinical guidelines as the primary treatment for moderate to severe ADHD in schoolchildren and young people. However, there are children and young people who do not respond sufficiently well to medicine, or who experience side-effects. Furthermore, there is no thoroughly documented evidence of the effects that medicinal treatment has on the lower levels of scholastic performance and the reduced neuropsychological functioning that otherwise hinder educational progress.

Major consequences for individuals

The analysis demonstrates the serious consequences that the disorder has on the

financial position of individual sufferers. People diagnosed with the disorder are compared with others, including siblings, who resemble them in terms of their upbringing, social background, etc.

The comparisons show that people whose ADHD is diagnosed in adulthood are nearly DKK 4,000 worse off in terms of disposable monthly income than comparable people who do not suffer from the disorder. The lower rate of employment among sufferers thus has a considerable influence on their personal finances.

In addition to having lower incomes, people with ADHD also have additional expenses, in particular for medicine and for medical treatment. Furthermore, they are more often victims of crime, for example, than are other people. In all, these 'victim costs' amount on average to nearly DKK 6,500 annually per person.

Is leisure a thing of the past in Denmark?

If the Danes of today feel stressed, it is not because of a lack of free time. A study by the Rockwool Foundation Research Unit shows that Danes still have as much leisure time as they did 45 years ago.

Work and the Welfare State

Leisure has been an item on the political agenda in Denmark for the past hundred years, with demands originally centring on having eight hours of the day for rest and recreation, eight hours for work, and eight hours for sleep. The focus today is on 'the good life', a concept that includes the relationship between work and family life. In the public debate, it has been claimed that Danish families with children find themselves under ever-increasing pressure of time.

But what is the reality concerning changes in leisure time in Denmark over the past few decades? Do Danes have more leisure time today than previously? What do Danes do with their free time? What about parents – how much leisure time do they have today compared with the situation in previous periods, and how stressful are their daily lives? These are some of the themes taken up in a new book by Jens Bonke of the Rockwool Foundation Research Unit entitled *Er fritiden forsvundet? 45 års udvikling i danskernes fritid*. (Has leisure vanished? Trends in Danes' free time over 45 years). The study is based on the results from a series of time use surveys available to the Research Unit; these have been analysed with respect to the distribution of leisure time and the changes in free time in Denmark during the period 1964-2009.

No change in available free time over 45 years

The first Danish time use survey was conducted in 1964, and the most recent in 2008/09. Thus, changes in Danes' leisure time can be tracked over a 45-year period. *Leisure time* is defined in the study as the time which remains for individuals that is not spent in paid employment or in work at home on household tasks or child care. In other words, it is time used for personal hygiene, eating, being with family, friends or acquaintances, and various leisure activities. The subjects of the analysis were Danes aged 18-64 who were in employment.

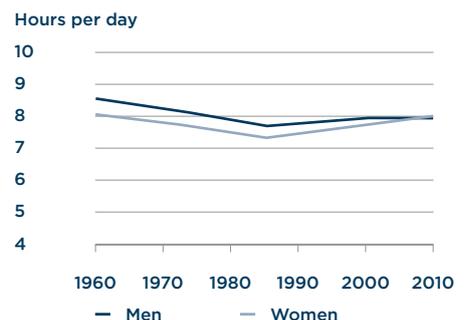
It is true that over the 45-year period, leisure time for men did decrease slightly, but in 2009 it still amounted to around 8 hours per day on average overall, i.e. when weekdays and weekend days are taken together. For women, too, leisure time in 2009 was nearly unchanged in relation to the situation in 1964, amounting to approximately 8 hours per day. In other words, men and women had roughly the same amounts of leisure on an average day as each other, and at both the beginning and the end of the period studied. Changes over the period are shown in more detail in the figure on the right.

The reason that leisure time remained approximately unchanged over so long a period was in part that the decrease in the time men spent in labour market employment was balanced by an increasing amount of work done in the home, while the reverse was the case for women, who spent more time in paid employment on average and less time on household tasks.

Leisure time for parents

The study next focused on trends in leisure time for parents with children under the age of 7 and parents whose youngest child was aged 7-15. This group included both people who were in employment and those who were not.

Changes in the leisure time available to men and women aged 18-64 and in employment, 1964-2009



Source: The Rockwool Foundation Research Unit



The analysis was presented at the Rockwool Foundation's stand at Denmark's political festival, The People's Meeting on Bornholm, in 2014. Jens Bonke of the Rockwool Foundation Research Unit is pictured here explaining the findings prior to a panel discussion. Members of the panel included Signe Munk, vice-chairperson of the Socialist People's Party, Fatma Øktem, spokesperson on equality for the Danish Liberal party and Louise Winther, mother of two children.

The most notable finding was that there were no significant changes in leisure time over the period 1987-2009 for either men or women with children in either of the two age categories. Thus, it is necessary to go back more than 20 years to find any real change in daily leisure time for parents of either very young or slightly older children. Any widespread experience of increasing levels of stress among parents of small children therefore cannot be explained in part or in full by a reduction in free time.

During the period 1964-87, however, the amount of leisure time enjoyed by fathers whose youngest child was under the age of 7 decreased by 1½ hours per day, while the amount of free time for mothers in such families fell by nearly three quarters of an hour per day. Mothers whose children were all of school age saw their free time diminish by nearly 1½ hours per day in this period, whereas the amount of leisure time was unaltered for fathers in these families.

There is nothing to suggest that the distribution of leisure time between mothers and fathers who were both in employment changed significantly over the period. The proportions of parents in employment who had less than 6 hours of leisure time per day (averaging out weekdays and weekend days) were just over 30% for fathers, and a little lower for mothers, throughout the period 1975-2009. Back in 1964, significantly more mothers had a very limited amount of leisure time than in the later years of the survey.

Changes over a lifetime

Not surprisingly, the amount of leisure enjoyed by Danes who are in employment changes over the course of a lifetime. The amount of free time is greater before children arrive in the family. When children are young, the amount of leisure available to their parents declines; it increases again when the children are older. It then returns a level equivalent to that enjoyed by younger men and women without children. In families where the youngest child

is under 7, fathers have nearly 5½ hours of leisure per day and mothers over 5 hours on average. Parents actually have a little more free time when the youngest child is over the age of 6 – around 6 hours daily for both mothers and fathers.

Satisfaction with leisure time

The satisfaction that women and men feel with the amount of leisure they have is related to whether or not they have children. However, it is only if the children are of pre-school age that parents' level of satisfaction with their free time is lower than that of people who are younger and have no children. When the children are of pre-school age, satisfaction is around 10 percent lower for mothers and 5 percent lower for fathers than for younger women and men without children. Fathers and mothers of school-age children express the same level of satisfaction with the amount of leisure they have as people without children.

