

STATCAP MASTERPLAN

FOR

UKRAINE

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ABBREVIATIONS AND ACRONYMS

BOP	Balance of Payments
CAS	Country Assistance Strategy
CSO	Central Statistical Organization
DECDG	Development Data Group
DSBB	Dissemination Standards Bulletin Board
GDDS	General Data Dissemination System
GDP	Gross Domestic Product
GFS	Government Finance Statistics
GOU	Government of Ukraine
HHSF	Household Sample Frame
IBL	Institutional Building Loan
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communication Technology
IMF	International Monetary Fund
NBU	National Bank of Ukraine
NGO	Non Government Organization
MOE	Ministry of Economy
MOF	Ministry of Finance
PHRD	Policy and Human Resources Development Fund
PIU	Project Implementation Unit
SNA	System of National Accounts
SDDS	Special Data Dissemination Standards
SSCU	State Statistics Committee of Ukraine
SSS	State Statistical System of Ukraine
TACIS	Technical Assistance for Commonwealth of Independent States
TA	Technical Assistance

Part 1: Introduction: Current Status and Assessment

1. Background and Process

1.1 Summary of recent related government-led processes such as PRSP or other national strategies, CAS, MTEF, MDGs, and their link to statistics

The Government is putting increasing emphasis on the importance of transparency, and has recently subscribed to the IMF Special Data Dissemination Standard (SDDS). The activities in implementing the SDDS norms would make an important contribution to the better working of Ukraine's markets, facilitate access to international financial markets, allowing financial services providers, for instance, to compare information on potential borrowers against agreed benchmarks. The result should be lending and investment decisions based on timely and comprehensive statistics, as well as increased accountability of policy makers – overall, improved and more sustainable economic performance.

Implementation of a broad-based poverty reduction strategy and attaining job-creating, sustainable economic growth in Ukraine by making available a steady supply of trustworthy and readily available social and economic statistics needed for policy making and monitoring purposes.

1.2 Summary of government's statistical development strategy

The Government of Ukraine has embarked on a program of Public sector reform. As part of that effort it proposes to strengthen and modernize its statistical system. The Government proposes to seek a Loan, tentatively estimated at US \$30 million, from the International Bank for Reconstruction and Development (IBRD) for that purpose. For the preparation and design of the Project, the Government received grants from the Japanese Grant Program for Public Sector Reform administrated by the World Bank. From the Recipient-executed portion of the grants extended to the State Statistics Committee of Ukraine (SSC), preparatory work has been done with the aid of consultants to formulate tentative proposals.

Over the past several years the State Statistical Committee (SSC) has taken a number of steps to reform the statistical system. It launched new surveys, modified the system of national accounts, introduced new classification systems based on international standards and benefited from technical cooperation provided by multilateral and bilateral donors. The Government has enacted a new statistical law. These activities resulted in a subscription to the IMF's SDDS in early 2003.

Despite these developments, the Ukrainian authorities recognize that the existing statistical system is outdated and fails to fully meet the needs of the country. Not all the methodologies and underlying concepts are in accord with international standards. Statistical compilations do not adequately meet user needs for policy relevant and timely statistics. The data collection methods, based on full reporting, are not cost effective. Current capacities for data processing, storage and dissemination are inadequate. They further realize that the statistical series and indicators produced are on the one hand, excessive and incompletely systematised, and, on the other hand inadequate to support comprehensive analysis of the current economic and social situation, and do not help in forecasting and providing inputs into the formulation of macro-economic and poverty reduction policies.

The Ukrainian Government wishes to reform and strengthen the statistical system in a manner that would lead to its needs being better met in a cost effective manner. The Government further wishes to base statistical compilations on international standards and concepts using collection methods that make greater use of sampling, resulting in a reduction of the workload and the costs entailed. It wishes to improve and modernize data processing and storage through the greater use of IT technology. It further wishes to enhance its capacity to better disseminate data.

The Government has taken a number of steps to reform the statistical system. As part of that effort the Government has developed "The Government program for transition to international system of accounting and statistics", particularly the third phase for the period 2003-2008. The Program has been the driving force behind the preparation of this master plan.

The SSC has identified six strategic themes that are inter-linked and are seen as laying the foundation for modernization of the system. These are:

- ***A: Interfaces with Users and Respondents, and Coordination***

Satisfying user demand without undue burden on respondents is the cornerstone of the strategy. As a first step it is important that user demand needs to be better understood. In addition to understanding user needs, there is scope for shaping demand in the context of a market economy.

Minimizing respondent burden is an important strategic choice in order to enhance cooperation. It involves introduction of sampling surveys and more extensive use of administrative data.

SSC needs to play a strong role in coordinating the State statistical system. This involves establishing a new National Statistical Council as well as continued cooperation with national and international statistical organisations.

- ***B. Legal and Statistical Infrastructure, Standards and Methods***

The new legislation governing statistics came into force on January 1, 2002. The revised law contains most of the provisions required for effective operation of the statistical system and is largely in accordance with the UN Principles but leaves room for further improvements pertaining to a legal basis for a decennial population census, clarifying the confidentiality provisions, and reinforcing the coordination role of SSC.

The statistical infrastructure underpinning data collection, processing and dissemination will be enhanced through development and use of internationally accepted statistical concepts and classifications and practices. Sampling will be increasingly promoted in place of full coverage in order to handle the increasing number of small businesses.

- ***C. Data Development***

Given that mission of the Statistical system of Ukraine is to collect, process and disseminate accurate, timely, coherent and trustworthy statistical data concerning the economy and social conditions in Ukraine, *required by government, business and society to make informed decisions, data development is at the core of the strategy.* Past emphasis on data for serving the needs of a centrally planned economy will be replaced by a need to meet the needs of the different stakeholders in a market economy.

- ***D. Organisational Development and Management***

The organisational structure of an office must facilitate efficient operations, and must be flexible and capable of adapting to changing needs. The present organizational structure is a heritage of the past and will be reformed in stages. It will be addressed through reorganisation of the central office staff and subcontracting some central office functions to selected regional offices whose structure will be reoriented. Restructuring the regional offices along functional lines (questionnaire dispatch, data collection, data processing, etc) will produce efficiency gains. Human resource management procedures will be enhanced. A performance review system will be implemented, a training strategy will be articulated and the training infrastructure will be rationalised and extended. To assist in planning and financial management, a system for monitoring staff working hours by project will be introduced and used as the basis for providing human resource estimates for all activities. In addition, a corporate quality framework will be introduced.

- ***E. Information and Communications Technology***

Information and communications technology (ICT) provides the backbone for efficiency gains and quality improvements and thus upgrading the ICT is a strategic theme. Procurement and development decisions will be made in accordance with a single, coherent and up-to-date ICT Strategy. They will include upgrading of: desktop hardware and software; internal computer network; database management and data processing systems; security, archiving and confidentiality protection systems; and data dissemination and exchange systems.

- ***F. Development of Other Components of State Statistical System***

SSC is not the only player in the State Statistical System. Several ministries and agencies produce statistics, first of all, the Ministry of Finance (government finance statistics), the National Bank (monetary and banking statistics, balance of payments), line ministries such as Health and Education. Their activities will be enhanced and coordinated to avoid the possibility of duplication or conflicting data.

1.3 Past and ongoing donor assistance in statistics, including WB interventions, with an outline of relevant projects and financing. Lessons learned.

With the collapse of the Soviet Union in 1991, the statistical offices of the newly independent republics were largely left to their own devices without the benefit of central guidance in respect to methodologies and guidelines. Furthermore, the general dislocation and weakening of state institutions led to a breakdown of the system of reporting to the statistical authorities. Non-response, which had never been a serious problem for the Soviet Union, became a problem especially in the case of privately owned units of production. The SSC, like statistical agencies in other Republics, for its part was unable to fill existing gaps or estimate values for non-response, as it had neither the expertise nor tradition of estimation. Coupled with the above-mentioned developments, the SSC faced the problem of capturing data from new privately owned enterprises that began to emerge as economic reforms spawned new entities. In many instances, these escaped the statistical net. In addition, the underground economy grew and informal activities could not be captured by the statistical system either.

Given the above, the published statistical series became deficient in coverage and misrepresented the levels of output and the use of that output. Thus, the published economic statistics understated levels and exaggerated declines. In the social area, similar biases and distortions emerged. For instance, the unemployment rate was calculated on the basis of the registered unemployed workers in receipt of benefits and excluded all those not registered or not in receipt of benefits. School enrolment figures are possibly distorted by the break down in reporting systems. It should also be noted that the decay of the established administrative systems impinged on the degree to which records were kept.

