Statistics Norway
Statistisk sentralbyrå

Statistics Norway
Department of Economic Statistics

Randi Johannessen and
Tom Langer Andersen

The Consumer Price Index of Mozambique

A short term mission
29 November - 19 December 1998

Contents

1. Introduction - summary

Our second visit to Instituto Nacional de Estatistica (INE) - within the framework of the Twinning Project - took part in the period 29. November - 18. December 1998. The terms of reference was:

- Evaluate the achievement in implementing the new methodology recommended by the previous short term mission
- Develop criteria for treatment of apparently significant products that according to IAF have very small or no weight at all
- Suggest routines for data entry and processing for calculating the CPI at province and national level
- Monitor activities and suggest new to be developed

During our stay we have been visiting Nampula, Beira and Maputo. In Nampula which were visited from 2. - 4. December, the focus was set on three subjects:

a) Principles and methods used in establishing new weights using the IAF 1996 for the provinces
b) Adjustment works for the basket of commodities and services
c) Measurement problems

In Beira and Maputo, which were visited from 5. - 18. December, we were focusing on:

a) Principles and methods used in price collection
b) A draft plan for the new IT-system to be developed including a system for data entry and computations.

During the last six months some of the activities recommended for the current revision in the first report (May 1998) has been started, of which some are close to be finished. Two basic activities - the new weights and an update of the basket of items have been given high priority by the CPI staff.

A new set of provincial weights based on the IAF 1996 is available - as a draft solution. This work has from several reasons run into problems. The basic problem was that the source was raw IAF-data not being professionally revised or edited by the responsible unit within INE. Some methodological aspects of the IAF have also contributed to the problems. The basket of commodities and services has been revised based on the detailed IAF information. This activity has been going on during the last months or so. Parts of the non-relevant or non-important items from the current basket are decided taken out while new items or services have been included. As a part of the assistance to the project we have reconsidered the draft solution for the weights and the basket. Our advice is to reduce the total number of types of items in each province. Our analysis has shown that the draft solution has a type of item coverage close to 95 per cent of total household expenditures. Reducing the number of types of items, with some 20 per cent in each province having n average 60 types of items per province, lowers the coverage to 93 - 94 per cent. This reduction has been enabled by using a more comprehensive method for selecting types of items where a special focus has been put on a stratification of the household expenditures within the 4-digit consumption group according to the current consumption classification.

There seems to be a different behaviour of the price collectors between the regions when it comes to basic understanding of the purpose of the CPI and how to handle different situations that occur during the collecting of prices. Some of them focus too much on measuring the level of prices, while the aim of the CPI is to measure the changes of prices. Instruction and training of the price collectors are necessary to

reduce subjective judgement and behaviour difference. A general instruction for price collecting must exist.

At the time of our visit the most critical problem seems to be the lack of or only vague IT-plan for the project. According to the goal set for publishing the first index on the new platform a revised or new IT-system must be operating at latest in January 1999.

In addition the number of staff within the CPI-organisation having the competence for running the project is in practise unchanged. Dr. Firmino which is a very competent person within the CPI-field seems to be overloaded of various other tasks and projects having higher priority. To achieve the total set of goals made for the project requires a full time engagement from Dr. Firmino for the next half-year or so. The project organisation must also rapidly be staffed with a highly competent IT-person who must be allocated to the project for a similar time period - on a permanent basis.

The remainder of this document discusses the four issues specified in the terms of reference. Chapter 2 discusses some basic issues of importance when working with new weights. Chapter 3 evaluates the draft solution made for the weighting structures, while chapter 4 discusses the data collection phase. In chapter 5 a draft plan for the development of a new IT-system has been sketched. Chapter 6 gives a summary of the issues to focus during 1999. Although much has to be done we strongly recommend that much effort should be put into developing sound data collection routines at provincial level. An important part of this will be the new IT system which must have an important role in improving the flow of data and metadata between Maputo Central and the provincial offices.

2. Some basic issues

This chapter gives a brief presentation of some basic issues of importance when making a CPI (Consumer Price Index), when working with new weights and with topics in the data collection phase. The main purpose of this chapter is to establish a common basis or way of thinking when approaching the various issues faced during a major revision.

2.1. The item - concepts and relations

When working with the weights to be used in the CPI computations the item concept has an important role. The item concept has also an important part in the basket of goods and services - the data collection phase. Although the concept has common elements there are important differences that have to be focused. The purpose of this chapter is to establish a common understanding of the item concepts used in the CPI process.

The work done when establishing the new weights is based on information available in the IAF on item level. During this process one identify some basic types of commodities and services - weight items - to be used later on in the data collection phase as well as the process of computations.

A weight item will normally be identified through its importance in the consumption pattern, e.g. having a weight larger than some fixed minimum level or is sampled in one way or another. A specific weight item represents a subpopulation of products bought by the households. On this level the description of the item is normally general and without any specifications establishing links to special brands, marks, types, sizes etc. En example might illustrate this somewhat: "Shirt" is a weight item common for all provinces and represents the subpopulation "Shirts" within the clothing group. For data collection a more specified item is required, e.g. "Shirt, long sleeves, cotton and polyester, good finish". The latter type of specification is normally referred to as the representative item.

When it comes to the data collection phase the price collectors often have to make some adjustments or additions to the specifications given for the representative item, to adapt to what is actually sold in the outlets - the representative product. The representative product selected for observation might differ from one shop to another, and more substantial differences might be found across provinces. Although this might complicate the task of estimating and making relevant comparisons of price levels across provinces, there should be no special problems when it comes to the computations of the CPI.

2.2. What to observe and what to measure

The basis for doing the fieldwork, i.e. collecting prices on products, is a set of specified products representing the representative items selected for each weight item. An example:

Weight item:	Shirt
Representative item:	Shirt, cotton or composite short levees
Representative product:	Shirt, 85 % cotton and 15 % polyester, short levees, good finish, brand: NIKE

The basket of representative items might be the same or more or less so across provinces, but the representative products are expected to differ and changes might occur at different points in time. The given set of representative products is the basis for the fieldwork done by the price collectors.

The price collector will every month visit the same shop or market to observe the prices of the same specified products. The overall purpose of what the price collector is doing is to measure the price changes on the same product from one month to another. This is a purpose wholly consistent with the overall CPI purpose namely to measure the changes in the consumer prices or changes in the cost of living of the target population.

Although focusing on the weight item price levels - as is the case for INE to day - in principle should not conflict with the basic purpose of the CPI, we have a strong impression that overfocus on "the average price level" has become a problem. A number of examples were mentioned in the previous report and will not be repeated here. Some of the problems have been visualised when specifying the representative products (the shirt example), when measuring exact monthly prices for food item (referring to the previous discussions of the weekly data collection programme for food items) and to some extent in estimation or computations of the CPI. One of the basic problem seems to be the lack of ability to focus on the needs for the coming years. The future - and most likely the near future - will no doubt require a larger focus on the flow of information from and to the field workers, new methods for utilising the information in control, verification and the computations.

As has been illustrated above the availability of products differs across provinces and also within each province, shop and market. Due to the increasing pace of changes in the products made available to the consumers and also shifts in the origin of the products across provinces when imported, the problem of measuring country price levels has evidently become more complicated. In a rapid changing world of products it is recommended to remove the focus towards the price change of the products. Although not uncomplicated as such this have the advantage of focusing what in fact is to be measured in the CPI.

Our advice is that INE in data control and computations starts working directly with the relative price,

$$\mathbf{P_{i,t}/P_{i,t-1}}$$

where P is the price for a specified type of item, e.g. shirt, while i = 1, ..., n reflects the various products - types, marks etc. that has been observed in the markets or the shops in two periods, t and t-1, referring to the current and the previous month.

Due to the fact that the relative price focus the price change from one period to another, allows for a larger difference in varieties within a representative item in data collection. The idea of measuring changes requires that one should observe the same type of product in the two subsequent periods. If the product should not be available in the second period a substitute should be collected having - as far as possible - the same qualitative features.

2.3. When measuring price changes

Although the price collector will have the price of the product as his main target in every visit to a shop, it is of utmost importance that he bears the overall purpose of his visit to the shop in mind - measuring price changes. On the other side the overall purpose of the work on the basket of products should be to enable the price collector to do what he is expected to do.

When measuring price changes the basic situation is that the price collector has a specific product, which are meant to represent a representative item or are expected to find a product, which might serve the same function. For the price collector to do his job:

- It is important that there is some flexibility in the specification of the representative item, so those suitable representative products can be found. One might use the same specification of the representative item for all provinces, but one can not expect the same products to be found;

- The specification must have the flexibility needed to enable measurement through changes in products or changes in the quality of the product. When the price collector notes that a specific product has run of out sale the specification of the representative item must be so flexible that a new product can be found for further observations;

- The role must be well defined. The role-definitions are normally made clear through training on the job and in providing the price collector with instructions - in written. This is the basis for the quality in his work and contributes to the credibility needed to make sound judgements in the field;

- He must be aware of his role as an informer to the Central Unit on the changes in products and markets. The quality of the information received from the field workers is fundamental for the well functioning of the CPI system.

  Every year some 5 - 10 per cent of the total number of products made available to the households in the shops and markets disappear, and new products appear in a different packing, size, strength etc. It is of utmost importance that the CPI will be able to catch these changes in an efficient way, and the price collectors have to have the important role of providing such information for the CU.

3. Establishing the weighting structures

The intention of this chapter is to serve two purposes. On the one side the chapter evaluates the results that has been presented by the CPI project for the work with new weights and the basket of weight items (the draft solution). In our analysis we have focused on the draft solution and the results shown for the weights and the list of weight items on province level. The analysis has shown that work with the draft solution suffers from the lack of some basic statistical principles and methods for identifying and selecting weight items and due to that some adjustments are required for the draft solution. As a consequence - this chapter suggests some principles and methods to be used for this type of work. The weighting structure seems more or less to be in place. We nevertheless recommend that adjustments be made in line with the principles and methods presented in this chapter. For documentation and further studies the tables presented in annex 1 shows an alternative solution for weights and the weight basket on province level according to these principles.

Based on a rather thorough examination of the draft solution for the new weights and the weight basket specified, our main conclusion is that the number of items on the list is too large. The basic principle used when selecting the weight basket in the draft solution - all items having a weight of 0,01 or more should be included - seems all too ambitious and turns in fact out to be superfluous. Adopting this principle gives a coverage of approximately 95 per cent of all expenditures (average for the 3 provinces) identified using the IAF 1996. The number of items selected in the draft solution is 245 for Maputo, 246 for Beira and 207 for Nampula.

Reducing the number to 180 items for Maputo as suggested in our analysis reduces the coverage to 93,5 per cent. Whatever way one look at this, the total coverage in both alternatives is close to be extremely high. Such a high coverage seems however difficult to avoid simply due to the fact that the consumption pattern in each of the provinces is fairly strong concentrated on weight item level. The inclusion of the extra 65 items in Maputo - as in the draft solution - increases costs and to some extent the response burden for the outlets, while each extra item - on these levels of coverage - only will have a very small impact (0,02 on average) to the overall CPI. The impact might be somewhat higher on the less aggregated levels of CPI publishing. For Beira we have suggested to reduce the number of items to 195 (down 51) and for Nampula to 166 (down 41) - in both places without loosing coverage of any significance.

The basic idea of reducing the number of weight items allows for improving the efficiency in the data collection phase. Our study of the data collection work discussed in chapter 3, has shown that much remain to be done in this phase and putting a special focus on this is strongly recommended for 1999. It should be added that the reduction of the number of weighting items reduces the cost in fact without loosing coverage and relevance of the CPI.

We also like to communicate our concern about the lack of documentation of the works that has been done so far. A detailed documentation is important for building competence and securing the continuity of this type of competence within the INE. It is strongly recommended that priority is given for making documentation and that the documentation work are given a central part of the current routines.

3.1. The revision of the weighting structures

The chapters 3.1.1 - 3.1.4 elaborates some of the basics of performing the weighting work.

3.1.1. At the very start of a revision

The new weights are based on item expenditure information from the IAF 1996. We have not been able - in a thorough way - to look into the principles and methods used for this survey, but expect that there are similarities to most expenditure surveys found in other countries.

The ideal situation for the CPI staff would be to receive population estimates of the household expenditures as well as expenditure shares on weight item level and/or on 4-digit level according to the current consumption classification used (PALOP). The data received should be available with the required breakdown on province. The work with the new weights has in this context been far from the ideal situation. If we have understood the situation correct, much of the work on the weighting structures has been done by the CPI staff - from the very bottom.

In the ideal situation the evaluation of the quality of the weights is based on both expenditure shares as well as expenditure data. We have, however, not been introduced to results presenting the detailed expenditures measured in Meticais for the provinces - only to the expenditure shares. Although the latter is the focus for the CPI weights, a revision of the weighting structures should start with an analysis of the expenditures. Such results no doubt provides a better basis for an intuitive evaluation of the quality in general. And there is - from several reasons - a need for a quality control of the basis for the weighting structures.

The CPI-weights is built up from information on expenditures on item level within a sample of households, i.e. commodities and services bought by the households in the markets and shops. In a statistical sense several types of errors might occur. The most common one is related to measurement errors in the IAF, which might occur from a number of reasons: items not clearly specified in the questionnaires used in the IAF, misinterpretation of the various parts of the form by the data collector, data entry errors etc. A thorough control both on the details and aggregates - on expenditures measured in Meticais - will often identify suspected errors and extremes (true or false) having influence upon results. These are to be verified and adjusted whenever needed. The experience from being a user of comparable surveys in other countries is that the number of measurement errors might be large and also have a substantial impact on the results - especially on detailed level.

The IAF is most likely a sampled survey covering only parts of the provinces. Normally such surveys use some kind of stratification of the cities and rural areas of the provinces to be covered, and the stratum sample of households to be observed is selected or identified using sampling techniques. We are not aware of the sampling techniques used in the IAF, but like to pay attention to likely problems that might occur during this process. According to the information we have received the work with the weighting structures has solely been based on the sampled data from the IAF without making the corrections normally needed for establishing the population estimates. Although one should not expect the population estimates on item level to be very good, the use of sample data might cause severe errors.

The question on how to handle the households own production is another issue that should have been dealt with in the very start of this process. According to our information the own production, which is mainly for subsistence, is not included in the basis for estimating the weights. Own production is however indirectly reflected in the weighting structure due to that the marketed part of the household production provides the cash needed for other types of consumption.

The exclusion of the household own production in the new weighting structure is in line with the principle adopted for estimating the weights used in the current index. We have not been able to analyse the consequences of this principle, but tend to conclude that it works fairly well for the existing coverage

of provinces and with the focus on the urban areas. This principle are, however, to be reconsidered in the process aiming at increasing the provincial coverage of the CPI and especially when including rural areas.

As pointed out before in this chapter the weight items have an important role and might also rule the work with the new basket of goods and services. However, one should be careful in giving all too much liability to the quality of the weight item data. An important part in this phase of the revision of the weights is to compensate for weaknesses or problems identified during the work with the IAF. It is important to utilise all types of knowledge to assure that the new weights are optimal from the very beginning.

3.1.2. Stratification for publishing and comparability

The CPI uses a consumption classification (PALOP) as a basis for the publishing of the results. [1] The classification has in practise tree levels - the main group (1-digit level), the subgroup (2-digit level) and the undergroup (4-digit), while the 3-digit level from technical reasons does not exist. Based on the draft solution each 4-digit level will comprise from 2 - 7 weight items. We recommend that INE use the 4-digit level as a level for comparison and analysis across the provinces - a building block. The weight item has served this function in the CPI until now.

Introducing a new building block for the CPI intends to serve several purposes. One basic purpose is to secure that the stratification used in the weighting works are the same as will be used in comparisons and analysis across provinces. Until now the weighting item has served this function but problems have emerged due to variations in the weight items covered across the provinces, and there are all reasons to believe that such problems will become more visible and troublesome when increasing the provincial coverage. An offensive strategy to solve this is to establish a common level for comparison and analysis on a higher level than the weight item. When using PALOP the next level above the weight item is the 4-digit group. When introducing the COICOP the code system might be somewhat different, but should in principle be easy to adapt to the needs for the CPI.

The advantage of using such a principle for the weighting works is that the coverage can be optimised on the building block level, i.e. to secure that the coverage is sufficient on the levels that are to be compared. This enables coverage of all types of consumption for each of the provinces although there might be differences in the weight items that are covered in each of the provinces. In fact - one removes the focus from comparing average weight item prices to comparing changes in prices - and thus the cost of living - across provinces.

