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Mini Presentation

SPPI for Industrial Cleaning in Norway

Jonas A Hansen
Jonas.Hansen@ssb.no

# Contents

# 1   Definition of the sector

According to NACE Rev. 2, the group *cleaning services* is found under the division *Services to buildings and landscape*. *Cleaning services* is divided into classes of *General cleaning services of buildings, other building and industrial cleaning services* and *other cleaning services*. The supreme class is, by far, General cleaning services of buildings, which is the one we have decided to focus on, both in our price index and in this paper.

| NACE Rev. 2 | | | ISIC Rev. 4 |
|---|---|---|---|
| **Group** | **Class** | **Description** | |
| 81.2 Cleaning services | **81.21 General cleaning services of buildings** | Normal, non-specialised cleaning of buildings | 8121 |
| | 81.22 Other building and industrial cleaning services | Industrial, window, furnace, chimney and other specialised cleaning services | |
| | 81.29 Other cleaning services | Disinfection, exterminating, sweeping, snow removal and sanitation services | 8129 |

**Table 1 Cleaning services according to NACE Rev. 2 and ISIC Rev. 4**

When we first started developing this price index, we included general cleaning and window cleaning. We also wanted to include disinfection and exterminating services, but since we could not classify these enterprises as one group in our Business Register, we decided to wait until NACE Rev. 2, where these services are classified under a separate 5-digit level (81.291). This is still under consideration, but since the turnover in this group is so small, we have decided not to include it at this point. After a few quarters, we also removed the questions about window cleaning in the questionnaire, due to many of the respondents not were able to fill in correct/useful information.

# 2   Structure of the Norwegian cleaning services

As previously mentioned, general cleaning services of buildings is the largest class within cleaning services. As we see from Table 2, almost 80 percent of the turnover belongs to this class. In addition to being small in size (turnover) the two other classes consists of a lot of various types of services. This makes it hard to produce a reasonable index/sub-index on a 4-digit level, and the utility value will be small compared to all the work that has to be put in to it.

| Class | Turnover | Percent |
|---|---|---|
| General cleaning services of buildings | 8.7 | 79.8 |
| Other building and industrial cleaning services | 0.9 | 8.3 |
| Other cleaning services | 1.3 | 11.9 |

