OBTAINING INFORMATION ON BUSINESS SERVICES IN TRANSITIONAL ECONOMIES
THE CASE OF EAST GERMANY AND HUNGARY

Eva Kigyóssy-Schmidt, KAI e.V., Bussiness Services in Transitional Economies, Berlin Centre
Prenzlauer Allee 89, 10405 Berlin, Germany

KEY WORDS: Transitional economies, business services, availability of information

Introduction

Radical changes in Central and Eastern Europe have resulted in an unpredictable development. The transition from a centrally planned economy towards a market oriented system has gone along with a significant decline in production accompanied by corresponding social instability. Contrary to all expectations, the first half of 1993 did not bring about any convincing signs of relieving the worsening situation.[1]

Considering the ongoing changes in Central and Eastern Europe it becomes obvious that research is faced with the following facts. The policy makers who manage transitional economies will have to be provided as soon as possible with first-hand information on the intended and unintended effects of the transition strategies. As an example, the lack of basic information on transition economies or the need for information rooted in the learning-by-doing process of transition have actually evidenced this demand. The well-known contradiction in transitional economies between the pressing need for creating a viable management for transition and the time required for it tends to result in uncertainties and a lack of basic statistical information. To break this deadlock, more and more national and international efforts will have to be made, which are aimed at compiling basic statistical information as well as complementary information gained from additional sources.

Our special interest is focused on the availability of basic statistical information. The investigations are experimental and their output should be qualified as a preliminary workshop report.

I am most grateful for supporting my research to Oswald Angermann, Michael J. Bannon, Bernd Becker, Constanze Cehic, Peter W. Daniels, Agnes Ghibutiu, Ralf Hain, Angela Heinze, Sylvia Hoffmann, Brigitte Klementz, Bodo Klempin, Csak Ligeti, Udo Ludwig, Bernd Matthes, Jörg Matthes, Betina Müller, Jürgen Oberläuter, Manfred Packeiser, Agnes Pahl, Peter Pukli, Utz-Peter Reich, Marta Ronai, Lothar Römer, Oda Schmalwasser, Karl Schoer, Rainer Schwarz, Karolyne Sinkovicz and Carsten Stahmer. There is no need to be stressed that I take exclusive responsibility for the conclusions stated in this paper.

1. Obtaining information on transitional economies

1.1. Overall changes and statistics

The sudden collapse of the former political and economic structures is firmly ending up in numerous difficulties. Equally, great difficulties are encountered in the course of collecting statistical data and other information on transitional processes in Central and Eastern Europe. Listing some of these problems, I should like to refer to the background of statistics underlying transitional economies.

First, there is an overall reorganisation in management concerning the

units that have to be considered statistically. As an example, the state-owned domestic trade companies were compelled to report on virtually all aspects of private consumption in the centrally run economies. In Hungary, as a result of privatization and other measures, only rough estimates are available on private consumption for 1990 and 1991. Secondly, the step-by-step establishment of a new state administration has gone along with the introduction of highly revised statistical methodology. Further, due to the reorganisation and uncertainties a sharp increase in fluctuation has impeded statistical observat3ions. The case of retail trade in Hungary is underlining this fact. In 1990, there were some 100,000 shops and restaurants registered. Against the background of an increase in their number, amounting to nearly 167,000 in 1992, there is a rapid change observable, reflected in the reopening and closing down of some 67,000 shops and restaurants at least five times over the period. Finally, there are radical changes also in the legal regulations that have altered bookkeeping, taxation system etc. The statistical report system has been renewed, too. Even in the case of Germany where already prior to unification West German statistical methodology has been introduced by the East German statistics, it has taken more than one year to operate the new system, cp. 'Einführung der Bundesstatistik in den neuen Bundesländern' (1993).

All these factors have resulted in almost total blackouts, i.e., statistical data in transitional economies are characterized by a high degree of unreliability and incompleteness.

1.2. Why the example of business services ?

As mentioned above, there is a pressing need for latest information to be made available for the transformation management. The confused circumstances in ex-socialist countries require a special kind of collecting basic information. Here, the role of experts is of highest priority. In this context, using the example of the establishment of business services in transitional economies, possibilities of obtaining basic information will be discussed.

The changes in Central and Eastern Europe are aimed at creating a well-run market oriented economic system. It has become general knowledge that new institutional conditions and legal regulations have to prepare a framework for the more or less unfamiliar market economy. In the final analysis, the new macroeconomic regulations are focused on enterprises. According to my hypothesis, business services in transition may signalize the adaptation to new regulations at company level. Additionally, the development of business services in itself, representing a new kind of activities, reflects a certain stage of the upcoming market economy.

2. Obtaining information on business services in transition

2.1. The case of East Germany

2.1.1. East German experiments with instant capitalism

Undoubtedly, the unique 'Big Bang' transition experimented by East Germany has failed, cp. also Albach (1993), Busch (1992), Jens (1993), Lösch (1992), Ludwig (1993), Matthes (1993), Pfeiffer and Janeba (1992), Propp (1964, 1990) and 'Zur wirtschaftlichen und sozialen Lage in den neuen Bundesländern' (1993). From the point of view of pure business one has to conclude that already one month after the introduction of the monetary union (on July 1, 1991), nearly the whole East German economy had to be declared bankrupt.[2] At the beginning of 1993 there is actually no light at the end of the tunnel, cp. also the spring expertise of the

German Institutes for Economic Research in 'Die Lage der Weltwirtschaft und der deutschen Wirtschaft im Frühjahr 1993' (1993). Reflecting the "demanufacturing" process, in 1993 the net output of manufacturing is estimated at about one fourth of the corresponding value of 1990. As a result of instant capitalism, within a relatively short time East German national wealth has plummeted drastically.[3]

There is a high uncertainty concerning human resources. Nearly every second East German employee available is confronted with different kinds of insecure labour market positions. The growing unemployment has been corrected by social and retraining measures.