3.1.3. Principles and practise when selecting weight items

The representative types of items specified in the new weighting structure have been selected from the numerous types of items made available by using the IAF. To achieve an acceptable coverage and to reduce the number of weight items to be used in the draft solution, the project decided to cover all weight items having a share of 0,01 per cent or more of total expenditure. By using this principle some weight items having a lower expenditure share than the fixed level has been taken out. The sum of weights for

[1] During the last years a major revision has been done on the consumption classification in the context of international organisations and a new final classification (COICOP) is to be decided in the spring 1999. Although not familiar with the PALOP we see that close relations exists to the classifications used in most countries, which normally have previous National Account recommendations (SNA) as a common basis. Most countries have the 1- and 2-digit levels in common although some minor differences exist. The lower levels are however to a larger degree adjusted to fit in with the national consumption patterns, although still having much in common across countries.

these weight items has tentatively been estimated to 4 - 5 per cent. Although some of the weight items have been taken out of the specified list of items, the related shares of expenditures has been retained through a proportional redistribution to weight items retained. Another way of expressing this is to say that the retained weight items represents those taken out. We consider this to be a reasonable solution and do not see any substantial problems in the sum of redistributed expenditure shares.

In addition the project has had the ambition to - as far as possible - use the same representative weight items across the provinces. This principle could to some extent be reasonable if the overall purpose for the CPI was to estimate and compare average price levels for the provinces. Although such prices might be of interest for the users and made available from the CPI bases, we must stress that such prices at the best should be considered as a secondary product. The overall purpose of the CPI is to measure the changes in the consumption prices or the changes in cost of living, and not the price levels as such. One must also bear in mind that the measuring of price levels as such is a complicated task requiring other methodological approaches than what is possible within the CPI, when it comes to data collection.

Our advice to the project has - from various reasons - nevertheless been to reconsider the principle of setting a minimum threshold for the accepted types of items. Our recommendation has in general been to approach the question of coverage from a somewhat different perspective. It is strongly recommended to focus the coverage of weight items within the 4-digit consumption group level instead of the weight item level as in the draft solution. By removing the focus to this level one is able to optimise the coverage in the lowest level of aggregation and thus to improve the efficiency in the data collection phase without loosing precision in the estimates. This principle will also allow for more differences in the provincial consumption patterns - and thus better to reflect existing differences in product availability and tastes.

Some other reasons for reducing the number of types of items should be mentioned. Our recommendation is based on the fact that the provincial consumption patterns in most consumption groups (4-digit level) tend to be concentrated to one or some few items - most likely due to local availability, relative prices and some common patterns in household preferences. There is also a tendency towards that the expenditure shares of the preferred items (by the households) often are much larger than the less preferred items. When facing such patterns the spreading of the data collection to include the non-important weight items merely increases costs without giving influential benefits on the CPI. Our preference and recommendation are to reduce the number of weight items to be covered and instead improve measurement by increasing the number of observations behind each item.

Here we must add that including so-called non-influential weight items could be relevant - although having a low weight:

- *Seasonal variation in consumption:* Some weight items might only be available for the consumer during a short period of time within the year - normally at the same time of the year (seasonal items). During the seasonal period the importance of such items in the household consumption might be substantial while almost not existing in other periods.

  We should add that the treatment of such seasonal products represents a methodological problem in the current CPI work. Although the annual average is low, the actual expenditure share during the seasonal period will normally be substantially below the true level and all too high during the off season for such products.

- *Macro economic awareness:* Some items might have the role of representing special features in the macro economic environment of a country. When trading countries have differences in inflation and

the exchange rate fluctuates, the importing country receives inflationary effects. To secure that the CPI is capable of catching up such impulses - at any point in time - it is important that the basket of weight items reflects the share of imported items in the provincial consumption patterns. When it comes to the selection of representative items for data collection, it is just as important that the basket reflects a situation of having several countries from where the products are imported.

Based on the discussions and the recommendations above we suggest the following basic rules for selecting the weight items to be used in the weighting structures:

- Cover all relevant consumption groups on 4-digit level [2].
- Each group should as a minimum comprise 2 types of items [3].
- Within each 4-digit group sample or select items until the coverage has reached 80 - 90 per cent.

A simple case: Start selecting the type of item having the largest expenditure share and add weight items to the specified list according to the size of the share until the relative coverage within the group reaches 80 - 90 per cent. If the remaining weight items have low shares no further action should be taken to increase the coverage [4].

A more complicated case - example: A group consists of some few weight items each having large expenditure shares, the sum of weights are below 80 per cent and a number of items within the group have lower shares. For such a group we recommend to start with selecting the types of items having larger shares. In addition one can sample or select some few more items. If there are reasons to believe that the price trends of the weight items within the low share group are fairly similar over time to the trends found in the high share group, no low share weight items should be added to the list.

Weight items, which are taken out of the list using these rules, are in principle retained by redistributing their weight onto the remaining weight items. The remaining weight items represents those left out.

To illustrate the way of thinking we have added some examples below discussing some of the ideas laid down in the rules.

---

[2] The 4-digit level group can be identified looking at the 7-digit item code used in the CPI data collection and estimation, e.g. 1101112 Arroz Extra. The first digit in this code refers to the consumption of food, beverages and tobacco. The first 2 digits refer to the consumption of food only, while the first 4 digits refer to a specific part of the food consumption.

[3] The claim of having at least two weight items within a 4-digit group are fixed to secure that group results always can be estimated. There are however no clear rules for fixing a maximum number. Using the overall number of weight items - e.g. 200 for the CPI survey in total - one can estimate an average maximum number of 4 by dividing with the total number of 4-digit group's (50).

[4] Exceptions might be made if the remaining 10 per cent comprise one or several important weight items.

Case 1: Overruling the principle of having a minimum of 2 items within the group

The draft solution:

Code	Name	Weight
3203	Gas	0,01
3203	Petroleo	1,88

Sum of weights: 1,89

Recommended solution:

Code	Name	Weight
3203	Petroleo	1,89

In this case we decided to take the gas product out of the specified list of types of items although in practise overruling the principle of always having a minimum of 2 items covered. This decision was made from various reasons:

a) An extreme low expenditure share on gas;
b) The prices of gas and petroleo will normally follow the same price trends in time - and
c) In this group it should be uncomplicated to have just one weight item due to that petroleo most likely will be available on a regular basis.

In the recommended solution the expenditure share of gas is redistributed to the petroleo.

Case 2: Coverage of 80 - 90 per cent

The draft solution:

Code	Name	Weight
3501	Fogao	0,82
3501	Geleira	0,75
3501	Ferro de engomar	0,03
3501	Relogio de parede	0,02
3501	Maquina de costura	0,01

Sum of weights: 1,63

Recommended:

Code	Name	Weights Item	Weights Accum.		Rel %
3501	Fogao	0,82	0,82	50,3	
3501	Geleira	0,75	1,57	96,3	
	Items to be excluded and the weights				
	are to be redistributed				

In this case we see an often found pattern that one or some weight items dominates the group. By selecting the two largest items (in this case) one achieves more than 96 per cent coverage of the total sum of weights (Rel %) within the group. The other three items have relatively small expenditure shares and would - if included on the list of specified weight items - not have had any significant influence on the CPI price trends for the group. If however one of the items which are excluded through this process - from one or another reason - are to be considered as carrying a special feature for the group, a feature not covered by the two largest items, the exclusion of such an item should be reconsidered.

We have throughout this chapter been conscious when using the term "weight item". This is done to make clear that one in this part of the process is not selecting the specific representative items to be observed during data collection. One is only identifying the basic types of items (or weight items) to represent the large number of products (the population of products) that actually can be found within each consumption group. Although the exercise of selecting weight items within a consumption group is approached from a purely technical angle in this context, we have tried to make clear the importance of

having knowledge about the items - both in a macro and micro context. Such information can be very important in the process of selecting weight items as well as representative items to be observed in the data collection phase.

For more about the weighting structures worked out according to these principles - see annex 1. As the cases above have shown we have not been 100 per cent consequent in obeying the rules set and in the annex some more examples of this can be found. In some cases this illustrates that it always will be a need for sound judgement by the person responsible. In other occasions the lack of consistence with the rules can - at least to some extent - be explained by our restricted knowledge about the micro aspects on item level in Mozambique.

3.1.4. When redistributing the weights

In several occasions we have talked about redistributing the weights from weight items taken out of the specified list to the weight items that are retained. The redistribution of the weights in this situation is based on the idea that each type of item in the weighting structure must represent more than itself. This is due to the basic fact that a fairly small survey like the CPI survey will never be able to cover directly all types of consumption.

As we have seen from the examples above and in the annex 1, two types of redistribution have been used.

- Allocating the weight of an excluded item to another specific item.

- A proportional redistribution of the sum of weight for the excluded items to all weight items retained on the specified list of items.

The two principles of redistribution that are mentioned are most likely the ones most used for such operations. We should, however, add without developing the subject any further, that there are several other principles that could have been considered. The technical aspects or mathematics of redistribution should be fairly simple and will not be discussed here. However some few words should be mentioned about making the choice of principle and the ideas for this.

It is evident that the selection of the first principle above must be based on knowledge about items and - relations between the items or phrased in other words - about household preferences and substitution between items. Such knowledge will often be local in the sense that different aspects might influence the item relations across provinces in a country. Such aspects might depend on consumption patterns, tastes, availability of items (national produced or imported), regularity in availability, seasonal aspects, subsidies, special item taxes or differences in value added tax across the country etc. Having such information will in practise be important when using this method.

The second principle when redistributing might be labelled the low knowledge option and is adopted in cases where, e.g. the relations between items are so complex that no explicit single alternative seems possible or when the knowledge of the matter is limited.

The redistribution made in annex 1 have in almost all cases been done within the 4-digit consumption group, i.e. weight items taken out have their weight redistributed to all other weight items retained within the same 4-digit group. One should however be aware of that making proportional redistribution within the 4-digit group not always will be the best or the obvious solution. The relations between items will now and then lead to that the weight of an excluded item in one group best could be redistributed to another group.

4. Data collection phase

The purpose of this chapter is to give a brief presentation of the main phases of the data collection, before turning on to discuss some of the aspects in further detail, including methods to solve different problem that might arise during the fieldwork.

After defining the weight items as described in chapter 3, the Central Unit (CU) has to choose the precise items that represent the price trend of the weight items. This involves:

- Selection and specification of representative items and their varieties
- Obtain the sample of outlets
- Revision of the basket of items and sample of outlets

The quality of an index depends very much upon the way it is constructed at the most detailed level of observation. During field work one often experiences that there are other types of consumption - than those specified in the list - that are important (weight items) and thus should be included in the weighting structure. Such problems might have several causes but two types are common: the weighting structures are partially out of date due to rapid changes in the detailed consumption patterns and unidentified errors or serious weakness in the raw data used for making the weighting structures. To secure that the new weights and the basket of weight items are optimised, it is strongly recommended to reconsider the weighting structures and to make adjustments when needed.

The choice of representative item, weights, sample of outlets and the specification of the items must be continually checked. Since a major revision of the representative items will not be conducted until the performing of a new IAF, the list should be revised regularly, at least once a year, in order to take into account any changes in the market. The revision of the specifications are also necessary when having a large number of missing quotations, a wide or increasing variation in the distribution of price changes observed or a large number of substitutes occurs.

The next step is the field work phase which involves;

- Designing forms
- Choosing products
- Measurements problems and bias
- Seasonal items
- Quality change and new products
- Problems specific to particular items; tariff structures, second hand prices
- Training and instructions of the price collectors

To improve the data collection, consistent procedures should be established for dealing with different situations in the fieldwork. Price collectors ought to be well trained and should be provided with a good manual explaining all the procedures that they have to follow. The form used in price collection should be accompanied with the aid of a checklist or a set or codes to allow reporting relevant information or explaining missing price observation. Knowledge of this information is important when computing the index. The information will also be useful to those taking over the price collection for another person.

Prices of some goods and services such as electricity, fares for buses and trains are often set and regulated on a national basis. For such items prices could be collected centrally by telephone or mail. The payment for such consumption often follows use and acquisition, so that one has to specify a set of

representative journeys. It is relatively easy to obtain data about the tariff structures, but problems might arise when the structure of bus fares and train fares changes. Electricity is often provided in two-part tariffs with a fixed charge and a kilowatt-hour charge. If these change in different proportions, then either they should be treated as two part prices each having separate weights, or the total bill per kilowatt-hour for a consumer with a specified level of consumption will have to be calculated.

If second hand purchases like clothes and cars play a major role in the household, such purchases should not be omitted from the index. However, if it is not feasible to collect second hand prices one can assume that the price trend of such products is represented by the movement of the overall index or subgroups of the index. Another option is to let the group of second hand products explicitly be represented by another group, to which the weights of the excluded items are allocated.

When the prices are collected, the last step before computing indices is the processing phase:

- Transmission of the data
- Entering the data
- Controlling the data

In order to avoid a reduction in the quality of the price data, standard methods for processing data should be developed. As a general, the price data delivered by the price collectors should be reviewed and edited for comparability, substitutions, and unusual or large price changes. There should be procedures such as reprising in the same outlets, for checking the reliability of the price data.

In the rest of this chapter we will concentrate on parts of the two first phases in the data collection. In chapter 4.1 we will focus on the selection and specification of the representative items, while the sample of outlets will be described in chapter 4.2. Chapter 4.3 will discuss some measurement problems faced during the fieldwork, while chapter 4.4 looks into the problems with missing observations. In chapter 4.5 we focus on quality changes and new products, while some thoughts about procedures for price collection will be presented in chapter 4.6.

4.1. The basket of representative items

The work with the weights and the basket are interrelated in several ways. The evident relation is the technical link between the weight items and the types of items to be followed up in data collection. Although this relation seems straight one should bear in mind that a specific weight item only represents a number of products that can be related to a certain type of consumption. Thus the weight item in it self will normally not be a product, but should first of all be considered as a label for a group of products (subpopulation of products). See chapter 2.1 for more about this. In practise the transition from the weight item to the representative item and to the representative products will make clear the need for more knowledge about the details in the households consumption patterns. This chapter works with the representative items and the representative products as defined in chapter 2.3, and the basis is the weight items identified during the work with the weights.

4.1.1. Selection of representative items

After defining the weight items, one has to choose the precise products to be followed in the data collection. The central unit selects and specifies representative items for each 4-digit group. The selection is based upon the statistician's knowledge of consumer goods and regular personal contact with the outlets. Price collectors then select the variety (representative product) of each representative item to be priced at each outlet.

During the work with the field force we have made some experiences with the basket on detailed level. The basket of commodities and services need adjustments due to the changes in the product availability and the consumption pattern in general. We suggest to reduce the number of type of items within the food group and increase the coverage of prices charged for services and non-food items. See chapter 3 for more about this. When it comes to increase the number of products (brand, marks, different units, etc.) we recommend the use of wider or more general specifications of the representative items. This issue which will be discussed some further below.

Some items are not found in the basket, however according to the price collectors are important among the consumers. The reason could be that the results of the IAF have failed to provide information of a whole year within each region or the items were not available at the time of performing the IAF. E.g. apples are missing in the basket of Beira but are to be found in the markets. To solve this problem, we suggest looking for existing goods in the basket which can represent the price trends of the missing items.

4.1.2. Specifying items and products

Specifications of the representative items tell the price collector what item to look for at the time of the first visit in the outlets. In most cases the specifications will cover a number of varieties (products), so that the price collectors must precisely identify one in each outlet for pricing. It is our impression that some of the specifications of the representative items in the current CPI are too precise. It is obvious that tight specifications, and thus leaving less to the price collectors judgement, requires less training on their part. But tight specifications entail the risk that an outlet from time to time does not sell the items exactly as specified. Especially clothing and furniture are difficult to specify due to a number of brands, styles and models. Due to this the quality and price levels might differ considerably between outlets. We strongly recommend to loosening the specification and allowing the price collectors to choose among a wider range of products. This will increase the number of price observations and minimise the variance within the representative item, which in turn will improve the quality of the index. The consequence of using more general specifications and thus allowing products to differ within and across provinces, shops and markets are discussed in chapter 2.1.

The price collector should supplement the specifications by noting additional and more precise information in details to provide a unique identification of the product priced. Such information could cover brand, style, material, domestic or imported, etc. To improve the field force and ensure that the correct goods are being priced, feedback on the descriptions is necessary. See table1 for examples of relatively loose specifications of some representative items and their descriptions.

Table 1. Specifications of representative items

Representative item	Description of the actual product collected	Unit of the actual product collected	Brand of the actual product collected
Rice, 1 kilo or heap	Arroz corrente, domestic	1 kilo	
Sugar, white, 1 kilo or heap	Domestic	Heap	MH
Spaghetti	Imported	500 gram	DONNA MARIA
Lemonade, bottle or can	Bottle	300 ml	FANTA
Beer, bottle or can	Can	240 ml	MANICA
Men's shirt, cotton or polyester, good finish	Long sleeves, 100 % cotton, front pockets		ST. JOHN
Women's fashion shoes, 1 pair	Leather, 35-70 mm heel, size 37-40	Pair	BALLEY
Child's T-shirt, cotton or polyester	Short sleeves, collar, 70 % cotton, 30 % polyester size 8 years		NIKE
Batteries, 4 pack	Small, domestic	4 pack	National

The distinction between domestic and imported food should be a part of the specification only if the price collectors could distinguish the two. (Even if the distinction is relevant to price trends). For example if the specification of sugar include sugar imported from Swaziland, the price collector will not be able to find prices of sugar if the trade between Swaziland and Mozambique stops. If the specifications allow a wider range of varieties, the price collector will observe both domestic and imported sugar as long as the quality is the same.

