A DESCRIPTION OF A SURVEY TAKEN IN THE
AREA SURROUNDING KARIOBANGI MARKET

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ABSTRACT

This paper is a description of a survey of households taken in an
area surrounding the Kariobangi market in Nairobi, Kenya. The paper has
been divided into several parts. The first part is a very short
description of the notions about economic development which prompted the
desire to design and administer the survey being discussed. The second
part describes some of the procedures needed to get the survey underway,
and also discusses some of the problems and delays which were encountered.
The third part describes the sample frame used and the selection of the
sample, as well as the final make up of the interviews and the response
rates in different strata. The fourth part is a short description of the
procedure used to administer the questionnaire. A copy of the questionnaire
is appended. The fifth part is a description of the coding procedures
along with a copy of the coding manual. The final part is a very short
discussion of what has been done along with short descriptions of two
extensions of this research which seem interesting to me.

This paper is a description of a survey of households taken in an area surrounding the Kariobangi market in Nairobi, Kenya. The paper has been divided into several parts. The first part is a very short description of the notions about economic development which prompted the desire to design and administer the survey being discussed. The second part describes some of the procedures needed to get the survey underway, and also discusses some of the problems and delays which were encountered The third part describes the sample frame used and the selection of the sample, as well as the final make up of the interviews and the response rates in different strata. The fourth part is a short description of the procedure used to administer the questionnaire. A copy of the questionnaire is appended. The fifth part is a description of the coding procedures. along with a copy of the coding manual. The final part is a very short discussion of what has been done along with short descriptions of two extensions of this research which seem interesting to me.

PART 1: BACKGROUND INFORMATION

Over the last several years, economists interested in the process
of economic development have indicated increased interest in the affect on
the distribution of income of the types of development strategies advocated
by most Western oriented development economists since World War II. This
is significant because until recently this group of economists for the
most part seemed to consider growth in income per capita to be almost
synonymous with if not synonymous with economic development and therefore
showed little interest in other goals of development. This increased
interest in the distribution of income is undoubtedly a result of a variety
of factors. In any case, it has resulted in an interest in trying to
determine why the distribution of income resulting from the above mentioned
strategies is so unequal, and in turn trying to determine strategies which
encourage a somewhat more equal distribution of income in the developing
countries concerned. While there is far from complete knowledge about what
causes the existing distribution of income, it does seem clear that part
of the problem has been relatively slow growth in employment in the modern
sector despite (at least in some cases) relatively rapid growth in national
output. This has proved to be a particularly serious problem in large
urban areas, where employment is necessary to survival, and where in most
cases there is a very rapidly growing labour force.

If it is assumed that such slow growth in employment is in fact
a serious problem, it is natural to look for a solution by trying to
determine ways of increasing the rate of creation of new job opportunities.
In fact, a variety of investigators who take this line have argued that one
important way of creating such new job opportunities is by promoting very
small businesses which operate largely outside of the "modern" sector and
which provide a large number of goods and services to a wide range of
customers using very little capital and other scarce resources. Different
investigators have chosen to label this group of businesses differently, .
although perhaps the most widely used term has been the "informal sector".
Unfortunately, there is very little information about the extent of such
business activity or about the expected growth of such activity. My main
concern has been in trying to determine how to collect information about
these activities. In fact I have argued that a large proportion of such
activities exist in order to provide goods and services to members of low
income communities, and I have further argued that virtually all such
businesses are run by entrepreneurs living in those low income communities.
Because of this, I have also argued that a potentially interesting way of
determining the number of present and future employment opportunities from
these very small businesses is to look at the role of these activities in

the overall economies of the low income communities of which they are part, and then to study the expected patterns of growth of the economies of these communities.