The prospects of an economic revival are questionable. The structural changes within the East German economy have induced a structural crash that is destroying especially human capital engaged in research and development activities.[4] More and more experts are calling for long-term revival policies of the East German economy. It might not be the only solution to stop explosion of financial transfers to the New Federal States.[5]

2.1.2. Establishing business services in East Germany

One of the key issues of the East German transition is the capability of acceptance of West German institutional conditions and legal regulations, cp. also Kigyossy-Schmidt (1993A).

In this view, basic information on the process have to be used to correct transformation policies. As business services are likely to manage acceptance at the company level, they may signalize intended and unintended effects of the transition policies at work.

Obtaining information on business services in the New Federal States does not only mean to collect statistical data in the traditional way. Apart from primary company statistics, additional sources of information will have to be used.

There are not many statistical data available on East German business services. To complete them great efforts will have to be taken.[6] Table 1 presents the estimated output of selected business services between 1991 and 1992. Technical consulting and planning, as well as legal and taxation services and certified public accounting and consulting are the most frequent services in East Germany. When analyzing the number of companies providing business services in East Berlin, we obtain the same predominance.

The scope of future studies will have to be directed towards regional development, collecting employment and output data, and assessing the sources of business services.

2.2. Establishing business services in Hungary

Obtaining information on business services in Hungary goes along with similar difficulties as in East Germany. Special problems result from the necessity for developing several new methods of compiling data such as number of enterprises, number of employees, type of company management, number of registered business services with zero output, type of bookkeeping, regional location of companies, output etc.

Comparing the structure of selected business services in terms of employment and output, we obtain a contradictory picture, cp. Table 2. Architectural, engineering and other technical services are predominant within output, and other business services account for the greatest ratio within employment. Concerning

renting services and advertising, there is an essential difference between the ratio of employment and output. Future analyses will have to clarify how deep these differences are rooted in the efficiency of business services.

3. Conclusions

Irrespective of the very nature of the transition process, i.e. instant capitalism or evolutionary transition, the overall changes in Central and Eastern Europe have brought about an unforeseen economic decline and social tensions. Even in the specific situation of East Germany it is not sufficient to be in favour of having a "strong state" offering monetary security. To manage the transition from a centrally planned economy to a market oriented system, well-founded concepts are also urgently needed.

Adequate concepts for managing transition policies, however, call for basic information. For a better understanding, all available information will have to be considered in correlation with each other. Attempts towards obtaining information on business services in transitional economies represent a first step in this direction. Compiling and capitalizing on information available on Central and Eastern Europe calls for a coordinated action by experts. An increasing cooperation between statisticians and economists is badly required, too.

---

1. For 1993, the forecasted real GDP in the post-socialist countries will be by 5 to 20 percent lower than the year before. In this context, the outlook for the Czech Republic, Hungary and Poland is slightly better, with corresponding values ranging between 0 and 3. At the same time, the unemployment rate is expected to increase substantially, climbing to 15 to 18 percent. (Only the Czech Republic represents an exception to this forecast with a rate of 7 percent.) Cp. 'Die Lage der Weltwirtschaft und der deutschen Wirtschaft' (1993), p. 10.

2. In comparison with the corresponding period of 1990, the East German manufacturing output did not make up for even 50 percent.

3. In 1990, the estimated value of the world's largest holding company - the 'Treuhand' - amounted to DM 600 billion. Recent evaluations show that in 1994 the 'Treuhand' will have to pay DM 250 billion, with a revenue of DM 40-50 billion coming from the residual property value.

4. With an unemployment rate running from 50 to 90 percent the East German R & D personnel provides the lowest employment level in the New Federal States.

5. The total monetary transfers to East Germany have increased as follows (billion DM): 132 in 1991, 156 in 1992 and are predicted to increase to 170 for 1993, cp. 'Die Lage der Weltwirtschaft und der deutschen Wirtschaft'(1993), p. 22.

6. Thus, regional company-register data should be collected and analysed. This would mean to handle some ten thousand data, for the Federal State 'Mecklenburg-Vorpommern' alone.

References

Albach, H. (ed.), (1993), 'Unternehmen in den neuen Bundesländern - Erfahrungen mit Transformationsprozessen', Zeitschrift für Betriebswirtschaft, Ergänzungsheft 1/93, Wiesbaden: Gabler.

Busch, U. (1992), Widersprüche im Transformationsprozeß - gescheiterte Programme und geplatzte Illusionen', in Theorie und Praxis von Transformation in der Gegenwart, Wissenschaftliche Zeitschrift der Humboldt-Universität zu Berlin, Reihe Geistes- und Sozialwissenschaften 41 (1992) 10, 105-108.

Die Lage der Weltwirtschaft und der deutschen Wirtschaft im Frühjahr 1993, DIW (Berlin), HWWA Institut (Hamburg), ifo Institut (München), Institut für Weltwirtschaft (Kiel), Institut für Wirtschaftsforschung (Halle), RWI (Essen).

Einführung der Bundesstatistik in den neuen Bundesländern (1993), Band 23 der Schriftenreihe Forum der Bundesstatistik, Statistisches Bundesamt (ed.), Wiesbaden: Metzler-Poeschel.

Jens, U. (1993), 'Schocktherapie oder Gradualismus? Zur Transformation einer Zentralverwaltungswirtschaft', in Institute for Economic Research - Hamburg (HWWA) (ed.), Wirtschaftsdienst 1993/III, 158-164.

Kigyóssy-Schmidt, E. (1993), 'Introduction of New Institutional Conditions and Legal Regulations into Former Centrally Run Economies: The Case of East Germany', in H.D. Kurz (ed.), United Germany and the New Europe, Aldershot: Edward Elgar, 31-44.

Lösch, D. (1992), 'Der Weg zur Marktwirtschaft - Eine anwendungsbezogene Theorie der Systemtransformation', in Institute for Economic Research - Hamburg (HWWA) (ed.), Wirtschaftsdienst 1992/XII, 656-664.