What does Denmark's energy policy cost, and what does the country get for its money?

Over the past 20 years, Denmark's energy policy has been marked by huge investments in sustainable energy and by high energy duties, both of these being intended to benefit the environment and in particular to cut CO₂ emissions. In order to determine whether the policy has been a success in terms of these goals, it is necessary to know both the actual reduction in CO₂ emissions and the extent to which the policy has affected the costs to society of generating electricity. These two questions have been investigated by the Centre for Economic and Business Research, with funding from the Rockwool Foundation.

'In Denmark we have the capacity to cover for wind energy when the wind isn't blowing. We have a back-up system that supplies energy when there's no wind. So we actually have massive over-capacity - and that costs money.'

Professor Anders Sørensen, Centre for Economic and Business Research, Copenhagen

External Research

Denmark has committed to ambitious goals for limiting greenhouse gas emissions – and measured in terms of CO₂ emissions from domestic production, the country is making progress. Many years of investment in sustainable energy production have improved the Danish carbon account on that score. However, only CO₂ emissions from production that takes place actually in Denmark are measured, and not the total effects of Danish consumption. An important limitation on these production-based measurements is that they do not include emissions that are linked to imports. The Centre for Economic and Business Research (CEBR) has therefore conducted an analysis of the situation as it is when the net effects of Danish imports and exports are included. In this way we arrive at a measurement of what annual consumption in Denmark actually costs in terms of impact on the climate.

The difference between the results of the two methods of accounting is substantial. If we consider production alone, then CO₂ emissions for Denmark are found to have fallen by an impressive 20 percent over the course of the period of economic

growth from 1996 to 2007. If, on the other hand, we take consumption into account, then the decrease is only five percent.

The explanation for this is an increase in the importation to Denmark of goods that cost a lot to produce in terms of CO₂ emissions. In 1996, the carbon account was in balance between imports and exports, meaning that foreign trade had no effect on the overall picture. The situation was very different in 2007, when Denmark was importing goods whose production involved high levels of CO₂ emissions.

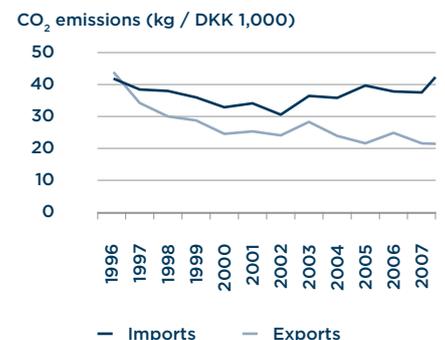
Lower CO₂ emissions for goods going out and higher emissions linked to those coming in

The accounts for imports and exports have thus played an increasingly important role in measuring the amount of CO₂ emissions underpinning Danes' consumption. There is a relatively simple two-part explanation for this. One part is that production in Denmark became ever cleaner over the course of the period. This meant, as the figure on the right illustrates, that the CO₂ load on the environment produced by goods which Denmark exported declined;

in fact, it was halved between 1996 and 2007.

The other part of the explanation concerns what Denmark imported, and from which countries. The countries with which Denmark trades have all succeeded in reducing CO₂ emissions from production activities, but from very different starting

CO₂ emissions per DKK 1,000 of Danish imports and exports, 1996-2007



Source: *Measuring Denmark's CO₂ emissions 2006-2009*, CEBR and the Rockwool Foundation, 2014



Professor Anders Sørensen of Copenhagen Business School (right), one of the researchers responsible for the report, discussing the results with Jens Joel, spokesperson on Climate and Energy for the Social Democrats.

levels. For example, the CO₂ emissions from production in China are very high, and Denmark's trade with China began to grow very swiftly following that country's admission to the WTO.

It is not possible to calculate CO₂ emissions for Denmark's total consumption for the years after 2009, since the calculations are based on emissions data for 40 different countries, which are currently only available for the years up until 2009. For the comparison of production-based and consumption-based CO₂ emissions, 2007 is viewed as the most recent relevant year for observations in the analysis period. This means that there is no confusion of the effects of increasing imports from China in particular with the effects of the economic crisis and the subsequent substantial drop in international trade.

The international perspective and climate negotiations

No matter whether the world's climate negotiators are gathered in Kyoto, Copenhagen, Doha or Lima, the outcomes of their discussions always seem to be disagreement, foot-dragging, and mutual recriminations.

There are naturally a great many explanations for this situation. One of them is that it is possible to calculate CO₂ emissions on the basis of either consumption or production. Depending on whether one measures in one way or the other, some countries will appear to be much more polluting – or much less – than others. The method of calculation used means a great deal for which country can claim to hold the high moral ground in the climate debate and proclaim that 'It is you – not us – who has to take action now.' It is easy to see how the method of calculation alone can give rise to disagreement if we compare a selection of countries.

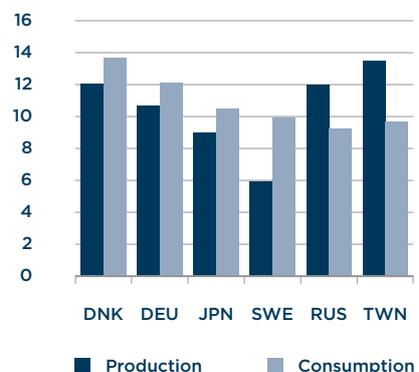
As the figure on the right shows, Sweden is a country for which there is a considerable difference in how much CO₂ is emitted in its production and in its consumption. Like Germany and Denmark, it is in Sweden's interest to focus on production rather than consumption, if the political aim is to make other countries appear to be the ones that have to reduce their emissions. In contrast, production in countries such as Russia and Taiwan is linked to high levels of CO₂ emissions in comparison with the emissions associated with their overall consumption.