The SSC faced other challenges. These included the need to rapidly move towards the calculation of economic accounts based on the internationally accepted standards represented by the System of National Accounts (SNA). To this end, external technical assistance was sought particularly to support the calculation of GDP and related aggregates. Measures were taken to compute price indices and trade and other external flows. However, the underlying concepts and procedures employed in the collection of basic data did not undergo fundamental changes. Thus, the resulting GDP and related aggregates were weak and did not fully conform to international standards. The SSC faced yet another challenge. Data users, unaccustomed to international data standards, continued to insist upon the parallel compilation of indicators and statistical series based on Soviet standards. The SSC was hard pressed as the workload increased without a corresponding increase in resources. Furthermore, it experienced a loss of professional staff as new employment opportunities emerged.

The SSC has received and benefited from considerable technical assistance from the donor community, principally from The World Bank, the IMF, the EU's TACIS, OECD, USAID, Central Bureau of Statistics of the Netherlands, and Statistics Canada etc. The assistance has focused on:

- Staff participation in workshops and seminars
- Consultations on technical issues and applications
- Provision of equipment on a modest scale
- General advice on statistical standards
- Policy advice

In the early 1990s The World Bank provided a loan of \$9 million for the acquisition of computer hardware. The Soviet era hardware was dilapidated and could not be serviced and maintained for lack of spare parts. A key lesson learnt from that intervention was that reforming a statistical system demands sustained inputs and an overall strategy that is based on a comprehensive assessment of data needs. The World Bank has contributed to the reform effort in yet another significant manner. It provided SSC with grant assistance under the Japanese Grant Program for Public Sector Reform administered by The World Bank. From the recipient-executed portion of the grant extended, preparatory work has been done with the aid of consultants to formulate tentative proposals.

The IMF has had a long term Resident Adviser at the SSC to assist in improving key economic statistics that included price statistics, national accounts and the balance of payments.

Annex 1 provides details concerning the assistance provided to the SSC by various bilateral and multilateral donors aimed at strengthening the statistical system. Several comments are in order. The range of activities that were supported was extensive. However, there is some evidence to indicate that the assistance was donor driven and was inadequately coordinated. In the absence of a coherent work plan, the assistance delivered does not appear to have had the maximum impact.

1.4 Description of the Process for preparing the SMP, including consultation with stakeholders

The SMP is based on the consultations with the SSC and other government agencies, reports of the local and international consultants engaged in the Project preparation phase, and reports of other international agencies providing technical assistance in statistical capacity building. It should be noted that the Project preparation was done in parallel with the development of the third phase of "The Government program for transition to international system of accounting and statistics" for 2004-2009, of which the Project is a major component.

During a two year period, proposals from the central and regional offices were assembled, considered in conjunction with strategic reports prepared by local and foreign consultants, and consolidated into a single draft strategy. This draft was distributed for comments and suggestions within the central and regional offices of SSC Ukraine and sent to other government departments and agencies and to national and international organisations with whom the SSC has strong partnership links. Feedback on the strategy was incorporated into this final version

Development of the strategy has provided an opportunity to involve staff at all levels in the development process, to publicise SSC's role amongst national and international organisations, and to secure the support of stakeholders, including data providers and users.

The development process has been both top-down and bottom-up. SSC senior management took the initial lead in identifying the major strategic issues and outlining the principal strategic directions. Staff at more junior levels have helped convert the strategic themes into more specific developmental activities and the preparation of a detailed implementation plan.

SSC has engaged other agencies, both data producers and key data users within the government in obtaining inputs. Similar interactions with private sector entities have not been as actively pursued because of institutional constraints and the absence of an organized and clearly identifiable group of key data users.

SSC paid special attention to the views of external donor agencies, both bilateral and multilateral. It has taken special account of international standards, data priorities and the reporting requirements of agencies such as the UN, IMF, OECD, The World Bank, and the EU. In drafting this Master Plan, SSC has had the benefit of various reports prepared by these agencies that dealt with the issue of reforming the statistical system of Ukraine. Special attention has been paid to the IMF's SDDS following the Ukrainian acceptance of the SDDS.

2 Current status of national statistical system

2.1 Description of the system: the main data producing agencies and division of responsibilities.

The current statistical system of the Ukraine is structured and organized essentially on the model in place in the Former Soviet Union (FSU). The statistical system of the FSU had certain features that merit highlighting.

First and foremost, the orientation of the system was to serve the needs of an economy that relied upon central planning as the basis for economic management. Thus, all statistical information was collected for the purpose of central planning, target setting, and allocation of resources, monitoring performance and assessing the achievements of the state.

Secondly, the statistical system was geared to obtaining comprehensive information from enterprises through standardized forms. All enterprises reported in detail inputs of labor, raw materials

used, along with the volume of output. An elaborate system of monthly, quarterly and annual reporting was in place. Such reports were collected at the lowest administrative level (Rajon), aggregated before submission to the next level, (Oblast), before transmission to the statistical office of the republic which in turn reported aggregated results to the national Goskomstat of the USSR. Sample surveys were rare, the notable exception being a household expenditure survey. This survey was not a conventional survey of the type canvassed in market economies. The underlying methodology varied from the one used in the non-socialist world. Households were selected from lists of employees, rather than listings of households or dwellings. Furthermore, the emphasis was on cash expenditures and did not take account of consumption out of own production. Measures of income were limited to cash receipts. Additionally, the selected households remained on the panel for extended periods of time. Thus, the data generated by the survey were somewhat biased, and did not conform to international standards and concepts.

Thirdly, the underlying concepts embodied in statistical collections were based on the framework of the economic accounts of the nation, which were compiled on the basis of the Material Product System (MPS). The System treated most service activities as non-productive and thus excluded their contributions to national output. A further feature emphasized in data collection was the measurement of volume of output in quantitative rather than value terms.

Fourthly, in the area of Social Statistics, apart from the Population Census carried out every 10 years, all current social statistics were compiled from registers and administrative records maintained in great detail at the Rajon and Village (local) levels by agencies of the Government -health clinics, schools etc. In other words, almost all the statistics were generated by administrative processes and represented complete coverage of events and transactions.

Fifthly, the organizational and administrative structure of the statistical system mirrored the governmental structure of the FSU. It will be recalled that at the apex, there was a Central Government below which there were republics and autonomous regions. Each of these **was** sub-divided into Oblasts, which in turn were divided into Rajons. Under this overall structure, the statistical system took the following form:

- At the central level, the *Goskomstat* of the Soviet Union was the central statistical agency of the country. It prescribed concepts, classifications, the modes and frequency of collection, consolidated statistical data for the entire country based on data reported by the statistical offices established in the republics, and had overall management and administrative control over the entire statistical system.
- The level of the republics, the statistical offices essentially performed a dual role as intermediaries – as consolidators of data reported to them by the Oblast and Rajon level statistical offices, and as overseers of statistical operations within the republic and in ensuring that standards set at the national level were implemented within their territorial jurisdictions.
- The Oblast level statistical offices collected summary data based on the “complete reporting” system implemented by the Rajon statistical offices.
- The Rajon statistical offices were collectors of primary data from reporting units. They had the prime responsibility for data collection, preparation of consolidated tables and their transmission up the statistical chain. These offices were also responsible for data validation, certification and initial processing.

The hierarchical structure outlined above had other features that merit special mention. The statistical offices at each of the Central, Republic and Oblast levels consisted of Departments. These Departments had a subject matter orientation grouped by sectors or specialization e.g. national accounts,

industrial, agricultural statistics etc. A key element was that at each level the Departments were mirrored. These arrangements led to two outcomes: a) a degree of compartmentalization, and b) hierarchical reporting. In operational terms these arrangements led to some degree of self-sufficiency and isolation between different departments, but also a degree of duplication.

Data processing and management were centralized at each level of the statistical system. These responsibilities were assigned at the central level to a Computer Center. Similar Centers existed at the level of the Republics and Oblasts. The various Computer Centers were in turn organized and structured in a manner to “mirror” the statistical departments. Thus, for each Department in the statistical office there was a counterpart Department in the corresponding Computer Centers. The Computer Centers were largely staffed with systems engineers and programmers. The Computer Centers were equipped with main frame machines. Like their counterparts in the statistical departments, staff worked in isolation from their colleagues in the other departments of the Computer Centers.

