CYCLING WORKS
Jobs and Job Creation in the Cycling Economy
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ECF would like to express its gratitude for the financial support provided by the Cycling Industry Club, but also for the valuable input the members of the Club and other participants have given to the present study. We would especially like to thank the members of the Advisory Board who have invested time and energy to participate in two workshops in Brussels and at the Eurobike Trade Fair in Friedrichshafen in order to make this report a success.
ABOUT THE EUROPEAN CYCLISTS’ FEDERATION

ECF is the umbrella federation of bicycle users’ organizations in Europe and beyond. Our aim is to have more people cycling more often and we target to double cycling by 2020 in Europe. To reach this goal we work with our members and partners on putting cycling on the agenda at global, European, national and regional level.

TABLE OF CONTENTS

FOREWORD ............................................................................................................. 6
INTRODUCTION BY THE EUROPEAN CYCLISTS’ FEDERATION .............................................. 7
SUMMARY TABLES ..................................................................................................... 8
SUMMARY AND CONSIDERATIONS. 650,000 JOBS IN THE EUROPEAN CYCLING SECTOR TODAY, MORE THAN 1,000,000 TOMORROW .................................................. 10
1. Main findings ...................................................................................................... 10
2. Caveats ............................................................................................................... 10
INTRODUCTION .......................................................................................................... 12
CURRENT LEVEL OF CYCLING JOBS ........................................................................ 13
1. Approach & global result .................................................................................. 13
2. Results for various sub-sectors ........................................................................ 14
JOB POTENTIAL OF CYCLING WITH INCREASE IN BICYCLE MODAL SHARE ............... 19
1. Approach and global result ................................................................................ 19
2. Results for various sub-sectors ........................................................................ 20
QUALITATIVE ASPECTS OF CYCLING EMPLOYMENT .................................................. 26
1. Job quality ......................................................................................................... 26
2. Job intensity ....................................................................................................... 27
3. Gross employment effects vs. net employment effects .................................. 27
4. Cycling and the local economy ........................................................................ 28
BIBLIOGRAPHY ........................................................................................................ 30
FOREWORD

Dear Reader,

As Chairman of the Cycling Industry Club’s Advisory Board, it is my pleasure to offer the full backing of the cycling industry sector for this important publication.

This study is part of a long-term collaboration between ECF and the cycling industry in the framework of the Valuing Cycling Project. The aim of this project is to collect robust data on the cycling sector and its potential for the European economy in order to make the investment case for cycling at European, national and local level. By providing sound data to decision-makers, it will help to put cycling on equal terms with other transport modes and other sectors of the economy. Given the current economic situation, job creation is one of the most pressing issues for Europe. This study shows the great potential that cycling has in this respect – more than 1 million cycling related jobs could exist in the EU if ECF’s goal to double the modal share of cycling was reached.

That is not just good for employment, it releases the multiple benefits of cycling including reduction of CO2 emissions, better air quality, reduced congestion and improved public health.

To achieve this public investment is needed. Together with ECF, the companies of the Cycling Industry Club hope that this study will help to boost investment in cycling and thus further the prosperity of Europe, its economy and its citizens. We look forward to working with policy makers at all levels to achieve these results.

Tony Grimaldi
President and CEO of Cycleurope
Chairman of the Cycling Industry Club Advisory Board

INTRODUCTION BY THE EUROPEAN CYCLISTS’ FEDERATION

In reaction to the global financial and economic crisis that started in 2008, job creation has become a main priority of EU policy. In this context, ECF has decided to commission academic consultancy Transport & Mobility Leuven to carry out a study that quantifies the contribution of the cycling sector to job creation in Europe. This study has been realised with support from ECF’s partners in the Cycling Industry Club. It continues the work that has been initiated by ECF with the report on the cycling economy, estimating the economic benefit of cycling at €205 bn per year for the EU-27.

So far, investments in cycling have mostly been driven by factors like the need for a more efficient transport system, congestion relief, health benefits or improved access. Employment in the cycling sector has rarely been used as an argument at the international level, except for cycling tourism. The aim of the study is to show that employment in the cycling sector is a co-benefit of investments in cycling, and also a benefit in its own right.


### Employment Potential (Full-Time Equivalents) with Doubling of Cycling Modal Share

<table>
<thead>
<tr>
<th>Country</th>
<th>Bicycle retail &amp; repair</th>
<th>Bicycle manufacturing</th>
<th>Cycling infrastructure</th>
<th>Cycle tourism</th>
<th>Cycle hiring schemes</th>
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### SUMMARY TABLES

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<th>Bicycle retail &amp; repair</th>
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1. MAIN FINDINGS

We estimate the jobs in the European cycling sector today at around 650,000 full-time equivalents (EU-27, excluding Croatia). With a doubling of bicycle modal share, the employment potential of cycling jobs represents more than 1,000,000 full-time equivalents.

This study takes into account jobs in the bicycle industry, bicycle retail, bicycle infrastructure and bicycle tourism sector. The table below shows the jobs of the respective sectors today (left) and with a doubling in bicycle modal share (right). We find that bicycle tourism is by far the largest contributor to cycling jobs.

High number of jobs per million of turnover

Table 1 below shows the jobs of the respective sectors today (left) and with a doubling in bicycle modal share (right). We find that bicycle tourism is by far the largest contributor to cycling jobs.

An opportunity for a more inclusive Europe

The qualitative evaluation of jobs in the bicycle sector shows that a number of them do not require high levels of qualification. By providing easily accessible employment for groups that are disadvantaged on the labour market because of their low qualification levels, this offers an opportunity to contribute to the objectives of an inclusive Europe.

Cyclists are better for the local economy

Another interesting point about (functional) cycling is that cyclists go more to local shops, restaurants, cafés or other local businesses than users of other transport modes. Cyclists buy more local and organic products. They are better for the local economy.

2. CAVEATS

Not all employment in the cycling sector taken into account

The present study only looks at job creation in certain key sectors of the cycling economy. However, in certain sectors there was very limited or no data available on the amount of cycling jobs. For example, for cycling services the amount of jobs that we included could be an underestimate because job creation of doubling the modal share of cycling might be underestimated.

In the manufacturing sector, the job creation effect of doubling the modal share of cycling might be underestimated. The reason for this is that with increasing modal shares, bike prices go up which could imply that cyclists buy less cheap Asian bikes and more bikes which are assembled in Europe. Within the limits of the study, we were not able to investigate trade flows and therefore our numbers will not pick up such an element.