When a whole range of qualities are available, the product chosen by the collector in a particular outlet for a particular representative item should be one which is most typical of that item (or currently selling well) and that over time is related to a certain quality and volume. But this is not necessary the cheapest brand or the smallest quantum. Different brands and quantum can sometimes be found for each representative items. Examples are given in tables 2 and 3.

Table 2. "Tooth pasta"

Outlet	Brand	Unit	Price
Outlet 1	Colgate	50 gram	9.000
Outlet 2	Aquafresh	50 gram	10.000

Table 3. "Washing powder"

Outlet	Brand	Unit	Price
Outlet 1	Surf	500 gram	30.000
Outlet 2	OMO	500 gram	30.000
Outlet 3	Bravo	150 gram	5.000

In table 3 we see that the price collector in outlet 3 has chosen the quantum of 150 gram instead of a 500, simply due to the fact that this particular outlet does not offer 500 gram. The price of the quantum of 150 gram should be reported and used in computation. For measuring price changes it is necessary to collect a comparable price (150-gram) for the previous month as well. When this price is collected it should not be necessary to make unit adjustments in the current price to perform the comparison needed.

4.2. Sample of outlets

The purpose of a consumer index is to measure changes over time in the general level of prices of goods and services that the reference population pays for their consumption. An outlet is a shop, market, service establishment or other place where goods and services are sold or provided to consumer for non-business use. The populations of outlets in the CPI consist of markets, retail shops and drugstores. Both official and unofficial markets are included.

Luxury shops, wholesalers and small mobile shops (ambulantes) are excluded from the sample of retail shops. The reason for excluding the luxury shops seems to be the fact that they are more expensive. If the reference population for the index includes all inhabitants of the country, the luxury shops should be a part of the sample of outlets (although the price level are some what above of the normal level). Having in mind the rapid change of the economy in Mozambique, we strongly recommend including the luxury shops in the sampling population of retail shops. For practical reasons the ambulantes are left out of the sample of outlet. Wholesalers should be included if large parts of the population of consumers are shopping in these kinds of outlets and especially if the price trends are known to differ from the retail shops. There might be a problem of obtaining prices for a fixed quantum and quality over time in these kinds of shops.

For some services like health-care and rented dwellings, prices are centrally determined. But there also exist parallel markets providing these kinds of services. The parallel markets are excluded from the sampling population. It is most likely easier to obtain the prices centrally than to collect them from the free market. However, it is recommended to record both sets of prices if there is a possibility to identify and specify the products.

The result of the IAF identifies the type of outlets for each recorded expenditure, but not the name and location of each particular outlet. In lack of an updated business register, the sample of outlets should be obtained by purposive sampling (selection). The selection should be based upon the local knowledge as to which outlets are important and typical among the households.

4.3. Measurement problems - the field work

Prices are collected on all working days, except Wednesdays. The markets are visited weekly on Tuesdays and Thursdays, while the shops are visited Monday and Friday once a month. The plan for data collection is opposite in Beira. As recommended by the previous short term mission, the weekly collection program on food should be abandoned because from our point of view it seems like a fairly costly routine without having any clear identified contributions to the overall CPI. During the fieldwork the price collectors might face several problems like variation in time of quantum of some goods and missing observations. In the rest of this chapter we will focus on the first subject, while missing observations will be discussed in chapter 4.4.

Maputo has a greater share of official markets. The price collectors do not obtain prices of vegetables in the unofficial market. However, according to the price collectors there has been a substitution in selling food from the official markets to the unofficial markets. Due to this we strongly recommend to include

the food prices from unofficial markets and also increase the number of price observations within the markets. The fact that the prices of some products such as fruits and vegetables varies within a marked, also requires an increasing number of price observations within every market to achieve a more precise estimate of the price changes of the different products.

Goods in the unofficial markets, especially fresh foodstuff are not sold in standardised weights or quantities, but by heaps (montinhas) or bundles. Every third month the price collector will buy some of the products and bring them to the headquarters to weigh them and estimate a kilo price. In the purpose of analysing whether the price trends in the unofficial markets differ from the official markets, the quantum to be priced in the two kinds of markets must correspond. Below we suggest an alternative way to handle this problem.

Assuming that the consumers buy a heap or a bundle in the unofficial markets, the CPI staff should not try to obtain the price of 1 kilo. Instead the price collector should categorise the heaps, so that a heap of a certain quality always will be identified. When it comes to measuring price changes of the heaps, the price collectors should always stick to the same type of heaps.

Vegetables, fruits and some other foodstuff tends to be sold in heaps by the size (quality) of the vegetable, and the heaps consisting of only small, medium or large vegetables. The number of vegetables within the heaps seems to be fairly stable. Examples;

- Tomatoes: always 4 in the heap (or sometimes more if the tomatoes are very small)
- Potatoes: always 4 in the heaps if the potatoes are medium size, 3 if big size.
- Mangoes: always 3 in the heaps
- Onions, squash, etc. priced per unit, and different sizes are available

Some vegetables are sold in bundles, but the size of the bundles seems to be stable over time. Some other foodstuffs like rice, beans, salt, flour etc. are sold by cups or cans usually of 3 different sizes.

If the price collectors always choose a heap of the same size (quality), e.g. tomatoes of medium size and the number of vegetables in the heap are stable, the price collectors are likely to estimate the correct price change over time. To be sure of always finding the same quality, the price collector might have to obtain prices of heaps of two or three different qualities from different stands within every market. The collector should always stick to the same stands within each marked when obtaining prices. If the prices tend to fall during the day caused by decreasing quality of the goods, the price collector should always obtain prices at the same time a day in a particular market. As mentioned above one should increase the number of price observations to achieve a more precise estimate of the price change of e.g. tomatoes within each market.

If a heap consist of a mix of all the sizes (qualities) the price collector must transform the heap to consist of one or the other, e.g. if a heap consist of 2 big and 4 small potatoes, one can assume that the heaps consist of 8 small potatoes.

If the CPI staff want to estimate a kilo price every month, they should decide the weight of a small, medium and large vegetable. When collecting prices the price collector should note whether the heap consist of small, medium or large vegetables and also count the number of vegetables in the selected heap. Knowing the price of the heap and an approximate weight of one of the vegetables in the heap, one can easily estimate a fairly precise kilo price of the actual vegetable.

4.4. Missing observations

Consistent procedures should be established for dealing with missing price observations whatever the cause is. The main possible sources of missing price observations are:

- Disappearance of an existing product - temporary or permanent
- Seasonal unavailability
- Outlets are uncooperative
- Outlets are temporary or permanently closed

The price collector should have clear instructions to stick to the same product for a given outlet. However, a problem rises with the disappearance of a particular variety from a selected outlet or the closure of an outlet, since this prevent the desired matching of the current and previous prices. The first step when a product in a particular outlet is missing, is to state whether the disappearance is temporary or permanently (at least for some months). If only a short period disappearance is expected, the item can be temporarily omitted. If this is not the case, the question is whether or not to replace it with a substitute, and if so how to deal with any difference between them.

In this chapter we will focus on a temporary disappearance of a product and seasonal unavailability, while permanent disappearance of products will be discussed further in chapter 4.5.

4.4.1. Temporary missing price observations

Today two methods are used to handle a temporary missing price observation:

- Copy last month price, and hence assume no price change
- Using the price of an observation from another outlet that is not part of the sample of outlets.

Copying the last month price is a common method, but only recommended if the prices of the rest of the products within the particular representative item remain unchanged. Disappearance of an item from an outlet might possibly require that another outlet be chosen. The same might be necessary when an outlet disappears. However, as far as possible a substitute should be picked within the same outlet. If this is not possible, the CU has to establish rules so that the price collectors make a correct choice with respect to a new outlet. The instructions for price collection in chapter 4.6 states some principles.

As a general principle, if the product is temporary out of stock, the price collector should find a similar substitute and obtain the price. If the product is likely to be back before next month collection, the central unit can impute a price for the current month based on the observed prices for the same products from other outlets in the same region. See table 4 for an example.

Table 4. Estimating a price based on the price obtained from other outlets.

Outlet	Product	Base price	October	November	Relative in November (P_t/P_{t-1})
Outlet 1	Japanese batteries	2500	3000	3500	1.166
Outlet 2	Chinese batteries	2000	2500	3000	1.200
Outlet 3	Chinese batteries	1500	2000	2364	-
	Index	100	125.000	147.773	

Chinese batteries are temporary out of stock in November, but are likely to back in December. There is no similar substitute available in outlet 3, so that an estimated price must be imputed. The price of batteries in outlet 1 and 2 has risen from October to November by average of 1.182. The price of batteries in outlet 3 in November could be estimated by multiplying the price in October (2000) with the average price change of the rest of the product within the representative item "Batteries".

4.4.2. Seasonal items

The most obvious source of seasonal patterns in the index is variation in the supplies of fruit, vegetables and some other types of fresh food. Unavailability might also be caused by seasonal variation in demand. The prices of such items rise when having close to unavailability at certain time during the year. Due to this, meaningful prices cannot be observed. Fictitious prices must be attributed to non-available items. Today the CPI staff attributes a fictitious price by copying the last month prices until the product reappear. This is not a recommended solution because it assigns too much importance to the last month price implying no change in the prices throughout the period of unavailability. If the number of imputed items becomes large there will no doubt be a noticeable impact on the CPI. Another objection is that a large time gap of discontinuity might cause unacceptable price changes when the item comes back into season and actual price is again obtained.

Other methods of attributing a fictitious prices for seasonal items;

- Assume that if the items had remained available, the price would have moved in the same proportion as the price of the available goods within the consumption group. This is equivalent to redistribute the weight to other items within the 4-digit consumption group.
- Take the average price of the seasonal item from the last season and use this to impute the off-season price. This price is used until the next season occurs and a reliable price can be observed.

We strongly recommend the first method. This method also gives the "correct" long times movement; if all prices return to the original level the index return to it original level as well. An example of the method is given in table 5.

Table 5. Index for the 4-digit group 1107, Maputo. (December 1997=100).

Codes	Item	Weight	Jan. 98	Feb. 98	M-1	M
1107111	Laranja	0.160	100.35	100.44	16.0560	16.0704
1107121	Limao	0.110	100.12	100.11	11.0132	11.0121
1107131	Tangerina	0.020	100.24	100.28		
Sum of products					27.0692	27.0825
Index			100.255	100.049		

In table 5 we have listed indices for some representative items within the group 1107 assuming for simplicity to only consist of Laranja, Limao and Tangerina. Tangerina turns out to be a seasonal item and its actual price will reappear in June. The indices of Tangerina for January and February are estimated by using the price trends of Laranja and Limao from December to January and for January to February. The average price change of Laranja and Limao is 0.235 percent in January and 0.04 in February. Based on these changes the index for Tangerina is calculated to 100.24 in January and 100.28 in February.

The figures in the column M-1 and M are the sum of weight multiplied by the index for Laranja and Limao in January and February. The index of the group 1107 in February is estimated by the ratio of the

sum of products 27.0692 / 27.0825 while the index of January is estimated by the ratio 27.0692 / 27.000 (were 27.000 is the sum of products in December).

4.5. Quality problems and new products

Substitutions will be necessary when priced items disappear permanently from the outlet(s) in which they are observed. An item, which is no longer available in sufficient quantities or under normal sale conditions, might also be considered to be unavailable. Clear and precise rules should be developed for identifying the substitute item. Precise procedures should be laid down for price adjustments with respect to the difference in characteristics when substitutions are necessary. As far as we can see, no standard procedure among the regions is established to handle such problems. The results will be less price observations as time goes by, which in turn make the CPI more vulnerable in responding to changes.

4.5.1. Introduction of different quantum or brand

From time to time a given outlet substitute the products from one brand to another brand or to different quantum. Examples are sugar from Maputo being replaced by sugar from Swaziland, or Surf washing powder is replaced by OMO. An example of substitution among different quantum is when the quantum of 500 gram or 1000 gram becomes more common than 150 gram. The price of the new brand will be comparable with the old brand as long as the quality of the different products is the same. In addition, if the households do not have an another alternative product than the new one, the old and the new product must be considered comparable. The introduction of a larger quantum of the same brand (or a brand of similar quality) requires that the price collector obtain the new price for the new quantum. It is important to change the base price according to the new price so that the prices in the two periods are comparable.

4.5.2. Quality change

Quality change is one of the most difficult problems facing price index practitioners. The goal in producing price indices is to measure the pure price change and exclude changes due to improvements or deterioration in the quality of products. Ignoring quality changes can result in substantial overstatements of price changes, as prices increase due to quality improvements is included in the price indices. The rapid change of the quality of e.g. electrical equipment is a major problem when it comes to measure pure price changes.

When finding the replacement product the price collector has to evaluate the differences in quality. If the substitute is not comparable to the old one, some adjustments for quality will have to be made. Based upon the information from the price collectors, the central unit has to decide whether to treat the quality change as a volume change or if a quality adjustment is necessary. The first method is a common method where the base prices are changed in a way that no price change between the old and new product occurs. The price of the substitute should be compared directly only if the new and the old items are considered to be fairly similar.

There exist mainly two types of quality adjustment:

- Direct adjustment
- Imputation

Direct adjustment involves assigning a monetary value to the quality difference and then adjusting the price observation for the quality difference. This type of quality adjustment will not be discussed any further. Imputation requires the use of observed price information when the price index is compiled. Two frequently used methods of quality adjustment are "overlap period" and "splicing". When a substitute variety is introduced to replace the old variety, the price of the old variety for the current period or last

month's price of the new variety should be collected or estimated to create an overlap price. The price difference between the estimated price and the actual price of the new variety is the estimated quality difference that is to be excluded from the price index. The methods are shown in table 6 and 7.

Table 6. Quality adjustment and use of "overlapping period"

Outlet	Product	Base price	October	November	Relative in November (P_t/P_{t-1})
Outlet 1	Japanese batteries	2500	3000	3500	1.166
Outlet 2	Chinese batteries	2000	2500	3000	1.200
Outlet 3	Chinese batteries	1500	2000	-	-
	Substitute 1	(2625)	3500	4500	1.285
	Index	100	125.000	154.385	

Prices of a fixed quantity of batteries are selected from three different outlets. In November Chinese batteries are permanently unavailable in outlet 3. The price collector found a substitute (American batteries) having a price of 4500, but the substitute is not comparable in quality due to the fact that most all the American batteries last longer. The price collector found out that the American batteries was available in October to the price 3500 (overlapping price observation). The American batteries have to be used to calculate the index in November, but the base price has to be estimated. The price ratio when the two items were sold in outlet 3 last month is computed as 3500/2000 and the ratio is multiplied by the base price for Chinese batteries in outlet 3 of 1500 to estimate a base price for the American batteries of 2625. The November price of American batteries is then used to calculate the index for November.

If there is no overlapping price observation of American batteries in October, one has to estimate in advance the price of the old product in November.

Table 7. Quality adjustment and use of "splicing"

Outlet	Product	Base price	October	November	Relative in November (P_t/P_{t-1})
Outlet 1	Japanese batteries	2500	3000	3500	1.166
Outlet 2	Chinese batteries	2000	2500	3000	1.200
Outlet 3	Chinese batteries	1500	2000	(2364)	-
	Substitute 1	(2855)	-	4500	-
	Index	100	125.000	149.558	

The price of the old product in November is obtained by multiplying the price of October by the average price change of the other products available (as shown in table 4). To get the new base price one use the price ratio between the substitute and the old product 4500/2364 and then multiply the base price of the old product to provide and estimated base price for the substitute.

There are reasons to believe that new high quality products first will be introduced in Maputo before reaching Beira and Nampula. The methodology of solving these problems in Maputo will most likely be used in Beira and Nampula as well. In order to ensure that the methods will be handled the right way, a full description of the methodology is extremely important.

4.6. Instructions for price collection - a draft

Based on discussions and work in the field with the price collectors, we have got an impression of the problems that the price collectors face in their job. It is our impression that the price collectors are doing a good job. However, there seems to be somehow different behaviour among the price collectors and between the three regions. Lack of or insufficient instructions or training can be one reason. In general the price collectors in Maputo seems to have much more knowledge of the overall goal of the CPI, a better understanding of how to handle different situations, e.g. what to do when a product is temporary or permanent missing.