Ludwig, U. (1993), 'Das ostdeutsche Beschäftigungsklima im März 1993', Institut für Wirtschaftsforschung Halle, Konjunkturbericht 4/93, 28.

Matthes, B. (1993), Arbeitsangebot in den neuen Bundesländern bis zum Jahre 2000, Consulting Paper, Berlin: Wirtschaftsforschung gGmbH.

Pfeiffer, U. and Janeba, E. (1992), Eine wirtschaftliche Entwicklungsstrategie für die neuen Bundesländer - Fakten, Analysen und Vorschläge für ein langfristiges Programm, Düsseldorf: Friedrich-Ebert-Stiftung.

Propp, P.D. (1964, 1990), Zur Transformation einer Zentralverwaltungswirtschaft sowjetischen Typs in eine Marktwirtschaft, Osteuropainstitut der Freien Universität Berlin, Wirtschaftswissenschaftliche Veröffentlichungen, Vol. 20, Berlin 1964, Reprint 1990, Köln: Wissenschaft und Politik.

Zur wirtschaftlichen und sozialen Lage in den neuen Bundesländern (1993), Sonderausgabe, April 1993, Statistisches Bundesamt, Stuttgart: Metzler-Poeschel.

Appendix

Table 1 Structure of Selected Business Services in East Germany between 1991 and 1992

Business Services	Estimated Output as a whole = 100		Output in 1992 1991 = 100
	1991	1992	
1. Legal and taxation services, certified public accounting and consulting	16	20	143
2. Technical consulting and planning	38	35	110
3. Advertising	3	2	101
4. Other professional, technical and marketing services	16	16	111
5. Renting and leasing	7	9	160
6. Other business services	13	11	106
7. Non-profit organizations	7	7	112
Business services total	100	100	119

Source: **Author's research based on selected reports and interviews**

Table 2: Structure of Selected Business Services in Hungary in 1992 (Percentage share)

Business services	Structure of	
	employment	output
1. Renting services (automobiles and transport means, other machinery and equipment, other renting	0.9	17.7
2. Legal services, accounting, auditing, taxation, management consulting, marketing services	7.5	15.6
Including:		
Legal services	1.0	0.2
Accounting, auditing and taxation	4.6	3.9
Marketing and public opinion polling	0.3	0.8
Management consulting	1.6	10.7
3. Architectural, engineering and other technical services	32.1	43.4
Including:		
Architectural services	22.3	36.9
Business planning	9.4	5.8
Testing and analysis of products and materials	0.4	0.7
4. Advertising	0.9	4.9
5. Other business services	58.6	18.3
Including:		
Labour recruitment etc.	0.1	0.1
Investigation and security services	0.7	1.2
Building cleaning services	7.5	3.5
Photografic services	1.7	1.6
Packaging	0.6	1.8
Rest of other business services	48.0	10.1
Total	100	100

Source: **Author's research based on selected reports and interviews.**

THE ENERGY CONSUMPTION AND ENVIRONMENT AREAS IN INDUSTRY

Philippe M. SABOT, Industrial Statistics Departement
Philippe M. SABOT, SESSI, 85 boulevard du Montparnasse, 75 270 PARIS cedex 06, FRANCE

KEY WORDS : establishment surveys, sampling units, local units, stratification.

INTRODUCTION

In 1992 the Industrial Statistics Department of the Ministry for Industry has launched three new surveys dealing with energy and environment.

The Industrial Energy Consumption Annual Survey
The Annual Survey on Investments Protecting the Environment
The Survey on Environment Market.

The first survey has been in use for about 10 years but will be redesigned in 1993. This survey aims at estimating the progresses of the two main lines of the French policy for energy : on the one hand energy conservation and on the other hand national energy substitution for imported energy to which the increase of electricity penetration is necessary.

The next two surveys on environment have been launched for the first time in 1992. Agents from the Ministry for Environment and Ministry for Industry, members of Professional Organisations and experts on the sphere of environment have jointly elaborated these surveys in 1991.

These surveys aim at highlighting managers decisions concerning the different aspects of the environmental policy and also at answering the industrialists needs for information.

In addition, these surveys are pilot surveys to the account of the Statistical Office for the European Communities (EUROSTAT). EUROSTAT has given the responsability of carrying these surveys out to the Ministry for Industry. These two surveys are respectively attempting to follow the producers efforts in order to protect the environment, and attempting to learn which industries are considering environment as a market. They also try to show some characteristics of this market.

1. A SURVEY ON ENERGY CONSUMPTION IN INDUSTRY

In 1982 the Industrial Statistics Departement of the Ministry for Industry has elaborated the Energy Consumption Annual Survey.

Although only a few unreliable and dissimilar sources were available, this survey intented to give accurate official information on energy.

It has been choosen to use the local unit level where the manufacturing process takes place in manufacturing industry. The survey has been elaborated with the help of questionnaires sent by post to French firms.

A response rate close to 95% has been reached thanks to the obligatory feature of this survey[1] .

The published results give detailed information on the levels of energy purchase and energy consumption for each area and for each sphere of activity.

1.1 THE SURVEY PROCESS

Local unit ("établissement" in french) determines the statistical unit of this survey. It is a place where equipements consuming energy are located as well as electricity or gas meters and fuel tanks.

(1) According to the statistical law (7th of June 1951), the questionned firms are obliged to answer to obligatory feature surveys. In exchange, a guaranty is put down of using their answers without tax control or economic repression ends of view.

Three criteria determine the range of this survey :
- Main activity : the questionned units must have an activity in manufacturing industry (ISIC from 15 to 36).
- Manufacturing activity : the range of the survey covers factories, workshops or permanent yards where a manufacturing or processing activity takes place.
- Units size : the survey includes only establishments employing at least 20 people up to December the 31st of the year taken into account.

According to these three criteria, the range of the survey covers about 30,000 units for the year 1992.

A process has been drawn up in order to reduce the cost and the burden of the survey. It consists in questionning only a part of the establishments including from 20 to 99 salaried employees. (These units describe only 8% of the energy total consumption.)