Finally, the study takes only direct effects into account. Indirect effects are not taken into account. An indirect effect is for example the jobs created at the steel or aluminium producer who provides input for the bicycle manufacturer.

Room for improvement of the estimates

This study estimates the gross job effect. It does not account for the fact that if people did not cycle, there could be other jobs replacing cycling employment. The net job effect would take this into account. As a result, the job growth numbers that we indicate for a doubling of bicycle modal share should not be interpreted as indicating a net employment growth numbers for the entire economy. They should be considered as the increase in cycling jobs, whereas jobs in other sectors may diminish in compensation. Nevertheless, our calculations have also shown that job intensity per €M turnover is higher for the cycling economy than for other transport modes.

Also, we want to stress that our estimates for employment growth potential in case of a doubling of bicycle modal share are based on a relatively simple statistical model. We correlate current modal share with cycling economy indicators in a cross-section of EU-27 countries, and subsequently use these correlations to estimate the economic impact of increasing modal shares by extrapolation. This approach leaves the room open for statistical problems, such as endogeneity bias, which would imply that we over-estimate the employment effects of increasing modal shares. However, limited data availability and limited resources have motivated the current approach for this study.

We find that bicycle tourism is by far the largest contributor to cycling jobs.

The numbers we provide are based on available data and statistics, completed with calculations and analyses. The quality of our estimates are obviously linked to the quality of the data that we use. Quality of available data and statistics greatly vary.

- Data on employment in the manufacturing and retail sector are good
- Estimates on tourism sector can be improved, especially the link between an increase in modal share and the increase in bicycle tourism
- Data on current bicycle modal share and growth potential in bicycle use are poor. No consistent time series are currently available in Europe. This means that there is much room for improvement of the estimate of job impacts of an increased modal share of cycling.

### Table 1: Overview of jobs in the cycling sector today and with a doubling of modal share

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<th>Subsector</th>
<th>Employment (FTE today)</th>
<th>Employment (FTE with doubling of modal share)</th>
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<td>Bicycle infrastructure</td>
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<td>869 927</td>
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<td>4224</td>
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### Table 2: Job intensity comparison between bicycle subsectors and related sectors (in FTE employment/1 M€ turnover, average for EU)

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<td>Ships and boats: 4.07</td>
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<td></td>
<td>Car: 1.65</td>
<td>Air and spacecraft: 3.9</td>
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<tr>
<td>Sales + accessories sale</td>
<td>5.42 (without adjustment)</td>
<td>Motor vehicles: 1.52</td>
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<td></td>
<td>8.13 (with adjustment)</td>
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<tr>
<td>Repair</td>
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<td>Motor vehicles: 7.59</td>
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<tr>
<td>Infrastructure</td>
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</table>

* This adjustment factor is explained in section 5.2.
This study makes a research-based assessment of the economic value of the cycling sector for the European economy, focusing on jobs and employment. This study is one of the first to undertake the challenge of quantifying cycling jobs at the European level. We take into account multiple cycling-related activities such as bike retail, bicycle manufacturing, bike infrastructure investment, cycle tourism and bicycle services. In this study, we quantify the full-time equivalent number of jobs. This is consistent with common practice in computing employment impact of economic policy measures.

A number of recent studies have quantified job impact of cycling at a national or at regional level:


The scope of our study is EU27*. We use recent statistics (2009-2014), but we cannot pin down one single year. Because of limited data availability, we use the statistics that are available in recent studies or databases. The numbers we use are thus generally well comparable, because there have been no sudden shocks in recent years. Where possible, we use data from different sources in calculating a single indicator. This enhances the reliability of our calculations. Our study focuses on the direct employment impact of the cycling economy. We do not compute indirect or induced jobs from investing in the bicycle economy. Our estimates can therefore be considered as a lower bound estimation. The difference between various impacts is represented in Figure 1.

We define direct impact as the turnover and employment which is directly related to cycling activities. These are, for example, the salespersons who sell and repair bicycles in specialized shops, the bicycle manufacturing industry, the construction companies that build the bicycle infrastructure, etc. Indirect impact is defined as the turnover and employment realized in the sectors that supply products and services to the sectors that directly benefit from cycling expenditures. For example, the steel or aluminum industry furnishes steel or aluminum to the cycle manufacturer.

**Current Level of Cycling Jobs**

In this chapter, we explain our methodological approach in calculating the current number of jobs due to cycling activities in Europe. Next, we provide an overview of our results at an aggregated, European level. We include a more detailed overview of results at the country level in Annexes I-V (see http://tinyurl.com/cycling-jobs).

**1. Approach & Global Result**

The figure below illustrates our approach. The text clarifies it further.

**Figure 1. Economic Impact of Cycling Economy**

Transport behaviour - cycle infrastructure investment - bicycle tourism - bicycle services

Direct impact on turnover and employment

Bicycle sales/retail
Bike repair
Tourism industry (hotel, restaurant)

Indirect impact

Effect on activities that supply products and services directly impacted sectors

Induced effects

Spending of beneficiaries direct and indirect effects

**Table 1**

<table>
<thead>
<tr>
<th>Sector and sub-sectors</th>
<th>Investment</th>
<th>Turnover</th>
<th>FTE jobs/1M investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle market definition - Sector and sub-sectors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure construction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle sales/retail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle repair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourism industry (hotel, restaurant)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Economic Value**

**Turnover investment**

**FTE jobs**

**FTE jobs/1M investment**

**Step 1: Definition of 5 subsectors**


**Step 2: Calculate sector turnover & Step 3: Calculate employment related to turnover**

For each of these subsectors we calculate the economic value by turnover, with the exception of bicycle infrastructure for which we use investment as the main indicator. We translate turnover into Full Time Equivalent jobs, based on the FTE/turnover ratio that we find in the Eurostat Structural Business Statistics. The statistics are available for a number of sectors following the NACE (Statistical Classification of Economic Activities in the European Community) sector classification. We select the NACE codes that contain bicycle related activities as illustrated below. For example, we use the NACE 3092 ratio for the manufacture of bicycles.

- NACE 3092 Manufacture of bicycles and invalid carriages
- NACE 4231 Construction of roads and motorways
- NACE 4645 Wholesale of other household goods
- NACE 55 Accommodation
- NACE 56 Food and beverage
- NACE 7411 Renting and leasing of recreational and sports goods

*We do not include results due to reasons of limited data availability.