As mentioned in chapter 2.2, the price collectors needs a basic understanding of:

- The main purposes of the CPI; measure price changes and not put so much effort in measures the precise price level of a representative item.
- The price concept in the CPI; the prices to be collected are the regular transaction prices, including indirect taxes, paid by the reference population. Sale prices, discount and special offers should be included as long as the goods and services are offered in their normal availability.

Training and a written instruction of how to handle different situations in the fieldwork will improve the data collection. Below we give an example of such an instruction based on the principles stated in chapter 2.3. Spot checks or accompaniment by supervisor is one way to control that the collectors are following the procedures and instruction laid down for price collection.

1. If an outlet is temporary shut, the price collector should try again later, otherwise report the facts.
2. If an outlet is permanently shut, the price collector should select a similar outlet within the same region, and report the facts. If an outlet is likely to be permanently shut next month the price collector should report the facts, and for next month find a similar outlet within the same region.
3. If an outlet is unwilling to co-operate, the price collector should state the reason, e.g.;

- authorised person is not available
- shop-owner does not understand the purpose

The price collector could provide the letter to explain the purpose, or try again later when an authorised person is available, otherwise report the facts

4. When an outlet totally changes the products in sale, the price collector should skip the outlet and replace it with a similar shop within the same areas and report the facts.
5. When first visiting a given outlet, the price collector chose the products which are representing the items (in collaboration with the seller or shop owner), and should also supplement the specifications by noting additional and more precise information (characteristics) in details to provide a unique identification of the product priced.

Check list for characteristics of the representative items:

- Brand (Surf, OMO, Colgate, Adidas, Nike, Sony, International, etc.)
- Quantity (per 100 gram, per kilo, per 5 litres box, per medium cup, per heap, per pair, per ticket, etc.)
- Quality (bad, middle, good)
- Material (cotton, polyester or a mixture)

- Style (long or short sleeves, front pocket, collar, etc.)
- Size (neck measure, small, medium or large size, etc.)
- Imported or domestic

6. Every month when collecting prices, the price collector contacts the shop-owner and reports the reason for visiting the outlet. If the price collector (in agreement with the shop owner) state that the prices of the products seems to be right, he or she reports the prices (eventually included a cash discount) and thanks the shop-owner for the help.
7. If one or several prices have significant difference from the previous price collection, the price collector should state the reason, e.g.;

- sale price or a special offer
- price reported last mount was incorrect
- other reasons for significant difference

The price(s) of the products should be reported if the price collector find that the price(s) is comparable with the obtained price previous month. It is important that the reported price is supplemented with a set of codes that explain the changes, so that it is not regarded as an error. These supplements will be useful for the central unit when computing the index.

8. When a product is missing in a particular outlet, the price collector must obtain information whether the product is temporary (for one or two month) or permanently (at least for some months) out of stock, and state the reason, e.g.;

- seasonal items
- change in the unit of quantity
- new product (with improved quality)

A. Temporary
The price collector should find a similar substitute *within the same outlet*. For example if the brand SURF washing powder is sold out, a substitute could be OMO or BINGO, and FANTA could be a substitute for COCA-COLA. Report the price and supplement the price with a code that states that the chosen product is a substitute.

If it is not possible to find a substitute, and the missing product is likely to be in the outlet next month, the *central unit* can impute a price for the product based upon the price trends of the same product in other outlets within the region.

B. Permanent
Seasonal availability: Report the facts.
The *central unit* will impute a fictitious price change based upon the price change of the rest of the items within the 4-digit consumption group.

Different quantum: Pick the new quantum of the same brand or a similar brand that equals the quality. The *central unit* must change the base price so that the prices of the old and new product are comparable.

New product: Find a substitute of equal quality to the old product. The price of the new product will be comparable with the old one as long as the quality equals. If no substitute of equal quality to the old

product is possible, evaluate (in collaboration with the shop-owner) the quality difference between the old and new product and report the price. If possible the price collector should get an overlapping price by obtaining last month price of the replacement (if it existed in the outlet last month). This information and the evaluation will bee needed for the central unit if some quality adjustment is necessary. The price should be supplemented with codes that state that the product is a substitute or whether the quality equals or not.

5. The new IT-system - draft plan

This part of the report supports the chart presented below describing the flow of data in and out of the various parts of the IT-system. In the flowchart each element is given a number and each of these elements are somewhat further discussed here. The flowchart and this document represents a draft plan for designing and developing the new system which will be developed using MS Access.

5.1. Introduction - summary

The IT development plans seems to be based on two approaches, which will move forward in separate phases. The first step to be realised during the next month or so includes adjusting the existing dBase / Clipper system. The purpose of this approach is to build a preliminary system for computing a revised CPI based on updated weights and baskets, which has been established during this autumn. This solution enables a parallel production of the old index and the revised index. It is not yet decided whether to publish the old index or the revised index, or both. The adoption of a stepwise approach seems to be wise given the short time left before the first release of the new index.

The first step allows for some more time in developing the new IT-system. In our opinion one needs more time for this second step, due to the lack of planning for this part of the project as well as expected shortage in the IT-staff allocated. The time needed for fulfilling this plan is roughly estimated to be 4 - 5 months, but will most likely be somewhat adjusted in the process needed towards the final plan for the new IT-system.

There are several high priority ambitions for the new system. Some of the most important is to:

- Increase the flow of information between the province delegations and Maputo Central
- Build a central price database comprising both raw data received from the provinces and revised production data used in the computations
- Establish routines for control, error identification and imputations
- Use the geometric average in computing the micro level price indices, i.e. the indices for each item level identified in the weighting structures
- Develop new routines for estimating the indices
- Build a central price index base comprising item level indices as well as all aggregated indices
- A routine for production of standard tables used in publishing
- Establish a system of catalogues for keeping the consumption classification, item descriptions, outlet register and weight data.

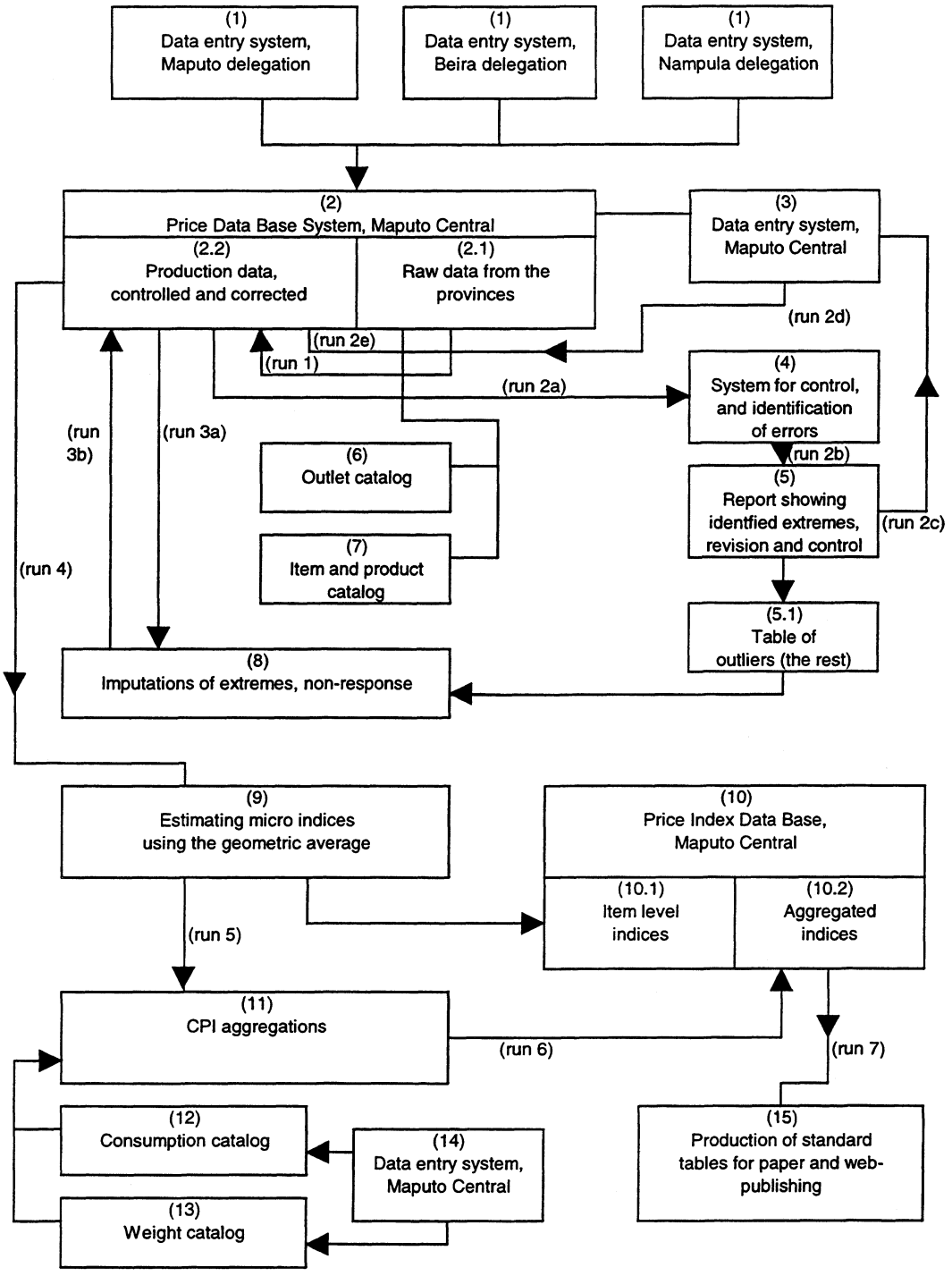
For the data entry systems to be used in the provinces it is important to build routines, which are able to provide the central unit in Maputo with sufficient information for the monitoring of the quality in data as well as the quality of the job, done. When increasing the number of provinces covered in the CPI, the Maputo Central will receive a flow of data. Although price data will be an important part of this, the need for the future will be to receive information from each province reflecting the changes in outlets, in item descriptions, changes in quality on the products observed etc.

To data bases have to be built - a price database comprising data as received from each province office and the controlled and corrected production data for each province. An index database comprising item level indices estimated using the geometric average and aggregated indices for the provinces and the

nation. A new system for performing control, identifying errors and making imputations has to be developed.

The remainder of this document sketches a plan for the IT work to be done during the next 4 - 5 months or so. In the presentation of the main activities each subject is briefly presented as an introduction and objectives are given. In addition related activities are presented and discussed. All activities presented have within short to be planned in more detail. Each presentation ends with presenting a list of important output as well as giving a rough schedule.

The CPI production system
A flowchart



5.2. The Data Entry System (1)

This is the data entry system to be used in data entering - prices and unit's etc. The system will later on be used in the delegations of Maputo, Beira and Nampula. The design of the system should aim at securing the Maputo Central with information on changes in items, in descriptions, quality judgements.

Objectives:
The overall objective is to establish a new system for data entering improving the local control on data and to improve the insight of Maputo Central into current coverage of outlets and items, and recent changes made.

Activities:
- Establish new routines for entering observed prices and units. The new routine should provide information on changes in outlets and items. This type of information will be needed for making sound judgements in handling quality changes.
- Routine for entering new items and descriptions of products, and new outlets will be needed. This is a very important part of the new entering system.
- Routine for extracting data to be mailed to Maputo Central should be developed. Testing of this routine should be made on pilot versions to catch eventual problems in an early phase.
- To decide how data are to be received by Maputo Central and how the various types of data in an efficient way can be routed to the relevant tables in the base system. An automatic updating procedure based on the files received should be considered.
- One should consider making an automatic report to the operator for the current month (screen / paper) showing what has been done - number of prices entered, number of changes, the item descriptions that are changed, number of new outlets etc.
- When data base system and a pilot of the data entry system is ready - to enter the types of data to be used and start testing of the entry system. In the light of this make adjustments whenever needed.
- Training of the staff in using the new system
- Documentation is very important - both technical (IT) and user related

Outputs:
- A new data entry routine
- Automatic routine for routing data to the relevant tables in Maputo Central
- Documentation of the technical aspects (IT) and the user related parts

Schedule - supervision:
These activities must be done during 1. Quarter, by INE staff. Supervision by long term consultant and the IT supervisor.

5.3. The Price Data Base System (2)

This base system will comprise all price data received from the provinces as well as addition information on quality changes etc. The system will store the data received from the provinces as they were delivered in a raw database. In addition one should build a production data base for storing the price information used in the computations. The two bases will differ in various ways. The production data base will contain basis prices (from December 1998), centrally collected prices and include prices that have been imputed due to non-response or due to that some of the province data are considered to be unacceptable.

The main reason for establishing two databases is manifold but two should be mentioned. It is important to separate what has been done in the data collection phase i.e. in the provinces from what has been done in the Maputo Central. Furthermore the separation allows for making analysis of the effects of the Central part of the overall CPI-estimations. The full benefit of such a separation will be experienced when increasing the provincial coverage.

Objectives:
The overall objective is to establish a price data base system, which is capable of handling a large flow of data from the provinces to Maputo. It is important that the new base system is prepared for including new provinces.

Activities:
- To decide how the data base structures shall be - variables etc.
- To decide how the data on quality changes in the provinces are to be stored to secure an efficient use of such information during the current revision works.
- To decide how a new item code system should be. The item code system must be adjusted to remove the consumption classification related part (PALOP) of the code. In the new system the link to the consumption classifications (PALOP and / or COICOP) will be established using catalogues to simplify the introduction of new or changes in classifications.
- Implementation of a new item code system
- Creating a raw database containing the information on observed price and units from the provinces as well as information on quality changes that will be received.
- Creating a production database containing the data to be used in the computations of the provincial as well as the national CPI.
- A routine for loading the unit corrected prices from the raw database to the production database. Bear in mind that all adjustments in province prices are to be made in the production database.
- One has to decide how the data outflows and data inflows to the two databases shall be. The production database will provide other parts of the production system with the relevant information e.g. to the micro index computations.

Outputs:
- A raw data base containing province data
- A production data base
- A new item code system and the implementation
- Automatic loading of data from the raw data base to the production data base
- Training of the staff
- Documentation

Schedule - supervision:
These activities are the basic ones, which normally takes some time and should be given very high priority; must be done by end of 1. Quarter, all done by INE staff. Supervision by both the long-term consultant and the IT supervisor is recommended.

5.4. The Data Entry System of Maputo Central (3) & (6) & (7) & (14)

This entry system will to a large extent be equal to the province systems, but need functions that will be specific for the Central Unit. The Central will have to make changes in the catalogues comprising the consumption classifications and the weighting structures. For the outlet and the item and product

catalogues the updating will have to be performed automatic, but the options for introducing new outlets and new items will be used.

Objectives:
Improve the efficiency of the revision works in Maputo Central.

Activities:
- The new data entry system must provide support for the uses Maputo Central will have when entering centrally collected prices, making special adjustment in prices due to quality changes or from statistical purposes.
- The entry system should also be prepared for making changes in the consumption classifications as well as the weighting structures.

Outputs:
- A data entry system adapted for Maputo Central needs.

5.5. System for control and identification of errors - operators report (4)&(5)

This is an important part of the new IT-system and the implementation of new methods used during revision. The experiences from a vast number of countries has shown that all to much time is spent on making personal judgements in this part of the revision. Misjudgements and lack of symmetric information has led to an over revision in many situations. In the near future a wider coverage of provinces will strongly focus the need for an efficient system for control and error identification.

This part of the revision focus on the recent changes in prices - the relative price or quota: $P_{i,t} / P_{i,t-1}$, and are based on unit corrected price information from the provinces made available from the production database. If one aims at publishing the province CPIs, the control should be performed on each set of province data. Items identified (or flagged) as extreme are to be revised by the CPI staff, while the other non-flagged items are to be considered as accepted and verified and no further action is needed. Such controls might also be made on the relative price compared to the same month last year.

Objectives:
To reduce the corrections made during the current revision phase to an efficient minimum and avoiding over revisions of the data.

Activities:
- Routine for extracting the micro data from within item level from the production database - for each province. Outlet and item code and prices for current and previous period is needed.
- Programming the system of mathematics for the control routine
- A window for fixing the parameters to be used in operating and starting the system.
- A report to screen / paper showing items to be subject for further control.
- Routine for making flagged items available for the operator according to a sorted top-down principle - loaded to a separate table ("table of outliers")- to be treated in the data entry system. All information about quality changes reported for the flagged items in the province data sets should be made available.
- Training of staff
- Documentation

Outputs:
- A full working routine for identifying errors in relative prices using all information available

Schedule - supervision:
These activities should be done during 2. Quarter, done by INE staff in co-operation with the long-term consultant and the short-term consultant. Supervised by long-term consultant and IT supervisor.