**Table 2 Turnover for cleaning services in Norway (NOK billions) (2008)**

The total turnover, as shown in figure 1, was steady from 2002 to 2004. In the same period, we notice that the number of establishments (LKAUs) is also steady, while the number of employees is decreasing. After this non-growth period, the industry had some very good years. From 2005 to 2008, the turnover increased with 52 per cent, the number of employees increased with almost 6 000 and there were almost 400 more establishments.
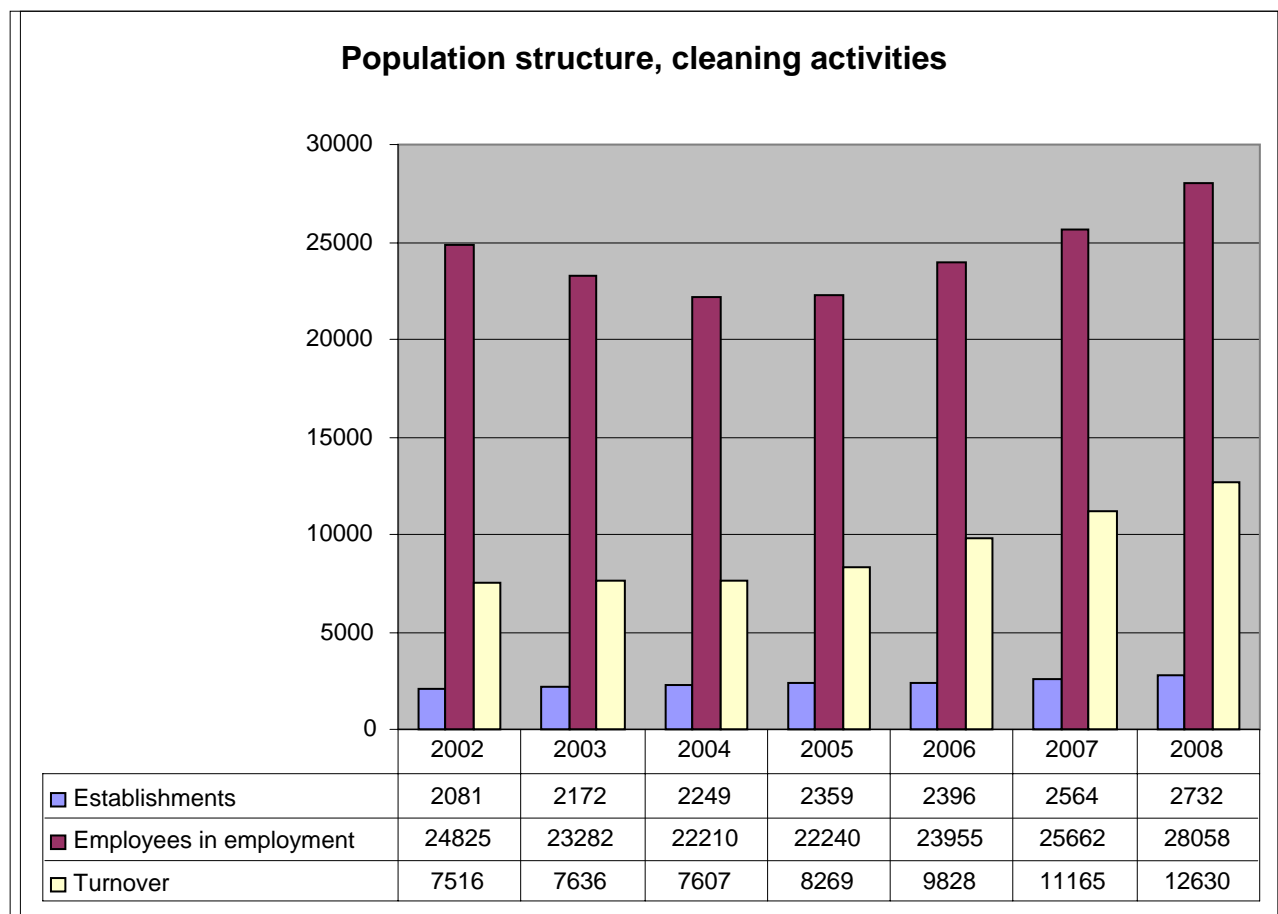


**Population structure, cleaning activities**

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|
| ■ Establishments | 2081 | 2172 | 2249 | 2359 | 2396 | 2564 | 2732 |
| ■ Employees in employment | 24825 | 23282 | 22210 | 22240 | 23955 | 25662 | 28058 |
| □ Turnover | 7516 | 7636 | 7607 | 8269 | 9828 | 11165 | 12630 |

**Figure 1 Population structure, cleaning activities (2002-2008)**

# 3 Pricing methodology

This industry is a labour-intensive industry, meaning that the wage costs play an important part of how the services are priced. At least 60 per cent of the price changes are a result of changes in the wages. Other variables that cause price regulations are which methods and equipments that are used. The size of a cleaning area and the length of a contract can also affect the price.

Larger tasks are often put out to tender. Dependent on the competitive situation, it is reasonable to believe that prices will vary in the competitive tendering. There are also quite a few smaller, unserious enterprises in this industry, mainly in the bigger cities, where the competition is larger. They are allowed to continue because they are priced low, and many of those who purchase cleaning services focus on the price, and not on quality and knowledge about the business.

## 3.1 Current method

The first five years of this index, from 2005, when it was developed, until today, we have used contract pricing as our price method. We follow long-term contracts where we ask the sample units to give a new price every quarter. We also ask for square metres, how many square metres that need thorough cleaning, INSTA 800-level and number of hours used. We are currently not using all these variables in the index calculation, but they are used as controls to see if the contract is the same as last quarter. All of them should also be quiet easy to fill in. In addition to this, we have a price control. If there has been a change in the price, we ask the respondents to estimate how much of the change that comes from a real price change and how much that is a result of changes in the contract (for instance more/less square metres).