*For this, a more elaborate input-output analysis would be necessary; however, this is difficult given the discrepancy between the cycling economy and the existing NACE sector classification.

This report is structured in three main chapters. In chapter 3, we report the importance of the European cycling economy by turnover or investment. We further calculate the number of full time equivalent jobs related to cycling activities in Europe. In chapter 4, we develop an ambitious growth scenario with doubling of bicycle modal share by 2020 and calculate its employment impact. In chapter 5, we discuss qualitative aspects of cycling jobs and other insights that can qualify our results. Elements we discuss are:

- the distinction between gross employment growth and net effects
- job intensity in the cycling sector in comparison to related sectors (such as the car industry)
- average quality of cycling jobs

**INTRODUCTION**

**CURRENT LEVEL OF CYCLING JOBS**
Global results: 650 thousand full-time equivalent jobs related to bicycle economy in Europe. We give a brief overview of the totals on European turnover, investment and cycling jobs in Table 3. We find that current FTE employment in the cycling economy amounts to 654,909.

We find a yearly employment of 12,472 FTE jobs in bike repair by multiplying the estimated turnover with the FTE/turnover ratio. More detailed results per country are shown in Annex I (see http://tinyurl.com/cycling-jobs).

Bicycle industry

Manufacturing jobs

The most important input for computing FTE jobs in bicycle industry is the “Bicycle industry and market profile” report produced by the CBIL (2013). This report gives a yearly estimate of employment in bicycle manufacturing and bicycle parts manufacturing.

Adding wholesale employment

To this, we add an estimate of FTE jobs created in the distribution/wholesale activity. Ekosgen (2010) estimated that around 845 persons were employed in the bicycle industry sector in the UK in 2008. Comparing this employment number with the number of jobs in the COLIBI (2013) report, we find that 700 employees are not represented in the COLIBI numbers. Ekosgen (2010) further indicates that a large share of industry jobs is in the area of wholesale of bicycles. We also learn from the COLIBI (2013) that the UK is one of the countries with the largest discrepancy between bike sales and bicycle production, with relatively small production in comparison to much higher sales numbers.

In calculating the number of bicycle wholesale jobs, we assume that employment in distribution and wholesale of bicycles is linearly related with the import need of a country. The underlying assumption is that local producers deliver directly to a bike retailer without passing via a wholesale center. Imported bicycles will more often go to an importer/wholesale center first and then be distributed to retailers.

So we use the information from the UK to estimate employment in wholesale activities. We obtain an estimate of 1 FTE job in wholesale and distribution per 960 bicycles imported. Combining the COLIBI data on bicycle manufacturing with the calculated numbers on FTE wholesale jobs, we obtain the aggregate number of FTE jobs in the European bicycle industry as shown in Table 5.

We provide a more detailed overview for FTEs per country in Annex II (see http://tinyurl.com/cycling-jobs). We again validate our results with employment numbers obtained in earlier national studies. We find that our estimate of FTE employment in the bicycle industry is somewhat conservative but that it is in line with results from previous studies.

### Table 3: Overview of Key Results on Turnover and Employment in Different Cycling Subsectors

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Turnover (1000 €)</th>
<th>Employment (FTE number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle retail (mainly sales and repair)</td>
<td>8,457,720</td>
<td>80,587</td>
</tr>
<tr>
<td>Bicycle industry (manufacturing and wholesale)</td>
<td>22,629</td>
<td></td>
</tr>
<tr>
<td>Bicycle infrastructure</td>
<td>3,193,087</td>
<td>23,417</td>
</tr>
<tr>
<td>Bicycle tourism (accommodation and restaurants)</td>
<td>42,460,000</td>
<td>524,052</td>
</tr>
<tr>
<td>Bicycle services (hire schemes and cyclogistics)</td>
<td>4224</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>654,909</td>
<td></td>
</tr>
</tbody>
</table>

### Table 4: Overview of Turnover Realized and FTE Employment for the EU in the Subsector of Bicycle Retail

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Turnover (1000 €)</th>
<th>FTE employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle sales</td>
<td>5,638,480</td>
<td>50,696</td>
</tr>
<tr>
<td>Bicycle accessories sale</td>
<td>1,973,468</td>
<td>17,244</td>
</tr>
<tr>
<td>Bicycle repair</td>
<td>845,772</td>
<td>12,147</td>
</tr>
<tr>
<td>Total bicycle retail</td>
<td>8,457,720</td>
<td>80,587</td>
</tr>
</tbody>
</table>
Cycling Works: Jobs and Job Creation in the Cycling Economy

**Bicycle infrastructure investment**

- **Investment figures based on turnover**
  - We use investment, rather than turnover, as the starting point for our FTE estimation in the sector. We then apply an employment/investment rate to estimate number of full-time equivalents active in cycling infrastructure. For this, we use indicators from the NACE 4311 sector ‘Road construction’ and apply an adjustment factor to represent bicycle-specific investment.

**Based on national studies and observed relationship with modal share**

- In estimating the number of FTE jobs in bicycle infrastructure, we use the observation that investment in cycling infrastructure per capita is generally in line with a country’s cycling modal share. This observation has been made in a number of studies on the topic such as:
  - UNEP (2010). Share the road: Investment in walking and cycling infrastructure.
  - ECF (2013). Funding cycling infrastructure: Time for national authorities to step up!

**Adaptation for Eastern European countries**

- However, we have to take into account the observation by the ECF (2013), that investments in cycling infrastructure are considerably lower in Eastern European countries. The study points to the example of Hungary with a bicycle modal share of around 15% and only 3€/cap in annual cycling infrastructure investment.

- We are able to estimate bicycle infrastructure investment/employment per country for all European countries using the observed correlation between bicycle modal share and investment. We start from information on investment/person from a number of national studies. Table 6 gives an overview of the information that we use for our estimation.

- For Western European countries, we will directly use the investment per person obtained. For Eastern European countries, we take into account that bicycle infrastructure is often less developed and financed (as demonstrated by the numbers for Hungary in Table 6). Thus, the estimates of investment per capita for Eastern European countries are the numbers that we obtain from our model, divided by three. This gives us the amounts of investment per person. We find total investment per country by multiplying this number with population per country.