5.6. Automatic imputations for flagged extremes - outliers (8)

This is another new element that should be introduced into the CPI IT system. Studies into the field of imputation have shown that the subjective element by the operators or the person responsible for revision varies through time. The reason for introducing this part is to secure an over time similar treatment of outliers by using the same methods from month to month.

In every period there will be outliers, which can not be treated by automatic procedures. In many situations the number of outliers that can be treated manually has to be fixed according to the capacity of the staff occupied with such tasks on a regular basis. E.g. if the capacity should be estimated to 25 cases, then the 25 most extreme outliers loaded to the "table of outliers (see (4)-(5) above) are treated manually by the staff. If more than 25 items are flagged the number of items above 25 are handled using the automatic routine.

In automatic imputations a number of rules could be used. It is recommended to use a fairly simple formula in such routines, e.g. a hot deck variant like using the average or median increase of the non-flagged items.

Objectives:
To build in an over time consistency in the imputations for the provincial and national CPI, and to make the manual adjustments more efficient.

Activities:
- Routine for extracting the rest of outliers from the table of outliers to be treated automatic - for each province.
- Programming the system of mathematics for the imputation routine.
- A routine for rearranging which items to be treated automatic and manual.
- A report to screen / paper showing the items that have been subject for automatic imputations.
- A routine for updating the production database with the item subject for automatic imputation.
- Training of staff
- Documentation

Outputs:
- A full working routine for automatic imputations

Schedule - supervision:
These activities should also be done during 2. Quarter, done by INE staff in co-operation with the long-term consultant and the short-term consultant. Supervised by long-term consultant and IT supervisor.

5.7. Estimating micro indices using the geometric average (9)

This is also a new element that should be introduced into the CPI IT system, which improves the overall quality of the CPI for most item levels. The geometric average and micro substitution has been in the current debate among the various CPI environments for some time. The basis for this debate is the well known lack of weighting information below the item level in most countries, and that the rapid and increasing changes in products made available to the consumers are expected to influence the consumption patterns at this level.

The micro substitution comprises the types of changes the consumer makes when facing changing prices on products serving more or less the same functions. Some examples might illustrate this - the consumers substitutes one shop for another (having a lower price), or one product (mark, brand etc.) for another (although more or less the same type of item), or delays the consumption (substitution in time) of a specific item etc. These types of substitutions are considered to be of importance and most studies made comparing the traditional arithmetic average and variants of this to the geometric average has shown that the true change in the consumer prices (or cost of living) within item levels are over-estimated.

It should be added that the use of geometric average has not shown the same efficiency and relevance when the consumers face no real alternatives. Tests has shown the resulting type of item level index will be the same when using the geometric average as in using the arithmetic average, thus using the geometric average for all types of item level indices is recommended.

When estimating the micro indices on type of item level our advice is to base the computations on the indices made for each of the products available within a specific type of item. The product index is simply estimated by dividing the controlled and verified product price within an item level with its basis price for December 1998.

Objectives:
Improve the quality of the CPI on item level.

Activities:
- Routine for extracting the prices and basis prices below type of item level from the updated production database - for each province.
- Programming the system of estimation of the micro indices.
- A routine for updating the Price Index Database (see (10) below) - item level indices.
- Training of staff
- Documentation

Outputs:
- A complete system for estimating micro indices.

Schedule - supervision:
These activities should also be done during 2. Quarter, done by INE staff in co-operation with the long-term consultant and the short-term consultant. Supervised by long-term consultant and IT supervisor.

5.8. The Price Index Data Base System (10)

The price index database will contain two parts or bases - the item level index database and the aggregated index database. The data should in both bases be stored as time series and it must be an easy task to extract full or parts of specific time series. The item level index base will along with the

consumption classification and the weighting structures constitute the basis for estimating the aggregated indices.

Indices will be estimated for each of the provinces and at national level, where series according to the current plan will be available on 4-digit, 2-digit, 1-digit PALOP and as totals. For the aggregated index base one has to develop a code system for identifying the different series. The final version of COICOP will be finished during the first part of 1999. Although INE will not be able to use all groups within this classification for some time one should consider leaving the PALOP.

Objectives:
The overall objective is to establish a price index data base system, which enables efficient flows of data and storage of the indices, made. Easy access to the stored time series is required.

Activities:
- To decide how the data base structures shall be - variables etc.
- To decide how the code system for time series in the aggregated index data base shall be
- Implementation of the new code system for time series.
- Creating an item level index database containing the estimated micro indices on type of item level for each province.
- Creating an aggregated index database containing the aggregated series estimated for provinces and the nation as a whole.
- One has to decide how the data outflows and data inflows for especially the aggregated index database shall be. The production system for standard tables to paper and web (see (15) below) will be based on these data.
- Training of the staff
- Documentation

Outputs:
- An item level index data base containing provincial series as well as national series
- An aggregated index data base
- A new code system for time series and the implementation

Schedule - supervision:
These activities should be done in late in 2. Quarter, most of the work must be performed by INE staff. Supervision by both the long-term consultant and the IT supervisor is recommended.

5.9. CPI aggregations (11)

The aggregations will as before be based on the type of item level indices in combination with the weighting catalogue and consumption classification catalogue.

As discussed in other parts of the document the weighting data should be stored in a catalogue including both item level weights and weights for the aggregated levels (4-digit, 2-digit, 1-digit) for each province. Each type of item should be specified with the item code and the corresponding weight. In addition the national weights should be specified for each consumption group. Having the weighting structures of each province and the national weights stored in one place will for future revision substantially simplify the updates of the weights.

The aggregates should be performed by estimating the 4-digit level indices (consumption group) using the traditional Laspeyres formula, where the input in the province estimation will be the province results on item levels belonging to each specific consumption group (4-digits). This procedure is to be reproduced for all consumption groups in each province. For aggregations above 4-digit level - each province - the indices estimated for 4-digit level should be used.

When estimating the national indices at the various levels of aggregation one uses the province results at the consumption group levels. For these aggregations additional weighting are required. Further aggregations should also here be built on the consumption group results.

Objectives:
Aggregate the CPI indices for each province and at national level.

Activities:
- Routine for extracting the item level indices, weights and consumption classification code - for each province from the respective catalogues or bases.
- Establish the weights for national aggregates - to be included in the weighting catalogue.
- Programming the system for aggregation
- A routine for updating the Price Index Database (see (10)) - aggregated indices.
- Training of staff
- Documentation

Outputs:
- A complete system for estimating aggregated CPI on province and national level.

Schedule - supervision:
These activities should also be done during 2. Quarter, done by INE staff in co-operation with the long-term consultant and the short-term consultant. Supervised by long-term consultant and IT supervisor.

5.10. The Consumption Catalogue (12)

It is not recommended to build the consumption classification directly into the item code system as is used now. Instead the consumption classification should be stored as a part of a separate consumption catalogue where each item is linked to its corresponding 4-digit consumption classification level. This catalogue should also include the text or description of each consumption group and the aggregated level. The catalogue should also be prepared for to types of text: a long text equal to the standard formulations, and a short text more suitable for use in publishing. These texts will be the same for all provinces and at a national level. If the text used in publishing should be different for the provincial and the national results, the short text should be developed for this purpose.

The major advantage of having the classification (or several classifications) in a catalogue is that this simplifies any types of future updates of the classification to be used.

Objectives:
Improve efficiency in the CPI routines for each province and at national level.

Activities:
- To decide whether the PALOP and the COICOP classifications should be used.

- Make a table linking each type of item to its corresponding 4-digit consumption classification level. Include a long text reflecting the text used in the national adapted consumption classification or the text from the international classification. Include a short text if needed for publishing. This link-table should then be loaded into the CPI system. The data entry system discussed above should be prepared for allowing changes in the classifications to be made.
- Training of staff
- Documentation

Outputs:
- A complete catalogue to be used in the system for estimating aggregated CPI on province and national level.

Schedule - supervision:
This work has to be done during 2. Quarter, done by INE staff in co-operation with the long-term consultant and the short-term consultant. Supervised by long-term consultant and IT supervisor.

5.11. The Weight Catalogue (13)

As discussed in other parts of the document the weighting data should be stored in a catalogue including both item level weights and weights for the aggregated levels (4-digit, 2-digit, 1-digit) for each province. Each type of item should be specified with the item code and the corresponding weight. In addition the national weights should be specified for each consumption group.

Having the weighting structures of each province and the national weights stored in one place will for future revision substantially simplify the updates of the weights.

Objectives:
Simplify future works on updating the weight structures and to enable aggregations of the province and national CPI.

Activities:
- Make a table linking each item level code to the corresponding weight - for each province. The data entry system discussed above should be prepared for allowing changes in the weighting structures to be made.
- Establish the weights for national aggregates - to be included in the weighting catalogue.
- Implementing the catalogue into the CPI system.
- Training of staff
- Documentation

Outputs:
- A complete catalogue to be used in the system for estimating aggregated CPI on province and national level.

Schedule - supervision:
Even these activities should be done during 2. Quarter, done by INE staff in co-operation with the long-term consultant and the short-term consultant. Supervised by long-term consultant and IT supervisor.

5.12. Production of standard tables for paper and web publishing (15)

A system part for producing the standard tables used in publishing in paper or on web is recommended. This will improve the efficiency in the publishing part of the work and will most likely be a fairly simple task to put into operation.

There should be no need for going further into this routine and I leave further planning on this part to the CPI staff. Developing such a system will give the users competence in operating and developing the system as a whole.

6. What to focus in the short and medium run

Although it normally will be a number of issues to deal with during a major revision we like to stress the need for a major focus on some important issues. We like to stress the two following issues:

6.1. Improving data collection

Improve the quality of the price data and measurement and preparing an extension of the coverage in the national CPI by increasing the number of provinces included, requires standard methods of selecting and revising the sample of items and outlets, carry out the price collection and handle measurement problems.

Objectives:

- Increase the number of price observation, improve the quality of measurement, and reduce the difference in the behaviour among the price collectors when facing problems during the fieldwork.

Activities:

- Extend the sample of representative items to cover more services and non-food items
- Allowing a wider range of varieties to be priced by loosening the specifications
- Implement regular routine for revising and updating the sample of items and outlets
- Establish standard routines to handle the sampling of outlets, selection of products, find a replacement when a product is missing and introduction of new products and change of quality / quantity
- Focus on price change instead of price level
- Establish a check list or a set of codes to allow reporting relevant information or explaining missing price observations
- Instructing and training of the price collectors

Output:

- Better understanding of the overall goal of CPI
- Less difference in the behaviour among the price collectors in the different regions
- Improved efficiency of price collection
- Improved quality of the price data and the overall index
- A written manual explaining all the procedures the price collectors has to follow

6.2. Develop the new IT-system

The plans for the IT-development seems to based on two approaches which will move forward in separate phases. The first step to be realised during the next month or so includes adjusting the existing dBase / Clipper system. The purpose of this approach is to build a preliminary system for computing a revised CPI based on updated weights and baskets, which has been established during this autumn. This solution enables a parallel production of the old index and the revised index. It is not yet decided whether to publish the old index or the revised index, or both. Starting out with an adjusted version of the old IT-system seems to be wise given the short time left before the first release of the new index.

Taking more time with the development of the new IT-system allows for having a wider approach in the ambitions for the new system. There are several high priority ambitions for the new system. Some of the most important is to:

- Increase the flow of information between the province delegations and Maputo Central

- Build a central price database comprising both raw data received from the provinces and revised production data used in the computations
- Establish routines for control, error identification and imputations
- Use the geometric average in computing the micro level price indices, i.e. the indices for each item level identified in the weighting structures
- Develop new routines for estimating the indices
- Build a central price index base comprising item level indices as well as all aggregated indices
- A routine for production of standard tables used in publishing
- Establish a system of catalogues for keeping the consumption classification, item descriptions, outlet register and weight data.

Annex 1: Weights, type of items and new products - by province

This annex presents the weighting structures on province level for Maputo, Beira and Nampula. Data are provided on 1-digit, 2-digit and 4-digit level according to PALOP, which is the current consumption classification used by INE.

Table 1. Consumption patterns in 3 provinces, 1-digit level. Weights in 1000[1]

	Maputo	Beira	Nampula	
1	732,09	720,59	756,59	Alimentação, Bebidas e Tabaco
2	33,46	37,70	38,09	Vestuário e Calçado
3	151,00	171,65	177,90	Conforto de Habitação
4	3,33	5,55	3,89	Saúde
5	25,98	19,98	10,52	Transportes e Comunicações
6	13,51	19,14	9,59	Educação, Cultura e Recreeio
7	40,63	25,40	3,42	Outros Bens e Serviços
Sum	**1000,00**	**1000,00**	**1000,00**	TOTAL

Table 2. Consumption patterns in 3 provinces, 2-digit level. Weights in 1000[1]

	Maputo	Beira	Nampula
11	707,22	699,27	750,85
12	23,00	14,01	3,65
13	1,86	7,31	2,09
21	26,04	32,66	34,66
22	7,42	5,05	3,43
31	38,34	21,60	83,04
32	70,68	99,02	58,81
33	1,63	0,24	4,72
34	2,22	0,59	0,73
35	3,10	5,70	16,34
36	2,72	1,50	2,74
37	26,06	38,36	11,25
38	0,00	0,07	0,06
39	6,25	4,58	0,21
41	2,40	4,88	3,63
42	0,41	0,14	0,00
43	0,51	0,54	0,27
51	0,18	8,77	5,50
52	0,52	0,41	2,49
53	15,25	9,55	2,53
54	10,02	1,25	0,00
61	0,48	4,53	3,89
62	1,78	0,27	0,11
63	0,75	0,47	0,15
64	10,51	13,86	5,44
71	37,79	12,83	2,64
72	2,67	12,43	0,57
73	0,17	0,00	0,22
74	0,00	0,13	0,00
Sum	**1000,00**	**1000,00**	**1000,00**

[1] According to PALOP - the current consumption classification used.

Table 3. Consumption patterns in 3 provinces, 4-digit level. Weights in 1000[1]

	Maputo	Beira	Nampula
1101	231,75	234,19	192,67
1102	86,74	109,88	57,04
1103	64,11	110,55	115,74
1104	23,74	7,24	6,10
1105	47,25	32,20	8,50
1106	67,87	52,88	54,09
1107	14,05	28,06	14,11
1108	49,64	32,35	109,18
1109	24,24	57,88	164,06
1110	78,43	19,11	16,36
1111	5,65	1,72	1,26
1112	13,75	13,22	11,74
1201	13,03	5,27	1,88
1202	9,97	8,74	1,77
1301	1,86	7,31	2,09
2101	1,17	0,71	0,49
2102	5,84	10,45	6,39
2103	13,30	18,84	26,39
2104	5,73	2,66	1,39
2201	3,24	2,68	1,58
2202	2,80	1,48	1,45
2203	1,32	0,89	0,39
2204	0,07	0,00	0,00
3101	12,66	14,69	24,11
3102	25,20	6,91	54,42
3103	0,48	0,00	4,50
3203	5,58	12,90	18,71
3204	54,49	80,39	38,30
3205	10,61	5,74	1,80
3301	1,63	0,24	4,72
3401	2,22	0,59	0,73
3501	3,10	5,70	16,34
3601	2,72	1,50	2,74
3701	26,06	38,36	11,25
3801	0,00	0,07	0,06
3901	6,25	4,58	0,21
4101	2,40	4,88	3,63
4201	0,41	0,14	0,00
4301	0,51	0,54	0,27
5101	0,00	8,77	5,50
5102	0,18	0,00	0,00
5201	0,52	0,41	2,49
5301	15,25	9,55	2,53
5402	10,02	1,25	0,00
6101	0,48	2,74	3,89
6102	0,00	1,79	0,00
6201	1,78	0,27	0,11
6302	0,75	0,47	0,15
6401	10,51	13,86	5,44
7101	4,58	0,81	0,00
7102	32,70	11,50	2,49
7103	0,26	0,28	0,15
7104	0,25	0,24	0,00
7201	1,40	2,72	0,33
7202	1,27	9,72	0,24
7301	0,17	0,00	0,22
7401	0,00	0,13	0,00
Sum	**1000,00**	**1000,00**	**1000,00**

[1] According to PALOP - the current consumption classification used.