Two strata are thus defined amid the group of local units from 20 to 99 salaried employees. Belong to the exhaustive stratum :
* All the establishments from sectors with high propensity to consume energy (for example iron and steel industry, chemical industry, paper industry...)
* Sphere of activities including too few units to be sampled.

The non-exhaustive stratum concerns all the other units for which a sample fraction varying from 2 to 8 according to the size of the sub-set has been applied (table 1).

The questionnaire about the year n-1 is mailed to the local units at the beginning of year n. Specialists then deal with the survey ; they are working in collecting informations for a given sphere of industrial activity. In fact, they are in charge of gathering all the Ministry surveys for the account of their own sphere of activity : thus they are aware of the changes in industry and are the most qualified people to detect misstatements.

The questionnaires are all gathered by mid August. Then non-responding units are either estimated or duplicated. An estimation starts as concerns the establishments including more than 500 salaried employees or belonging to a sphere of activity known as having a large propensity to consume energy. This estimation is either a data process or a manual process one. It depends on the knowledge of the specialist about his own sphere of activity. In other cases, duplication is instituted with the help of data processing, but checked by the specialists.

1.2 THE QUESTIONNAIRE

The questionnaire gathers data about purchase, self-production and stocking of energy as concerns the main energies during the surveyed year.

The purchased energy is expressed in "quantity" and "cost price", the stocked quantities in "turnover" and "at the end of the year".

The survey concerns the different energies listed below :
coal
lignite
coke
petroleum coke
natural gas
butane
propane
heavy fuel
domestic fuel
steam
electricity.

The questionned firms have been asked to indicate in what way each kind of energy is bound to be consumed :
heating of the buildings
manufacturing process
electricity production
raw materials
other kinds of use.

For electricity, uses are slightly different :
power
electric heating
other kinds of thermic use
other kind of use (electrolysis...).

1.3 THE RESULTS

The results of this survey come out in October. It consists in publishing the results of the survey on energy for Authorities or for private uses.

This survey offers the opportunity to assess the total consumption of a sphere of activity or an area, and to emphasize the different kinds of use of each energy and also the substitution between these

different energies according to the changes in price or advertising (see table 2 and 3).

There are 2 types of results :

Tables and an analysis for industries :
* A 200 pages publication providing the different tables of purchase and consumption of energy for each sphere of activity and each area.
* A short article (4 pages) where the conjonctural and structural evolutions of energy consumption are analysed.

Customized restitutions :
* Introduction of the results to a "users Club"
* Restitution of the informations to the questionned firms by giving them the amount of purchases and consumptions, and prices of energies for their sphere of activity and their area.
* Possibility for each private individual to obtain results on energy. That can be done for a given sphere of activity or for any other point.

1.4 THE FORTHCOMING EVOLUTIONS

Our better knowledge of energy consumptions and our improved equipments, especially the use of NON IMPACT PRINTING system, will allow us to collect information with customized questionnaires. In this way, only the consumed energies will be a survey subject matter, and with the help of a blank space the firm could declare energies not surveyed at the moment _ for example tyres in cement plants. We will achieve to reduce the burden for surveys and will get better observations.

2. SURVEYS ON INDUSTRY AND ENVIRONMENT

2.1 INVESTMENTS PROTECTING THE ENVIRONMENT

This survey aims at estimating the investment effort of manufacturing firms in order to fight against pollution (production with less polluting agents or cleaning process).

It also lists an inventory of the expenses alloted to the studies prior to investments (except expenses alloted to researchs).

Concerning the amount of investment a difference is made between :
control and measure of pollution emissions investment
changes in production processes for cleaner equipements
end-of-pipe investment.

Those data are collected for :
water protection
air protection
wastes elimination
noise reduction.

The survey included measures for the protection of the natural environment and excluded the working indoor environment.

The preceding years, the investments protecting the environment were surveyed in the Entreprises Annual Survey at the firm level. It has been decided to get more precise information about environment and this new survey was then launched at the local unit level.

The survey has been launched in March 1992. Its range covers local units from the sphere of industry and energy including more than 100 salaried people. The local units including more than 50 and in some special cases more than 20 salaried employees have been taken into account as far as the most polluting activity were concerned.

6,750 questionnaires have been mailed. At the moment the industrialists _ for whom the environment issue is growing in importance and interest _ have greeted the survey. In fact the response rate has reached 75% before the second follow-up letter, and was close to 90% for the final results.

The definitive results came out at the beginning of June 1993. They combined the results of this survey and also the results of the Enterprise Annual Survey which collect data about total investments at the local unit level.

2.2 SURVEY ON INDUSTRY AND ENVIRONMENT MARKET

This survey intends to locate firms for which the attention payed to the environment opens possible markets. Either because they offer eco-products or help other firms (in producting goods or services) or administrations in fighting against pollution (production with less polluting agents or cleaning process). These two last are called "eco-industries".

The survey has been sent at the beginning of 1992 to all firms employing more than 20 salaried people. The fields of industry taking little interest in eco-production or eco-industry (press, publishing, garment industry...) have however been excluded.

Contrasting with the previous survey this one focused on qualitative data and is not annual.

It appeared that the notions of eco-industry or eco-product was not frequently used. Only a few firms got involved.

The first results helped to elaborate a basic classification of environment activities :

- Suppliers of instruments, plants, and equipements:
  * in order to control and measure pollution
  * destinated to industrial waste treating plants
  * destinated to collection, transport and stocking systems of industrial waste or polluting emissions.

These suppliers are dealing with manufacturing firms but also with local administrations.

- Suppliers of substitutes :

as concerns raw materials
technical products
recycled packaging or packaging adapted to the environment marketing strategy.

- Drinking or unfit for drinking water treating plants
- Manufacturing firms with minor sphere of activities as :
  * industrial waste treating processes :
    . collection, transport, sorting and stocking
    . recycling
    . incineration
  * engineering services

The results of these surveys came out at the beginning of 1993 with different analyses by market.