**FTE/investment ratio: adjustment of ratio for NACE sector 4311 ‘Construction of roads and motorways’**

- We calculate the effect of infrastructure investment on employment using the FTE/M investment ratio from NACE sector 4311 ‘Construction of roads and motorways’. We adjust the FTE rate that we obtain to make it specific to cycling infrastructure. We use input from a study conducted at the University of Massachusetts called ‘Pedestrian and bicycle infrastructure: A national study of employment impacts’ (Garrett-Peltier, 2011). This study has calculated that direct employment effects of bicycle infrastructure projects is somewhat higher than for an average construction project (by a factor 1.28). Hence, we take the NACE 4311 FTE/investment rates and we multiply the coefficients by 1.28 to make the coefficient specific to cycling infrastructure.

**Bicycle tourism**

- The EuroVelo (2012) study on “The European cycle route network” contains a demand model on cycle tourism and related spending. This model is based on national data and data from case studies on cycle tourism and day excursions. The model produces country-level estimates of turnover realized by cycle tourists. The turnover is divided into overnight tourism trips and tourism daytrips. These estimates are the base for our calculations.

**FTE ratio: Assumptions on tourism spending**

- We make a number of assumptions on spending by overnight tourists and daytrip tourists to transform turnover into number of jobs. These assumptions are based on insights from the EuroVelo study into expenditures by different categories of cycle tourists.

- We assume that overnight cycle tourists spend:
  - 40% of their expenses on accommodation – NACE 55 Accommodation
  - 30% of their expenses on food and beverages – NACE 56 Food and beverages
  - 15% of their expenses on transportation – NACE 49 Land transportation

- We further assume that daytrip cycle tourists spend:
  - 60% of their expenses on food and beverages – NACE 56 Food and beverages
  - 20% of their expenses on transportation – NACE 49 Land transportation
  - 20% of their expenses on bicycle equipment – NACE 4704 Retail sale of sporting equipment in special stores
  - 15% of their expenses on bicycle equipment – NACE 4704 Retail sale of sporting equipment in specialized stores
  - 5% comes from renting bikes or bike accessories
  - 5% comes from renting of bikes or bike accessories

- The FTE/tourism rates for overnight cycle tourists and daytrip cycle tourists are a weighted average of the FTE/tourism rates of the NACE sectors as specified above. Notice that we do not include the turnover figures for bike sales or sale of bike accessories. The reason is that this turnover has already been accounted for in section 3.2.1 on retail. In order to avoid double-counting, we have to exclude the impact of tourism on bike retail from the current calculation.

**Full-time equivalent jobs in cycle tourism**

- We multiply the national revenue figures from cycle tourism by the FTE/tourism rates. We do the multiplication separately for overnight cycle tourists and daytrip cycle tourists. Then, we take the sum of the FTEs from both types of cycling travel to calculate the total employment related to bicycle tourism. Table 8 gives an overview of the results for Europe.

- We provide more detailed results per country in Annex IV (see http://tinyurl.com/cycling-jobs). We also validate our results by comparing them to results from national studies in Germany and France. We observe that our FTE figures are larger than from a further German study and are considerably higher than the numbers from the French National study.
employment rates that we observed for other sectors. The sector of bicycle rental has a high turnover rate and generates jobs at all levels of the value chain from production to marketing and advertising.

In particular, on the modal share of bicycle transport in terms of number of trips or distance travelled. This could be collected by Eurostat as part of their modal split database and would be an important step to evaluate policies to promote cycling in the future.

We evaluate what would be the employment effect of a doubling in bicycle modal share. Table 1 shows the current modal shares and the modal shares that would be attained in a bicycle growth scenario. The European bicycle modal share average has indeed doubled in the growth scenario, in comparison to the current modal shares. The weights for calculating the average are given by the % of all road traffic (in vehicle-kilometres) of each country.

We define different growth rates for each country because it is easier to double modal share in countries where the modal share is currently very low; for example, in Cyprus the modal share only needs to increase by 1% to achieve a doubling whereas in Netherlands modal share would have to increase by 31% to the very high level of 64%. For this reason, we set the growth potential for bicycle use in each country inversely related to its current modal share. We show the resulting bicycle shares in the growth scenario in the third column of Table 1. You will see in this table that countries with a relatively low modal share (such as Bulgaria or Cyprus) have more than doubled that share in the growth scenario, whereas countries with a high modal share (such as Netherlands or Denmark) have not doubled their modal share. The weighted average bicycle modal share in the growth scenario is 15.3% for EU27. This is exactly the double of the current modal share.

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2. RESULTS FOR VARIOUS SUB-SECTORS

Our results are largely based on statistical relationships between bicycle modal share and current expenditures on bikes (per capita). We identify this relationship using a cross-section of modal share data of European countries, in current years. We would like to stress that this statistical methodology can be considered as exploratory and this is caused by the limited availability of data. If better data existed, we could estimate a more robust statistical model. Currently some of the results could be due to endogeneity bias. For example, it could be the case that in middle-income countries, people cycles less and also buy less expensive bikes than in high-income countries. The relationship that we identify between bike modal share and price of bikes could then actually be driven by an underlying relationship between income and frequency of cycling, combined with a relationship between income and price of bike equipment sold. We could discard such endogeneity bias if we would have more data at our disposal to estimate better statistical models. Our methodology is thus rather exploratory than confirmatory. For this reason, we recommend that our results should be interpreted with caution.

**Bicycle retail: sales, accessories and repair**

We investigate the relationship between bicycle modal share and average price per bike sold in European countries. We identify this relationship using a cross-sectional data set of modal share data of European countries, in current years. We find that with increasing modal share, bike prices go up which could be due to endogeneity bias. For example, it could be the case that in middle-income countries, people cycles less and also buy less expensive bikes than in high-income countries. The relationship that we identify between bike modal share and price of bikes could then actually be driven by an underlying relationship between income and frequency of cycling, combined with a relationship between income and price of bike equipment sold. We could discard such endogeneity bias if we would have more data at our disposal to estimate better statistical models. Our methodology is thus rather exploratory than confirmatory. For this reason, we recommend that our results should be interpreted with caution.

**Relative prices and living standards between countries**

We fit a linear curve on this relation to estimate the correspondence between modal share and the average price of a bike. Figure 3 gives a graphical overview of the estimated relationship. We observe that the linear relationship does perform well in explaining the upward trend between modal share and price per bicycle.