Table 4. Weights and weight items for Maputo. 1996

C-4	C-Tol	Types of items	Weights
1101	1101111	ARROZ CORRENTE	8,808
1101	1101112	ARROZ EXTRA	1,312
1101	1101121	MILHO AMARELO	0,124
1101	1101122	MILHO BRANCO	3,107
1101	1101212	FARINHA DE MILHO (BRANCO)	2,033
1101	1101221	FARINHA DE TRIGO (NORMAL)	0,098
1101	1101222	FARINHA DE TRIGO ESPECIAL	0,055
1101	1101311	MASSAS ALIMENTICIAS (ESPARGUETE)	0,435
1101	1101321	MACARRÃO	0,460
1101	1101411	PAO	6,397
1101	1101412	PAO DE FORMA	0,281
1101	1101431	BOLACHAS	0,064
1102	1102111	CARNE LIMPA (VACA DE 2ª LIMPA)	0,300
1102	1102112	BIFE (VACA DE 1ª)	2,487
1102	1102115	DOBRADA DE VACA	0,145
1102	1102116	LINGUA DE VACA	0,301
1102	1102118	CABEÇA DE VACA	1,079
1102	1102131	CARNE DE SUINO DE (1ª)	0,049
1102	1102132	CARNE DE SUINO DE 2ª	0,081
1102	1102141	CARNE DE CAPRINO	0,088
1102	1102222	FRANGO (LIMPO MORTO)	4,045
1102	1102321	SALSICHA EM LATA	0,070
1102	1102331	FIAMBRE DE PORCO	0,028
1103	1103111	PEDRA**FRESCO DE 1"**	0,037
1103	1103121	CORVINA**FRESCA DE 2"**	0,060
1103	1103131	CARAPAU**CONGELADO DE 2"**	4,963
1103	1103154	SARDINHA	0,142
1103	1103231	CAMARAO FRESCO**MEDIO**.	0,078
1103	1103241	CARANGUEIJO	0,166
1103	1103261	CAMARAO SECO	0,776
1103	1103311	PEIXE SECO	0,190
1104	1104121	LEITE EM PO	0,139
1104	1104131	LEITE CONDENSADO	0,687
1104	1104211	QUEIJO	0,090
1104	1104231	MILO	0,067
1104	1104261	MANTEIGA	0,462
1104	1104311	OVOS	0,929
1105	1105111	OLEO ALIMENTAR	4,327
1105	1105121	MARGARINA FLOR	0,398
1106	1106111	ALFACE	0,487
1106	1106113	FOLHAS DE ABOBORA (NBOWA)	0,289
1106	1106121	CEBOLA	2,131
1106	1106131	CENOURA	0,171
1106	1106141	COUVE	0,767
1106	1106151	REPOLHO	0,151
1106	1106161	TOMATE	2,730
1106	1106172	FEIJAO VERDE	0,061
1107	1107111	LARANJA	0,168
1107	1107211	ANANAS	0,054
1107	1107221	BANANA	0,110
1107	1107231	COCO	0,971
1107	1107241	MANGA	0,066
1107	1107251	PAPAIA	0,036
1108	1108111	FEIJAO MANTEIGA	0,971
1108	1108112	FEIJAO NHEMBA	0,277
1108	1108113	FOLHAS DE FEIJAO NHEMBA	0,164
1108	1108121	AMENDOIM	3,552
1109	1109111	BATATA	1,718
1109	1109121	BATATA-DOCE	0,153
1109	1109122	FOLHAS DE BATATA DOCE	0,049
1109	1109131	MANDIOCA FRESCA	0,344
1109	1109133	FOLHA DE MANDIOQUEIRA (MATAPA)	0,117
1109	1109211	FARINHA DE MANDIOCA	0,043
1110	1110111	AÇUCAR AMARELO	6,188
1110	1110112	AÇUCAR BRANCO	1,569
1110	1110211	JAM DE ANANAS (MERMELADA)	0,034
1110	1110241	DOCES(REBUÇADOS LOUMAR)	0,051
1111	1111111	CHA	0,443
1111	1111121	CAFÉ	0,121

C-4 4-digit consumption level
C-Tol Types of item code

Table 4. Weights and weight items for Maputo. 1996

C-4	C-Tol	Types of items	Weights
1112	1112111	SAL GROSSO	0,317
1112	1112112	SAL FINO	0,037
1112	1112121	VINAGRE	0,124
1112	1112131	ALHO	0,378
1112	1112151	PIRI PIRI FRESCO	0,021
1112	1112161	PO DE CARIL	0,331
1112	1112171	CALDO DE GALINHA	0,118
1112	1112172	CALDO DE VACA	0,049
1201	1201121	REFRESCO EM GARRAFA	1,095
1201	1201122	REFRESCO EM LATA	0,122
1201	1201131	SUMO	0,079
1201	1201141	AGUA MINERAL	0,006
1202	1202211	CERVEJA GARRAFA	0,724
1202	1202231	VINHO TINTO	0,092
1202	1202251	WHISKY	0,181
1301	1301111	CIGARROS - PALMAR	0,037
1301	1301112	CIGARROS - FN	0,074
1301	**1301**	**CIGARROS - IMPORTED BRAND**	**0,074**
2101	2101121	TECIDO PARA VESTIDO	0,117
2102	2102111	BALALAICA	0,017
2102	2102121	CALÇAS	0,178
2102	2102131	CAMISA	0,207
2102	2102141	PEUGA	0,023
2102	2102181	FATO PARA HOMEM	0,159
2103	2103211	SAIA	0,141
2103	2103221	VESTIDO	0,244
2103	2103241	CAPULANA	0,641
2103	2103261	BLUSA	0,198
2103	2103251	SOUTIEN	0,065
2103	2103291	LENÇO DE CABEÇA	0,041
2104	2104111	VESTUARIO PARA CRIANÇA	0,483
2104	2104112	FRALDAS	0,090
2201	2201121	CALÇADO PARA HOMEM(SAPATO DE CAMUR	0,210
2201	2201111	SAPATO DE CABEDAL	0,113
2202	2202121	CALÇADO PARA MULHER(SAPATO DE CABED	0,280
2203	2203111	CALÇADO PARA CRIANÇA	0,132
2204	2204111	REPARAÇAO DE CALÇADO	0,007
3101	3101111	ALUGUER DA HABITAÇAO	1,266
3102	3102111	AGUA DA HABITAÇAO PRINCIPAL	2,490
3102	3102211	TINTAS	0,015
3102	3102212	TORNEIRAS	0,015
3103	3103111	VIDROS	0,048
3203	3203111	GAS	0,347
3203	3203121	PETROLEO	0,211
3204	3204111	CARVAO	4,654
3204	3204121	LENHA	0,795
3205	3205111	ELECTRICIDADE	1,061
3301	3301111	CAMA DE MADEIRA (CASAL)	0,032
3301	3301122	MOBILIA DE SALA DE JANTAR DE MADEIRA	0,131
3401	3401131	CORTINAS	0,117
3401	3401211	VELA	0,105
3501	3501122	GELEIRA	0,169
3501	3501123	CONGELADOR	0,090
3501	3501131	RELOGIO DE PAREDE	0,052
3601	3601111	LOIÇA DE VIDRO	0,076
3601	3601113	LOIÇA DE PLASTICO	0,033
3601	3601121	COPO	0,042
3601	3601211	PANELAS	0,121
3701	3701121	DETERGENTE (EMPÓ)	0,577
3701	3701111	DETERGENTE LIQUIDO PARA LOUÇA	0,577
3701	3701131	SABAO	1,397
3701	3701161	PALHA DE AÇO	0,055
3901	3901111	PAGAMENTO DE EMPREGADOS	0,625
4101	4101111	ACIDO ACÉTICO	0,185
4101	4101121	HIDROXIDO DE ALUMINIO	0,010
4101	4101132	FLUDIFICANTES DAS SECREÇOES BRONQUI	0,010
4101	4101151	CLOROQUINA	0,011
4101	4101161	ALGODAO HIDROFILO	0,006
4101	4101171	PARACETAMOL	0,017
4201	4201111	TAXA DE INTERNAMENTO	0,041
4301	4301111	CONSULTA MEDICA	0,044
4301	4301112	OUTROS SERVIÇOS MEDICOS (CONSULTA ES	0,008
5102	5102111	REPARAÇAO DE AUTOMOVEIS	0,018
5201	5201111	GASOLINA	0,052

C-4 4-digit consumption level
C-Tol Types of item code

Table 4. Weights and weight items for Maputo. 1996

C-4	C-Tol	Types of items	Weights
5301	5301111	BILHETE - TPM	0,042
5301	5301121	CHAPA	0,895
5301	5301211	PASSAGEM DE AVIAO	0,547
5301	5301221	PASSAGEM DE COMBOIO	0,042
5402	5402111	CHAMADAS LOCAIS (TELEFONE)	0,692
5402	5402121	CHAMADAS NACIONAIS	0,085
5402	5402131	CHAMADAS INTERNACIONAIS	0,225
6101	6101111	RADIO-RECEPTOR (RADIO GRAVADOR)	0,014
6101	6101121	TELEVISOR (A COR)	0,034
6201	6201111	JOGOS DESPORTIVOS (FUTEBOL)	0,130
6201	6201113	TEATRO	0,047
6302	6302111	JORNAL NOTICIAS	0,018
6302	6302112	REVISTAS	0,014
6302	6302113	JORNAL DOMINGO	0,043
6401	6401111	PROPINAS ESCOLARES	0,312
6401	6401131	LIVROS(TEXTOS) ESCOLARES	0,390
6401	6401141	LAPIS DE CARVAO	0,349
7101	7101131	BARBEARIA (SERVIÇO DE BARBEARIA)	0,056
7101	7101141	CABELEREIRO (SERVIÇO DE CABELEREIRO)	0,402
7102	7102111	SABONETE	1,010
7102	7102121	PAPEL HIGIENICO	0,292
7102	7102122	PENSOS HIGIENICOS (MODESS)	0,377
7102	7102132	ESCOVA DE DENTES	0,168
7102	7102151	PASTA DENTIFRICA	0,717
7102	7102161	MAQUINA DE BARBEAR	0,039
7102	7102211	PERFUMES	0,357
7102	7102221	LOÇAO PARA PELE	0,309
7103	7103111	ANEIS	0,017
7103	7103121	BRINCOS	0,009
7104	7104111	MALAS	0,025
7201	7201111	REFEIÇAO EM RESTAURANTE	0,043
7201	7201211	PAO	0,010
7201	7201221	SANDUICH DE OVO	0,088
7202	7202111	CHA (FORA DE CASA)	0,013
7202	7202211	REFRESCOS	0,057
7202	7202311	CERVEJA	0,057
7301	7301111	DESPESAS POR FUNERAIS	0,017

C-4 4-digit consumption level
C-Tol Types of item code

Table 5. Weights and weight items for Beira. 1996

C-4	C-Tol	Types of items	Weight
1101	1101111	ARROZ CORRENTE	8,667
1101	1101121	MILHO (AMARELO)	2,954
1101	1101122	MILHO BRANCO	0,047
1101	1101141	MAPIRA	0,235
1101	1101211	FARINHA DE MILHO (AMARELO)	5,343
1101	1101212	FARINHA DE MILHO BRANCO	2,745
1101	1101221	FARINHA DE TRIGO NORMAL	0,226
1101	1101222	FARINHA DE TRIGO (ESPECIAL)	0,141
1101	1101241	FARINHA DE MAPIRA	0,266
1101	1101311	MASSAS ALIMENTICIAS (ESPARGUETE)	0,169
1101	1101321	MACARRÃO	0,189
1101	1101411	PAO	2,329
1101	1101421	BOLO ARRUFADA	0,048
1101	1101431	BOLACHAS	0,062
1102	1102111	CARNE DE VACA 2ªLIMPA	0,472
1102	1102112	CARNE DE VACA (DE 1ª)	0,987
1102	1102132	CARNE DE SUINO DE 2ª	0,194
1102	1102141	CARNE DE CAPRINO	0,128
1102	1102151	CARNE DE GAZELA	0,132
1102	1102161	COELHO	0,292
1102	1102221	FRANGO VIVO	1,262
1102	1102222	FRANGO (MORTO LIMPO)	1,173
1102	1102311	CHOURIÇO DE CARNE INDUSTRIAL	3,718
1102	1102312	FIAMBRE DE PORCO	1,684
1102	1102321	SALSICHA	0,947
1103	1103111	PEDRA (FRESCO DE 1ª)	0,113
1103	1103131	CARAPAU (CONGELADO DE 2ª)	6,887
1103	1103152	VERMELHO	0,161
1103	1103154	SARDINHA	0,375
1103	1103231	CAMARAO (FRESCO)	1,504
1103	1103311	PEIXE SECO DE 1ª	2,017
1104	1104121	LEITE EM PO	0,407
1104	1104131	LEITE CONDENSADO	0,010
1104	1104261	MANTEIGA	0,047
1104	1104311	OVOS	0,261
1105	1105111	OLEO ALIMENTAR	3,213
1105	1105121	MARGARINA (STORK)	0,006
1106	1106112	ABOBORA	0,388
1106	1106113	FOLHAS DE ABOBORA (NBOWA)	0,538
1106	1106121	CEBOLA	0,912
1106	1106141	COUVE	0,235
1106	1106151	REPOLHO	0,060
1106	1106161	TOMATE	2,234
1106	1106171	MAÇAROCA	0,478
1106	1106172	FEIJAO VERDE	0,115
1106	1106173	QUIABO	0,329
1107	1107111	LARANJA	0,081
1107	1107211	ANANAS	0,038
1107	1107221	BANANA	0,275
1107	1107231	COCO	1,865
1107	1107241	MANGA	0,118
1107	1107251	PAPAIA	0,429
1108	1108111	FEIJAO MANTEIGA	1,185
1108	1108112	FEIJAO NHEMBA	0,723
1108	1108113	FOLHAS DE FEIJAO NHEMBA	0,376
1108	1108121	AMENDOIM	0,609
1108	1108141	MADUMBE / INHAME	0,128
1108	1108161	FEIJAO JUGO	0,214
1109	1109111	BATATA	0,193
1109	1109121	BATATA-DOCE	3,026
1109	1109122	FOLHAS DE BATATA DOCE	0,318
1109	1109131	MANDIOCA (FRESCA)	1,301
1109	1109133	FOLHA DE MANDIOQUEIRA (MATAPA)	0,551
1109	1109211	FARINHA DE MANDIOCA	0,400
1110	1110111	AÇUCAR AMARELO	0,152
1110	1110112	AÇUCAR (BRANCO)	1,759
1111	1111111	CHA (PROLAR)	0,119
1111	1111121	CAFÉ	0,053

C-4 4-digit consumption level
C-Tol Types of item code

Table 5. Weights and weight items for Beira. 1996

C-4	C-Tol	Types of items	Weight
1112	1112111	SAL GROSSO	0,897
1112	1112121	VINAGRE	0,028
1112	1112131	ALHO	0,178
1112	1112151	PIRI PIRI FRESCO	0,047
1112	1112161	PO DE CARIL	0,172
1201	1201121	REFRESCO EM GARRAFA	0,454
1201	1201131	SUMO	0,073
1202	1202211	CERVEJA GARRAFA	0,582
1202	1202212	CERVEJA LATA	0,188
1202	1202231	VINHO (TINTO)	0,070
1202	1202291	AGUARDENTE	0,033
1301	1301113	CIGARROS (KING SPORT)	0,493
1301	1301114	CIGARROS - LIFE	0,040
1301	**0001301**	**CIGARROS IMPORTED**	**0,040**
1301	1301211	TABACO VIRGEM	0,157
2101	2101111	TECIDOS (P/CALÇAS)	0,030
2101	2101121	TECIDO PARA VESTIDO	0,041
2102	2102111	BALALAICA	0,057
2102	2102121	CALÇAS	0,387
2102	2102131	CAMISA	0,189
2102	2102141	PEUGA	0,022
2102	2102161	CUECAS	0,129
2102	2102181	FATO PARA HOMEM	0,243
2102	2102191	JACKET	0,018
2103	2103211	SAIA	0,213
2103	2103221	VESTIDO	0,242
2103	2103241	CAPULANA	1,168
2103	2103251	SOUTIEN	0,020
2103	2103261	BLUSA	0,195
2103	2103271	CALCINHA	0,020
2103	2103291	LENÇO DE CABEÇA	0,024
2104	2104111	CAMISA PARA CRIANÇA	0,103
2104	2104112	FRALDAS	0,163
2201	2201112	CHINELOS	0,172
2201	2201111	SAPATOS DE CABEDAL	0,096
2202	2202111	SANDALIAS PLASTICAS	0,117
2202	2202122	SAPATILHAS (P/SENHORAS)	0,031
2203	2203111	CALÇADO PARA CRIANÇA	0,089
3101	3101111	ALUGUER DA HABITAÇAO	1,469
3102	3102111	AGUA DA HABITAÇAO PRINCIPAL	0,649
3102	3102211	TINTAS	0,021
3102	3102112	TORNEIRAS	0,021
3203	3203111	GAS	0,127
3203	3203121	PETROLEO	1,163
3204	3204111	CARVAO	3,409
3204	3204121	LENHA	4,630
3205	3205111	ELECTRICIDADE	0,574
3301	3301111	MOBILIA DE QUARTO (CAMA CASAL)	0,018
3301	3301123	CADEIRA DE MADEIRA	0,006
3401	3401111	LENÇOIS	0,032
3401	3401121	TOALHA DE MESA	0,016
3401	3401211	VELA	0,011
3501	3501122	GELEIRA	0,088
3501	3501123	CONGELADOR	0,373
3501	3501125	FOGAO A GAS	0,059
3501	3501131	RELOGIO DE PAREDE	0,050
3601	3601111	LOIÇA DE VIDRO	0,020
3601	3601113	LOIÇA DE PLASTICO	0,023
3601	3601121	COPO DE VIDRO	0,044
3601	3601211	PANELAS	0,063
3701	3701121	DETERGENTE (PO)?	0,237
3701	3701131	SABAO (BINGO)	3,465
3701	3701151	FOSFOROS	0,074
3701	3701161	PILHAS	0,060
3801	3801111	LAVAGEM DE MANTAS	0,007
3901	3901111	PAGAMENTO DE EMPREGADOS	0,458