The Three-Tier System remains in place to this date. The present statistical structure has three tiers – a national headquarters, Oblast level statistical offices and at the Rajon level. Data collection, based primarily on “complete” reporting, remains largely a Rajon level function; the Oblast statistical offices continue to have prime responsibility for data consolidation and preparation of standardized tables for submission to the national office. Hardware constraints prevent the storage of unit records as reported by respondents. Each regional office has the full range of functions, organised along the same lines as the Central Office. The Central Office conducts a few national surveys. The vast majority are carried out in the regions. Questionnaires and instructions and software for data collection and processing are developed and distributed by the Central Office to the regional offices.

While some changes have been introduced in the internal organizational structure of the national headquarters office, largely because of budgetary pressures, the “mirror” structure remains in place both in terms of the central office and the Oblasts and the statistical office versus the Computer Center.

At the current point in time:

In the Kiev HQ there are 450 staff in the SSC, 274 in the CIIC, another 111 staff of the Scientific Research Institute engaged in contract work on behalf of the SSC. Thus, the Central Office comprises in effect 835 persons. The Table 1 below provides an overview of the current staffing.

- The 27 regional statistical offices have an average of about 230 staff each, for a total of more than 6,200. The 650 or so Rajon statistical offices have an average of about 9 persons each, for a total of more than 6,000.
- The Rajon statistical offices are variable with respect to number of staff, equipment and functions, but in essence, Rajon staff hand arrange for enterprise questionnaires to be collected by enterprise from Rajon offices and hand deliver those that are not picked up; collect household data by personal interview; receive or collect enterprise data; forward data to regional office; edit and aggregate data (mostly manually) to produce Rajon level statistics.

Table 1. Number of Employees of the State Statistics Bodies (as per January 1, 2003)

	Actual staff	Whereof: government employees	From the total, the employees, possessing:		
			higher vocational education	secondary vocational education	no vocational education
In Ukraine whereof:	13,586	11,772	8,189	4,100	1,297

The SSC headquarters	450	425	392	18	40
Headquarters of oblast department	6,235	5,482	4,286	1,228	721
Rajon, city divisions	6,059	5,652	2,939	2,744	376
The CIIC	274	213	169	54	51
The Research Institute of Statistics	111	-	100	6	5
The Institute of Statistics, Reporting and Auditing	457	-	303	50	104

A number of observations are in order. This structure differs from that of most western country statistical offices.

First, despite budget cuts the overall number of staff – more than 13,500 - is very large in relation to staff levels in other statistical systems. The distribution between the three tiers is less than optimal. The size of the HQ Central Office relative to the regions is small. The scope for correcting the imbalances in order to implement the reform program is constrained by the limits on staffing at each level placed by the Ministry of Finance under the terms of an IMF program. This issue is taken up in a subsequent part of this report.

The three tier system has contributed to some duplication of functions and increased overhead costs by reproducing the Central Office structure in every regional office – the so-called “mirror” structure.

The number of permanent staff at Rajon level staff is considerable in relation to current needs and circumstances. The arrangements are a legacy of the past when Rajon administrations controlled enterprises within the Rajon and needed the data to do so.

The current skill mix of staff shows imbalances. There are shortages of experienced specialists in sampling and IT. The shortages can in part be attributed to the issue of salary levels especially in relation to private sector salary levels for IT professionals. Major changes in salary levels are outside the control of SSC. Moreover, the present system, whereby only certain staff can get bonuses or are allowed to work on personal contracts, is viewed by many as inequitable, and the long-term aim should be to eliminate such differences.

SSC has attempted to overcome present constraints by outsourcing certain activities. For sampling expertise, it contracts out work to the Scientific Research Institute. The Head of the Institute reports to the SSC and the Institute staff provide services to their clients in the SSC subject matter areas. The subject matter areas themselves are also developing expertise in response to the pressure to adopt sampling. There is a considerable risk of spreading sampling skills too thinly and a duplication of efforts.

2.1.1 Central statistical agency

During the extended period of transition, the SSC has taken a number of important and commendable steps to launch several new collections, restructure the statistical service, train staff and develop focused relationships with the major line ministries and agencies that are principal data users. The SSC has launched two new major surveys: a Household Expenditure Survey patterned on the World Bank’s Living Standards Measurement Study, and a Labor Force Survey using ILO recommendations. In addition, the SSC now compiles a Consumer Price Index based on IMF recommendations. National Accounts are now compiled in conformity with the 1993 SNA. Work is underway to establish a register of enterprises. A number of international and European classification systems have been introduced. A new Statistical Law was adopted recently. The law provides for safeguarding the confidentiality of

individual records. Arrangements were put in place to achieve greater statistical coordination. Annual work plans are systematically prepared in consultation with major users and approved by the Cabinet. These are significant steps that have put the SSC on the path of reform of the system. The SSC however continues to use many statistical methods and procedures inherited from a previous era, even though they are inappropriate in the current circumstances. Most statistical collections are on a complete reporting system with limited use of sampling. A considerable part of the data collected continues to be processed at the lower administrative levels in the country. Furthermore, the statistical infrastructure inherited from the past has weaknesses and needs strengthening. There is a need for more and modern computing facilities. These issues are reviewed more closely in the next part of this report.

Driven by the needs of central planners and decision makers at the lower levels of the administrative system, the scope of statistical collections in the former Soviet Union was extensive. The system was designed to collect comprehensive micro data, at frequent and regular intervals of time (in some instances weekly, but more normally monthly, quarterly and annually). A further feature of the system was that data were collected on a “complete reporting basis” from all legal entities and units. In addition, data was compiled at the small area level. Sample surveys were rare as almost all collections were on a complete enumeration basis.

This legacy and associated practices have continued. Users are essentially anxious not only to continue to receive information in the manner they are accustomed to, but have applied pressure on the SSC to provide new data sets. They have resisted any notion of curtailment in the flow of data or identification of a clear set of priorities. These user demands have imposed severe strains on the SSC as it has received little or no new resources to implement an expanded program of work.

Although an elaborate annual Plan of Statistical Work, which is developed by the SSC in consultation with major users, and approved by the Cabinet, regulates data collection in Ukraine, SSC has limited leverage in determining the scope of the plan. SSC is also constrained by the fact that users demand detailed data at the lowest administrative division - the Ryon - thus limiting its ability to move away from the system of complete reporting to one based on sample surveys. Users insist upon various data breakdowns by territory, by industry, by economic activity, by type of ownership, by organizational and legal forms of economic activities, etc. The Plan also specifies the periodicity of data collection and timing of work performance. Here again, users demand the greatest frequency, thus further burdening SSC. It is appropriate to note that there is little evidence that all of the data demanded by users and supplied by SSC is fully utilized.

Table 2: Number of Forms of the State Statistical Reporting in 2002(2000 numbers in brackets)

Sector of statistics	Total		Including:	
	Forms	% Of total	SSC reporting	Non-SSC reporting
1. Population statistics	10 (10)	2.0 (1.9)	6 (6)	4 (4)
2. Industrial statistics	26 (27)	5.2 (5.0)	26 (27)	-
3. Investment and construction statistics	32 (32)	6.4 (6.0)	32 (32)	-
4. Agricultural and environmental statistics	80 (96)	16.0 (17.9)	56 (59)	24 (37)
5. Statistics of services, transport and communication	51 (67)	10.2 (12.5)	34 (47)	17 (20)
6. Trade statistics	43 (41)	8.6 (7.6)	35 (32)	8 (9)
7. Financial statistics (together with financial reporting)	13 (19)	2.6 (3.5)	10 (14)	3 (5)
8. Statistics of property transformation	5 (5)	1.0 (1.0)	3 (3)	2 (2)

9. Price statistics	9 (2)	1.8 (0.4)	9 (2)	-
10. Social statistics	207 (209)	41.3 (38.9)	36 (32)	171(177)
11. Labour statistics	21 (25)	4.3 (4.6)	9 (12)	12 (13)
12. Statistics of structural enterprise surveys	4 (4)	0.8 (0.7)	4 (4)	-
Total:	(537)	100.0	260 (270)	(267)

SSC Management is cognizant of the issues arising from the massive effort to collect data. It endorsed the findings of a study undertaken by a consultant¹ that concluded there was some evidence that the present data collection effort has low effectiveness and incorporates a certain degree of excessiveness. The SSC Management also acknowledges that the existing data collection system does not comply with international standards and approaches. It is evident that there is an urgent need to rationalize and streamline the present approach to determining statistical priorities and the formulation of an annual work plan.