**Scenario calculation**

We will now use the results of the statistical models to predict the price per bike and the amount of bikes sold in the bike growth scenario. With these numbers, we can easily calculate the turnover of bicycle sales per country in the growth scenario. The turnover is given by the following formula:

\[ \text{Turnover per country} = \text{as price per bike} \times \frac{\text{bike sales}}{1000 \text{ pers}} \times \frac{1000 \text{ pers}}{1000 \text{ inhab}} \]

The average price per bike in purchasing power parity (PPP) units and the number of bikes sold per 1000 inhabitants are the outputs of our statistical models. The purchasing power parity units per country and the inhabitants per country originate from Eurostat.

We remark that an advantage of the method used is to avoid making particular assumptions on the fact that more people start to cycle or existing cyclists intensify their cycling, or people do relatively less or more cycling for leisure.

From now on, we can use the same methodology in calculating bicycle retail employment as we have done in chapter 3. First we assume that turnover in sale of bike accessories is around 35% of the turnover in the sales of bikes, in line with chapter 3. This assumption is based on the calculations from TML/Pro Velo (2014). We further assume that turnover in bike repair is around 15% of the turnover for bicycle sales. We obtain estimations on the turnover made in the European bicycle retail sector, as shown in Table 13.

**Our estimate on the impact of a doubling in bike modal share**

Our estimate of the turnover at doubling in bike modal share is an increase in turnover of around 42% for bicycle retail. People will buy more bikes and more expensive bikes when they cycle more, but the increase will not be proportional. This means that the increase in bike sales would be lower than the increase in modal share.

Subsequently, we compute the effect on jobs. The results are shown in Table 14. We find that the job impact of an increase in modal shares is slightly higher than the turnover impact. In absolute terms, we obtain an increase of 41 609 full-time equivalent jobs in European bicycle retail if cycling modal share doubled.

In Annex VI (see http://tinyurl.com/cycling-jobs), we include more detailed employment estimates in bicycle retail for the bicycle growth scenario, with job figures at the level of individual countries.

**Bicycle industry**

Our estimation of the turnover and employment impact for the bicycle industry follows from our estimate on number of bikes sold and average price per bike. In section 4.2.1, we computed that a doubling of bicycle modal share corresponds to a 42% increase in turnover for bike retail (bicycle sales, bicycle accessories sales and bike repair). We extrapolate this growth rate to the bicycle industry. As bike retail is clearly the main client of bicycle industry’s products, we can assume that a 42% increase in retail turnover leads to a 42% increase in industry turnover. An underlying assumption is that the current trade patterns of bikes and bike components does not change, i.e. the share of bikes sold in the UK and produced in Germany, France, Holland, domestically, outside EU, etc. does not change.

We therefore assume a uniform increase of 42% in turnover for each country. This leads to a uniform increase of 42% in bicycle industry employment. These estimations on FTE jobs is summarized in Table 15. We obtain an impact on employment in bicycle industry of 4526 FTE jobs.

There could be a reason for assuming that more European bicycles will be sold with increasing modal shares. The reason is that with increasing modal shares, bike prices go up which could mean that cyclists buy less cheap Asian bikes and

---

**Table 11: Overview of bicycle modal share in terms of % of total trips (two last columns are used to check that EU27 weighted average of potential modal share is indeed double the current modal share).**

<table>
<thead>
<tr>
<th>EU Countries</th>
<th>Current modal share</th>
<th>Growth modal share</th>
<th>%EU traffic</th>
<th>vkm - all road (TREMOVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>13.0%</td>
<td>25.6%</td>
<td>2.40%</td>
<td>93 298</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1.9%</td>
<td>5.1%</td>
<td>0.60%</td>
<td>23 417</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>7.1%</td>
<td>16.5%</td>
<td>1.47%</td>
<td>56 895</td>
</tr>
<tr>
<td>Denmark</td>
<td>18.9%</td>
<td>32.4%</td>
<td>1.37%</td>
<td>51 413</td>
</tr>
<tr>
<td>Germany</td>
<td>13.0%</td>
<td>25.6%</td>
<td>19.39%</td>
<td>752 695</td>
</tr>
<tr>
<td>Estonia</td>
<td>3.1%</td>
<td>8.0%</td>
<td>1.93%</td>
<td>752 695</td>
</tr>
<tr>
<td>Ireland</td>
<td>3.1%</td>
<td>8.0%</td>
<td>0.83%</td>
<td>9 371</td>
</tr>
<tr>
<td>Greece</td>
<td>3.1%</td>
<td>8.0%</td>
<td>1.90%</td>
<td>73 871</td>
</tr>
<tr>
<td>Spain</td>
<td>1.9%</td>
<td>5.1%</td>
<td>8.59%</td>
<td>333 407</td>
</tr>
<tr>
<td>France</td>
<td>3.1%</td>
<td>8.0%</td>
<td>14.17%</td>
<td>550 048</td>
</tr>
<tr>
<td>Italy</td>
<td>5.0%</td>
<td>15.3%</td>
<td>15.23%</td>
<td>591 109</td>
</tr>
<tr>
<td>Cyprus</td>
<td>1.0%</td>
<td>2.7%</td>
<td>0.11%</td>
<td>4 339</td>
</tr>
<tr>
<td>Latvia</td>
<td>8.1%</td>
<td>18.2%</td>
<td>0.36%</td>
<td>13 938</td>
</tr>
<tr>
<td>Lithuania</td>
<td>5.0%</td>
<td>12.5%</td>
<td>0.75%</td>
<td>28 935</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>1.9%</td>
<td>5.1%</td>
<td>0.20%</td>
<td>7 853</td>
</tr>
<tr>
<td>Hungary</td>
<td>18.9%</td>
<td>32.4%</td>
<td>0.90%</td>
<td>34 809</td>
</tr>
<tr>
<td>Malta</td>
<td>1.5%</td>
<td>4.1%</td>
<td>0.03%</td>
<td>1 215</td>
</tr>
<tr>
<td>Netherlands</td>
<td>31.8%</td>
<td>37.3%</td>
<td>3.74%</td>
<td>145 305</td>
</tr>
<tr>
<td>Austria</td>
<td>8.1%</td>
<td>18.2%</td>
<td>1.51%</td>
<td>58 803</td>
</tr>
<tr>
<td>Poland</td>
<td>9.5%</td>
<td>20.3%</td>
<td>4.69%</td>
<td>182 243</td>
</tr>
<tr>
<td>Portugal</td>
<td>1.9%</td>
<td>5.1%</td>
<td>1.72%</td>
<td>66 772</td>
</tr>
<tr>
<td>Romania</td>
<td>5.0%</td>
<td>12.5%</td>
<td>1.44%</td>
<td>55 745</td>
</tr>
<tr>
<td>Slovenia</td>
<td>7.1%</td>
<td>16.5%</td>
<td>0.45%</td>
<td>17 301</td>
</tr>
<tr>
<td>Slovakia</td>
<td>9.7%</td>
<td>21.7%</td>
<td>0.84%</td>
<td>34 376</td>
</tr>
<tr>
<td>Finland</td>
<td>13.9%</td>
<td>15.6%</td>
<td>1.37%</td>
<td>59 270</td>
</tr>
<tr>
<td>Sweden</td>
<td>11.1%</td>
<td>30.1%</td>
<td>2.19%</td>
<td>84 884</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.9%</td>
<td>5.1%</td>
<td>13.40%</td>
<td>520 307</td>
</tr>
</tbody>
</table>
| EU27           | 17.6%               | 15.3%              | 100.00%     | 3 882 610               