Unfortunately, there is very little data available about specific low income communities. As a result there was a demand for a survey to collect this sort of information. The primary aim of this paper is to describe the survey which actually resulted. The model for which this survey collected data, and a description of how different types of data were to be collected is described elsewhere.[1]

PART 2: NECESSARY PROCEDURES

The original formulation of the ideas which resulted in the demand for a survey of the type described here go back to late 1973. However, I actually began work on getting the survey underway in August of 1974. At that time I wrote a proposal for the I.L.O. which described the survey and proposed an initial budget. This proposal was submitted to the I.L.O. in late August. By the middle of September I got tentative approval for the project from Dr. Knowles, the director of the I.L.O. follow up project in Kenya, and therefore began planning the survey in earnest. The first step was to apply for permission to do such a survey from the Office of the President of the Kenya Government. Getting the clearance turned out to be a long process and it was not until December 16 after numerous trips to the offices of officials involved that a clearance was finally granted.

At the same time, I began the process of writing the questionnaire With the help of Prof. Martin David (visiting I.D.S. and a Professor at the University of Wisconsin in the U.S.), the questionnaire which appears as part of I.D.S. W.P. No. 195 was completed by the middle of October. W.P. No. 195 which describes the survey and presents the initial version of the questionnaire was presented at an I.D.S. seminar in early November.

While writing the questionnaire, I also made contact with Mr. Michael Njoroge, an employee at the Nairobi City Council who I knew had worked on previous socio-economic surveys, and through him I met a number of other Nairobi City Council employees who were experienced interviewers, and who as a group seemed very mature and competent. At the same time, I asked Mrs. Kamau at the I.D.S. to send me any people who had done interviewing for I.D.S. In this way I contacted 13 N.C.C. employees and 3 non-N.C.C. employees who were interested in the job and seemed capable of doing the work involved. I had an initial meeting with these men (and one woman) in early November once the questionnaires had been printed for the I.D.S. seminar.

.After discussing the questionnaire with the interviewers and
at the I.D.S. seminar mentioned, several changes were made. The question-
naire was then duplicated on December 2, by the University duplicating
service. The next necessary step was to discuss appropriate translations
of the questionnaire. It was decided that the questionnaire should be
translated into Kikuyu and Swahili, the most common languages used in
Nairobi low income areas.

In order to do this the questionnaire was broken into several
parts and each interviewer translated one part. Using the resulting
translation, two third parties compiled translations of the entire .
interview into Swahili and Kikuyu. These translations were then duplicated,
and the interviewers as a group discussed the translations, and came to
final agreement on a single translation. (These discussions were ably led
by Michael Njoroge who is the "foreman" of the group and as such is paid
extra). This was an expensive and time consuming process. However, it
did have the dual advantage of helping the interviewers learn their way
through what is really a very long and very complicated questionnaire; and
also of creating a single translation to be used by all of the interviewers
thereby minimizing bias resulting from different interviewers asking slightly
different questions.

In order to further familiarize the interviewers with the
questionnaires several nights were devoted to having the interviewers
administer interviews to one another. As a result, the interviewers had
fairly extensive contact with the questionnaires before the beginning of
the pre-test. I think this meant that the meaning of and information being
sought by individual questions was clear to the interviewers. What conti-
nued to be a problem for the interviewers during the beginning of the pre-
test, but which cleared up to some extent near the end, was determining the
sequence to follow through the questionnaire and determining the parts of
the questionnaire to be used under different circumstances.

Other details to be attended to before the actual pre-test could
begin included the following:

1. 　　　It was decided that I.D. cards should be provided so that
interviewers could identify themmelves, thereby lessening respondent
suspicion. Therefore, cards with a title page and short plea for co-operation
in Swahili and English were printed. There was also a place for photographs
and signatures of the interviewers. (The photographs were taken by me with
a standard 35mm camera). It was decided that it would be useful to mention
the National Christian Council of Kenya as a sponshoring body of the survey

on both these I.D. cards and in a pre-prepared introductory speech,
because of the good name of that organisation i- low income communities.
Because I had been working with Ms. Wanjiku Chiuri and Mr. Alex Gichuke on
possible ways the survey results could be used by the N.C.C.K. Urban Squatters
Improvement Programme, it was a straightforward matter to get permission
from N.C.C.K. to use its name in this way. (By the way, I believe part of
the reason for the excellent co-operation we received in Kawangware was the
fact that the respondents felt that since this was not a survey being
run by City Council or the Government but instead by the I.L.O. and by
N.C.C.K. their interests would not be threatened by answering the questions).