More wind, less CO₂

One of the primary reasons that Danish production is relatively less CO₂-intensive is that massive investments have been made in wind energy in Denmark over the past 20 years. CO₂ released in power generation forms the largest element in Danish production-related CO₂ emissions; since wind power generation really

Emissions of CO₂ – selected countries, 2007

CO₂ emissions (tonnes/inhabitant)



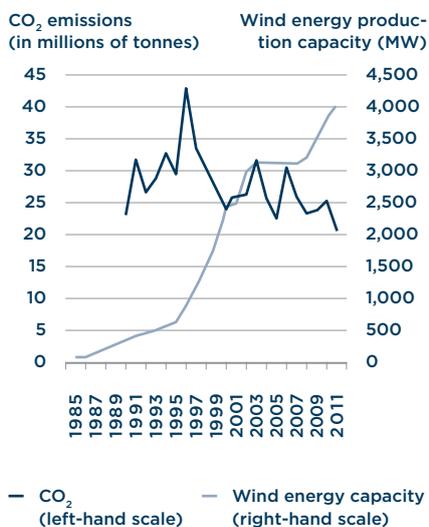
Source: *Measuring Denmark's CO₂ emissions 2006-2009*, CEBR and the Rockwool Foundation, 2014



Dr. Clinton J. Levitt of the University of Tasmania, one of the researchers involved in the project, presenting some of the results at the press conference on the occasion of the publication of the report.

took off in Denmark from the mid-1990s onwards, CO₂ emissions from energy production have been halved. Back in 1985, the total production capacity of Denmark's wind turbines was around 47 megawatts

Production capacity of wind energy (MW) and emissions of CO₂ from electricity generation, 1985-2011



Sources: *The cost of producing energy in Denmark*, CEBR and the Rockwool Foundation, 2014, and Statistics Denmark

(MW). In 2011 the figure was 85 times larger, with production capacity from wind power generation totalling 4,000 MW. This explosive development is illustrated in the figure on the left, which also shows annual CO₂ emissions in Denmark since 1990, the first year for which data are available.

Wind-generated electricity is the cheapest, and the cost is falling ...

Taken in isolation, the production costs for wind energy are lower than those for conventional power generation. With the massive investment that has taken place in wind energy, efficiency has increased rapidly, thanks to technological developments and through upscaling and better positioning of the turbines. Meanwhile, the efficiency of conventional power stations has remained essentially unchanged, while prices of fuel for combustion have risen sharply. Thus, wind energy has increased its cost advantage over conventional power generation.

... but investment in wind energy results in over-capacity and thus higher overall electricity costs

The enormous investment in wind power and the prioritisation given to providing

back-up capacity within Denmark to cover requirements when the wind is not blowing have necessitated the construction of significant over-capacity in the electricity generating sector.

This over-capacity increases the overall cost of energy production. The CEBR has carried out an analysis showing what the costs of producing energy in Denmark would be were it not for the expenses of phasing in and operating the wind energy element in power generation, which actually covers fully 30 percent of all electricity used. The analysis reveals that without wind energy, production of electricity in Denmark would be 14 percent cheaper than it is today. However, it does not set out to assess whether this is a high or a low price to pay. 'Some will say that wind turbines are eyesores, are noisy, kill birds and bats and generally get in the way. On the other hand, the advantages of wind power are plain to see: reduced CO₂ emissions, less pollution, and lower dependence on fuel. How much we should count these benefits to be worth is a political issue,' says Anders Sørensen.

Non-Western immigration will still result in net public expenditure in 2050 – if immigration and integration remain unchanged

A central topic in the debate on welfare – not only in Denmark, but throughout Western Europe – is whether immigration could help to tackle the challenge posed by an ageing population with a declining number of people of working age. Following on from previous studies by the Rockwool Foundation Research Unit of the importance of immigration for the public finances in Denmark, a new analysis reveals the extent to which immigration and integration are likely to affect the financial stability of the welfare state in the future.

Migration and integration

Previous analyses by the Rockwool Foundation Research Unit in 1999, 2004 and 2011 have shown that in the past, non-Western immigrants have had a negative impact on Danish public finances. This remained the situation in 2014. It is expected that first- and second-generation non-Western immigrants will have required a total net outlay of DKK 16.6 billion from public funds in that year. That is to say, figures for 2014 are expected to show that the total cost of immigration in the form of state services and transfer incomes was DKK 16.6 billion higher than the total sum non-Western immigrants paid into the public purse in the form of taxes and fees. Furthermore, despite a significant improvement in the integration of first- and second-generation immigrants

from non-Western countries onto the Danish labour market over the past 15-20 years, there is as yet no prospect of a surplus for the public exchequer resulting from non-Western immigration. The huge change that has taken place in the nature of immigration to Denmark since the beginning of this century – with a reduction in immigration for family reunification and for asylum, and an increase in the proportion of immigrants coming for work and education – does not look likely to affect the balance of payments to public finances.

As things look today, then, it seems unlikely that non-Western immigration will be making a positive contribution to financing the needs of the ageing Danish

welfare society in the foreseeable future – unless further improvements are made to integration. Even in 35 years' time, non-Western immigration will still not be making a net contribution to resolving the problems of financing the welfare state which will arise as a result of demographic changes; on the contrary, it is calculated that such immigration will continue to generate a net deficit to public funds of around DKK 6 billion.

Positive contribution from Western immigrants

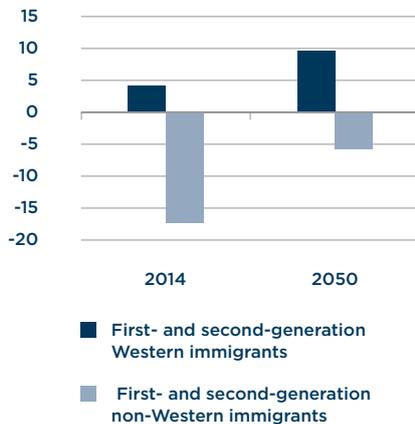
In contrast, the signs are that Western immigration to Denmark will make an even larger contribution to financing welfare in the future than is the case today, with such immigration currently generating a

'We need to focus on better integration. Education is the key word here.'

Mette Reissmann, Social Democrat spokesperson on integration and immigration affairs, commenting on the study to the newspaper *Jyllands-Posten*.

Net contributions to public finances, 2014 and 2050

DKK billions (2013 prices)



Today, non-Western immigration to Denmark generates a deficit for the public purse of almost DKK 17 billion. This deficit is likely to have fallen sharply by 2050, but it is estimated that the balance will remain negative. In contrast, Western immigration already generates a surplus of almost DKK 4 billion, and this surplus seems set to increase to around DKK 9 billion in 2050.

Note: The forecasts for 2014 are based on projections for the period 2013-2015.

Sources: The Rockwool Foundation Research Unit

net surplus of DKK 3.8 billion for the state. By 2050 this surplus will have increased to DKK 9.1 billion if immigration and integration remain unchanged.

Immigration from Western and non-Western countries combined can be expected to provide a modest net surplus of DKK 3.1 billion in 2050.

A positive contribution from second-generation non-Western immigrants

If we focus on second-generation non-Western immigrants in isolation, we see that they represent a net cost of DKK 12.5 billion today. Second-generation immigrants tend to be better integrated than their parents, but they are young at present and therefore often in education.

By 2050 these second-generation immigrants will have reached an age when they can be part of the active work force, and the current deficit is consequently expected to have been transformed into a surplus of DKK 6.2 billion. However, by that time their parents will have retired from the labour market, and will require a

net annual expenditure of DKK 12.2 billion; in consequence, the total balance from non-Western immigration will be negative, at DKK 6.0 billion. However, this figure is significantly less than the 2014 deficit.