Table 1 Population and Sample in the 1992 survey on Energy Consumption

	Non exhaustive stratum	Exhaustive stratum	Whole
Population	18,535	10,823	29,358
Sample	5,560	10,823	16,383

Table 2 A Distribution of Energy Consumption for each kind of use

	Energetical use	Raw materials	TOTAL (%)
Coal	95.3	4.7	100.0
Coke	66.1	33.9	100.0
Natural Gas	73.5	16.5	100.0
Other Gas	86.1	13.9	100.0
Petroleum Coke	76.6	23.4	100.0
Butane and Propane	39.5	60.5	100.0
Fuel	99.8	0.2	100.0
Domestic Fuel	93.6	6.4	100.0
Other Products	83.6	16.4	100.0
TOTAL	85.5	15.5	100.0

Table 3 Electricity Consumption in 1991

Power	Electric Heating	Other Kinds of Thermic Use	Other Kind of Use	TOTAL
69.1 %	2.5 %	12.2 %	16.2 %	100.0%

Table 4 The responses to the survey on Investments protecting Environment

	Number of local units
Questionned	6,753
Answering	5,950
Have invested in favour of environment	2,373
Have not invested in favour of environment	3,577

NIELSEN RETAIL TRADE SURVEY IN POLAND AND CSFR

Oreste Assereto, AC Nielsen Management Services
PO Box 3967, 6002 Luzern, Switzerland

KEY WORDS: Retail, Poland, CSFR

PART 1. CSFR

1. OBJECTIVES

In August 1992 Nielsen carried out a Retail Census in **Czechoslovakia** with the following objectives:

* To get an overview on the Czechoslovakian Food-, Drug- and Durable Consumer goods retail trade independent from official sources first time ever. The results of the study are comparable to those conducted by Nielsen in other countries.
* To assess the distribution of selected product classes and brands.
* To establish a basis for the Nielsen retail panel. The 1st audit will be executed in November/December 1992.

2. SURVEY-METHOD

2.1 The Sample

The objective was to achieve a representative sample of the Fastmoving Consumer Goods and Durable trade and to be able to split market segments.
We applied a mixed sample to achieve representativeness also in parts of the retail with a low absolute number of stores.

2.1.1 The Area Sample Method

Around 4% of the population was aimed at in the sample design.
CSFR communities were stratified in the following classes, according to the population of 1990 provided by the Statistical Central Office. See Table 1 CSFR.
The sample of communities according to the above rates was selected within each strata. In towns with more than 10000 inhabitants a sample of Town blocks was selected from commercial maps, in such a way that the overall sample rate of any block was around 4%.
Communities under 10000 were selected proportional to the SQRT of the population within a previous selection of 1 in 20.

2.1.2 The Address List Method

Lists of addresses were obtained from the statistical central office and Marketing Research Companies, which provided us with the following lists:

* Supermarkets
* Cooperatives
* Department stores
* Electro stores
* Pharmacies

Stores were selected at random with different sampling rates from these lists and interviewed.

The 2 methods above provided a total of 2528 completed questionnaires. Projection factors for each questionnaire were computed according to the 2 above described methods, taking also in consideration adjustments by sampling method of interview refusal. Also in the 2528 questionnaires we have included stores which physically exist, in the given location, but which are closed for business and no merchandize could be seen inside. They split as follows. See Table 2 CSFR.

2.2 Survey execution

A questionnaire specific to the retail field (Food/Drug and Electrics) was filled in by trained interviewer personnel.

3. DEFINITIONS

3.1 UNIVERSE

The selection of stores was mainly driven by their assortment.

* Pure Food Stores

The universe include those stores which handle at least 1 food product from the following product classes list and less than 3 drug or house hold products.

Food Product Classes:
Mineral Water, Chocolate tables, Margarine, Lemonades, Chocolate bars, Marmalade, Jam, Fruit juice, Biscuits, Wafers, Honey, Liquors, Soups, Sauces, Packaged bread, Wine, Ready meals, Frozen food, Beer, Cans, Ice cream, Coffee, Pasta, Children food, Cacao, Oil, Pet food, Tea, Butter, Chewing-gum, Cigarettes, Milk, Ketchup, Cheese

* Drug and Household Stores

We included stores that handle one or more household and body care product classes from the following list, but less than 3 food products.

Household/Health and Beauty Aid Product Classes:
Toilet Soaps, Paper towels & diapers, Laundry

Detergents, Cosmetic cremes, Cleaners, Tooth pastes Deodorants, Feminine hygiene, Shampoos, Razor blades, Toilet cleaners, Household foils, Toilet paper

* Food / Drug / Household Stores.

This shop type handles at least 1 food/drug or household product and 3 or more food products. These outlets handle a complete assortment of food/drug and household product classes.

* Supermarkets.

Supermarkets in Czechoslovakia are retail outlets with 100 and more m2 sales area and a wide selection of food and household product classes. They have cash registers, baskets or carts.

* Electro Stores.

The universe include all the stores which handle at least 1 product from the list but no drug and household products.

Electro Product Classes:

Video recorders, Walkman, Hifi single compon., Camcorders, Radios, Record players, Video cassettes, Alarm clock Radios, Cassette decks, Audio cassettes, Tape recorders, Compact sets, Audio/Video comb set, Hifi Towers, Boxes, CD Players, Video games, Home computers, Elektro ovens, Baking ovens, Microwave ovens, Washing machines, Laundry dryers, Dishwashers, Refrigerators, Freezers, Iron machines, Extractor, Kitchen Processors, Mixers, Motor grills, Coffee machines, Vacuum cleaners, Battery cleaners, Irons, Shavers, Lady shavers, Hair-care set, Fruit squeezers, Deep frying pans, Espresso machines, Bulbs, Batteries, Installation sets, Electro Warm Water Boilers, Contact grills/Toaster

All commodity volumes refer to year 1991 and include only packaged goods for Food + Household + Drug items. That means fresh products and other miscellaneous products were excluded.