2.   It was also necessary to arrange transportation. This was done
through the University Transport Office, which finally agreed to supply a
driver and a Volkswagon Kombi (at almost commercial rates, I might add),
after an exchange of letters and endorsement of me by Dr. Joe Maitha, the
head of the Economics Department, at the University of Nairobi.

3.   Since City Council employees are not allowed to take second jobs,
even outside of regular working hours, without appropriate permission;
that permission was sought and obtained from the Deputy Town Clerk,
Mr. Getonga.

4.   It was necessary to purchase clip boards and flash lights for the
interviewer's work in the field. The flash lights were particularly
necessary since the survey is carried out in the evening and many of the
households visited had very inadequate lighting (of all the villages in which
we worked, only New Mathare has electricity) making completion of the
interview form very difficult without flashlights.

        Once these details had been taken care of, all that was holding
up initial work on the pre-test was the lack of adequate research clearance.
Once this clearance was received, work on the pre-test began. The first
thing that had to be done was to visit the Nairobi Provincial Commissioner's
Office to notify that office of the survey and to describe the work to be
done. Once I did this, the Deputy P.C. (with whom I talked) stamped the
research clearance clearing the way for talks with lower ranking officials,
then it was necessary to visit the District Officer, Chief and Sub-chief
for Western Nairobi, Dagoretti and Kawangware to explain to each in turn the
meaning   of the research. (These visits paid off handsomely, for as
described below, the presence of the sub-chief at the beginning of the
interviewing seemed to add significantly to peoples willingness to
co-operate).

Upon obtaining clearance from these people to pre-test the
survey in Dagoretti, it was necessary to pick buildings to survey in
Kawangware Village, the specific area chosen for the pre-test. This was
done as follows: First, using an aerial photograph of the village supplied
by Ms. Lynn Muench of N.C.C., I divided the village into five identifiable
sections. I then chose two of these sections at random, and made rough
maps of the areas chosen. Once I had made the maps, I plotted a "random
walk" through each section. I then followed these walks, selecting every
tenth building until I had selected a total of 36 buildings, 18 in each
section. These buildings I placed on the map, so that I could return to
them later. Once this was done, we were ready to start interviewing.

Interviewing actually began on December 18. What we did was walk
to one of the buildings already chosen, and select two rooms in which
people were present. For the first two days of the survey the sub-chief
accompanied us on these walks, and after introducing himself to the people
in the selected rooms introduced those people to the interviewers who
were to remain and explained the purpose of the survey. Upon finishing at
one building, the remaining interviewers went with the sub-chief and me to
the next building and repeated the process. As mentioned, the sub-chief
accompanied us only for the first two nights. Thereafter it was decided
that word of our study had travelled throughout the village, and that the
further presence of the sub-chief was not necessary. Nevertheless, the
process of choosing households which were occupied at 5:00-5:30 continued.
It was expected that bias from the selection process would result, but
since this was only a pre-test this was not considered serious. In fact,
the result seems to have been the selection of a disproportionately large
number of what might be termed "standard family households" (i.e., a
household with a wife, husband and several children). It seems likely
that this was because those rooms which were occupied at 5:00 often were
occupied by wives waiting for their husbands to return from work. (This
problem was minimized during the actual survey, because all the households
in any chosen building were interviewed, and because on any evening a given
interviewer team had several buildings from which to select households).
In any case, in this way we managed to collect 66 interviews in 6 days.

While some problems were encountered during the pre-test, it
nevertheless did establish that the questionnaire could be administered
in a reasonable period of time. This was especially encouraging since
Kawangware very much resembles the villages around the Kariobangi market
which were the focus of the main survey. Despite the overall success of
the pre-test, it was decided that in a few cases questions or the format

of the questionnaire.itself needed to be changed. However these revisions
were all very slight. Once they were made, the main work which had to
be done before starting the interviewing was to actually select the final
sample.