The present indications are that neither Danes nor second-generation non-Western immigrants to Denmark will on average generate financial surpluses over the course of their lifetimes. Danes are predicted to cost the state an average of DKK 5,200 per year from cradle to grave, while second-generation non-Western immigrants are each expected to cost DKK 8,000 per year. Second-generation Western immigrants are expected to more or less break even in their relationship to the Danish public purse; they will each generate a small lifetime surplus of DKK 400 per year. However, they also constitute a smaller group.

It must be emphasised that these prognoses are based on the situation as it is today. Future government reforms might bring about changes to integration, immigration, and the financial relationship of Danes themselves to the public purse.

Fall in the level of undeclared work during the recession

For many years, the Rockwool Foundation Research Unit has been tracking undeclared work carried out in Denmark. In 2014 the Unit published an analysis of developments with respect to undeclared work during the recent economic recession. At the same time, analyses were published of the undeclared lifetime incomes for various educational groupings and of the effects on the supply of undeclared work of a tax reform which reduced marginal tax rates.

‘In times of a recession, unemployment increases, and as a consequence more people will have the time and perhaps the desire to compensate for a reduction in their official income by undertaking undeclared work. However, the amount of undeclared work did not increase in this instance, apparently because of lack of demand.’

Torben Tranæs, Research Director, Rockwool Foundation Research Unit.

Undeclared Work

The recent recession struck Denmark as devastatingly as it did the rest of Western Europe. The question was whether the resulting increased unemployment would cause the undeclared sector to grow. The short answer is that less undeclared work was done in 2012 than in 2008, when the recession began.

The analysis of undeclared work in Denmark was based on interviews with a representative sample of 1,920 Danes who were asked – over the period 2009-12 – about any undeclared activities in which they might have been engaged. Respondents answered questions about whether they had carried out undeclared work, and if so, how much.

The conclusion reached on the basis of this survey was that undeclared activities during the recession made up a smaller proportion of the total national economy than previously. In 2012 the undeclared economy represented 2.2% of GDP, equivalent to a market value of DKK 40 billion. This was a reduction in comparison with the 2.8% recorded in 2008, which at that time corresponded to DKK 48 billion.

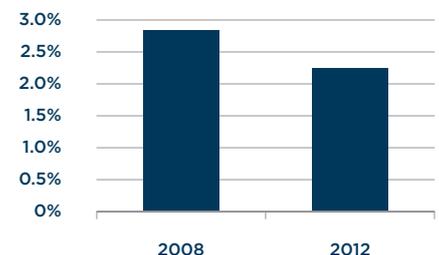
The most likely explanation for the decrease in undeclared work is that Danes became more reluctant to embark on new activities involving expenditure, whether declared or undeclared. In times of economic recession, unemployment increases, and in consequence more people will have the time and perhaps the desire to compensate for a reduction in their official income by undertaking undeclared work. However, the amount of undeclared work did not increase in this instance, apparently because of lack of demand.

This explanation is further supported by the fact that undeclared wages also fell throughout the period. Weakening demand hit the undeclared economy harder than the declared economy, which may have been because demand for services of the type that are typically purchased in the undeclared sector is highly dependent on income.

The fact that undeclared work fell in proportion to GDP is linked to a slow decline in the proportion of people aged 18 to 66 who carried out undeclared work and to a reduction in the length of the undeclared

working week. Thus, the weakening of the market for undeclared labour can be linked to both a decrease in participation in undeclared work and to a shorter length of time worked each week per participant.

Undeclared work as a proportion of GDP



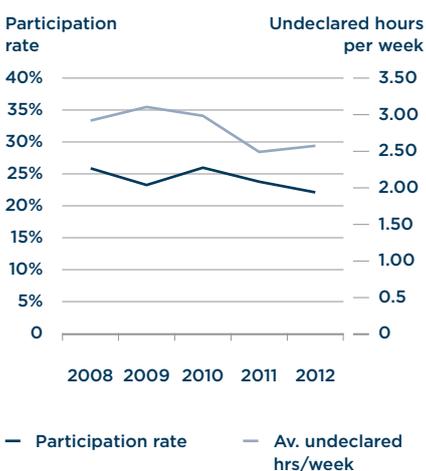
While undeclared work amounted to 2.8% of GDP when the recession began in 2008, it had fallen to 2.3% by 2011 and to 2.2% in 2012. The introduction of new rules concerning computerised payments in July 2012 can only account for, at most, a modest proportion of that decrease.

Sources: The Rockwool Foundation Research Unit and Statistics Denmark's labour force survey (AKU). The figures for 2008 are taken from the book *Danskerne og det sorte arbejde (Undeclared work and the Danes) (2010)* and include data collected in the autumn of 2008 and the spring of 2009.



Morten Østergaard (Social Liberal), then the Minister of Taxation, on the right and Mads Rørvig, (Liberal), Chair of the parliamentary Fiscal Affairs Committee, on the left commented on the results of the studies.

Participation in undeclared work and hours per week spent on such work



Both the length of the undeclared working week and the proportion of the population participating in undeclared work fell during the recession.

Note: Figures are based on analyses of surveys of respondents aged 18-66.

Source: The Rockwool Foundation Research Unit.

The undeclared labour market measured as a proportion of GDP is an expression of the value of what consumers obtain through undeclared work in relation to the total production in society.

Increased lifetime undeclared incomes for male skilled and unskilled workers

The survey of undeclared work contained a completely new element not previously studied, namely the undeclared earnings of various educational groupings over the course of a working lifetime. The results were clear: skilled and unskilled male workers earn much more in undeclared income than other people. For every undeclared Danish krone that a man who has completed higher education earns during his working life, skilled and unskilled workers earn three. Thus, the survey revealed that there are large differences among the various educational groups with regard to their

lifetime undeclared earnings. However, the differences are not great enough to have a serious impact on income distribution in Danish society.

Both skilled and unskilled workers earn on average around DKK 375,000 in undeclared income over the course of their working lives, while the corresponding average figure for people who have completed a higher education is around DKK 125,000. However, this does not alter the fact that people with a university education earn the most over the course of their lifetimes, and unskilled workers the least, as the figure on the opposite page illustrates.