Electro stores All Commodity Volume refers to sales of durable products.

3.2 NIELSEN AREAS

Nielsen I:	Prag
Nielsen II:	Rest of Bohemia
Nielsen III:	Moravia
Nielsen IV:	Slovakia

3.3 STORE SIZE DEFINITION BY SALES AREA CSFR

* Food/Drug/Household	small	<50 m2
	large	50-99 m2
* Supermarkets < 400qm	small	100-199 m2
	large	200-399 m2
* Supermarkets > 400qm	small	400-999 m2
	large	1000 + m2
* Drug/Household Stores	small	< 100 m2
	large	100 + m2
* Durables Stores	small	< 100 m2
	large	100 + m2

3.4 CITY SIZES

* < 10000 inhabitants
* 10000 - 99999 inhabitants
* + 100000 inhabitants
* Praha

3.5 OWNERSHIP

* State Ownership
* Cooperative
* Private

PART 2. POLAND

The methodology and description is similar to the one described for CSFR. However, the following differences should be noted:

2.1.1 The Area Sample Method

Around 2% of the population was aimed at in the sample design. See table 1 Poland.

2.1.2 The Address List Method

Lists of addresses were obtained from the statistical central office and Marketing Research Companies, which provided us with the following lists:

* Supermarkets
* Electro stores

Stores were selected at random with different sampling rates from theses lists and interviewed.

The 2 methods above provided a total of 4321 completed questionnaires. Projection factors for each questionnaire were computed according to the 2 above described methods, takeing also in consideration adjustments by sampling method of interview refusal. Also in the 4321 questionnaires we have included stores which physically exist, in the given location, but which are closed for business and no merchandize could be seen inside. They split as follows. See table 2 Poland.

PART 3. PROCESSING

A total of 2556 questionnaires for CSFR and 4321 questionnaires for Poland were returned from the field and processed with the SAS system in Lucerne.

The processing can be divided in the following tasks:

a. Data Cleaning. Consisted in reading the diskette files delivered by field in an ASCII format or DBase III and performing the necessary format and logical controls of the data.
b. Computing Expansion factors to allocate to each questionnaire. Two basic methods were used:
   - Area Sample
   - Address list Sample.

   Also adjustment factors for non response had to be computed, and combination of the two methods with "capture" and "recapture" concepts.
c. Research for shop types.Following the Nielsen BDP we had to investigate shop types and sizes which would provide marketing sense and provide an efficient strat ification criteria for the final Nielsen Retail Index sample.
d. Estimating ACV.Since many questionnaires did not have ACV data multiple regressions techniques were used to estimate missing data.
e. Final Tabulations. This is the set of cross tabulations and charts provided to clients.
f. The distribution sample.Brand distribution data was collected on a second wave,after the main census in about 1/3 of the visited stores. Projection factors had to be specially computed for these stores.
g. Sample Design. With the Universe strata information obtained in e.- a final sample of stores for the Nielsen panel was selected, making assumptions on data collection costs and coefficient of variation of brand sales.

PART 4. COMMENTS

The project of carrying out a Survey of retail stores is a rather long and laborious process which cannot be compressed in a short paper.

In both cases the following comments should be made.

4.1. Data editing.

A lot of questionnaires had to be edited during processing due to missing or wrong information.

An external field organization was used to carry out the survey, and the field data collection rules were not strictly followed.

In general missing data was estimated using probabilistic models, in such a way that the distribution of the values available in the complete questionnaires was maintained.

Also regression techniques were used when appropriate.

4.2. 2nd Sample Address Method.

Field was instructed to survey in the area sample all shop types, even those targeted with an address list method. This is a fall back strategy because it is known that the method of sampling from an address list requires an excellent and up-to-date quality list.

In the case of CSFR, the Universe for electro stores could not be properly estimated with the address list method because the list of addresses was of very poor quality. They were old addresses, with street names from old lists valid during the existence of socialist government in that country. Since the shift to the present form of government, street names have changed, and therefore the matching of the addresses in the 2nd sample stores could not be properly executed. Therefore the area sample estimate was used.

In Poland, the addresses matching exercise was much better. We obtained 2 estimates of the Electro universe. Again the area sample estimate was retained as it was nearer to known official figures.

4.3 The Trade Structure in the future.

The Trade structure in both countries is undergoing rapid change due to the liberalization of the economy.

New Western Retail Chains are opening shops in these countries, and it is expected that small traditional stores will start to die out.

In both countries plans are under way to repeat the Survey Process during the first half of 1993. This process will be repeated every 6 months for some segments (eg Supermarkets) and every year for other less important trade segments.

These 2 new surveys will help correct some of the deficiencies found, after implementing The Nielsen Retail Panels in the 2 countries.

Table 1. CSFR

	UNIVERSE			SAMPLE		
		Population			Population	
	number of comm.	sum per 1000	PCT SUM	number of comm.	sum per 1000	PCT SUM
CSFR	8600	155568	100.0	190	5380	34.6
under 5000	8211	5925	38.1	120	118	0.8
> 5000 < 10000	181	1257	8.1	12	84	0.5
> 10000 < 20000	103	1454	9.3	13	178	1.1
> 20000 < 40000	65	1814	11.7	15	411	2.6
> 40000 < 80000	22	1224	7.9	12	695	4.5
> 80000 < 160000	12	1117	7.2	12	1117	7.2
>160000 <320000	2	408	2.6	2	408	2.6
>320000 <640000	3	1157	7.4	3	1157	7.4
over 640000	1	1212	7.8	1	1212	7.8

Table 2. CSFR

	Pure Food stores	F/D/HH stores	SM <400m2	SM >400m2	D/HH	Electro	Pharmcs shops	Closed	Total
Sample stores	468	526	279	147	252	299	167	390	2528
Universe	10436	17663	5061	341	5069	3318	1285	8343	51516
% sample	4.5	3.0	5.5	43.1	5.0	6.4	13.0	4.7	4.9