The following procedure was followed to do this. First, maps of .
Marura and New Mathare Estates were obtained from the Nairobi City Council.
(These were provded by the Town Planning Section with the permission of
Mr. Gilbert Njau, Chief Planning Officer). In the case of Marura, the map
had to be slightly updated so that all buildings in the area were repre-
sented in the map. Once this was done, the buildings in both areas were
divided into groups of four. These groups were consecutively numbered.
Then, using a random number table 12 groups buildings in New Mathare and
28 groups of buildings in Marura were chosen. Once this was done, school
leavers were sent into the area with enumeration forms and instructed to.
draw maps of each selected group of 4 building in Marura and New Mathare.
On these maps the layout of rooms in each building was indicated, and the
number of households which occupied each room was also indicated (where a
household was defined as people eating together). Unfortunately, as indi-
cated in Part 3, the information on households per room seems likely to
be inaccurate. In any case, however, this did provide an estimate of the
number of rooms per building in Marura - important information since there
is a very wide variety of buildings sizes and types in the area.

The rest of the areas to be surveyed posed a problem in that no
maps existed of these areas. Therefore, the first task necessary in pick-
ing a sample of households in these areas was to make maps showing the
location of each of the buildings in the area. This I did without too .
much trouble, though it turned out to be a fairly time consuming process.
Once these maps were done I decided, given the small size of each of the
villages, that it was appropriate to simply count rooms rather than make
an estimate as in Marura. (Perhaps in retrospect this would also have
been preferable in Marura). I had the above-mentioned school leavers do
this. I then determined the average number of rooms per building in each
village. At this stage it was a straighforward task to consecutively number
the buildings in each village. Once I determined the number of interviews
to be administered in each area, I divided that number by the average
number of rooms per building in the area to determine the number of build-
ings to select. I then selected that number of buildings using a random
number table.

Once these procedures were completed, only the actual inter-
viewing remained. Unfortunately, it was just ~ this preliminary work was
being finished that fears of a possible cholera epidemic in Nairobi led to
the abrupt closure of a large number of informal sector enterprises
throughout the city. In particular, all the businesses in the Kariobangi
market were forced to suspend activity, and a large number of shops operated
from residential rooms in the Kariobangi area were closed as well. These
closures meant that the administration of the survey had to be postponed
because the survey was designed to determine the sorts of goods and services
which are bought by residents of Kariobangi from exactly the type of shops
which were closed. This postponement had to last at least until the re-
opening of the kiosks, and preferably until something like normal activities
were resumed - presumably some time after any official re-opening. The
resulting inevitable delay in administering the survey also caused further
delay. In the first place, the interviewers who had by January of 1976
fairly thoroughly learned what is a fairly complicated interviewing routine
inevitably forgot a good part of what they had learned during the lay-off.
As a result, once it was decided to re-mount the survey in early May,
retraining was necessary. (This was, it turned out, a fairly expensive
and fairly time consuming process). Secondly, during the delay the
research clearance which had originally been obtained for the survey
expired. While having the clearance extended was reputedly a straight-
forward process, it did not seem to be a certainty that it would be
extended; and little could be done in the two weeks spent making sure it
was extended.

In fact my concern about whether the clearance would be extended
happily seems to have been ill-founded, and an extension was granted on May
15. Once this was done, a similar process to the one described above in
preparation for the pre-test was followed. First, the approval (and stamp)
of the Deputy Provincial Commissioner was obtained. Once this was obtained,
I met with the District Officer for the Kariobangi area who in turn
arranged a meeting with the village leaders of the villages in which we
were to interview. That meeting was held on Friday May 23. During the
meeting it was decided that we would actually begin on May 26. It was
on that day that it became apparent that the interviewers had forgotten
more than they themselves realized, and as a result the period from May 26-
May 29 was used as a training period in the field. Since the weekend follow-
ing this training period was a three day weekend with an important public
holiday on Sunday (Madaraka Day), it was decided that it made sense to wait
until June 4 to begin in earnest.