### 3.1.1 Sampling

Statistic Norway's Business Register provides access to the establishments that can be a part of the sample for this survey. The population exists of all the establishments in NACE 81.2. The population is stratified after the size of the establishments. By size, we mean number of employees. The sample is drawn randomly based on probability proportional to size, meaning that the probability of being drawn from the population is greater for the large units. Some of the large units will be included in the sample for a longer time, while the smaller units will be there for a period of maximum four years. The sample, which consists of about 90 establishments, is drawn from a total population of 2 500 establishments, and covers about 40 per cent of the total turnover.

### 3.1.2 Weights

We have stratified the sample based on number of employees using size bands (1-9, 10-19 etc.). The largest enterprise, who stands for about 40 per cent of the turnover in the population, is given an own strata (strata 5). Because not all the local units have been chosen for our sample, the weight for this group in the sample is 25 per cent. This is also the strata with most price observations, as shown in figure 3. Strata 1 has fewer price observations now than in the original sample plan, and this is a result of some of the establishments in this group have been taken out, due to reasons like bankruptcy, wrong classification (NACE) and other. It is also a sign that new weights ought to be made, but because of the transition to the new method later this year, we have decided to postpone it until then.
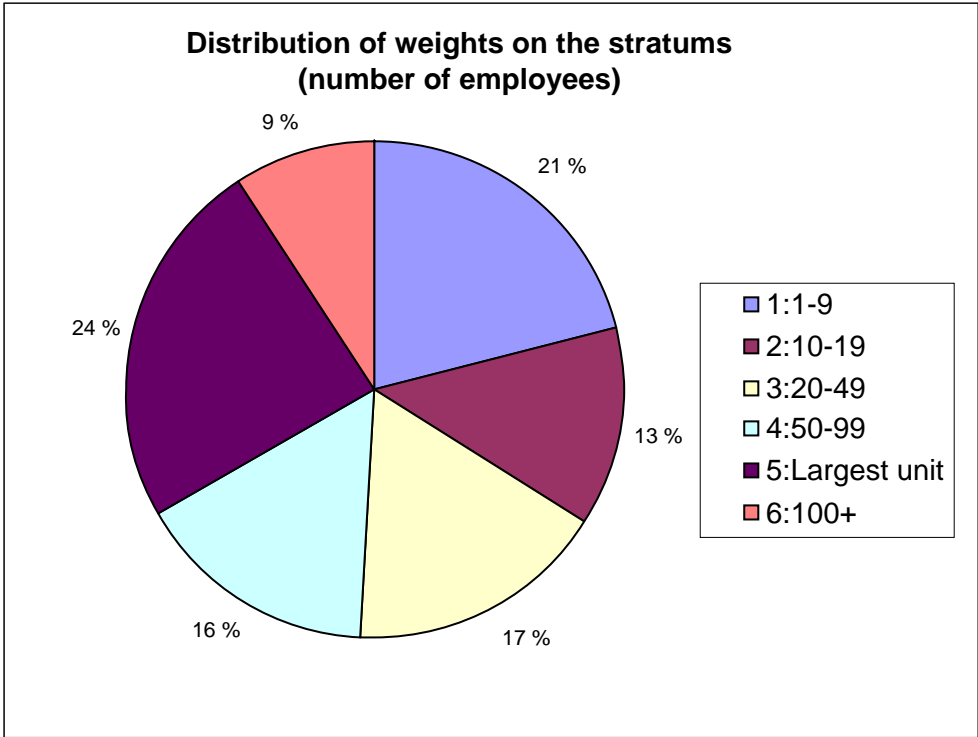
**Figure 2 Distribution of weights**