To gain a deeper understanding of the issues, it is necessary to take account of the present scope of data collection. Based on the study cited above and updated information for 2002, although the total number of forms was reduced, the SSC and other agencies of the Government between them still use a total of more than 500 statistical reporting forms to collect data. Table 2 provides an overview.

Under a law adopted by the Verkhovna Rada² of Ukraine "On the State Statistics", starting from January 2001, statistical information will only comprise data developed by the SCS. All other information, collected and generated by other ministries will be labeled "administrative data". Periodicity of information gathering through the reporting forms is elaborated upon in Table 3. Of the 260 forms canvassed by the SCS in 2002, 136 forms are canvassed annually. Quarterly reporting accounts for 22.7% of all collections, with monthly reporting at 15% of the total.

Table 3: Periodicity of Forms Canvassed by SCS

Sector of statistics	Total	Including:			
		annual	quarterly	Monthly	Other
1. Population statistics	6	2	-	-	4
2. Industrial statistics	26	19	2	5	-
3. Investment and construction statistics	32	14	16	1	1
4. Agricultural and environmental statistics	56	35	6	9	6
5. Statistics of services, transport and communication	34	14	10	8	2
6. Trade statistics	35	10	12	5	8
7. Financial statistics (together with financial reporting)	10	4	5	1	-
8. Statistics of property transformation	3	-	2	-	1
9. Price statistics	9	1	1	7	-
10. Social statistics	36	32	1	2	1
11. Labour statistics	9	3	3	1	2
12. Statistics of structural enterprise surveys	4	2	1	-	1
Total - items	260	136	59	39	26

¹ Anatoly Golovach: *Statistical Data Collection System in Ukraine*

² The Ukrainian Parliament.

- % of total	100.0	51.9	22.7	15.0	10.0
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The patterns and frequency of providing information by particular sectors are explained by tradition, rather than by the particular importance of these activities for the Ukrainian economy. The number of reporting forms used provides only a partial picture of the extent of information being collected. The study also revealed that the various statistical forms generated more than 70,000 indicators (excluding indicators incorporated in household surveys and national accounts).

The current system emphasizes indicators and is excessive in both volume and periodicity. There is broad agreement that the number of indicators should be reduced and be more analytical. There is a need to eliminate indicators which are narrowly specialized and a switch made to indicators based on the system of national accounts. Optimization of the system of indicators should facilitate the creation of a catalogue of statistical indicators, containing all their parameters (periodicity, reporting form, development breakdowns etc.). Based on an evaluation of the current situation, a number of conclusions can be drawn. Briefly:

- An excessive amount of information is currently being collected. The rationale and justification for the volume of data being collected is at best weak. A considerable amount of the data being collected are not wholly relevant to decision making processes in the current environment but are collected for reasons of tradition.
- There does not appear to be an integrating framework to guide the preparation of the annual Plan. The Annual Plan represents an aggregation of user demands without accompanying justification or explanations as to how the data are to be used by the agencies making the demands. In the absence of a costing and charge back mechanisms users are at liberty to make demands for what is seen as a “free good”. In addition, the present approach does not reflect priority setting or taking account of cost considerations.
- The demand for detailed small area data, driven by tradition and misplaced perceptions about the policy and decision-making role of local administrations, is a driving factor in the explosive data gathering effort. The insistence for detailed data by small area administrations has hampered the introduction of sampling methods.
- The full coverage approach in data gathering in the face of an explosion in the number of business units, particularly small businesses, has greatly increased the workload of SSC. A large proportion of these small businesses are often inactive and do not report. Those that are active however do not account for a significant part of output. The effort and resources employed are not commensurate to the amount of usable data generated.

These issues represent key constraints that will need to be addressed at an early stage if SSC is to be able to breakaway from the past and move towards cutting back on the quantum of data currently collected, adopt sampling methods in its data gathering and operate in the manner of other statistical offices countries in Western Europe. At the same time, such changes should enable the SSC to shift its resources to do more analytical work, to expand the household survey program, and to provide more relevant statistics at the regional level.

More detailed statistics are required to help design and monitor the poverty reduction programme. Poverty assessment involves the definition and monitoring of appropriate indicators, based on internationally accepted methods and procedures. Data are required at national and regional level over a wide range of topics - macroeconomic, industry, demographic, income and consumption, health care, education and other welfare, and ecology. Presently in support of poverty assessment, SSC prepares micro data files, containing data for households and their members, on quarterly, semi-annual and annual basis.

It should be noted that the SSC is the main statistical agency for systematic collection, compilation and dissemination of data. Other agencies of the government play a narrow role by compiling specialized statistics based on administrative records. The activities of the other agencies are briefly described in the sections below.

2.1.2 Central Bank

The National Bank of Ukraine compiles the balance of payments based on data from surveys and administrative sources. SSC shares the responsibility for compilation with the National Bank. Specific aims of this activity include improving the data acquired from banks for compiling the international investment position and developing a methodology for correlating the balance of payments and the international investment position.

Major responsibility for compiling banking and money statistics lies with the National Bank. Given the transition of the Ukrainian banking system to international accounting standards, there is considerable scope for improvements in the sources and methods used in compiling money and banking statistics

2.1.3 Ministries of Planning and Finance

The main functions of the Ministry of Economy and European Integration are to determine the strategy, goals and principal directions of economic policy, to undertake a comprehensive analysis of the country's economic development, and to develop main indicators for forecasting socio-economic development with both short-term and long-term perspectives. Government finance data are produced by the Ministry of Finance. Improvements are required in statistics of external debt and the data for local government budgets and in development and dissemination of the indicators.

2.1.4 Other line ministries (e.g., Health, Education, Agriculture)

Social statistics (health care, education, and welfare) are substantially derived from administrative registers, supplemented with survey data where required. The Ministry of Labour and Social Policy is a primary administrative source. The labour force and living conditions surveys, conducted by the SSC, supplement data collected by the Ministry..

Although there is no generalised framework similar to the SNA93 for social statistics, there is a wide range of international definitions and classifications, which SSC has been gradually moving to adopt, including for example, the International Disease Classification.

2.1.5 Other agencies

Foreign trade data are obtained from the Customs Committee. There is good co-operation between the SSC and the Customs Committee. The SSC checks the data and informs the Customs Committee about any errors it finds. Over time this has improved the quality of the data, especially the coding significantly. The Customs Committee sends back corrected data in subsequent monthly files. Further enhancement of the capacity of the Customs Committee is justified.

2.2 Statistical legislation and institutional framework of the national statistical system

2.2.1 Statistical legislation and degree to which system is independent

The adoption in 1992 of the Law of Ukraine on State Statistics created a legal basis for the development of statistics and marked the beginning of the reform of the national statistical system. The law covered basic provisions relating to the independence of the statistical system and reorganisation of the statistical system to the needs of a market-oriented economy. It also determined the responsibility of SSC for organisation and functioning of the statistical system of the country as a whole and prevented other government authorities, legal entities and the public from intervening in its activities.

Presidential Decrees aiming at improved performance of the Statistical system of Ukraine were issued in 1995 and 1997. The latter *Decree on Measures to Develop the State Statistics* specified a multi-annual programme of statistical reforms according to international standards over the period 1998-2002. It was the predecessor to the strategy and plan summarised in this document.

In 2000, the Parliament of Ukraine adopted the *Law of Ukraine on Introduction of Amendments to the Law on State Statistics* (No 1922-111, 13 July 2000). The Law came into force on 1 January 2001. In drafting this law, the SSC took into account the UN Fundamental Principles of Official Statistics, the model statistics act drafted by Eurostat, legislative enactments in other countries, and the opinions of interested ministries and departments. A copy of the main provisions of the law is appended (see Annex 2).

In addition, the statistical legislation includes the *Law of Ukraine on the All-Ukrainian Population Census* and *Amendments to the Code of Ukraine on Administrative Violations* (adopted in 2000) as well as a number of normative and legal acts related to different statistical areas such as national accounts, industry and transport statistics.

2.2.2 Mechanisms for coordinating statistical activities

Current SSC Plans and Planning Mechanisms

The SSC prepares a number of plans covering its activities and the corresponding sources of funding. There are three official general plans and there are plans for each of the SSC partnerships with international and national organizations in other countries where some funding is provided by the partner.