This long series of delays and miscalculations concerning the
time necessary to do a variety of tasks - especi...ly concerning the time
necessary to obtain a research clearance - had two serious consequences.
In the first place, the delays very significantly increased the costs of
training the interviewers because of the high cost of training and
retraining through a series of delays. Secondly, as a result of other
commitments on my part, it was necessary that I substantially reduce the
time in the field in order to finish within the time I had available for
the survey. Therefore, the entire portion of the survey dealing with a
city-wide sample was scrapped, and the number of interviews planned for
the other aspect of the survey in Kariobangi had to be almost halved.
(Both of these things resulted in substantially increased per interview
costs, for the former resulted in higher fixed costs, and latter in fewer
collected over which to spread these fixed costs).

In any case, the survey was actually administered from Wednesday,
June 4 to Thursday, July 3 - a period of 30 days during which we were in
the field every day except Sunday June 29 and Sunday June 15. As in the
Kawangware pre-test, transportation was provided by one University vehicle
and my personal car. When everyone turned up there were 14 interviewers
(including myself) who worked in pairs. During this period, a total of
14 interviewer days were missed out of a possible grand to total of 392
interviewer days. Of these 14 days missed, 8 were a result of a case of
malaria experienced by one of the interviewer. This excellent attendance
rate seems to have been primarily a result of the high wages being paid
combined with the threat of monetary penalties for excessive absenteeism
(though as I will indicate in several places in this paper, the team of
interviewers were a mature and a responsible group and I should not under-
estimate their willingness to do the job as required.) As in the Kawangware
survey, the respondents were remarkably co-operative, a fact which was
undoubtedly in part due to the willing co-operation of the leaders of the
different villages, but which was also in part attributable to the experience
and maturity of the interviewers.

PART 3: SELECTION OF THE SAMPLE AND ACTUAL RESULTS

The sample frame and the selection of the sample were briefly
discussed in Part 2. In this part a somewhat more thorough discussion
will be presented. The survey was taken in an area centering on the Kario-
bangi informal market on the far eastern side of Nairobi, Kenya. The
oldest housing in the area dates from very shortly after independence, and
was originally planned as a site and services scheme. The scheme was to
provide communal sewage and water facilities, and the plot allottee was to

build his own house. In fact this is by far the largest of the villages
in which we interviewed. It is locally known as Marura. Directly across
outer ring road from this scheme, are a pair of quite new (certainly since
1970) tenant purchase housing schemes known as New Mathare and Huruma
Estates. These are the highest income villages in the area surveyed.
North of these areas and Marura are 4 villages built by housing co-operative
societies on private land. They are known as Thayu, Kariodudu, Kwasabuni
and Glucola. Finally, east of Marura is Ngomongo which is a set of mud
and wattle houses which house people who formerly lived in a carton city
on the site of what is now Buru Buru Estate. These eight areas have in
common: (a) their proximity to one another, (b) their relative isolation
from the rest of the city, and (c) the fact that they are all served by
the Kariobangi market.

As indicated, there was a complete map of New Mathare and a partially
complete map of Marura available in the Town Planning Section of the Nairobi
City Council. Since there were no maps of the other areas, the first step
in creating a sample frame for the entire area was to make maps of Ngomongo,
Glucola, Kwasabuni, Kariodudu, Thayu, and Huruma, as well as complete the
map of Marura which was available. I ended in doing most of this work
personally, in large part because map making seems to be a fairly arcane
art in the opinion of virtually all of the people available to do this work.
As mentioned, actual counts of rooms were made in Kariodudu, Kwasabuni
and Glucola. In Thayu and Ngomongo, the remarkable homogeneity of the
architecture (4 rooms per building in Thayu and 2 rooms per building in
Ngomongo) made this unnecessary. New Mathare was also no problem since all
the houses in the estate followed a very rigid plan which called for 4
rooms per building.