Tax reductions have not affected undeclared work

The analyses of undeclared work published at a press conference in May 2014 also included a study of how the tax reform of 2010 affected the extent of such work in

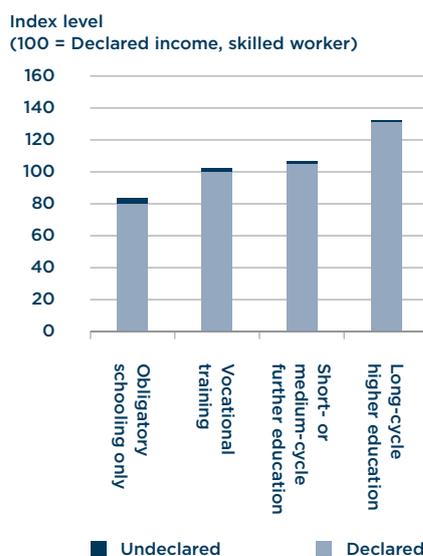


The researchers behind the report – Peer Ebbesen Skov (on the left), then of the Rockwool Foundation Research Unit, and Professor Søren Leth-Petersen, University of Copenhagen – share a joke with Professor Torben Tranæs (on the right), Research Director at The Rockwool Foundation Research Unit, at the press conference held on the occasion of the publication of the study.

Denmark. In addition to other reductions, the reform cut the amount of tax paid by high earners on the top part of their income. The conclusion of the study was that the tax reductions of 2010 had had no impact on supply of undeclared work.

The researchers arrived at the same conclusion from an analysis of how the ‘Home Work Scheme’ affected the amount of undeclared work done. The scheme, which was introduced in 2011, allowed purchasers a deduction from taxable income of up to DKK 15,000 for wage costs related to the repair, maintenance and cleaning of their homes. This meant that the cost of purchasing work in the formal economy in these sectors was reduced, so that the financial benefit of paying for such work to be done in the undeclared sector became correspondingly less. However, the detailed analyses in the study showed that the scheme had had no effect on the extent of undeclared work in Denmark.

Total declared and undeclared lifetime incomes for men



Undeclared incomes are not great enough to have a serious effect on the income distribution in Danish society.

Notes: Lifetime incomes calculated in 2004 values and converted to 2012 values using the official government adjustment percentages. Declared income refers to disposable income, i.e. income after tax.

Source: Danskernes sorte livsindkomst (Danes' lifetime undeclared incomes), Rockwool Foundation Research Unit

RIPAT for peace in Kenya

Since 2006, the Rockwool Foundation and the Tanzanian NGO RECODA have built up RIPAT (Rural Initiatives for Participatory Agricultural Transformation), an agricultural development approach. In 2014 an innovative new project was launched to test whether central elements of RIPAT can be used as a peace-building tool. The project is being piloted in selected agro-pastoralist communities in northern Kenya that have been troubled with inter-tribal conflicts, and integrates livelihood development and peace building in a low-tech, sustainable, community-driven approach.

Food Security and Peace Building

Food insecurity and conflict

Food insecurity and violent conflict are often interlinked – it is said that 'if you go to bed hungry, you wake up angry'. This linkage provides the rationale for the RIPAT for Peace project. Conflict can obviously have a negative impact on food security, for example by preventing normal farming and herding activities, but food insecurity in itself may be a factor in the outbreak of conflicts, or in sustaining or extending them. The root causes of conflicts in many African countries are often to be found in competition over land and water, the basic elements of food production. Such competition may become violent when there are also tribal or ethnic tensions involved.

Drought and conflict

Some current theory suggests that many of the areas that are likely to be worst hit by climate change and drought (and hence reduced food production) are also among the areas expected to be increasingly afflicted by violent conflicts. The RIPAT for Peace project applies a multifaceted approach to this problem by addressing the root causes of potential conflict, i.e. tribal tensions and competition over scarce resources.

The setting

Samburu County is a predominantly semi-arid area of northern Kenya which is officially classified as one of the poorest

areas in the country (high rates of poverty, illiteracy, child malnutrition, etc.). The area has a long history of conflicts over cattle, pasture and water, and also for revenge, among pastoralist and agro-pastoralist groups. In Samburu County such conflicts are usually among the three local tribes: the Samburu, the Turkana and the Pokot. The easy availability of cheap small arms means that conflicts are often violent. The project recognises that local community organisations and civil society itself are best positioned to address conflict issues and bring about change. However, many organisations have limited capacity to resolve conflicts and to integrate conflict issues into their work.



Morans (young warriors) not only herd livestock and but also protect both livestock and the community; they are often armed with illegal firearms, and may become involved in major conflicts with other tribes as well as in cattle thefts. These morans are now involved in conflict transformation activities and are learning new livestock and farming methods to increase their range of livelihood choices.

Young people make up a large percentage of the population, and they have an important role to play in shaping the future and in building stable and peaceful societies. The project therefore focuses particularly on the young warriors (morans) in the region, capitalising on their energies and capacities, providing them with new livelihood options, and giving them a belief in the possibility of a peaceful future.

The RIPAT model ...

The RIPAT model builds on the principle of help to self-help, and on the commitment of participants to help others. Drawing on existing skills and practices, RIPAT introduces participants to more effective, more sustainable farming methods designed to increase food production and food security. Groups of women, men and young people selected by the community are introduced to a 'basket of options' that may include crops, rainwater harvesting and irrigation, improved livestock, village savings and loan schemes, and marketing technologies. Participants trial and select for their own use the technologies that they consider most likely to help them achieve a viable livelihood. The RIPAT model also focuses on a social dimension

through the group structure in order to build up leadership and cooperation skills.

... and Peace

Linked to the agricultural work will be initiatives designed to help improve dialogue and cooperation among the ethnic groups in the region. RIPAT inter-group exchanges and meetings are forums for discussing crops, technologies and commerce, but also provide opportunities for positive interaction, tolerance and social cohesion across tribal divides. The project will engage peace committees, elders, young people, women, morans, police officers and local politicians in the search for common ground from which to rebuild relationships and bring tribal groups together. The goal is to encourage all levels of the community to work together to tackle environmental, economic and security obstacles to peace and development. The approach applied is an innovative, community-driven process for transforming relationships and addressing the root causes of conflict that enables communities to interact without resorting to violence. By analysing how they and others view conflict, communities can identify common strategies and processes that will enhance understanding among

groups and enable them to work together to prevent violence and address the underlying causes of conflict.

Evaluation

An external, independent evaluation of the project will be conducted. This will help to document results, to refine implementation strategies, and hence to optimise current and future projects.

Partners:

- The NGO Caritas Maralal in Samburu County, Kenya is the main implementing partner. It has vast experience from earlier livelihood and peace-building activities in the target areas.
- The Tanzanian NGO RECODA developed the RIPAT approach in partnership with the Rockwool Foundation. RECODA is responsible for ensuring the successful application of the RIPAT model.
- The UK-based NGO Responding to Conflict (RTC) has pioneered the participatory conflict transformation approach, skills and strategies. RTC will train peace committees and police officers, and will provide technical support to Caritas Maralal.
- The Rockwool Foundation is funding the project. It will provide strategic and technical advice and back-up.