CSFR CENSUS 1992 FOOD

FOOD		number of stores		turnover 1991 (KCS mio)		
		Total	%	Total	%	Average
CSFR Total		33501	100.0	95809	100.0	2.9
Nielsen areas:						
Praha		1626	4.9	7728	8.1	4.8
Rest of Bohemia		11910	35.5	31992	33.4	2.7
Moravia		8006	23.9	21402	22.3	2.7
Slovakia		11960	35.7	34687	36.2	2.9
Nielsen Shoptypes:	Size:					
Pure Food stores:	small < 50 sqm	6398	19.1	8128	8.5	1.3
	large 50-99 sqm	3039	9.1	6153	6.4	2.0
	super 100+ sqm	998	3.0	2689	2.8	2.7
	TOTAL	10436	31.2	16971	17.7	1.6
FDH:	small < 50 sqm	9578	28.6	11781	12.3	1.2
	large 50-99 sqm	8085	24.1	19413	20.3	2.4
	TOTAL	17663	52.7	31193	32.6	1.8
Supmkt < 400 sqm:	small 100-199 sqm	3056	9.1	18019	18.8	5.9
	large 200+ sqm	2005	6.0	21271	22.2	10.6
	TOTAL	5061	15.1	39290	41.0	7.8
Supmkt > 400 sqm:	small 400-999 sqm	283	0.8	6244	6.5	22.1
	large 1000+ sqm	59	0.2	2111	2.2	35.8
	TOTAL	341	1.0	8355	8.7	24.5
Citysize:	< 10000	17730	52.9	29974	31.3	1.7
	10000 - 99999	10713	32.0	44454	46.4	4.1
	100000+	3433	10.2	13653	14.3	4.0
	PRAHA	1626	4.9	7728	8.1	4.8

Table 1. POLAND

	UNIVERSE			SAMPLE		
		Population			Population	
	number of communities	sum per 1000	PCT SUM	number of communities	sum per 1000	PCT SUM
POLAND	2950	37958	100.0	83	10402	100.0
under 10000	2245	12640	38.0	19	116	1.0
>10000 < 20000	481	633	17.0	14	181	2.0
>20000 < 40000	109	2982	8.0	13	343	3.0
>40000 < 80000	66	3730	10.0	11	642	6.0
>80000 <160000	25	2810	7.0	9	1031	10.0
>160000 < 320000	14	3020	8.0	7	1645	16.0
>320000 < 640000	6	2555	7.0	6	2555	25.0
>640000 and < 1280000	3	2235	6.0	3	2235	21.0
over 1280000	1	1651	4.0	1	1651	16.0

Table 2. POLAND

	Pure Food stores	only D+HH	F and D or HH	SM <400m2	SM >400m2	Pure Electro	Kiosks	Closed	Total
Sample stores	1279	784	724	184	305	565	193	287	4321
Universe	83566	36822	56583	1863	1024	16357	131617	13407	341239
% sample	1.5	2.1	1.3	9.9	29.8	3.5	0.2	2.1	1.3

POLAND CENSUS 1992 FOOD + DRUG

FOOD & DRUG	number of stores		ACV / Turnover		
	Total	%	Total	%	Average
TOTAL POLAND	311475	100.0	197920	100.0	0.6
AREAS:					
Srowkovy (incl. Warsaw)	52659	16.9	39678	20.0	0.8
Polnocno-Wschodni	17703	5.7	13203	6.7	0.7
Polnocny	49918	16.0	34785	17.6	0.7
Poludniowy	45550	14.6	28497	14.4	0.6
Poludniowo-Wschodni	43991	14.1	23898	12.1	0.5
Srodkowo-Wschodni	13554	4.4	7669	3.9	0.6
Srodkowo-Zachodni	41917	13.5	24666	12.5	0.6
Poludniowo-Zachodni	46184	14.8	25525	12.9	0.6

POLAND CENSUS 1992 FOOD + DRUG

FOOD + DRUG		Number of stores		ACV / Turnover		
		Total	%	Total	%	Average
Nielsen Shoptypes	Size					
Pure Food	< 50 sqm	60685	19.5	38068	19.2	0.6
	50 - 99 sqm	16535	5.3	23911	12.1	1.4
	100 + sqm	6347	2.0	13227	6.7	2.1
	Total	83566	26.8	75206	38.0	0.9
Drug + Household	< 50 sqm	23605	7.6	13927	7.0	0.6
	50 - 99 sqm	8691	2.8	5883	3.0	0.7
	100 + sqm	4526	1.5	7934	4.0	1.8
	Total	36822	11.8	27745	14.0	0.8
Food + Drug + Household	< 50 sqm	37544	12.1	19036	9.6	0.5
	50 - 99 sqm	12553	4.0	13035	6.6	1.0
	100 + sqm	6486	2.1	19802	10.0	3.1
	Total	56583	18.2	51873	26.2	0.9
Kiosks		131617	42.3	26411	13.3	0.2
Supermarkets 100 - 399 sqm		1863	0.6	7549	3.8	4.1
Supermarkets 400 - 999 sqm		689	0.2	4956	2.5	7.2
Supermarkets 1000 + sqm		335	0.1	4179	2.1	12.5
Citysize: < 10000		77214	24.8	33692	17.0	0.4
10000 - 99999		137955	44.3	84068	42.5	0.6
100000 - 999999		81960	26.3	68265	34.5	0.8
1000000 +		14346	4.6	11895	6.0	0.8

Sampling and Estimation Methods for Sub-Annual Surveys of Small Industries: The Hungarian Experience

Adam MARTON, Central Statistical Office,
1525 Budapest, Keleti K. u. 5-7.

Up to the end of the 1980's, a relatively small number of large firms (appr. 2000) produced more than 95 % of the industrial output of Hungary.As a result of the transition from the centrally planned economy to market economy, a process of splits of big firms and a fast increase in the number of new small and medium size producers can be observed since 1988. Their share in the total production started to increase as well.