### 3.1.3 Data collection

We follow maximum three contracts from each respondent over time. The largest unit have their own special questionnaire, where they give up maximum seven contracts every quarter. All the questionnaires are electronic (paper version available if asked for), and the contracts they reported last quarter is pre-printed and all there is to do, is to fill in any changes in the price or other variables as mentioned in chapter 3.1. When a contract expires, they are asked to replace it with a similar contract, and fill out details for both the current and the previous quarter. The response rate is very high, close to 100 per cent.
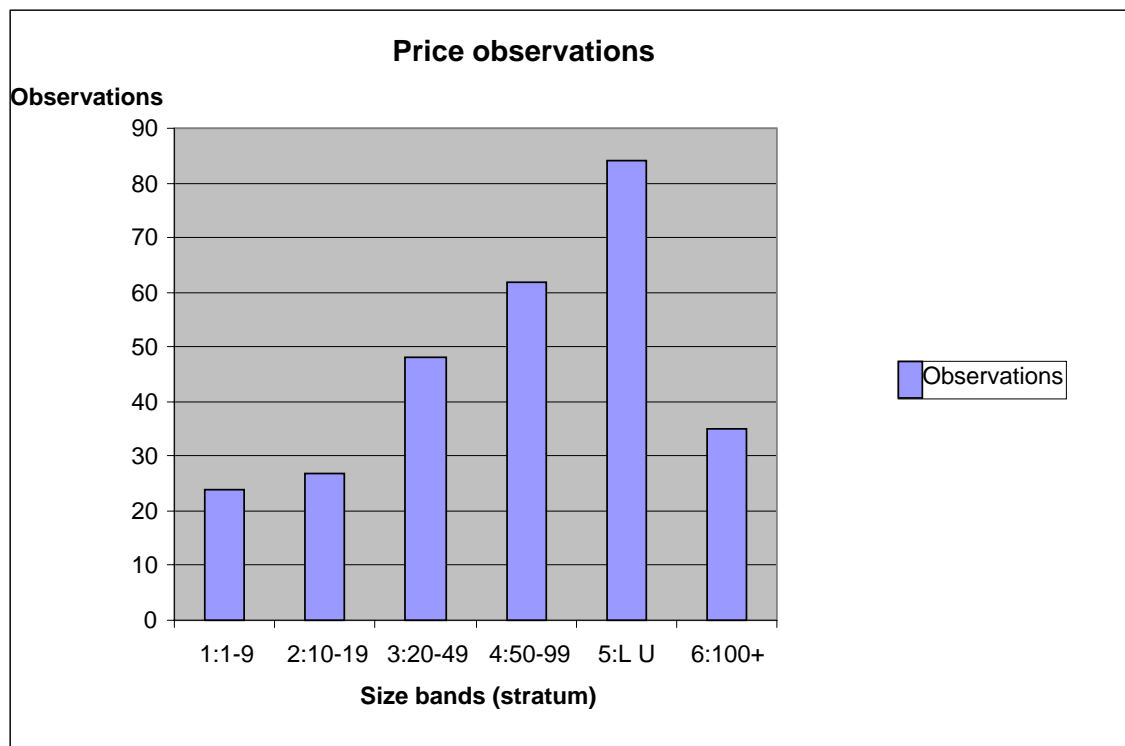
**Price observations**

**Observations**

**Figure 3 Price observations**

The number of price observations is stabile in this index, since the respondents return data for the same contracts every period. In total we have 280 observations (derivatives).

At the moment we are considering a new pricing method for this index. After many meetings and lots of discussions with the trade organisation and representatives from the units in the sample, we are aware of that there may be better methodological ways to produce the index. The sample representatives told us the survey is hard to respond to, and the trade organisation questioned the accuracy of our results. In co-operation with both the before mentioned parties, we have designed a new survey, which is being tested at this point. Both the current and the new survey are presented more detailed below.

## 3.2   New method

After discussions on how to improve our index with the trade organisation and representatives from the industry, we came up with a new method to calculate the index. From our point of view, this method looks a lot more complicated for the respondents to fill out, but we believe we will get equally good or better data from this. The new method collects turnover and cleaning surface divided in

different type of industries (similar to the NACE classification) and region. This gives us a price per m2 cleaned. The questionnaire contains these industries:

**B**      MINING AND QUARRYING

**C**      MANUFACTURING

**E**      WATER SUPPLY, SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES

**F**      CONSTRUCTION

**G**      WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES

**H**      TRANSPORTATION AND STORAGE

**I**      ACCOMMODATION AND FOOD SERVICE ACTIVITIES

**K**      FINANCIAL AND INSURANCE ACTIVITIES

**N**      ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES

**O**      PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY

**P**      EDUCATION

**Q**      HUMAN HEALTH AND SOCIAL WORK ACTIVITIES

**R**      ARTS, ENTERTAINMENT AND RECREATION

**T**      ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN ACCOUNT

**U**      ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES

These NACE classifications are representing the cleaning location, where the actual cleaning takes place. This means, if a cleaning company cleans a school, that turnover should be put in P) Education. Construction sites go under F) Construction and so on.