Factors affecting crime rates among young male immigrants

Boys from immigrant backgrounds are affected by the number of criminal youths who live in their municipality. The more young people there are in a municipality with criminal convictions, the greater the likelihood that immigrant youths will themselves be convicted of a crime early in their adult lives. This is revealed by a new analysis carried out for the Rockwool Foundation Research Unit by Anna Piil Damm of Aarhus University and Christian Dustmann of University College London.

Migration and Integration

The two researchers studied the incidence of youth crime among children of the refugees who were housed in areas selected by the Danish Refugee Council during the period 1986 to 1998, before the children reached the age of criminal responsibility in Denmark of 15 years. The results were clear. Immigrant male youths are more likely to refrain from crime if they grow up in areas where relatively few young people have criminal convictions, regardless of whether these convictions are for theft, drugs, violence or other crimes.

The analysis focused on youth crime across Danish municipalities during the period 1986-1998, revealing a clear

pattern. In Grindsted, for example, a municipality in Jutland with a low level of youth crime, 1.2 percent of young people aged 15-25 were convicted of one or more crimes in an average year. In Frederiksværk in northern Zealand, in contrast, a municipality with a relatively high level of youth crime, 2.8 percent of young people in the same age range were convicted of one or more crimes in the course of an average year. Young immigrants who grow up in municipalities like Frederiksværk rather than ones like Grindsted are much more likely to be convicted of a crime themselves before they reach the age of 21.

One of the main findings of the study was that for every percentage point by which the rate of youth crime increases in a Danish municipality, the probability of an immigrant youth being convicted of a crime rises by between 7 and 13 percent.

An additional effect from fellow countrymen

The study suggests that immigrant youths interact with and are affected by the behaviour of young people aged 15-25, regardless of their ethnic origins. 'These boys and young men are influenced by others, regardless of the ethnicity of the criminals. This indicates that their contacts include people of Danish origin. However,

'These boys and young men are influenced by others, regardless of the ethnicity of the criminals. However, the effects are greater if the criminals are from the same country of origin as the young people themselves.'

Anna Piil Damm, Associate Professor, Aarhus University

the effects are greater if the criminals are from the same country of origin as the young people themselves,' explains Anna Piil Damm.

It is important to note that what matters in this context is the number of criminal individuals living in the area. The total amount of crime committed in a municipality is of no significance for how law-abiding immigrant youths are, as indeed has also been demonstrated by earlier studies conducted in other countries; this fact has previously been interpreted as showing that young people do not exhibit more criminal tendencies as a consequence of living in a criminal environment.

According to Anna Piil Damm, we now know that such an interpretation is incorrect. If there are numerous young criminals living in a municipality, this has a negative effect, in the form of a greater proportion of criminals among the young people growing up in that area. However, more crime committed in an area does not in itself affect the behaviour of children and young people.

More police in an area reduces the number of crimes

Another finding of the study is that putting more police officers on the street really does have a crime prevention effect. Specifically, the researchers investigated whether various characteristics of Danish municipalities were associated with an increased or reduced level of crime among the children of refugee families. Effects were found, for example, for the number of people with low incomes in a municipality, the number of inhabitants, the teaching resources available – and for the level of policing.

Many of the factors studied proved to have no significance for the amount of crime committed by youths from immigrant families. This was the case, for example, for the clear-up rate for crime, which affected neither the number of young immigrants who committed crimes, nor the amount of crime they committed.

It was found, however, that the number of police officers per thousand of the population did affect youth crime among males. An increase in the number of police officers did not actually affect the number of young people convicted of crime. However, it did affect how much crime the young criminals committed.

In other words, employing more police officers did not appear to deter immigrant boys from embarking on criminal activity. But once the police knew whom they should keep an eye on, they were able to direct resources to this end and reduce the total number of crimes in their district.

A criminal conviction is only a minor hindrance to employment

How does a criminal conviction affect opportunities in the labour market? Here, the analysis showed that young male immigrants who were convicted of a crime had a slightly harder time than others in finding work. It was found that a conviction does tend to reduce the likelihood of immigrant men between 23 and 25 years old being in employment – but not by much. While 54 percent of other young men from refugee families were in employment at age 25, this was true of 52 percent of the young men with a criminal record.

The effect is sufficiently large to be statistically significant, but it is not a very large

effect from an economic perspective. It is worth noting in this context that it is frequently the case – i.e. for nine out of ten of young immigrant men receiving a criminal conviction – that they have previously been fined one or more times, without being given a prison sentence. Only one person in ten of those in the study who were convicted of a crime received any kind of prison sentence – short or long, suspended or enforced.

The study also examined the extent to which young men with a criminal conviction were able subsequently to complete either a course of vocational training – such as training to be a mechanic, an engineer, or a social and health care assistant – or a course of higher education.

The analysis showed that a conviction had no effect on whether young men take such a course of study. For both those with criminal convictions and those without, 27 percent of young men from immigrant backgrounds were enrolled in such a course at age 25, while 41 percent had already completed one.

International publication

The analyses by Anna Piil Damm and Christian Dustmann are a continuation of the work that began with the project entitled *A Dividing Population?* That project resulted in the publication of a book of the same name published in June 2006 and a follow-up publication in 2013. As well as being published by the Rockwool Foundation Research Unit, the analysis described in this article was also published in *The American Economic Review* under the title 'Does growing up in a high crime neighborhood affect youth criminal behavior?'

The Healthy Schools Network now also focuses on motor skills

Ever since the Healthy Schools Network started up in 2008, the overall goal of the project has been to improve the health of Danish schoolchildren. The focus has been on both physical and mental health. Since the outset, the Network has worked at developing and offering to schools a range of targeted, professional tools and educational programmes designed to meet specific challenges within the general field of health.

Health Interventions

Over the years, it has become more and more apparent that schools are keen to use the Rockwool Foundation's educational programmes in their work with children's physical and mental health. During 2014, the Perspekt programme demonstrated that there is a need to focus on school students' social, emotional and personal competences in order to improve both the classroom environment and students' wellbeing. The Cool2BFit programme also demonstrated its worth, indicating clearly that overweight schoolchildren need a helping hand to improve their health.

Given the success of the programmes already available, the Healthy Schools

Network decided in 2014 to focus on yet another programme for schools that want to put health on the agenda. Many studies indicate a strong relationship between good motor skills and body awareness on the one hand and children's scholastic and social development on the other – the better a child develops and performs in terms of motor skills, the greater the potential the child has to benefit from school work and to develop socially. In consequence, the Healthy Schools Network is now beginning to work with motor skills training and screening. Since both scholastic progress and general wellbeing are important elements in the work of the Healthy Schools Network, and since a

number of scientific studies have shown that at least six percent of school children have motor difficulties to a degree that affects their learning and social development when they begin school, it seems obvious that the Network should in the future offer help to schools to implement motor skills training.