**Table 12: Overview of key results on job creation following an increase in bicycle modal share (growth scenario: modal share +50%).**

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Employment (FTE) current scenario</th>
<th>Employment (FTE) growth scenario</th>
<th>Employment difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle retail (mainly sales and repair)</td>
<td>80 587</td>
<td>122 196</td>
<td>41 609</td>
</tr>
<tr>
<td>Bicycle industry (manufacturing and wholesale)</td>
<td>32 629</td>
<td>32 133</td>
<td>504</td>
</tr>
<tr>
<td>Bicycle infrastructure</td>
<td>33 417</td>
<td>36 484</td>
<td>13 067</td>
</tr>
<tr>
<td>Bicycle tourism</td>
<td>524 063</td>
<td>856 972</td>
<td>334 864</td>
</tr>
<tr>
<td>Bicycle services</td>
<td>4224</td>
<td>8484</td>
<td>4256</td>
</tr>
<tr>
<td>Total</td>
<td>654 909</td>
<td>1 069 188</td>
<td>414 279</td>
</tr>
</tbody>
</table>
more bikes at least assembled in Europe. Within the limits of the study, we were not able to investigate this element. We therefore remain with the linear relationship. This means probably that the employment effect in the manufacturing sector is underestimated.

In Annex VII (see http://tinyurl.com/cycling-jobs), we include more detailed employment estimates in bicycle industry for the bicycle growth scenario, with job figures at the level of individual countries.

**Bicycle infrastructure**

In estimating the effect of bicycle use on job creation through bicycle infrastructure, we again investigate the relationship using data for European countries in the current situation. We have used previously the observation that the relationship between bike modal share and infrastructure investment per capita is nearly linear. It is therefore logical that we recover this linear pattern in the current data (Figure 5).

We again use fitted values from this statistical model to obtain figures on investment per capita. We further multiply these with population per country to get an estimate of yearly total investment in bike infrastructure per country. We assume here that Eastern European countries will catch up and attain comparable cycling infrastructure investment rates as Western European countries. We compute the employment impact by using the same FTE/investment ratio that we have used in chapter 3. We show the results in Table 16.

We find an effect of growth in bike use on bike infrastructure employment in EU27 of around 5% in relative terms and 13348 FTE jobs in absolute terms. This increase is related to the roughly linear relationship between bike modal share and bicycle infrastructure investment (as shown in Figure 3).

In Annex VIII (see http://tinyurl.com/cycling-jobs), we provide more detailed employment estimates for bicycle infrastructure investment in the bicycle growth scenario, with job figures at the level of individual countries.

**Bicycle tourism**

For bicycle tourism, we make an indicative estimate of the potential increase in turnover based on reasoning and on numbers from the EuroVelo (2012) study.

**Reasoning**

In a scenario with doubling of modal share, this means that the people who consider the bicycle as their main transport mode would double. We interpret this doubling as an indication that the people who use the bike for utility biking (mainly home – work travel) would double. It is currently unclear to which extent this increase in utility biking would carry over to additional bicycle leisure trips. It is reasonable to assume that there is some effect on bicycle tourism, in particular on day trips, but the correspondence is probably lower than one on one. After all, in countries where functional cycling is not very common (Gallup, 2011), we observe that leisure cycling or cycling for tourist trips can still be quite popular (EuroVelo, 2012). The effect may be stronger if there would be separate policies that stimulate the tourism potential of regions and in particular the cycling tourism potential.

**Estimation**

Our estimate on the correspondence between bicycle modal share and expenses for cycle tourism is based on EuroVelo (2012). In this study, the authors estimate two separate demand models for cycling tourism, one for day trips and one for overnight trips. The demand model for day trips is partly based on a country’s bicycle modal share. The demand model...
gives as an output an estimate of the yearly expenses on bicycle tourism in a country. We correct this absolute number by the population of a country to obtain a relative indicator of bicycle tourism intensity. This allows us to estimate a relationship between modal share (Gallup, 2011) and bicycle tourism turnover in a country.

We estimate a linear regression with the logarithm of modal share as explanatory variable and the logarithm of expenses on bicycle tourism/capita as the dependent variable. The relationship is estimated in logarithmic form to be able to interpret the results in terms of % changes. The result of this regression is shown in Figure 6.

Based on this regression, we estimate that a 100% increase in modal share corresponds to a 66% increase in bicycle tourism turnover. We would like to stress that this is an indicative estimate. It is entirely based on the numbers that can be found in the EuroVelo (2012) study, because of the lack of other information sources on bicycle tourism at the European level. The authors of the report caution that their results are indicative, so the conclusions that we base on these numbers should also be considered like that. If more data would be available on the link between functional cycling and leisure cycling, we could make a more reliable estimate. The estimate could further be improved by including more variables that can explain variation in bicycle tourism, such as: variation in weather patterns, availability of cycle tourism infrastructure, etc. This is however not possible with the available study resources.

Impact on employment

We can now calculate the employment effect using the same procedure as we have done for computing current bicycle employment (in chapter 3). This means that we start from turnover (growth) and subsequently calculate jobs using FTE job/turnover rates. Table 12 gives an overview of the estimated turnover and jobs in our bicycle growth scenario.

We estimate the resulting effect on employment creation to be around 345 865 FTE jobs for the EU27.