C-4 4-digit consumption level
C-Tol Types of item code

Table 5. Weights and weight items for Beira. 1996

C-4	C-Tol	Types of items	Weight
4101	4101111	ANTIDOTOS	0,327
4101	4101143	PENICILINA	0,037
4101	4101151	CLOROQUINA	0,026
4101	4101152	MEBENDAZOL	0,015
4101	4101171	PARACETAMOL	0,010
4101	4101172	ASPIRINA	0,022
4101	4101181	HIDROXICOBALAMINA (VITAMINA B12)	0,024
4101	4101221	SORO ORAL	0,026
4201	4201111	TAXA DE INTERNAMENTO	0,014
4301	4301111	CONSULTA MEDICA	0,054
5101	5101121	BICICLETA	0,843
5101	5101211	REPARAÇAO DE AUTOMOVEIS	0,027
5101	5101221	REPARAÇAO DE BICICLETAS	0,007
5201	5201111	GASOLINA	0,041
5301	5301111	BILHETE - TPB	0,059
5301	5301121	CHAPA	0,727
5301	5301211	PASSAGEM DE AVIAO	0,123
5301	5301221	PASSAGEM NACIONAL DE NAVIO	0,026
5301	5301231	PASSAGEM DE COMBOIO	0,020
5402	5402111	CHAMADAS LOCAIS (TELEFONE)	0,107
5402	5402121	CHAMADAS NACIONAIS	0,012
5402	5402131	CHAMADAS INTERNACIONAIS	0,006
6101	6101111	RADIO-RECEPTOR (GRAVADOR)	0,264
6101	6101121	APARELHOS DE RADIO E TELEVISAO (TV A C(	0,011
6102	6102111	CASSETE AUDIO	0,161
6102	6102121	ROLO PARA FOTOGRAFIA	0,018
6201	6201111	JOGOS DESPORTIVOS (FUTEBOL)	0,012
6201	6201113	ESPECTACULOS ARTISTICOS (TEATRO)	0,016
6302	6302112	JORNAIS (DIARIO)	0,020
6302	6302113	JORNAL DOMINGO	0,020
6302	6302121	REVISTAS	0,007
6401	6401111	PROPINAS ESCOLARES	0,824
6401	6401121	CADERNOS	0,010
6401	6401131	LIVROS(TEXTOS) ESCOLARES	0,265
6401	6401141	LAPIS	0,265
6401	6401151	CANETA (ESFEROGRAFICAS)	0,021
7101	7101131	BARBEARIA (SERVIÇO DE BARBEARIA)	0,053
7101	7101141	CABELEREIRO (SERVIÇO DE CABELEREIRO)	0,028
7102	7102111	SABONETE	0,525
7102	7102121	PAPEL HIGIENICO	0,030
7102	7102131	SHAMPOO PARA CABELO	0,024
7102	7102132	ESCOVA DE DENTES	0,033
7102	7102151	PASTA DENTIFRICA	0,162
7102	7102162	LAMINAS	0,149
7102	7102211	PERFUMES	0,061
7102	7102221	LOÇAO PARA PELE	0,070
7102	7102231	FRALDAS PARA BEBES	0,096
7103	7103111	ANEIS	0,028
7104	7104111	MALAS	0,010
7104	7104121	GUARDA-CHUVAS	0,014
7201	7201111	REFEIÇAO EM RESTAURANTE	0,102
7201	7201211	PAO	0,044
7201	7201221	SANDUICH DE OVO	0,072
7201	7201231	BADGIAS	0,025
7201	7201241	BATATA (COZIDA, FRITA)	0,029
7202	7202111	CHA (FORA DE CASA)	0,042
7202	7202211	REFRESCOS	0,634
7202	7202311	CERVEJA	0,238
7202	7202312	CERVEJA LATA	0,018
7202	7202411	SUMO	0,039
7401	7401111	DESPESAS POR MATRIMONIOS	0,013

C-4 4-digit consumption level
C-Tol Types of item code

Table 6. Weights and weight items for Nampula. 1996

C-4	C-Tol	Types of items	Weight
1101	1101111	ARROZ CORRENTE	3,026
1101	1101112	ARROZ EXTRA	0,294
1101	1101113	ARROZ PRE-COZIDO	0,983
1101	1101122	MILHO (BRANCO)	1,340
1101	1101141	MAPIRA	0,273
1101	1101212	FARINHA DE MILHO BRANCO	9,308
1101	1101231	FARINHA DE MEIXOERA	0,157
1101	1101241	FARINHA DE MAPIRA	2,542
1101	1101311	MASSAS ALIMENTICIAS (ESPARGUETE)	0,068
1101	1101321	MACARRÃO	0,075
1101	1101411	PAO	1,144
1101	1101431	BOLACHAS	0,058
1102	1102111	CARNE DE VACA (DE 2ª LIMPA)	0,255
1102	1102112	CARNE DE VACA DE 1ª	0,285
1102	1102131	CARNE DE SUINO (DE 1ª)	0,202
1102	1102132	CARNE DE SUINO DE 2ª	0,207
1102	1102141	CARNE DE CAPRINO	0,612
1102	1102161	COELHO	0,106
1102	1102171	CARNE DE OVINO	0,111
1102	1102221	FRANGO (VIVO)	2,448
1102	1102331	FIAMBRE DE PORCO	1,478
1103	1103131	CARAPAU (CONGELADO DE 2ª)	3,142
1103	1103154	SARDINHA	2,044
1103	1103211	LULAS (FRESCAS)	0,047
1103	1103231	CAMARAO (FRESCO MÉDIO)	0,859
1103	1103241	CARANGUEIJO	0,078
1103	1103311	PEIXE SECO DE 1"	3,786
1103	1103312	PEIXE SECO DE 2"	1,620
1104	1104111	LEITE (FRESCO)	0,201
1104	1104311	OVOS	0,409
1105	1105111	OLEO ALIMENTAR	0,819
1105	1105123	MARGARINA PLANTA	0,031
1106	1106111	ALFACE	0,059
1106	1106112	ABOBORA	1,193
1106	1106113	FOLHAS DE ABOBORA (NBOWA)	0,908
1106	1106121	CEBOLA	0,329
1106	1106141	COUVE	0,129
1106	1106161	TOMATE	0,667
1106	1106171	MAÇAROCA	1,290
1106	1106172	FEIJAO VERDE	0,662
1106	1106174	COGUMELOS	0,171
1107	1107111	LARANJA	0,025
1107	1107211	ANANAS	0,018
1107	1107221	BANANA	0,740
1107	1107231	COCO	0,556
1107	1107241	MANGA	0,056
1107	1107251	PAPAIA	0,016
1108	1108111	ERVILHA	2,132
1108	1108111	FEIJAO MANTEIGA	0,443
1108	1108112	FEIJAO NHEMBA	3,725
1108	1108113	FOLHAS DE FEIJAO NHEMBA	0,239
1108	1108121	AMENDOIM	2,403
1108	1108131	AMENDOA DE CAJU	0,282
1108	1108161	FEIJAO JUGO	1,694
1109	1109111	BATATA	0,193
1109	1109121	BATATA-DOCE	0,182
1109	1109131	MANDIOCA (FRESCA)	3,504
1109	1109132	MANDIOCA SECA	6,985
1109	1109133	FOLHA DE MANDIOQUEIRA (MATAPA)	1,369
1109	1109134	FOLHAS DE BATATA DOCE	0,170
1109	1109211	FARINHA DE MANDIOCA	4,004
1110	1110111	AÇUCAR AMARELO	0,137
1110	1110112	AÇUCAR (BRANCO)	1,499
1111	1111111	CHA	0,054
1111	1111121	CAFÉ	0,072
1112	1112111	SAL GROSSO	0,995
1112	1112121	VINAGRE	0,023
1112	1112131	ALHO	0,029
1112	1112151	PIRI PIRI FRESCO	0,068
1112	1112161	PO DE CARIL	0,009
1112	1112171	CALDO DE GALINHA	0,051

C-4 4-digit consumption level
C-Tol Types of item code

Table 6. Weights and weight items for Nampula. 1996

C-4	C-Tol	Types of items	Weight
1201	1201121	REFRESCO EM GARRAFA	0,171
1201	1201131	SUMO	0,016
1202	1202211	CERVEJA (GARRAFA)	0,089
1202	1202212	CERVEJA LATA	0,089
1301	1301111	CIGARROS - GT	0,104
1301	1301	CIGARROS - IMPORTED	0,104
2101	2101121	TECIDO PARA VESTIDO	0,049
2102	2102111	BALALAICA	0,041
2102	2102121	CALÇAS	0,209
2102	2102131	CAMISA	0,216
2102	2102132	CAMISOLA (P/HOMEM)	0,051
2102	2102141	PEUGAS	0,065
2102	2102181	FATO PARA HOMEM	0,057
2103	2103211	SAIA	0,072
2103	2103221	VESTIDO	0,038
2103	2103241	CAPULANA	2,147
2103	2103251	SOUTIEN	0,023
2103	2103261	BLUSA	0,241
2103	2103271	CALCINHA	0,023
2103	2103291	LENÇO DE CABEÇA	0,096
2104	2104111	VESTUARIO PARA CRIANÇA	0,139
2201	2201111	CALÇADO PARA HOMEM (DE CABEDAL)	0,079
2201	2201121	SAPATO DE CAMURÇA	0,079
2202	2202121	CALÇADO PARA MULHER (SAPATO DE CABEI	0,145
2203	2203111	CALÇADO PARA CRIANÇA	0,039
3101	3101111	ALUGUER DA HABITAÇAO	2,411
3102	3102111	AGUA DA HABITAÇAO PRINCIPAL	3,927
3102	3102211	TINTA	0,758
3102	3102212	TORNEIRA	0,758
3103	3103121	PORTAS	0,189
3103	3103131	PREGOS	0,261
3203	3203121	PETROLEO	1,871
3204	3204111	CARVAO	0,533
3204	3204121	LENHA	3,298
3205	3205111	ELECTRICIDADE	0,180
3301	3301111	CAMA DE MADEIRA (CASAL)	0,125
3301	3301121	MESA DE MADEIRA (MESA DE COZINHA C/ 4 (	0,056
3301	3301122	MOBILIA DE SALA DE JANTAR DE MADEIRA	0,187
3301	3301123	CADEIRA DE MADEIRA	0,026
3301	3301131	MESA DE METAL	0,078
3401	3401141	TOALHA DE BANHO	0,024
3401	3401211	VELA	0,049
3501	3501121	FOGAO	0,858
3501	3501122	GELEIRA	0,776
3601	3601111	LOIÇA DE VIDRO	0,032
3601	3601112	LOIÇA DE PORCELANA	0,065
3601	3601113	LOIÇA DE PLASTICO	0,094
3601	3601121	COPO DE VIDRO	0,055
3601	3601211	PANELAS	0,027
3701	3701121	DETERGENTE (EM PO)	0,008
3701	3701131	SABAO	1,066
3701	3701141	VASSOURA	0,027
3701	3701171	SODA CAUSTICA	0,025
3801	3801112	SERVIÇO DE LAVANDERIA	0,006
3901	3901111	PAGAMENTO DE EMPREGADOS	0,021
4101	4101111	ANTIDOTOS (ACIDO ACETICO)	0,177
4101	4101132	FLUDIFICANTES DAS SECREÇOES BRONQUIC	0,010
4101	4101143	PENICILINA	0,012
4101	4101151	CLOROQUINA	0,051
4101	4101152	MEBENDAZOL	0,007
4101	4101171	PARACETAMOL	0,006
4101	4101172	ASPIRINA	0,049
4101	4101173	ACIDO ACETILSALICILICO	0,006
4101	4101182	SAL FERROSO	0,026
4101	4101183	FERRO-DEXTRANO	0,018
4301	4301111	CONSULTA MEDICA	0,027
5101	5101111	BICICLETA	0,322
5101	5101211	REPARAÇAO DE AUTOMOVEIS	0,222
5101	5101221	REPARAÇAO DE BICICLETAS	0,006
5201	5201111	GASOLINA	0,249
5301	5301121	CHAPA	0,210
5301	5301221	PASSAGEM DE COMBOIO	0,043
6101	6101111	RADIO-RECEPTOR (GRAVADOR)	0,235
6101	6101121	TELEVISOR (COR)	0,154

C-4 4-digit consumption level
C-Tol Types of item code

Table 6. Weights and weight items for Nampula. 1996

C-4	C-Tol	Types of items	Weight
6201	6201112	CINEMA	0,011
6302	6302111	JORNAL NOTICIAS	0,008
6302	6302114	JORNAL SAVANA	0,008
6401	6401111	PROPINAS ESCOLARES	0,306
6401	6401121	CADERNOS	0,028
6401	6401131	LIVROS(TEXTOS) ESCOLARES	0,070
6401	6401141	LAPIS	0,070
6401	6401151	ESFEROGRAFICA	0,070
7102	7102111	SABONETE	0,129
7102	7102131	SHAMPOO PARA CABELO	0,024
7102	7102132	ESCOVA DE DENTES	0,010
7102	7102151	PASTA DENTIFRICA	0,019
7102	7102162	LAMINAS	0,032
7102	7102171	POMADA PARA CALÇADO	0,010
7102	7102211	PERFUMES	0,025
7103	7103131	COLARES	0,015
7201	7201221	SANDUICH (DE OVOS)	0,021
7201	7201251	PEIXE (FORA DE CASA)	0,012
7202	7202211	REFRESCOS	0,016
7202	7202411	SUMO	0,008
7301	7301111	DESPESAS POR FUNERAIS	0,022

C-4 4-digit consumption level
C-Tol Types of item code

Table 7. List of new weight items in Maputo

C-4	C-Tol	Types of items	Weight
1101	1101412	PAO DE FORMA	0,281
1102	1102115	DOBRADA DE VACA	0,145
1102	1102116	LINGUA DE VACA	0,301
1102	1102118	CABEÇA DE VACA	1,079
1102	1102331	FIAMBRE DE PORCO	0,028
1103	1103154	SARDINHA	0,142
1103	1103311	PEIXE SECO	0,190
1104	1104231	MILO	0,067
1104	1104261	MANTEIGA	0,462
1106	1106113	FOLHAS DE ABOBORA (NBOWA)	0,289
1106	1106172	FEIJAO VERDE	0,061
1108	1108112	FEIJAO NHEMBA	0,277
1108	1108113	FOLHAS DE FEIJAO NHEMBA	0,164
1109	1109122	FOLHAS DE BATATA DOCE	0,049
1109	1109133	FOLHA DE MANDIOQUEIRA (MATAPA)	0,117
1112	1112112	SAL FINO	0,037
1112	1112172	CALDO DE VACA	0,049
1201	1201141	AGUA MINERAL	0,006
1202	1202251	WHISKY	0,181
1301	1301	CIGARROS IMPORTED BRAND	0,074
2104	2104112	FRALDAS	0,090
3103	3103111	VIDROS	0,048
3301	3301122	MOBILIA DE SALA DE JANTAR DE MADEIRA	0,131
3401	3401131	CORTINAS	0,117
3401	3401211	VELA	0,105
3501	3501123	CONGELADOR	0,090
3501	3501131	RELOGIO DE PAREDE	0,052
3601	3601111	LOIÇA DE VIDRO	0,076
3601	3601113	LOIÇA DE PLASTICO	0,033
3601	3601211	PANELAS	0,121
3701	3701161	PALHA DE AÇO	0,055
4101	4101111	ACIDO ACÉTICO	0,185
4101	4101121	HIDROXIDO DE ALUMINIO	0,010
4101	4101132	FLUDIFICANTES DAS SECREÇOES BRONQUICAS/XAROPE	0,010
4101	4101161	ALGODAO HIDROFILO	0,006
4101	4101171	PARACETAMOL	0,017
4301	4301112	OUTROS SERVIÇOS MEDICOS (CONSULTA ESPECIAL)	0,008
5102	5102111	REPARAÇAO DE AUTOMOVEIS	0,018
5301	5301211	PASSAGEM DE AVIAO	0,547
5301	5301221	PASSAGEM DE COMBOIO	0,042
5402	5402121	CHAMADAS NACIONAIS	0,085
5402	5402131	CHAMADAS INTERNACIONAIS	0,225
7102	7102122	PENSOS HIGIENICOS (MODESS)	0,377
7102	7102132	ESCOVA DE DENTES	0,168
7102	7102161	MAQUINA DE BARBEAR	0,039
7102	7102211	PERFUMES	0,357
7102	7102221	LOÇAO PARA PELE	0,309
7103	7103111	ANEIS	0,026
7103	7103121	BRINCOS	0,009
7104	7104111	MALAS	0,025
7201	7201211	PAO	0,010
7301	7301111	DESPESAS POR FUNERAIS	0,017
		Sum weights of new weight items	**7,409**