The three principal general plans are the multi-year plan, the annual plan and the plan of statistical works

- **Multi-year Plan.** Once every five years or so the SSC develops a multi-year plan. The multi-year plans are designed as the stages of the "The Government program for transition to international system of accounting and statistics", a long term program for restructuring of the State Statistical System of Ukraine and refers essentially to developmental activities rather than to ongoing operations. The most recent plan covers the period 1998-2002. It includes not only SSC activities but also statistical activities for which other government departments and agencies are responsible. The multi-year plan is prepared by the Planning Division, reviewed by the SSC senior management, discussed with all other departments and agencies, and approved by the Cabinet of Ministers. Each year the SSC must report progress against this plan. The plan is not changed even though circumstances change. For example, some of the activities envisaged in the present plan were not achieved during the time frame because the funding envisaged by the plan did not materialize, and the timeframe was extended. Currently, the third multi-year plan is under preparation.

- **Annual Plan.** Based on the multi-year plan and the actual circumstances, the SSC develops a one year plan covering its activities for the following year. The plan for year Y+1 is developed in the Spring of year Y. It focuses on developmental activities.
- **Plan of Statistical Works.** This is a very detailed plan that is developed towards the end of the year Y for implementation the following year (Y+1). It refers only to SSC activities that are to be supported through the government budget. It is in two parts. The first part comprises the set of instructions for the various SSC organizational units (head office, computer centre and rayon and oblast level offices) for the data collection, processing and dissemination activities. Each instruction indicates the data collection form being used, the unit responsible for sending the data, for receiving the data and the time frame for the operation. The second part of the plan of statistical work comprises the set of developmental activities. The plan of statistical works is developed by modifying the plan of statistical works for the current year (Y) in accordance with the annual plan for year Y+1. At the end of year Y, the statistical plan of works for year Y+1 is submitted to the Cabinet of Ministers for approval. Approval of the plan is a prerequisite for assignment of the budget, though there are actually no resource estimates in the plan.

In addition to these general plans the SSC has plans describing its joint activities with each of the international organizations and national organizations in other countries with which it has a partnership agreement. These plans are formatted depending upon the nature of the partnership agreement – formal or ad hoc - and the amount of funding. The list of foreign partners with whom the SSC is presently collaborating includes Eurostat (Tacis Statistics 2 and Statistics 4 programs), ILO, IMF, OECD, various UN agencies including UNDP, UNECE, UNFPA, and UNSD, INSEE, Statistics Canada, Statistics Sweden, UK DFID (Know-How Fund), and USAID.

2.2.3 Mechanisms for promoting consultation between users and providers

In most countries the primary mechanism for promoting consultations between users and producers and for validating and updating the statistical work program is to assemble, and obtain feedback from, user groups. In addition, a National Statistical Council exists to articulate statistical policy. The Council provides a platform for a dialogue between users and producers. At the present point in time such formal mechanisms do not exist. The Council of Ministers fulfils a narrow function when it reviews the Annual Work Plan prepared by the SSC based on priorities identified by the key public sector data users. No mechanism is in place to obtain inputs from other users in the economy.

3. Assessment of strengths and weaknesses of current system

3.1 System as a whole

3.1.1 Adequacy of legislation, independence from political interference; safeguards for confidentiality of data

Good legislation is a necessary but not sufficient condition for an effective and efficient national statistical system. Evidently, there are many laws that effect the operations of SSC, some specifically dealing with the statistical system itself and some with the role of government more generally. This review focuses only on those aspects of the legislation that deal specifically with statistics, the key component of which is the statistics act.

According to the Eurostat model, the statistics act should include at least the following provisions:

- the right to collect data;
- the obligation to ensure that the data collected are used only for statistical purposes, except with the express permission of respondents and except for certain types of data that are in any case publicly available;
- the right to access for statistical purposes data that have been collected for government administrative purposes;
- the obligation to ensure that no data pertaining to individuals are released either consciously or unwittingly;
- freedom from political interference in the timing or content of data releases, i.e., independence of the statistical office from political pressure;
- designation of an agency as the agency responsible for overall coordination of official statistics within the country; and
- arrangements for appointment and removal of the chief statistician of that agency that do not depend upon political whim.

The new law *On the State Statistics* that came into force on 1st January, 2001 contains the bulk of these provisions. In addition it provides a notional distinction between *statistical data*, meaning the data developed by SSC and *administrative data*, meaning data collected and processed by other ministries. The Law also permits SSC to develop statistical data on a commercial basis.

Nevertheless, viewed from the perspective of the UN Principles of Official Statistics, and taking into account the experience of other European countries, there are some additional areas that should be addressed. They include the coordination role of SSC and its relations with other data providers, ensuring confidentiality, and the legal requirement for a population census every 10 years.

A general observation pertaining to credibility is in order. Public perceptions concerning data integrity are often crucial in establishing the credibility of a statistical system as a source for reliable data. These perceptions extend to issues of confidentiality and the independence of the statistical system. Furthermore, such perceptions influence the degree of cooperation on the part of respondents. Building confidence and credibility require sustained and continuous efforts. SSC has taken a number of vital steps in this direction. These include the new statistical law, the subscription to the IMF's SSDS, the commitment to develop a meta database and taking the issue of data transparency seriously in the context of a more proactive dissemination policy.

3.1.2 Coordination and feedback mechanisms

At the present point in time SSC does not have a formal or systematic approach to obtain feedback. A method that is widely used in western statistical agencies for validating and updating the statistical program is to assemble, and obtain feedback from user groups. Typically such groups meet twice a year or so and discuss data availability and uses within particular subject matter areas, for example in agriculture, health or finance. One group may be devoted to the discussion of statistical methods. Such groups supplement the work of a National Statistical Council, which has a more general (less content-specific) focus.

SSC will need to develop and implement a policy of partnership with respondents rather than relying on the law and respondent fear of prosecution for refusal to cooperate. Elements of the policy will need to include:

- ensuring data confidentiality is not only maintained in practice but is understood by respondents – this is fundamental to building and maintaining effective relations;
- making maximum use of administrative data;
- reducing the data demands by constantly reviewing questionnaires and ensuring they exclude requests for data that are not absolutely essential;
- use of sampling in place of censuses wherever possible, and rotating the samples;
- ensuring respondents that are being surveyed for the first time understand why the data are required and what they are expected to do;
- improving the clarity of questionnaires;
- providing choices (mail, telecopier, telephone, e-mail, etc) by which respondents can provide the data;
- ensuring vigorous follow-up of non-respondents. For estimation purposes it is vital to determine whether non-response is because the unit is inactive or non-existent, or simply reluctant to respond.

3.1.3 Quality awareness

Assessments of data quality are to some extent subjective. However, the extent to which attention is paid to data quality issues is reflected by the heed paid to user inputs; the periodicity of revisions to past series, re-weighting and updating of base years, consistency checking, adherence to internationally recommended methods (e.g. chain linking) and concepts.

The present data collection methods are inefficient by international standards and the infrastructure and the procedures for processing, storage and distribution of data are obsolete. With At the same time, downsizing of government as a major objective, SSC faces innumerable challenges in introducing more efficient operations to enhance data quality. Building on new technology and new methods enable reductions in operating costs and increases in quality, but their introduction requires scarce development funds.

The IMF conducted a baseline assessment of Ukraine’s statistical system covering the SSC, the National Bank of Ukraine (NBU) and the Ministry of Finance (MoF), and six datasets: national accounts (NAS), consumer price index (CPI), producer price index (PPI), monetary statistics (MS) and balance of payments statistics (BOP), and government finance statistics (GFS)³ It included an initial assessment of the statistical system including identification of weaknesses in legal and institutional aspects, as well as resources to compile statistics. It brings together accepted standards and codes of good practices, highlights the vulnerabilities of the system, and facilitates the development of an action plan to address outstanding problems. It provides the *strategic framework* for a project to develop Ukraine’s statistical system incorporating the Fund’s Data Quality Assessment Framework (DQAF) as the central *conceptual feature*.

3.1.4 Adherence to professional, ethical and international standards

³ The baseline assessment was conducted during April 3–17, 2002 by the Fund’s mission to prepare the Report on the Observance of Standards and Codes—Data Module and Detailed Assessments using the Data Quality Assessment Framework.