The new motor skills programme draws upon both research by Dr Ingegerd Ericsson in connection with the Swedish 'Bunkeflo project' and a comprehensive motor skills project implemented in the Municipality of Roskilde, Denmark. The Roskilde project has resulted in all the schools in the municipality screening re-



Motor skills testing for reception class children at Jyllinge School in the Municipality of Roskilde

ception class children for motor weakness. The Healthy Schools Network programme has been developed in collaboration with Nicholas Hansen, a sports teacher at Jyllinge School, who was responsible for the motor skills initiative for schools in Roskilde municipality.

Over a period of several years, Nicholas Hansen has observed that more and more children are struggling with motor skills weaknesses when they begin school, with consequences for the children's everyday lives, social relationships and school learning. The problem is not one that children grow out of, so intervention is necessary.

Nicholas Hansen explains that 'we have seen great advances among the children at Jyllinge School in terms of motor skills, scholastic learning and self-confidence as a result of the screening and training, and at the school we are convinced of the importance of intervening early with children who have motor difficulties. It is very clear that our children feel greater security

when they can use their bodies without difficulty in all types of play and activity. Children who are insecure in their motor skills are often excluded from playing with other children. Mastery of motor skills thus represents a gateway to interaction with other children, which in turn contributes significantly to children developing confidence in their own abilities and achieving a greater sense of self-worth,' Nicholas Hansen concludes.

The Healthy Schools Network is very enthusiastic about the motor skills project at Roskilde. The better children develop in terms of motor skills, the greater the potential they have to benefit scholastically from their school work and in their social development. The Healthy Schools Network aims to develop both scholastic skills and wellbeing, and this new motor skills programme is designed to help with both.

The Healthy Schools Network

- The Healthy Schools Network was launched in 2008.
- The network is based on a broad concept of health; its goal is to help improve school students' physical health, mental health and general wellbeing.
- Member schools are offered the programmes Perspekt, Drug Rebels and Cool2BFit at cost price.
- The development of the scheme is supported by the Rockwool Foundation.

Read more about the Healthy Schools Network, Perspekt, Drug Rebels and Cool2BFit at www.sundskolenettet.dk

The tax reform of 2010 was used to reduce tax payments and had no real effect on labour supply in its first year

During their first year, the tax reductions implemented in Denmark in 2010 had no effect on the earnings of the highest-paid 25 percent of taxpayers, who were the people who stood to gain most from the reform. On the other hand, a number of wage-earners obtained a tax advantage by having some of their income from the end of 2009 paid out in 2010.

Work and the Welfare State

Taxes are vital for financing the welfare state, and the Rockwool Foundation Research Unit studies this topic through two analytical approaches. First, the Unit examines the extent to which Danish citizens fulfil all their obligations to pay taxes. Second, it addresses the question of how taxation affects the supply of labour in Denmark.

In 2010 the Danish government implemented a number of tax reductions, and the Research Unit studied various factors in connection with this reform as part of its overall research interest in the relationship between taxes and labour supply. In 2014 an analysis was published of the

effects on labour supply of the 2010 tax reform, a reform which primarily reduced the taxes of the highest paid.

The analysis was performed by Professors Claus Thustrup Kreiner and Søren Leth-Petersen, both of the Department of Economics at the University of Copenhagen, in collaboration with Peer Ebbesen Skov of the Rockwool Foundation Research Unit. The effect on undeclared work was examined at the same time in a supplementary analysis, described on page 34.

The thinking behind the tax reform of 2010 was that highly paid people in Denmark would find it attractive to earn

more and would consequently increase their incomes, either by working more hours or by working more productively. This did not happen, however, in the first year that the new regulation was in effect. The average incomes of high earners did rise from 2009 to 2010 by more than the incomes of other earners, but the whole of this increase can be attributed to 'income shifting', whereby taxpayers with high incomes transferred earnings from the last part of 2009 to the start of 2010, when lower tax rates began to apply.

Among the highest-level earners in Danish firms – defined here as the five best-paid people in each firm – 6-8 percent moved

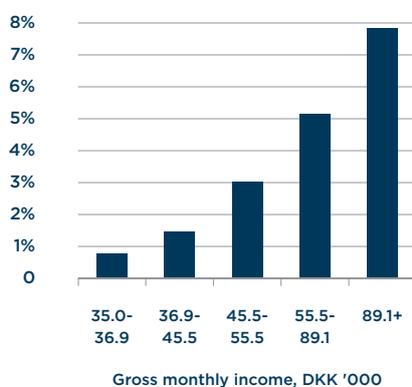
income from one year to the next, while the overall proportion of all wage-earners with monthly incomes above DKK 35,000 who did this was 2.7 percent. The percentage was even higher among taxpayers who had funds available in the bank and knowledge of the opportunities available under tax law for shifting income.

The analysis also showed that while relatively few people shifted income, those who did so moved large amounts of money. If we consider those who shifted more than 50 percent of their December 2009 salary to January 2010, we find that there were around 6,000 such wage-earners who postponed taking their salary in order to obtain a tax advantage. The highest-paid earners moved an average of 30 percent of their December salary to January.

Differences among sectors

Even though income shifting took place in all branches of the private sector, there were differences among them. Only 1.5 percent of employees in the financial sector took advantage of the change in the tax rules, despite the fact that they were presumably familiar with the new regulations; this was well below the overall figure of 2.7 percent.

The shares of taxpayers by income groups who shifted income from Dec. 2009 to Jan. 2010



The shares of salaried employees who shifted income from December 2009 to January 2010 increased in step with monthly income levels.

Source: The Rockwool Foundation Research Unit. Based on monthly income reported to the Danish Tax Authority

Less surprisingly, accountants were much more active than the average; nearly one in ten of them moved income from December 2009 to January 2010.

While the top managers in the private sector were active in moving income from 2009 to 2010 in order to secure a tax advantage, the analysis showed that the highest earners in the public sector were much more reticent about doing so.

Institutional limitations may have contributed to high-paid employees in large firms being less active in this respect than high earners in smaller firms. The proportion of the very highest earners at a firm who postponed income payments, however, was large irrespective of the size of the firm.

Income shifting is legal

Income shifting is legal. An employee agrees with his or her employer that part of the salary for the last part of the year, in this case the year 2009, is to be paid in January of the following year, i.e. 2010. This was of course worthwhile only because the rate of tax in 2010 was lower than that in 2009, thanks to the 2010 tax reform, which reduced the marginal rate of tax on annual incomes above DKK 424,000 from 63 to 56 percent.