C-4 4-digit consumption level
C-Tol Types of item code

Table 8. List of new weight items in Beira

C-4	C-Tol	Type of items	Weight
1101	1101141	MAPIRA	0,235
1101	1101241	FARINHA DE MAPIRA	0,266
1102	1102141	CARNE DE CAPRINO	0,128
1102	1102151	CARNE DE GAZELA	0,132
1102	1102161	COELHO	0,292
1102	1102312	FIAMBRE DE PORCO	1,684
1103	1103152	VERMELHO	0,161
1103	1103231	CAMARAO (FRESCO)	1,504
1104	1104261	MANTEIGA	0,047
1106	1106112	ABOBORA	0,388
1106	1106113	FOLHAS DE ABOBORA (NBOWA)	0,538
1106	1106171	MAÇAROCA	0,478
1106	1106172	FEIJAO VERDE	0,115
1106	1106173	QUIABO	0,329
1108	1108113	FOLHAS DE FEIJAO NHEMBA	0,376
1108	1108141	MADUMBE / INHAME	0,128
1108	1108161	FEIJAO JUGO	0,214
1109	1109122	FOLHAS DE BATATA DOCE	0,318
1109	1109133	FOLHA DE MANDIOQUEIRA (MATAPA)	0,551
1109	1109211	FARINHA DE MANDIOCA	0,400
1301	1301	CIGARROS - IMPORTED BRAND	0,040
1301	1301211	TABACO VIRGEM	0,157
2102	2102111	BALALAICA	0,057
2104	2104112	FRALDAS	0,163
2201	2201112	CHINELOS	0,172
2202	2202111	SANDALIAS PLASTICAS	0,117
3401	3401121	TOALHA DE MESA	0,016
3401	3401211	VELA	0,011
3501	3501123	CONGELADOR	0,373
3501	3501125	FOGAO A GAS	0,059
3501	3501131	RELOGIO DE PAREDE	0,050
3601	3601113	LOIÇA DE PLASTICO	0,023
3601	3601211	PANELAS	0,063
3701	3701121	DETERGENTE (PO)?	0,237
3701	3701161	PILHAS	0,060
3801	3801111	LAVAGEM DE MANTAS	0,007
4101	4101111	ANTIDOTOS	0,327
4101	4101143	PENICILINA	0,037
4101	4101152	MEBENDAZOL	0,015
4101	4101171	PARACETAMOL	0,010
4101	4101172	ASPIRINA	0,022
4101	4101181	HIDROXICOBALAMINA (VITAMINA B12)	0,024
5101	5101211	REPARAÇAO DE AUTOMOVEIS	0,027
5101	5101221	REPARAÇAO DE BICICLETAS	0,007
5301	5301211	PASSAGEM DE AVIAO	0,123
5301	5301221	PASSAGEM NACIONAL DE NAVIO	0,026
5301	5301231	PASSAGEM DE COMBOIO	0,020
5402	5402121	CHAMADAS NACIONAIS	0,012
5402	5402131	CHAMADAS INTERNACIONAIS	0,006
7102	7102131	SHAMPOO PARA CABELO	0,024
7102	7102132	ESCOVA DE DENTES	0,033
7102	7102162	LAMINAS	0,149
7102	7102211	PERFUMES	0,061
7102	7102221	LOÇAO PARA PELE	0,070
7102	7102231	FRALDAS PARA BEBES	0,096
7103	7103111	ANEIS	0,028
7104	7104111	MALAS	0,010
7104	7104121	GUARDA-CHUVAS	0,014
7201	7201211	PAO	0,044
7201	7201231	BADGIAS	0,025
7201	7201241	BATATA (COZIDA, FRITA)	0,029
7202	7202111	CHA (FORA DE CASA)	0,042
7202	7202311	CERVEJA	0,238
7202	7202411	SUMO	0,039
7401	7401111	DESPESAS POR MATRIMONIOS	0,013
		Sum weights of new weight items	**11,455**

C-4 4-digit consumption level
C-Tol Types of item code

Table 8. List of new weight items in Beira

C-4	C-Tol	Type of items	Weight
1101	1101141	MAPIRA	0,235
1101	1101241	FARINHA DE MAPIRA	0,266
1102	1102141	CARNE DE CAPRINO	0,128
1102	1102151	CARNE DE GAZELA	0,132
1102	1102161	COELHO	0,292
1102	1102312	FIAMBRE DE PORCO	1,684
1103	1103152	VERMELHO	0,161
1103	1103231	CAMARAO (FRESCO)	1,504
1104	1104261	MANTEIGA	0,047
1106	1106112	ABOBORA	0,388
1106	1106113	FOLHAS DE ABOBORA (NBOWA)	0,538
1106	1106171	MAÇAROCA	0,478
1106	1106172	FEIJAO VERDE	0,115
1106	1106173	QUIABO	0,329
1108	1108113	FOLHAS DE FEIJAO NHEMBA	0,376
1108	1108141	MADUMBE / INHAME	0,128
1108	1108161	FEIJAO JUGO	0,214
1109	1109122	FOLHAS DE BATATA DOCE	0,318
1109	1109133	FOLHA DE MANDIOQUEIRA (MATAPA)	0,551
1109	1109211	FARINHA DE MANDIOCA	0,400
1301	1301	CIGARROS - IMPORTED BRAND	0,040
1301	1301211	TABACO VIRGEM	0,157
2102	2102111	BALALAICA	0,057
2104	2104112	FRALDAS	0,163
2201	2201112	CHINELOS	0,172
2202	2202111	SANDALIAS PLASTICAS	0,117
3401	3401121	TOALHA DE MESA	0,016
3401	3401211	VELA	0,011
3501	3501123	CONGELADOR	0,373
3501	3501125	FOGAO A GAS	0,059
3501	3501131	RELOGIO DE PAREDE	0,050
3601	3601113	LOIÇA DE PLASTICO	0,023
3601	3601211	PANELAS	0,063
3701	3701121	DETERGENTE (PO)?	0,237
3701	3701161	PILHAS	0,060
3801	3801111	LAVAGEM DE MANTAS	0,007
4101	4101111	ANTIDOTOS	0,327
4101	4101143	PENICILINA	0,037
4101	4101152	MEBENDAZOL	0,015
4101	4101171	PARACETAMOL	0,010
4101	4101172	ASPIRINA	0,022
4101	4101181	HIDROXICOBALAMINA (VITAMINA B12)	0,024
5101	5101211	REPARAÇAO DE AUTOMOVEIS	0,027
5101	5101221	REPARAÇAO DE BICICLETAS	0,007
5301	5301211	PASSAGEM DE AVIAO	0,123
5301	5301221	PASSAGEM NACIONAL DE NAVIO	0,026
5301	5301231	PASSAGEM DE COMBOIO	0,020
5402	5402121	CHAMADAS NACIONAIS	0,012
5402	5402131	CHAMADAS INTERNACIONAIS	0,006
7102	7102131	SHAMPOO PARA CABELO	0,024
7102	7102132	ESCOVA DE DENTES	0,033
7102	7102162	LAMINAS	0,149
7102	7102211	PERFUMES	0,061
7102	7102221	LOÇAO PARA PELE	0,070
7102	7102231	FRALDAS PARA BEBES	0,096
7103	7103111	ANEIS	0,028
7104	7104111	MALAS	0,010
7104	7104121	GUARDA-CHUVAS	0,014
7201	7201211	PAO	0,044
7201	7201231	BADGIAS	0,025
7201	7201241	BATATA (COZIDA, FRITA)	0,029
7202	7202111	CHA (FORA DE CASA)	0,042
7202	7202311	CERVEJA	0,238
7202	7202411	SUMO	0,039
7401	7401111	DESPESAS POR MATRIMONIOS	0,013
		Sum weights of new weight items	**11,455**

C-4 4-digit consumption level
C-Tol Types of item code

Table 9. List of new weight items in Nampula

C-4	C-Tol	Types of items	Weight
1101	1101112	ARROZ EXTRA	0,294
1101	1101113	ARROZ PRE-COZIDO	0,983
1101	1101141	MAPIRA	0,273
1101	1101231	FARINHA DE MEIXOERA	0,157
1101	1101241	FARINHA DE MAPIRA	2,542
1102	1102141	CARNE DE CAPRINO	0,612
1102	1102161	COELHO	0,106
1102	1102171	CARNE DE OVINO	0,111
1102	1102331	FIAMBRE DE PORCO	1,478
1103	1103154	SARDINHA	2,044
1106	1106112	ABOBORA	1,193
1106	1106113	FOLHAS DE ABOBORA (NBOWA)	0,908
1106	1106171	MAÇAROCA	1,290
1106	1106172	FEIJAO VERDE	0,662
1106	1106174	COGUMELOS	0,171
1108	1108111	ERVILHA	2,132
1108	1108112	FEIJAO NHEMBA	3,725
1108	1108113	FOLHAS DE FEIJAO NHEMBA	0,239
1108	1108131	AMENDOA DE CAJU	0,282
1108	1108161	FEIJAO JUGO	1,694
1109	1109133	FOLHA DE MANDIOQUEIRA (MATAPA)	1,369
1109	1109134	FOLHAS DE BATATA DOCE	0,170
1202	1202211	CERVEJA (GARRAFA)	0,089
1202	1202212	CERVEJA LATA	0,089
1301	1301111	CIGARROS - GT	0,104
1301	1301	CIGARROS - IMPORTED BRAND	0,104
2102	2102111	BALALAICA	0,041
2102	2102132	CAMISOLA (P/HOMEM)	0,051
2102	2102181	FATO PARA HOMEM	0,057
3103	3103121	PORTAS	0,189
3103	3103131	PREGOS	0,261
3301	3301122	MOBILIA DE SALA DE JANTAR DE MADEIRA	0,187
3301	3301123	CADEIRA DE MADEIRA	0,026
3301	3301131	MESA DE METAL	0,078
3401	3401141	TOALHA DE BANHO	0,024
3401	3401211	VELA	0,049
3601	3601111	LOIÇA DE VIDRO	0,032
3601	3601112	LOIÇA DE PORCELANA	0,065
3601	3601113	LOIÇA DE PLASTICO	0,094
3601	3601211	PANELAS	0,027
3701	3701121	DETERGENTE (EM PO)	0,008
3701	3701171	SODA CAUSTICA	0,025
3801	3801112	SERVIÇO DE LAVANDERIA	0,006
4101	4101111	ANTIDOTOS (ACIDO ACETICO)	0,177
4101	4101132	FLUDIFICANTES DAS SECREÇOES BRONQUICAS/XAROPE	0,010
4101	4101143	PENICILINA	0,012
4101	4101152	MEBENDAZOL	0,007
4101	4101171	PARACETAMOL	0,006
4101	4101172	ASPIRINA	0,049
4101	4101182	SAL FERROSO	0,026
4101	4101183	FERRO-DEXTRANO	0,018
5101	5101211	REPARAÇAO DE AUTOMOVEIS	0,222
5101	5101221	REPARAÇAO DE BICICLETAS	0,006
5301	5301221	PASSAGEM DE COMBOIO	0,043
7102	7102131	SHAMPOO PARA CABELO	0,024
7102	7102132	ESCOVA DE DENTES	0,010
7102	7102162	LAMINAS	0,032
7102	7102211	PERFUMES	0,025
7103	7103131	COLARES	0,015
7201	7201251	PEIXE (FORA DE CASA)	0,012
7202	7202411	SUMO	0,008
7301	7301111	DESPESAS POR FUNERAIS	0,022
		Sum weights of new weight items	**24,768**

C-4 4-digit consumption level
C-To Types of item code

Recent publications in the series Documents

97/9 H. Berby and Y. Bergstrøm: Development of a Demonstration Data Base for Business Register Management. An Example of a Statistical Business Register According to the Regulation and Recommendations of the European Union

97/10 E. Holmøy: Is there Something Rotten in this State of Benchmark? A Note on the Ability of Numerical Models to Capture Welfare Effects due to Existing Tax Wedges

97/11 S. Blom: Residential Consentration among Immigrants in Oslo

97/12 Ø. Hagen and H.K. Østereng: Inter-Baltic Working Group Meeting in Bodø 3-6 August 1997 Foreign Trade Statistics

97/13 B. Bye and E. Holmøy: Household Behaviour in the MSG-6 Model

97/14 E. Berg, E. Canon and Y. Smeers: Modelling Strategic Investment in the European Natural Gas Market

97/15 A. Bråten: Data Editing with Artificial Neural Networks

98/1 A. Laihonen, I. Thomsen, E. Vassenden and B. Laberg: Final Report from the Development Project in the EEA: Reducing Costs of Censuses through use of Administrative Registers

98/2 F. Brunvoll: A Review of the Report "Environment Statistics in China"

98/3: S. Holtskog: Residential Consumption of Bioenergy in China. A Literature Study

98/4 B.K. Wold: Supply Response in a Gender-Perspective, The Case of Structural Adjustments in Zambia. Tecnical Appendices

98/5 J. Epland: Towards a register-based income statistics. The construction of the Norwegian Income Register

98/6 R. Chodhury: The Selection Model of Saudi Arabia. Revised Version 1998

98/7 A.B. Dahle, J. Thomasen and H.K. Østereng (eds.): The Mirror Statistics Exercise between the Nordic Countries 1995

98/8 H. Berby: A Demonstration Data Base for Business Register Management. A data base covering Statistical Units according to the Regulation of the European Union and Units of Administrative Registers

98/9 R. Kjeldstad: Single Parents in the Norwegian Labour Market. A changing Scene?

98/10 H. Brüngger and S. Longva: International Principles Governing Official Statistics at the National Level: are they Relevant for the Statistical Work of International Organisations as well?

98/11 H.V. Sæbø and S. Longva: Guidelines for Statistical Metadata on the Internet

98/12 M. Rønsen: Fertility and Public Policies - Evidence from Norway and Finland

98/13 A. Bråten and T. L. Andersen: The Consumer Price Index of Mozambique. An analysis of current methodology – proposals for a new one. A short-term mission 16 April - 7 May 1998

98/14 S. Holtskog: Energy Use and Emmissions to Air in China: A Comparative Literature Study

98/15 J.K. Dagsvik: Probabilistic Models for Qualitative Choice Behavior: An introduction

98/16 H.M. Edvardsen: Norwegian Regional Accounts 1993: Results and methods

98/17 S. Glomsrød: Integrated Environmental-Economic Model of China: A paper for initial discussion

98/18 H.V. Sæbø and L. Rogstad: Dissemination of Statistics on Maps

98/19 N. Keilman and P.D. Quang: Predictive Intervals for Age-Specific Fertility

98/20 K.A. Brekke (Coauthor on appendix: Jon Gjerde): Hicksian Income from Stochastic Resource Rents

98/21 K.A.Brekke and Jon Gjerde: Optimal Environmental Preservation with Stochastic Environmental Benefits and Irreversible Extraction

99/1 E. Holmøy, B. Strøm and T. Åvitsland: Empirical characteristics of a static version of the MSG-6 model

99/2 K. Rypdal and B. Tornsjø: Testing the NOSE Manual for Industrial Discharges to Water in Norway

99/3 K. Rypdal: Nomenclature for Solvent Production and Use

99/4 K. Rypdal and B. Tornsjø: Construction of Environmental Pressure Information System (EPIS) for the Norwegian Offshore Oil and Gas Production

99/5 M. Søberg: Experimental Economics and the US Tradable SO_2 Permit Scheme: A Discussion of Parallelism

99/6 J. Epland: Longitudinal non-response: Evidence from the Norwegian Income Panel

Documents

PORTO BETALT
VED
INNLEVERINGA
P.P.
NORGE/NOREG

Tillatelse nr.
159 000/502

B

Returadresse:
Statistisk sentralbyrå
Postboks 8131 Dep.
N-0033 Oslo

Statistics Norway
P.O.B. 8131 Dep.
N-0033 Oslo

Tel: +47-22 86 45 00
Fax: +47-22 86 49 73

ISSN 0805-9411

Statistisk sentralbyrå
Statistics Norway