Kariobangi was slightly greater problem because there is a wide
variety of building styles in that area. Therefore, as mentioned, I
originally divided the entire scheme into groups of four buildings, and then
chose 78 groups at random. I then had school leavers make sketches of each
building in the chosen groups. These sketches indicated the number of rooms
per building. I also asked for information about the number of households
per building. Unfortunately, this information seems likely to be unreli-
able. I also had school leavers determine the number of households per
building in each of the other areas mentioned. Once again, however, I am
afraid this information is unreliable. In fact, in areas other than New
Mathare, Huruma, and Marura, an estimate of one household per room seems
to be a very good one. In the first three areas mentioned this estimate

is too low. A better estimate will eventually be made using information about number of rooms per household in the questionnaire. In any case this original work resulted in a count of the actual number of rooms in 4 areas (Kariodudu, Kwasabuni, Glucola, New Mathare), and very accurate estimates of this number in the other 4 areas (Ngomongo, Marura, Thayu and Huruma). These counts of rooms and buildings along with maps of the location of the buildings was what served as a frame. This frame was used by consecutively numbering the buildings in each area and then selecting a random sample of buildings using a random number table. In this way 51 buildings were selected in Marura, 23 buildings were selected in New Mathare, 5 buildings were selected in Huruma, 25 buildings were selected in Thayu, 7 buildings were selected in Kariodudu, 6 buildings were selected in Kwasabuni and 5 buildings were selected in Glucola. In Ngomongo, we originally selected 7 buildings. Unfortunately interviewing in the area turned out to be extremely difficult since there were only a very small number of buildings to choose from and the residents of most of the buildings selected seemed to be not at home. As a result, a large number of substitution was necessary and the sample from Ngomongo is as a result probably biased.

Once the buildings were selected, the interviewing began. The final results were as follows:

Area	Number of Buildings	Number of Households	Number of Missed Households	Number of Vacant Rooms	Response Rate
Marura	51	188	25	2	88%
New Mathare	23	39	10	0	80%
Huruma	5	19	0	0	100%
Thayu	25	62	28	1	70%
Kariodudu	7	50	3	1	94%
Kwasabuni	6	23	5	2	82%
Glucola	5	22	6	1	79%
		403	78	7	84%

As can be seen, the response rate seems reasonable for a survey of this type. In addition to the above interviews, 14 interviews were collected in Ngomongo. Unfortunately, as mentioned, this was undoubtedly a biased sample and I am not certain what use I will make of these interviews.

PART 4: ADMINISTERING THE QUESTIONNAIRE

As can be seen, the questionnaire used is divided into several
parts. Which parts are used for any particular household depends upon the
actual composition of the household. More specifically, the interview is
administered as following. Upon determining whether the household to be
interviewed contains an adult capable of answering the questions in the
interview, the interviewer introduces himself. Originally a common
introduction was used (see Table 1). However, as the interviewing
progressed individual interviewers developed what they felt was the best
way of introducing themselves (though all the introductions centered on
the International Labour Office as sponsor).

After introducing himself, the interviewer determined the make up
of the household (questions A0 - A7) and then determined the work status
of the person to whom he was talking (questions A8 - A16). Once that was
completed, the interviewer determined the work status of each person listed
in the small table accompanying question A2 by using a Part A2 for each
such person. Having determined the composition of the household, the
interviewer then asked questions A29 - A76 (PART A3) to (or for) the head
of the household, (or heads of household where the household was made up
of several friends). Once this was done a PART B was administered for each
person in the household with regular employment, a PART C was administered
for each self-employed person in the household, a PART E was asked for
each casual worker in the household, and a PART F was administered for each
person looking for work. Following that the purchases made in the last 24
hours were listed on SHEET 1, and the purchases in the categories listed
in PART H and at the bottom of SHEET 2 were listed on SHEET 2. Finally,
PART I1 was administered to (or for) the head of household.