Number of producers

Table 1

	Industry			Construction industry		
	1988	1990	1992	1988	1990	1992
Corporations, more than 50 empl.	1965	2628	2877	644	781	901
Corporations, less than 51 empl.	968	4843	11481	1319	2387	5991
Partnerships		9336	11125		4133	5527
Sole proprietors	88871	104839	131637	49837	55225	63909

x/ 1989

During the past few years, the output of big producers slightly decreased, while that of the small ones increased. In order to publish fairly reliable estimates of monthly percentage changes of the most important indicators of industry (construction included) a sampling survey of small producers was designed.

The sub-annual sample surveys of small industries started in 1991.

SAMPLING DESIGN

Corporations with more than 50 employees are continuously and completely (without sampling) surveyed. To eliminate the impact of non-response, follow ups and/or imputations are carried out.

The target population of the sub-annual sample surveys in 1991 and 1992 was all producers with 50 employees and less. Sole enterpreneurs, except for a few hundred big producers, were not included.

The questionnaire contains only a few questions on the output (export and domestic use), the number of employees and labour costs. (The questionnaire for the big producers is more detailed.)

The sampling frame is the CSO business register. Although it is continuously updated, as a consequence of many

1/ Contributed paper presented at ICES, Buffalo, June 27-30, 1993
2/ Approximate share: 82 %, 14 %, 4 %, respectively
3/ Approximate share: 50 %, 40-45 %, 5-10 % respectively

changes in the target population (economic demography) the coverage far not complete.

Sampling design: stratified, two-stage, probability cluster sample.

Strata: industry groups, legal status, size category, region and date of formation. New units will be covered after 6 months only.

The sample size is based on estimates of the variances of the target population.

The sample allocation to the strata was a Neyman type.

50 % yearly rotation of the sample is planned in the future.

Clusters: 556 settlements selected with proportionate to size (number of inhabitants).

The sample according to industry subgroups is not representative enough due mainly to random factors. In certain cases some adjustment needed.

ESTIMATION

Estimation: simple inflation combined with ratio estimates in case of "old" units. The size of the individual strata (N_i) is available from the register, but is has to be corrected monthly, based on the survey results. (Detailed data on industrial production, number of employees, labour costs etc. are available in the regular monthly, quaterly and yearly publications of the CSO.)

The treatment of outliers needs special attention due to the great variance of the output of the individual producers in time.

SURVEY ERRORS

The target population is relatively small, certain variables have high variance, due to the great variability in time, and many idle units with zero output.

1. Sampling error

The relative standard error (cv) is appr. 20 % and about 1,4 % for the total industrial output. In the case of the construction industry the corresponding figures are 8-10 % and 2-3 % respectively. (The estimates for the small businesses are used only as part of the total!)

Certain stratification was not efficient:

- size groups proved to be irrelevant. The correlation between the number of employees and the output was low: 0,2 - 0,3;
- the behaviour of producers with different legal status is not clear;
- the use of ratio estimates needs some further investigation.

Industry groups are used as domains.

Simulation studies will give some more information and possibly will help to improve sampling design.

2. Non-sampling errors

Coverage: The response rate is fairly low (Table 2). 75 % of the missing sample units did not answer, or could not be contacted. In the case of the other 25 % the address was incorrect, or changed their activity. Based on the sample results, the N_i's of the individual strata were corrected.

Response rates, 1992 Oct.-Dec.

Table 2

	Target population (N)	Sample size (n)	Number of responses (n)	n /N	n/n
				percent	
Industry	25043	1602	1070	6,4	66,8
Construction	10918	1826	898	16,7	49,2
Together	35961	3428	1968	9,5	57,4

x/ Includes some large sole proprietors.

Field work: the units which exist but do not answer have to be contacted and asked to fill in the questionnaire. The upkeeping of the list of addresses is also an important task. In general: more attantion has to be paid to the personal (telephon) contact with the respondents.

Response error:in Hungary the black or hidden economy is very large. There is a very strong propensity to avoid taxation. Underreporting is not negligible.

FOLLOW-UP STUDY

In the 3rd quarter of 1991 500 sample units were selected randomly for a follow-up study.428 units were found, 72 were missing as a result of some error, or lack of updating in the register. Out of 428 units 379 answered the interviewer, but 166 out of the 379 did not mail the regular report.

120 industrial units filled the questionnaire and also they answered the interviewer.(The difference between the original and the follow up data is "biased". It is very likely, that the answer to the follow-up study is more precise. The "real" response variance cannot be estimated.) The average of the total output was 13,6 % higher in the second case. But in Budapest, based on 46 observetions, the average of the second answer was 40 % higher than that of the first one. In the case of the other 74 observations the result,on the average, was practically the same (2,7 %).

70 non-reporting industrial producers had practically the same average output as the former 120, but the average number of their employees is only half of those of the 120 units who reported in due time.

In the case of the construction industry the results of this comparative study showed greater variability. The average in the follow-up study was appr. 40 % higher than the average of the data of the original mail-questionnaires.

In 1992 a somewhat modified follow-up study was carried out. The preliminary results reinforce the findings of the first one: output figures are larger, field work has great importance, etc.

CONCLUSIONS

The quality of the results of sampling surveys of small industries in a transition country like Hungary depends on the

- "behaviour" of the target population minafested partly in the business register;
- field work of the CSO's local offices;
- reluctance to answer and underreporting;
- different behaviour of the producers in Budapest and in the remaining part of the country, and the
- great variance of the output values of the producers;
- outliers, which are partly due to the hectic behaviour of the economy (financial policy). The variance in time is greater,than among the individual units. Larger sample should reduce the sampling error, but the overall import on the quality of the estimates should have been marginal only.

Small area estimation techniques,at present, cannot be used.

Final conclusion: most of the problems are not "methodologycal", but the consequence of the transition character of the economy. What statisticians can do is to pay attantion to the above mentioned phenomena.But to improve the quality of establishment survey estimates more resources needed too.