### 3.2.1   Sampling

The sample here will be the enterprises that are members of the trade organisation, NHO Service. We will not deliberately change the sample in the future, but new members of the trade organisation will automatically take part in the survey, while any members who leave the organisation will be "taken out". The sample will have about the same number of units as the current method.

### 3.2.2   Weights

Since this method still is under consideration, we have not made any weights yet. But number of employees and turnover are variables that both are suitable for this purpose.

### 3.2.3 Data collection

Statistics Norway will not be responsible for the data collection. NHO Service will collect data from their members, and they will pass it on to us. The response rate will probably be lower than what we have now, because we will not be able to use a compulsory fine. NHO Service is also collecting data on another price index, employment activities, at the moment, and it works fine. The experiences we have made with this is that the large units always send data, while the smaller ones send in most of the time, but not always. The total number of respondents is nevertheless about the same.

## 4 Results

Figure 4 shows the development of the price index from the 4th quarter of 2004, when we first published it, until the latest quarter, 1st quarter of 2010. The growth has almost been continuous in the entire period with a total growth of 27.5 per cent. There have only been two quarters where the index has decreased compared to the previous quarter, and these drops are very small (-0.6 and -0.9).
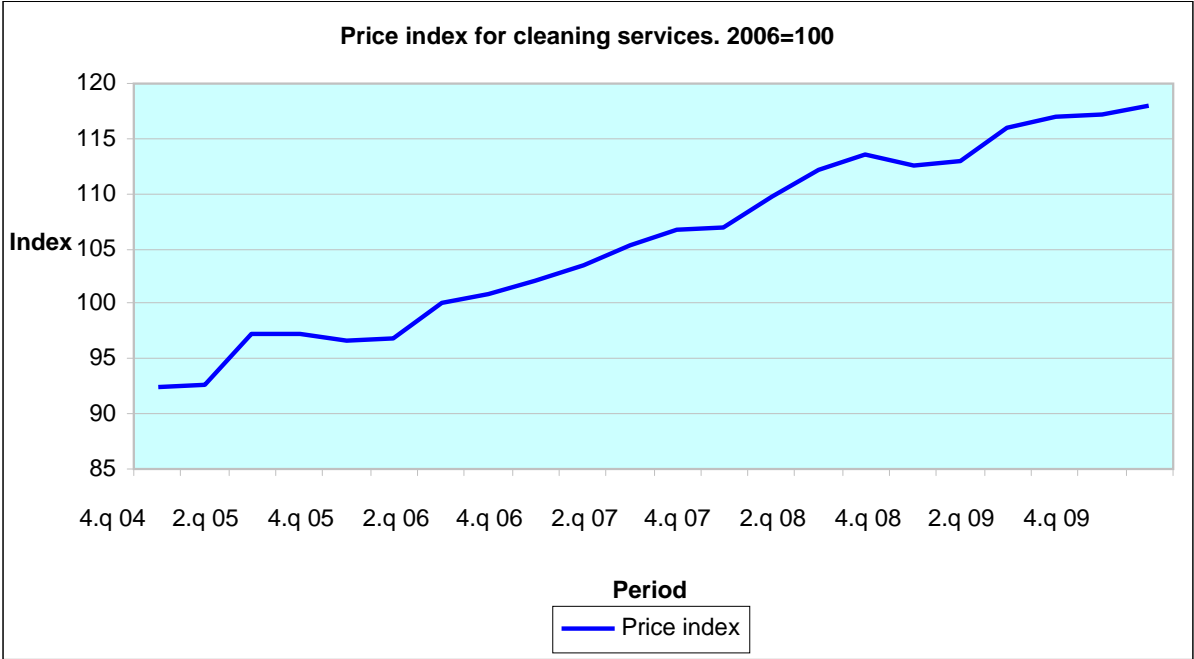