Since every part of the survey was very rarely needed for any
given household, the parts were physically arranged as follows. A basic
questionnaire was first made up and stapled together. This questionnaire
included PART A1, one copy of PART A2, one copy of PART A3, one copy of
PART B, one copy of PART G, one copy of PART H and one copy of PART I1.
Several of these questionnaires were then placed on a clipboard together
with extra PARTS A2, A3 and E; extra SHEETS 1 and 2; and copies of PARTS C,
E and F. While initially this arrangement did lead to some excessive
shuffling by the interviewers, they fairly quickly learned to use this
system fairly effectively. It also should be noted that the interviews

used in the field were of several colors to help the interviewers in
finding needed parts. (PART A1 - white; PART A2 - green; PART A3 - pink;
PART B - white, PART C - green, PART E - white, PART F - green, SHEET 1 -
yellow; SHEET 2 - pink; PART I - white).

Clearly, the time taken to administer any given interview depended
very heavily on the make up of the household in question. In a simple one
or two person, one job household the entire interview often took no more
than 35-40 minutes. On the other hand, in more complicated households,
and especially in households which had self-employed people, the admini-
tration of the interview could take as long as $1\frac{1}{2}$ hours. This often
strained the willingness of the household members to co-operate, and
probably biased answers to questions late in the questionnaire. Unfortun-
ately, I have no good way of knowing how serious this possibility of bias
is.

Despite some problems, the interviewing stage of this data
collection process went remarkably well. I think this was largely due to
the fact that, as I have mentioned before, the interviewers used are an
able, experienced, and mature group who did an excellent job overall. I
would highly recommend them to future researchers doing surveys in Nairobi
They can be reached through Mike Njoroge who is in the Town Planning
Section of the Nairobi City Council.

PART 5: CODING

The coding, like other parts of the survey, turned out to be more
expensive and time consuming than originally expected. As can be seen
from the coding manual (immediately following the questionnaire), there are
several parts to the coding. These include coding background information
about the household, coding information about the head of household, coding
information about the expenditure patterns of the household, and coding
information about the employment and background of each employed member of
the household. The actual procedure for doing the coding was as follows.
In the first place, I separated and read the questionnaire. If a particular
questionnaire was incomplete it was returned to the field. Each complete
form was separated as follows: First, information about the head of house-
hold's employment, (either PART A1 or PART A2 plus the appropriate employ-
ment type form) was stapled together with PART A3 and PART I. Then
information about the employment of other members of the household (either
PART A1 or PART A2 plus the appropriate employment type form) was stapled
together. Finally, SHEET 1 and SHEET 2 (containing information about house-
hold expenditure) were stapled together. These newly created bundles were

placed in an envelope, on which was taped a sheet of paper (labeled Form 1 below) with pertinant information about the ho——hold. This work was done by me in the course of reading the questionnaires daily. (This task was fairly time consuming, but I do feel that reading the interviews daily was very important to maintaining the quality and thoroughness of the information collected).

In any case, the resulting envelopes were then split among the teams of coders. One member of each team used the coding instruction sheet to code the information from the sheets about household purchases, while the other used the coding instructions for card type 1 and card types 21 and 22 to code information about the household as a whole and the head of household. Once this was completed coding instructions for card types 3, 4, 61 and 62 and for the businessman and background routines were used to code information about the employment and background information of each individual who was working or looking for work.

This work was done by four school leavers, and was supervised by a University graduate (who also checked the work of the coders.) There also was a fifth school leaver available part of the time who helped keep the work up to date and also did a variety of odd jobs for me. With this team it was possible to keep up with the work of the interviewing team, and as a result the coding was completed two days after the interviewing — on July 5. Finally, during the week of July 7, the coders used the sheets entitled Routine for Checking Coding to check crucial parts of the coding.