SSC has gradually moved towards the adoption of international norms and practices. It has accepted the UN Principles, subscribed to the IMF's SDDS, revised the statistical laws to emphasize rules of confidentiality. It has made attempts to improve data accessibility and introduce greater transparency. In addition, it has introduced internationally accepted frameworks such as the SNA, the BOP and GFS. Progress has also been made in adapting international classifications such as NACE, the Harmonized System, ISCO etc.

3.1.5 Adequacy of outputs in terms of Macro-economic management; Preparation of poverty reduction programs; Monitoring progress towards the fulfillment of the Millennium Development Goals;

It is somewhat paradoxical that an excessive amount of information is currently being collected. As noted earlier, a significant amount of the data being collected are not wholly relevant to decision making processes but are collected for reasons of history. The demand for detailed small area data on output, driven by tradition and misplaced perceptions about the policy and decision-making role of local administrations. The insistence on detailed data on output by small area administrations has hampered the introduction of sampling methods. At the same time, the small-area data on social issues, particularly poverty-related, are often insufficient, although it directly refers to the local authorities' area of responsibility.

These issues represent key constraints that will need to be addressed at an early stage of modernization if the SSC is to be able to breakaway from the past and move towards cutting back on the quantum of data currently collected, adopt sampling methods in its data gathering and operate in a more efficient manner.

The other key issues that hold back modernization of the state statistical system are:

- (i) the current structure of statistical bodies in the country, inherited from the planned economy era and hampers the large-scale introduction of advanced data collection methods and use of modern information technology;
- (ii) insufficient level of interaction and co-ordination between the SSC and other government data providing agencies which results in duplication of activities and general lowering of statistical standards;
- (iii) insufficient skills and experience in modern management issues, particularly at the middle-management level;
- (iv) insufficient level of knowledge of international statistical standards, methods and practices, particularly at the regional level;
- (v) lack of knowledge and experience in the use of statistical software;
- (vi) insufficient understanding of analytical techniques and familiarity with data at different levels of government.

3.1.6 Adequacy of resources and sustainability

The Government does not have sufficient resources, particularly for financing comprehensive organizational reform, staff training at all levels, and introduction of new data collection mechanisms and modern communication and information technology. At the same time, the TA provided by other

international agencies and bilateral donors was limited in scope and concentrated basically in upgrading the methodological standards in use. The primary focus was on providing training to staff at the Headquarters. Some modest equipment was provided. However the assistance provided was insufficient to embark upon a substantive data collection effort, renewal or organizational restructuring. Budget constraints have contributed to under funding of statistical operations and investment in infrastructure.

Other constraints faced by SSC relate to the absence of a proper system of financial and budget management as well as of an integrating framework to guide the preparation of the annual data collection plan. The annual plan represents an aggregation of user demands without accompanying justification or explanations as to how the data are to be used by the agencies making the demands. In the absence of a costing and charge back mechanisms, users are at liberty to make demands for what is seen as a “free good”. In addition, the present approach does not have the requirement of priority setting or taking account of cost considerations.

It should be further noted that there is an imbalance in the allocation of staff resources between the HQ and regional offices.

3.2 Main agencies

3.2.1 Adequacy of resources (human, financial, logistics, management, IT&C)

The budgetary resources available to SSC are inadequate. Requests for additional budgetary funds are not entertained by the authorities in part because of the overall austerity program pursued by the government. The budgeting process contributes to the difficulties. The process begins with an agreement with the Ministry of Finance on the work program. The Ministry then provides SSC with so-called “control figures” which are not directly linked to the work program. The SSC sends out counter-proposals. These proposals are based on the number of employees and their wages (so-called “protected” items), estimated payments to be made for postal, etc. services, and utilities.

There is usually a gap of about 20% between the MoF and SSC figures. The gap is filled usually by “Special fund” receipts from paid services, lease income, etc. The remaining gap is unmet and leads to arbitrary cuts in expenditures on renovation and transportation. In some cases, employees are urged/encouraged to leave, albeit the mechanism is not clear, since there are no redundancy regulations.

The budgeting process is less than satisfactory as it does take account of actual costs associated with the execution of the agreed work program, which in turn is driven by user pressures and vested interests. SSC management has little or no flexibility in strategic redeployment of resources.

Despite budget cuts in recent years, the overall number of staff - around 13,800 - is very large in relation to staff levels in other statistical systems. The distribution between the three tiers is less than optimal. The size of the HQ Central Office relative to the regions is small. The scope for correcting the imbalances is constrained by the limits on staffing at each level placed by the Ministry of Finance under the terms of an IMF program.

3.2.2 Management, including human resource management

SSC management faces a number of obstacles in the use of resources, both financial and human. The number of permanent staff at Rajon level is considerable in relation to current needs and circumstances. The arrangements are a legacy of the past when Rajon administrations controlled enterprises within the Rajon and needed the data to do so. SSC management has no flexibility in

redeploying staff, for instance by moving staff from one tier to the other. This is in part linked to the acute housing situation which affects staff mobility.

The current skill mix of staff shows imbalances. There are shortages of experienced specialists in sampling and IT. The shortages can in part be attributed to the issue of salary levels especially in relation to private sector salary levels for IT professionals. Major changes in salary are outside the control of SSC. Moreover, the present system whereby only certain staff can get bonuses or are allowed to work on personal contracts is viewed by many as inequitable, and the long-term aim should be to eliminate such differences in conditions.

The current role of the Computer Center is somewhat anomalous. The Computer Center existed as a central unit and utilized a main frame system which also demanded the in-house development of software. With the introduction of PCs, some staff have been transferred to SSC. However, the Center continues to exist and attempts to offer services to other agencies and the private sector on a fee basis. Its future role requires careful evaluation by the authorities. SSC management has no authority to either reduce staff levels or to redeploy staff at the Center and will therefore need to take up the matter with the budget agency..

At the broadest level, the structural changes that are essential call for a contraction of the Oblast and Rajon level statistical offices with a concurrent expansion of the HQ office. The role of the Computer Center requires rationalization through its integration into the main SSC structure. It is appreciated that this may not be entirely feasible in the short term for several reasons. Foremost amongst these are the freeze imposed by the Ministry of Finance on changing the staff complement at each of the three tiers of the statistical system.

SSC has faced staff losses because of disparities in pay levels. This is more of a general government wide problem as public sector salary levels are not competitive against levels in the private sector. The problem is particularly acute in respect of skilled IT staff.

Resource constraints have limited the ability of SSC to mount well structured in-service training to upgrade and renew skill levels. Civil service rules and rigidities preclude the establishment of career planning and development.

At a broader level SSC lacks a strong management culture. This is attributable in large measure to the bureaucratic tradition in the public sector as a whole with centralized decision making as the norm. Even when managers recognize and wish to introduce change they are hampered by rules. A case in point is the lack of delegated authority to redeploy staff or financial resources between tasks. The budgeting process, referred to elsewhere, does not emphasis the cost accounting dimension. With the introduction of program budgeting, it is likely that improvements will take place.

The internal organizational structure of SSC, with its various departments, has contributed to compartmentalization, which has led to the lack of a team approach in implementing work programs. Each unit has tended to become self-sufficient and self-contained thus contributing to duplication of efforts. This is best illustrated by the absence of a pool of expertise in say sampling, or in questionnaire design.

3.2.3 Effectiveness of process of consulting and coordinating with providers and users

Statistical offices in many countries have a *National Statistical Council* made up of members from government, academia and business to help them in determining and marketing their overall policies, strategies and data collection programmes. The council can be of assistance not only in establishing user needs but also in promoting good relationships with respondents and sponsors. An earlier attempt to establish such a Council met with limited success. However, under the new law there is

provision for such a body. Furthermore, a more concerted effort will be made to launch an outreach to users by conducting statistical policy seminars with the objective of putting in place the mechanisms for a dialogue with users.

There is a need to broaden procedures for determining user needs. Defining user needs is not a simple task. Preparation of the annual plans of statistical works assists in the analysis of user needs by providing a forum for interaction between SSC and the main government users. However, it is not sufficient in itself. Firstly, it involves only government users. Secondly, these users tend to view statistics as a free good, and SSC presently has no means of indicating the actual data collection, processing and dissemination costs associated with their production.

3.3 Main statistical areas and/or operations

3.3.1 Type and purpose

At the broadest level, the indicators currently produced by the Ukrainian statistical system (and reflected in the raw data collected for their compilation) are excessively detailed in some areas and deficient in others. Information gaps exist to permit comprehensive analysis of the current national economic and social situation and for forecasting its development. Furthermore, the existing data collection systems do not meet international practice and standards, making international comparisons more difficult.