In Annex IX (see http://tinyurl.com/cycling-jobs), we provide more detailed employment estimates for bicycle tourism in the bicycle growth scenario, with job figures at the level of individual countries.

Bicycle services

For bicycle services, we have even less indications to estimate job growth in a scenario of a doubling in bicycle modal share than for bike tourism. It is not unreasonable to assume that FTE employment in bicycle services doubles when the amount of people for which the bike is the main transport mode doubles. The goal of the EU White Paper on Transport to reach “near zero-emission urban logistics” by 2030 shows there is political momentum to develop urban cycle logistics services. This means that a doubling in bicycle modal share would lead to an additional 4224 FTE jobs in bicycle services in comparison to the current situation, to a total of 8448 FTE jobs in bicycle services when bicycle modal share would double to a European average of 15.3%.
This chapter contains a brief overview of qualitative elements in relation to cycling jobs. We discuss some elements that have not been the focus of our research so far.

1. JOB QUALITY

We provide some insights into average job quality of cycling-related employment. The information we provide is largely based on a study by Eurofound (2014) on ‘working conditions and job quality: comparing sectors in Europe’. This study provides several job quality indicators for Europe, at the level of NACE sectors. We have seen earlier that this sector classification does not correspond entirely with the cycling sectors as we defined it. The NACE sectors are too broad and encompass other activities besides cycling. On the other hand, cycling related employment is scattered over several NACE codes.

For this qualitative analysis, we select a number of NACE codes which contain the most important groups of cycling jobs. Table 18 provides an overview of the NACE sector, the economic activity and related Eurofound sector.

Some selected insights from the Eurofound job quality study:

- **Average size of the workplace**
- **Many small workplaces (1-9 employees) in sectors Retail and Food & beverage**
- **More mid-size workplaces (10-249 employees) in sectors Construction and Accommodation**
- **Metal industry is the sector with largest workplaces: 250+ employees**
- **Gender distribution**
- **Retail, accommodation and food & beverage services have slightly more female employees**
- **Construction and metal industry are dominated by male employees**
- **Age distribution**
- **Retail, food & beverage services and accommodation are sectors with relatively high share of young employees**
- **Construction and metal industry have somewhat older working population, but are not the sectors with the oldest population either**
- **Self-employment**
- **Share of self-employment around 20% in Retail and Construction sector**
- **Share of around 17% in Food & beverage services**
- **Lower shares of around 10% in Accommodation and 5% in metal industry**
- **Distribution of working hours & work-life balance**
- **Construction and metal industry sector have longer hours worked on average (40+ per week), while hours worked is more around 38 hours in Retail, Accommodation and Food & beverage services**
- **Variance in hours worked is highest in Food and beverage, somewhat lower in Retail, Accommodation and Construction and lowest in Metal industry**
- **Retail, Accommodation and Food & beverages also work more atypical hours than the average sector**
- **Work-life balance seems to be relatively worse in selected cycling sectors in comparison to the average**
- **Accommodation and food & beverage score much worse on work-life than other sectors.**
- **Training**
- **The % of workers having received employer-paid training is also lower in selected cycling sectors than in the average economic sector**
- **Level is lowest for accommodation, retail and food & beverages**
- **Earnings**
- **Selected cycling sectors are not the highest paying economic sectors**
- **Food & beverages, retail and accommodation are below the average economic sector in terms of wages**
- **Metal industry and construction are above the average, but not among the highest wage sectors (financial services, banking, insurance)**
- **Working time quality**
- **Selected cycling sectors are below the average in terms of working time quality**
- **Construction is close to the average, whereas food & beverage is among the lowest.**
- **Safety**
- **Retail, accommodation and food & beverage services are very safe occupations**
- **Metal industry and construction are among the more dangerous work environments**

- **Willing to do job at 60 years**
- **Most selected cycling sectors are below the average in terms of willingness to do the job at 60 years**
- **Preferences with higher willingness to work beyond 60 years: financial services, computer programming, legal and accounting services, etc.**

### Conclusion

The analysis is approximate to the relation between NACE codes and cycle sectors is not always exact. We can still conclude that job quality in the cycling sector is only slightly lower than the average European job, in spite of the NACE sectors in which cycling employment can be found. Industrial jobs typically offer a lower job quality than many services jobs (such as financial services, public services, etc.). Also, a high share of cycling employment is in the tourism industry, which mainly consists of food & beverage and accommodation as employment sectors. These are also below average in terms of job quality according to the Eurofound report.

On the other hand, this analysis also creates opportunities for the cycling sectors provide chances for people with relatively low qualification levels, for whom finding employment could be a real challenge in the current job market situation. Cycling thus helps achieve the EU target for inclusive growth – 75% employment rate for women and men aged 20-64 by 2020 – by getting more people into work, especially those lacking higher qualifications.

2. JOB INTENSITY

Job intensity is an important indicator, because it gives an idea about the number of jobs that can be sustained with a given revenue stream in various economic sectors. This number thus indicates the job intensity of a certain turnover realization. We analyze average European job intensity in various economic sectors.

In Table 19, we compare job intensity in the cycling economy with employment intensity in related sectors for motor vehicles. The data we use are from Eurostat Structural Business Statistics. We make sure that we conduct a representative comparison by using a balanced sample of European countries. This means that we take the weighted average of FTEs/turndown, only including the countries where data is available for bike sector and for the other transport sector. If not, we could bias the comparison between both groups.

The table shows that for a similar increase in turnover, job creation in cycling industry is above that for other transport modes. This observation holds for manufacturing activity and for retail sale of bicycles and accessories/equipment. It is also true for investment in infrastructure. The employment effect of cycling infrastructure is 2.8 times higher than the employment effect of general transport infrastructure. The only activity for which the situation is different is repair: job creation per turnover is higher in motor vehicle repair than in bike repair.

The adjustment factor we mention in the table refers to the fact that we have increased the jobs/turndown rate based on the numbers from the French ATOUT study (Mercat, 2009). Without the adjustment factor we use the FTE/turndown rate from Eurostat Structural business statistics for sector NACE 4764 ‘Retail sale of sporting equipment in specialized stores’. With the adjustment factor we use the FTE/turndown rate from the French ATOUT study. In any case, both job intensity indicators are higher for the sale of bicycles than for motor vehicles.