Overall, the system described above seems to have worked fairly well. Of course, it is difficult to tell how accurate the work which has been done is. However, the checking procedures instituted seem adequate. While it is inevitable that mistakes remain, it does seem that they be expected to be relatively few in number. As seems to be the general wisdom, it seems likely that work could have been saved by waiting until all the questionnaires to be coded had been collected. However, given the time pressure involved, this was impossible. In fact no serious penalties seem to have resulted. It remains to be seen what sort of problems will be encountered during analysis of the data.

PART 6: CONCLUSION

Essentially what this survey has done is collect data necessary to estimate the degree of self-sufficiency of the economy of a low income area of Nairobi, Kenya. Such an estimate can be made from both the income and expenditure sides, since the survey collected information on where people earn their income and where they spend it. This information is

central. to the. specification of the sort of growth model precented at
the I.D.S. W.P. No. 140, and the survey was designed primarily in order
to collect information for this type of model. Another important use of
this data will be in doing at least a preliminary analysis of various
demand elasticities for a number of informal sector products and services.
I plan on using the data both in these two ways and for several projects
which at this point seem of lesser importance. Results of these projects
will be forwarded to I.D.S. Presumably the results of such study will in
part indicate directions for further study. Therefore, it may be premature
to indicate what directions further studies should take. Nevertheless, I
would like to end this paper with some comments about two research projects
which I feel might be interesting extensions of the one described here.

The first project is one I had originally planned to do but which
I failed to complete because of the lack of time caused by the delays
mentioned above. Essentially it was a project designed to test the hypo-
thesis of the I.L.O. (and others) that increasing the equality of the
distribution of income would lead to an increase in the demand for informal
sector projects.

This was to be done by extending the sort of survey described
above to a sample of households in Nairobi as a whole, and then determining
various demand elasticities (including the income elasticity of demand) for
informal sector projects. In fact in many ways this seemed to me to be
potentially the most interesting study which was described in the original
plans for this survey (which was to include a sample of the city as a whole).
Unfortunately, the Kariobangi sample had been chosen and the city wide
sample had not when it finally became clear that some sort of survey would
be allowed. It was in part as a result of that fact that the latter part
of the survey was dropped. This decision to drop the city wide sample was
only taken because of the strong pressure I felt to return to finish my
Ph.D. dissertation before a commitment to take a University academic job
and to teach two new courses began for me in September of 1975. In fact,
I had even drawn up a mail survey to be used in the European and Asian
areas of Nairobi to simplify data collection there. I have included this
at the end of the paper.

The second project which seems to me to be of interest is to
collect the kind of data described above for a local area outside of the
main urban centres in Kenya. In fact, given the predominantly rural nature
of the Kenyan economy, this may be the most important type of study of all.
For in an important sense, the economy of Kenya is made up of a large number
of small semi-self-sufficient rural communities. Because of this, a sensible

way of planning development in Kenya would seem to be to determine the
needs of these small rural communities and then plan ways for helping them
fill these needs. But the approach described by I.D.S. Working Paper 140
and 195 in combination with this paper seems to me to be one way of in
fact determining the needs of such communities.

It is difficult to know how to end a paper like this. Perhpas,
since only people contemplating doing a survey will have read this far, I
should simply give some general advice. I guess I have three things to
say. First, everything takes much longer than originally planned. Second,
everything costs much more than originally estimated. Third, this type of
survey seems to me a good way of getting a feeling for what is going on in
the country.

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We are taking a survey of households in Kariobangi in order to
determine what goods and services the people in Kawangware buy from
small African businessmen. The survey is sponsored by the International
Labour Office and is being run in co-operation with the National
Christian Council of Kenya (NCCK). The information we gather will be
used to help small African businessmen improve their businesses, and
the neighborhoods where their businesses are located. All information
you give us is completely confidential. We appreciate your co-operation.

0. 0/- to 99/- per month

1. 100/- to 249/- per month

2. 250/- to 399/- per month

3. 400/- to 599/- per month

4. 400/- to 799/- per month

5. 800/- to 999/- per month

6. 1000/- to 1499/- per month

7. 1500/- to 1999/- per month

8. 2000/- to 2999/- per month

9. 3000/- or more per month.