**Figure 4 Price index for cleaning services**

Compared to the same quarter previous year, the index has always increased, as shown in figure 5. It usually has an annual growth between 5 and 6 per cent, but from the start of 2009 it is halved, and is now stabile on about 3 per cent; maybe as a result of the economic crisis. Since we also have a quarterly turnover index for cleaning services, the figures from STS can be used to deflate the development in volume for each quarter.
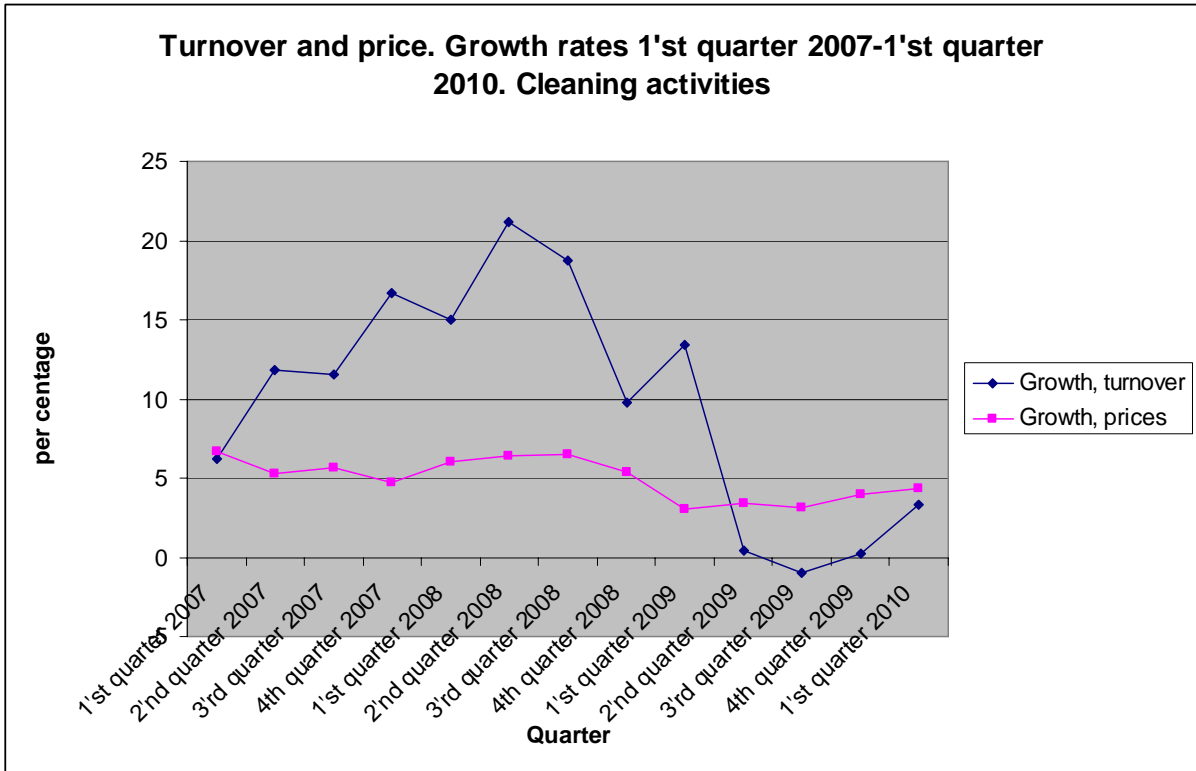
**Figure 5 Changes from the same quarter last year, nace 81.2**

Figure 5 shows that changes in turnover mainly are a result of a change in volume. A possible explanation for the limited change in growth rate prices, even in periods with large growth rates in turnover can be that in the short run the price development is more dependent on the wage level than the business cycle.

# 5   Future work

Our main priority now, is to get a final decision on whether we will use the new method or not. NHO Service has started the data collection, using the new method, and we will follow both the methods for some time. We want to follow both the methods for at least six quarters, so we are sure we don't make a wrong or too hasty decision. When we have data for a few quarters, we can start to analyse the two methods to see differences and similarities in the results. Hopefully we will be able to make a final decision within this year.

If we see from the analyses that the new method is weaker than the one we already produce, we will rotate the sample, collect new weight information and continue as before.