Current data collection efforts can be broadly grouped into seven groups: production, foreign trade, finance, prices, household, social, and other. For the purposes of presentation, production surveys are divided by branch of economic activity into seven groups, reflecting their current organization. However, they should also be thought of from the perspective of two groupings: those collecting detailed annual structural data and those collecting monthly or quarterly indicator data. In addition, it should be noted that the basic data are used in the compilation of macro-economic aggregates encompassed by the national accounts and the balance of payments.

Multi-Industry Structural Surveys: The annual structural survey was first conducted for 1997 reference year. It is presently a full coverage survey of all enterprises. In 2000 reference year, a single questionnaire was used for all enterprises, but small enterprises were not required to answer some blocks of questions. The data collected for the enterprise include volume of production, costs, turnover, stocks, number of employees and remuneration, fixed capital investment, innovation and information on expenditures, also volumes of production broken down by the local units belonging to the enterprise. The survey also included a section collecting intermediate consumption data (material expenditures and consumed services) by KVED category for the national accounts. For the 1999 reference year approximately 350,000 questionnaires were distributed. There were initially about 110,000 non-responses. In addition, there is a semi-annual structural survey covering a sample of small manufacturing and construction enterprises being conducted on a trial basis. A quarterly structural survey with full coverage of large and medium enterprises, collecting a greatly reduced set of data is also conducted.

Industry Surveys: There is an annual survey of about 100,000 large, medium and small enterprises that are engaged in industrial production as the predominant activity or as a secondary activity, and that operate on an independent accounting basis, i.e., maintain an individual balance sheet. These comprise manufacturing units, joint ventures with controlling foreign equity capital, subsidiary industrial enterprises (without financial autonomy) of non-industrial organizations, collective and state farms and multi-sectoral organizations, under all forms and types of ownership (state, private, collective and mixed). The data collected include physical volume and value of production, turnover, and number of employees, the value of dispatched production, incoming orders and the number of hours worked for goods with a

long production cycle. The survey includes collection of data for 500 commodity items. Data are published by economic activity and by region

There is in addition a quarterly survey of about 75,000 large and medium enterprises that are engaged in industrial production as the predominant activity or as a secondary activity. The data collected include physical volume and value of production, turnover, and number of employees, the value of dispatched production, incoming orders and the number of hours worked for goods with a long production cycle. Also in place is a monthly survey of approximately 10,000 large enterprises whose predominant activity is industry and who are, or were, state owned. The output of local units is included in the data reported by the enterprises. Collectively, these enterprises are responsible for around 90% of total industry output. The data collected include physical volume and value of production, turnover, and number of employees, the value of dispatched production, incoming orders and the number of hours worked for goods with a long production cycle.

Monthly and quarterly data are collected on a discrete rather than cumulative basis. The response rates for all the surveys are very high. However, there are some response problems with the new small-scale, non-state enterprises. These are sometimes difficult to locate because some have changed address and some are inactive.

Entrepreneurships are not included in any of these surveys. In terms of total industrial production, their combined output is considered to be relatively insignificant. However, it might be significant for some specific types of industrial activity, e.g., food processing.

Construction and Investment Surveys: A new classification of buildings and dwellings, harmonized with the corresponding European classification, was introduced in 2001. The content of construction surveys has been changed accordingly. The methodology for compiling the production index has not yet been finalized and needs further fine-tuning and practical application with appropriate time series behind. A pilot survey on building permits has been implemented in five regions and the full scale survey will begin in 2002.

Foreign direct investments are surveyed but not in the detail required for the balance of payments. A quarterly survey on portfolio investment has been introduced.

Agriculture: There is an annual agricultural survey of enterprises. It is based on full coverage – 60,000 enterprises. There are two questionnaires, one for large and medium enterprises (16,000), and the other for small enterprises (44,000). Annual enterprise production data for agricultural enterprises are also collected by the Annual Structural Survey, and limited data on household production are obtained from the Living Conditions Survey. There is a monthly full coverage agricultural survey of enterprises. The questionnaire is shorter.

Given that about 64% of agriculture production is by households, the SSC has recently introduced a monthly household sample survey collecting data on the production and use of land. The sample size is about 28,000 households (out of an estimated 6.5 million households in rural areas). The survey is separate from the Living Conditions Survey, firstly because more questions would overload the Living Conditions questionnaire, and secondly because of the long time taken to process the Living Conditions data.

Services: A new annual survey is being developed. In contrast to the existing survey, it will cover services to enterprises as well as households. A full coverage pilot survey was conducted in three regions during 2001. The sample size is around 6000 enterprises. After experience has been gained, the old survey will be discontinued and the new survey will be converted to a sample survey.

Data for banks and insurance companies are available from administrative sources.

Transportation and Communications: There are monthly and quarterly surveys of enterprises with road transport as the main activity, or the secondary activity but provided on a commercial basis. The annual survey also covers those units that have transport as a secondary activity for their own needs. Entrepreneurships involved in providing road transport are not surveyed at all. The net result is incomplete coverage of road transport. A pilot trucking survey was conducted in Kiev during 2001.

For railways, air, and water transport there are monthly and quarterly surveys and additional data are acquired from administrative sources. There have been ad hoc surveys on the use of mini-buses and other kinds of transport.

Domestic Trade: There is an annual full coverage survey of all enterprises involved in retail trade, irrespective of their predominant activity, or type of administration or ownership, with a total sample size of about 50,000.

The quarterly survey excludes small non-state enterprises and co-operatives. However, data for these enterprises is imputed based on their annual data, thus the nominal coverage of the quarterly survey is the same as the annual. Additionally, there is a monthly sample survey, comprising about 25% of all enterprises.

There are annual and monthly surveys of city and town markets. The monthly surveys collect volumes of sales and prices of agricultural products. Organised markets account for about 30% of total turnover and informal markets for a further 6%.

The output data are supplemented with estimates for the entrepreneurships, based on taxation data, accounting for about 7% of total turnover.

Annual and quarterly surveys of wholesale trade have recently been introduced, with full coverage of large, medium and small enterprises – about 50,000 enterprises in total.

Foreign Trade: Foreign trade data are obtained from the Customs Committee. There is good co-operation between the SSCU and the Customs Committee. The SSCU checks the data and informs the Customs Committee about any errors it finds. Over the time this has improved the quality of the data, especially the coding significantly. The Customs Committee sends back corrected data in subsequent monthly files.

In January 2001, Parliament approved the law on customs tariffs introducing the Harmonised System 1996 (HS 1996). The classification will be applied from mid 2001.

Finance: Finance data are obtained primarily from the accounting reports and other administrative sources. All enterprises are also required to submit an annual financial report to the SSC. Although this was originally an administrative requirement, it is now regulated by statistical law. The report is in four sections: balance sheet, income and losses, flow of funds and own capital. As previously noted, there is some duplication between these data and those collected by the annual structural survey.

Prices: Consumer price indices are well developed as a result of very fruitful cooperation with the IMF. The calculation of the CPI is done with the support of the 27 regional statistical offices. In each region, prices for all 425 items (goods and services) of the CPI are registered. While prices for food (having a weight of almost 60%) are collected in 468 towns, the prices for the other goods and for services are registered in the 27 capitals of the regions and in the large cities. The territorial coverage of the price collection seems to exceed the EU-average, but it has to be taken into account that the differences in price level and possibly price development between cities and smaller towns are substantial. Although a reduction is planned, the number of collected prices will remain large.

Producer prices are less well developed. They are still in terms of the old classification of economic activities.

For the first time, unit value indices for 2000 with base year 1999 have been calculated for exports and will soon be completed for imports. All indices are calculated at the 9-digit level. No prices are collected from the enterprises.

Labor: Labor data are collected both by way of enterprise and household surveys. There is an annual full coverage survey of all enterprises. Employment includes civil employees in military industrial complexes, persons on sick leave, on extended paid leave, apprentices, home contract workers and casual employees. Employees on maternity or childcare leave are excluded. Data collected include gross wages, nominal and real changes of gross wages, actual payments of wages and salary indices, for economic sectors and regions. The data are adjusted to include estimates of self-employment using information obtained from the Taxation Authorities.