3. GROSS EMPLOYMENT EFFECTS VS. NET EMPLOYMENT EFFECTS

We calculated the number of jobs in the cycle sector or the increase in jobs in the cycle sector. This is the gross employment effect of the cycle sector. We would like to stress that we did not calculate what are the net employment effects (a pure increase in jobs) and what are the effects that will probably be compensated by a decrease in jobs in other sectors (e.g. an increase in cycling could lead to a decrease in the use of cars which could lead to a loss of jobs in the car sector).

To analyse this, we should ask the question what the situation would be with cyclists and without cyclists. It is clear that without cyclists and cycles, a part of these jobs would have disappeared (the net effect). It is also clear however...
that other jobs would be created in the production of other transport modes (the compensating effect). The net employment effect of cycling is the difference in the number of jobs in a situation with cyclists and a situation without cyclists. With the limited resources in this project, we were not able to calculate the net effects. We provide however some qualitative comments.

The main employment effects are in the tourism sector. Lots of cycling jobs are linked to the tourist sector. We can, however, assume that the elasticity between “cycle tourism” and “normal tourism” is very high. In other words, if a cyclist does not take a cycle holiday or excursion, he will take another holiday or excursion, most probably not in the same area. We could therefore assume that the net increase in jobs in the tourism sector is only small compared to the gross effect we calculated. At the same time, jobs and revenues in the tourism sector could be redistributed to some extent. Countries with good cycle tourist infrastructure can attract more tourists, while countries with less good cycle tourist infrastructure could lose tourists.

We also expect that an increase in cycling jobs leads to a small reduction in jobs in the car industry and retail sectors. More cycling means (a bit) less cars. Based on our own studies and the Copenhagen bicycle accounts, the share of cyclists suppressing a car is around 10% to 20%. Further research is needed to see if this means suppressing car ownership or car use — if only the latter is concerned, jobs in the car industry will largely be unaffected. On the other hand, we have also seen that job intensity is higher in the cycling industry sector than in the car industry. For this reason, we do expect that an increase in bicycle modal share will in the end lead to a net job growth effect. In addition to this, we can also notice that many studies have found that cyclists contribute more to the local economy than car drivers. This can also be considered as a positive element of cycling jobs, as it is more difficult to replace local jobs with jobs outside of Europe.

4. CYCLING AND THE LOCAL ECONOMY

Lots of studies show that cyclists spend in the local economy compared to users of other transport modes. We provide a small sample of those studies and their main conclusions.

- A survey of Fubicy for ADEME, the environmental agency found that:
  - Non-motorized clients are more loyal than motorized clients.
  - Non-motorized clients spend less per shop visit, but they visit shops more frequently
  - The shops in the city centers create less automobile traffic than shopping centers at the periphery (Fubicy, publication 4841)
- Studies in Utrecht (the Netherlands), Münster (Germany) and Amsterdam (the Netherlands) see that cyclists spend less per visit, but visit shops more frequently.
- In Copenhagen, cyclists contribute the most to the turnover of the retail sector (Marie Kästrup, 2013)
- A study of the Portland State University (Kelly Clifton) came to similar conclusions for Portland. Cyclists spend more in the local convenience stores, bars, cafés and restaurants. The figure below illustrates the conclusions.

Most of the time, the studies of the type of the above ones, do not correct for other social factors like income, social status or household situation. These studies give a first indication, more in-depth studies would be very welcome to confirm the results.

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**FIGURE 7: AVERAGE EXPENSES PER MONTH IN THE RETAIL SECTOR DEPENDING ON THE MEANS OF TRANSPORT (CLIFTON, 2012)**
BIBLIOGRAPHY


ECF Member Organisations

Gie a Altbir (AT)
Bicyclo Sa (IT)
Rudolfsky Ostmark (AT)
Wien Cycling Community (AT)
Протяжённость трассы путешествия велосипедистов (Russia) (RU)
GBAG – Last Cyclists Quotations add (BE)
Pro Velo add (BE)
Tolledeskow add (BE)
Territoria Veganale (BE)
T & E, the European Federation for Transport and Environment (BE)
Green Tour Bocas & Hercegova (BA)
Belgian Cycling Association (BE)
Velo-Quebec (CA)
AJK (DK)
Kazakhstan Cycling Network (KZ)
KXCT: Slovakian Cycling Network (SK)
Argaman, Cyclistes du Midi (France) (FR)
Huszad Parnsztejn (CZ)
Indogiro (IN)
Centre D’Action pour la Normalisation (BE)
Centre Cycliste Belge (BE)
Cykelfrämjandet (SE)
Toerisme Vlaanderen (BE)
Pro Velo Schweiz (CH)
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CTC, the national cyclists’ organisation (UK)
Europäischer Fahrrad-Club (DE)
Land Transport Agency (GE)
FUB, Fédération Française des Usagers de la Bicyclette (FR)
HePo, Helsingin Polkupyöräilijät (FI)
Vänta Aga (EE)
Foreningen Frie Fugle (DK)
Nadace Partnerství (CZ)
Δημοτικός Όμιλος Ποδηλάτων Ιδαλίου (GR)
Πόλεις για το Ποδήλατο (GR)
Ασωσιατίκη Ακαδημία Ποδηλάτων (GR)
Δημοτικός Όμιλος Ποδηλάτων (IT)
Bicycle SA (AU)
Go 2 Albania (AL)
ECF Member Organisations

BICYCLE WORKS: JOBS AND JOB CREATION IN THE CYCLING ECONOMY

Alliance for Biking and Walking (US)
Асоціація велосипедистів Києва (UA)
CTC, the national cyclists’ organisation (UK)
Cyclenation (UK)
Sustrans (UK)
Izmir Bicycle Association (TR)
Bisiklet Derneği (TR)
Enverçevko (TR)
Thailand Cycling Association (TH)
Vietnam Cycling Association (VI)
Sudtaine (UK)
Cyclotourism (UK)
CTC, the national cyclists’ organisation (UK)
Alliance for Biking and Walking (US)

Mission Statement

Founded in 1983, the European Cyclists’ Federation (ECF) is the umbrella federation of the national cyclists’ associations in Europe, reinforced by similar organisations from other parts of the world. On behalf of our members, we are pledged to ensure that bicycle use achieves its fullest potential so as to bring about sustainable mobility and public well-being. To achieve these aims, the ECF seeks to change attitudes, policies and budget allocations at the European level. ECF stimulates and organises the exchange of information and expertise on bicycle related transport policies and strategies as well as the work of the cyclists’ movement.

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