The analysis carried out by the Research Unit was only possible because a new form of monthly income reporting was in operation. If the analysis of taxpayers' reaction to the tax reduction had been made on the basis of annual income alone, as was done previously, an effect would have been found in the form of increased annual earnings.

A real effect will probably occur in time

The fact that the tax reform had no effect in the first year does not mean that it will not have an effect on the labour supply in the long term, but only that it will probably take time. Professor Claus Thustrup Kreiner comments that 'it is well known that the short-term effects of a tax change are less than the long-term impact, and I expect that an effect of this reduction will become evident in time.'

However, he notes that it is remarkable that no effect at all could be detected on the labour supply in the first year: 'We had certainly realised that the short-term effect observed was too large, because it included shifted income; but we would never have guessed that the entire effect in the first year would be attributable to income shifting.'

It is possible that the deep economic recession gripping Denmark in 2010 made it difficult for people to increase their incomes, however much they might have wished to do so.

Few people knew the rules

In connection with the analysis described above, the researchers also carried out a survey of the public's awareness of the fact that wages could be shifted completely legally to take advantage of the tax reform. Even though this opportunity was discussed in the media in the period before the end of 2009, and even though the press coverage made clear that it was completely legal, the survey revealed only limited knowledge of the situation.

Only one third of the respondents in the survey said that it would pay to move income from 2009 to 2010, and only around one third thought that such an action was completely legal.

Only 11 percent of respondents with monthly incomes between DKK 30,000 and DKK 35,000 knew both that this manoeuvre would be profitable to them and that it was completely legal.

However, 17 percent of the most highly-paid earners – those with monthly incomes of over DKK 35,000 – said that they were aware of the tax advantages of shifting income and knew that it was legal.

International presentation of the results

At around the same time that the results of the study were published in Denmark, the analysis by the three researchers was presented to an international audience at the January 2014 conference of the American Economic Association in Philadelphia, USA.

Publications by the Rockwool Foundation in 2014

Publications are available for free download at rff.dk.



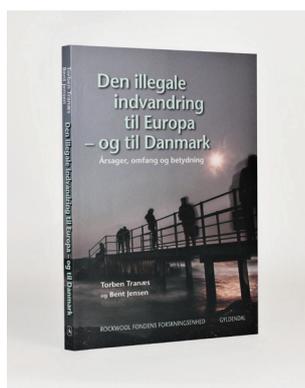
Styring, ledelse og resultater på ungdomsuddannelserne (Danish upper secondary education: Management, administration and results)

Edited by Lotte Bøgh Andersen, Peter Bogetoft, Jørgen Grønnegård Christensen and Torben Tranæs.
Odense: University Press of Southern Denmark.



Er fritiden forsvundet? 45 års udvikling i danskernes fritid (Has leisure vanished? Trends in Danes' free time over 45 years)

By Jens Bonke.
Odense: University Press of Southern Denmark.



Den illegale indvandring til Europa - og til Danmark. Årsager, omfang og betydning (Illegal immigration to Europe - and to Denmark. Causes, extent and significance)

By Torben Tranæs and Bent Jensen, with contributions by Johanne K. Clausen and Stine Laursen. Copenhagen: Gyldendal.



Hvad ved vi om modtagerne af kontanthjælp? En oversigt over publiceret forskning om kontanthjælpsmodtagere i perioden 2007-2014 (What do we know about recipients of income support? An overview of published research concerning recipients of income support in the period 2007-2014)

By Bent Jensen.
Odense: University Press of Southern Denmark.

The efficiency of educational production: A comparison of Denmark with other OECD countries

By Peter Bogetoft, Eskil Heinesen and Torben Tranæs.
Odense: University Press of Southern Denmark.

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Odense: University Press of Southern Denmark.

Is leadership in the eye of the beholder? – A study of intended and perceived leadership strategies and organizational performance

By Christian Bøtcher Jacobsen and Lotte Bøgh Andersen.
Odense: University Press of Southern Denmark.

Benchmark af erhvervsuddannelserne (Benchmarking Danish vocational education and training programmes)

By Peter Bogetoft and Jesper Wittrup.
Odense: University Press of Southern Denmark.

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By Anna Piil Damm and Christian Dustmann.
Odense: University Press of Southern Denmark.

Danskernes sorte livsindkomst (Danes' undeclared lifetime incomes)

By Peer Ebbesen Skov.
Odense: University Press of Southern Denmark.

Danskernes sorte arbejde under krisen 2009-2012 (Danes' undeclared work during the crisis of 2009-2012)

By Peer Ebbesen Skov.
Odense: University Press of Southern Denmark.

Publications by the Rockwool Foundation in 2014

Publications are
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Does the marginal tax rate affect activity in the informal sector?

By Søren Leth-Petersen and Peer Ebbesen Skov.
Odense: University Press of Southern Denmark.

Do preferences impact behavior and wellbeing?

By Jens Bonke and Marie Louise Schultz-Nielsen.
Odense: University Press of Southern Denmark.

The cost of producing electricity in Denmark – A Technical Companion

By Clinton J. Levitt and Anders Sørensen.
Copenhagen: The Rockwool Foundation.

Indvandrere og danskernes nettobidrag til de offentlige finanser (The net contributions made by immigrants and Danes to Danish public finances)

By Marie Louise Schultz-Nielsen and Torben Tranæs.
Odense: University Press of Southern Denmark.

Measuring Denmark's CO₂ emissions 1996 – 2009

By Gagan P. Ghosh, Clinton J. Levitt, Morten S. Pedersen and Anders Sørensen.
Copenhagen: The Rockwool Foundation.

Arbejdstid. Hvorfor er der forskel på faktisk og normal arbejdstid? (Working hours. Why are there differences between actual and normal working hours?)

By Jens Bonke.
Odense: University Press of Southern Denmark.

The cost of producing electricity in Denmark

By Clinton J. Levitt and Anders Sørensen. Copenhagen: The Rockwool Foundation.

The annual accounts of the Rockwool Foundation – Summary

Statement of income 2014	Danish Kroner
Interest and dividends	71,284,618
Administration costs*	8,277,757
Profit before donations	63,006,861
Allocated donations	50,371,179
Result year-end	12,635,682

Capital as at December 31, 2014	Danish Kroner
Tied up capital	3,469,568,514
Available capital	142,417,078
Capital and reserves	3,611,985,592

* Board members' fees 2,168,417

Colophon

Photography

Stig Stasig
Page 12, 13, 17, 23, 28, 29, 34
and 35

Anni Nordahl
Page 21

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Page 25

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Page 37

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