There are semi-annual, quarterly and monthly surveys having a size cut-offs design. The cut-off levels vary by branch. Response rates are very high except for small private enterprises. A labour cost survey covering all enterprises was implemented in 2000, with technical guidance from INSEE.

There is a quarterly labour force survey. The survey sample will be completely revised once the results of the population census are available in perhaps a year or so. It will be redesigned to produce regional level data.

Total registered unemployment is defined as the number of persons registered as unemployed by state employment offices at the end of the month. These data are obtained from administrative sources. In accordance with the legislation the state employment office makes the decision regarding the registration status of an individual. Able-bodied persons of working age (16-54 for women; 16-59 for men) are considered as unemployed, irrespective of the reasons for their not having gainful employment, provided they have no income from activity; have been recorded by a state employment office as seeking employment; are able and ready for any gainful activity; and have not received an appropriate employment proposal.

Living Conditions and Other Household Surveys: The Living Conditions Survey was completely redesigned in 1999. It is a modular, multi-purpose survey. It includes modules on health (self-assessment), availability of health services, arrears of rent payments, and economic expectations as well as the core questions on household expenditures. It also collects economic data not covered by enterprise surveys. The results are published for Ukraine, 8 economic regions, and the 27 oblasts/regions and include analyses of the data. The SSC is preparing microdata files (households and household members) on a quarterly, half-annual and annual basis. They are used for poverty studies and for the development of the poverty reduction strategy.

Demography: Demographic statistics and statistics on internal migration are available for Ukraine in total, at oblast and rayon levels as well as for cities and villages. There has been a suggestion to create a population register in the Ministry of Justice, based on the 2001 population census, but no decision has been taken. Statistics on migration are now a political priority as Ukraine is becoming a final destination as well as transit country for migrants. A project to measure inflows and outflows started at the end of 2000 in cooperation with Statistics Finland. It included an assessment of administrative data sources, also the design of a survey involving a short questionnaire to be added to the normal registration documents for migrants and emigrants used at the registration desks in police departments. The questionnaire includes questions on date of birth, gender, place of living, nationality and citizenship, migration destination or source, and number of children. Questions on education, occupation and reasons for migration were excluded based on previous negative experiences with the answers. Before the survey can be conducted, there need to be agreements with the Ministry of Interior (for migrants) and with the local administrations.

Other (Environment, Research and Development, Business Opinion, Etc): The Ministry of Environment is responsible for most environmental data. The SSC is responsible for statistics on forests, expenditures for environmental purposes and ecological funds. It would like to develop surveys on waste, pollution and ozone effects. The Scientific-Research Institute has been conducting quarterly business opinion surveys of industrial enterprises since 1996. This sample comprises about 1200 industrial enterprises, including about 20% state owned enterprises, 10% co-operatives and remainder joint-stock companies. The survey includes all the harmonized questions used in the EU system of business opinion surveys together with additional questions relating to: terms of payments from other organizations; changes in remittance procedures; changes in volume of loans; and changes related to contacts with banks.

National Accounts: The SSC has adopted the 1993 System of National Accounts. The SSC produces annual input-output tables in addition to GDP estimates by production, income, and expenditure approaches. Starting in 2001, the data by economic activities are compiled according to the NACE Classification. Before 2001, the industrial classification used was based on the Ukrainian classification of activities. In Ukrainian production accounts, intermediate consumption of FISIM is not allocated to individual industries, but shown as a separate item for the whole economy. Current and comparable price estimates are produced for GDP from the production and expenditure approach. Comparable price estimates refer to prices of the previous year and no efforts are made to produce chain-linked GDP at constant prices of a unique reference period. For example, 1998 GDP in constant price is expressed in prices of 1997 while 1997 GDP at constant price is expressed in prices of 1996. As a result, while there is a positive difference of about 16% between constant price GDP of 98 and 97, the two indicators cannot, in any way, be compared to each other because the two GDPs are compiled according to different reference periods.

Balance of Payments: The balance of payments data of Ukraine are compiled according to the recommendations included in the fifth edition of the IMF Balance of Payments Manual (BPM5). The data are presented according to 11 broad categories of data under two main headings, namely current account: imports and exports of goods, imports and exports of services, income, and current transfers; capital and financial account: capital transfers; direct investment, portfolio investment, other investment, and reserve assets (and errors and omissions). The National Bank of Ukraine (NBU) has the overall responsibility for the compilation of the balance of payments. The balance of payments compilation is based on an international transactions reporting system (ITRS), which is under the responsibility of NBU, supplemented by a survey-based system under the responsibility of the SSC. The ITRS compilation system was introduced in January 1993. Under this system, two categories of respondents are obliged to report to the NBU: (1) domestic banks that undertake international transactions both for their own accounts and on behalf of their customers and (2) resident enterprises that have opened foreign accounts outside the domestic banking system. Both categories of respondents are required to report directly to the NBU on a monthly basis. The ITRS is a closed reporting system, in which opening balances of the non-resident accounts, gross movements (credits and debits) in the required details, and closing balances of the accounts are reported.

In addition to the customs data, data on the "shuttle trade" (goods transported by individual travelers), which are not included in the customs trade statistics, are estimated by the NBU using customs data on the number of people crossing the border and the amounts of foreign currency they are allowed to carry with them, supplemented by customs information on the number of privately imported cars, a survey on the value of imported clothing goods in domestic retail sales, and bilateral trade data. Thus, trade in goods shown in balance of payments will differ from foreign trade statistics published by the SSC, which do not include freight and coverage adjustment.

Government Finance: Compilation of the general government operations data is based on the main principles of IMF 'GFS Manual 1986' except for receipts from public property privatization. Until 2002, the national statistical system treated these receipts as budget revenues, and starting 2002 they will be classified as a financing item. This approach differs from the IMF 'GFS Manual 1986' recommendations, which assign privatization to lending minus repayment. Annual report on general government operations contains information on revenues, expenditures by economic, institutional and functional type, consolidated budget balance and report on financing from external and internal sources. In compliance with 'GFS Manual 1986' data are compiled on a cash basis and presented according to the consolidation principles, that is they exclude transfers between different levels of this sector.

Budget classification used for data compilations is a single systematized grouping of revenues, expenditures (including lending minus repayment) and budget financing by economic, functional, institutional, and other types developed according to current legislation of Ukraine and international standards (Order of Ministry of Finance of Ukraine dated December 3, 1997 -265 amended). The classification was developed in line with the IMF 'GFS Manual 1986' principles except for the receipts from public property privatization, which until 2001 were treated as non-tax revenues.

3.3.2 Methodological soundness

SSC has endeavored to improve the methods and approaches it employs in data collection by adopting international standards and classifications. The adoption of the 1993 SNA, the IMF's fifth edition of the BOP Manual, the 1986 GFS, ILO standards for labor force statistics represent a move towards international methodologies. Similarly, it has introduced NACE and the Harmonized System as key classifications in the compilation of statistics.

Some progress has been made in reducing the dependence on the system of complete reporting which was a key characteristic associated with the Soviet statistical system. A number of new sample surveys have been introduced. However, the household sample surveys rely upon household sample frames that are less than robust. In the case of business surveys, in the absence of a comprehensive business register, coverage of enterprises and establishments is incomplete. SSC has yet to develop and use techniques for adjusting reported data for either under-reporting or non-response.

Progress has also yet to be made in other key areas that impact on the quality of data. The practice of seasonally adjusting various series has yet to be adopted. Chaining linking indices has yet to be attempted.

The responsibility for methodological development is a shared one between the Institute and the Methodology Department. This divided responsibility is in part attributable to the limited staff skills available within the SSC. SSC has had to turn to an external entity to engage in methodological work, including sample design, and provide inputs to SSC. The present arrangements are not optimal and SSC must over time develop an in-house capacity. The Methodology Department, once strengthened and fully operational, should come to play a pivotal role through interactions with other units in SSC in developing sample designs, experimenting with alternative designs, designing questionnaires and pre-testing them. In the longer term, the work of these unit(s) will come to provide intellectual leadership and contribute to improvements in data quality.

At present data entry is done at the Oblast level but only summary reports in the form of standardized tables are transmitted to the Computer Center which in turn is responsible for the preparation of aggregated tables and supplying summary tables to the subject matter departments for further analysis, reporting to client agencies and the preparation of reports for general publication. The access to unit records at the HQ level represents best practice and is the norm in almost all statistical systems. It has

several benefits. It provides professional staff with the ability to review all data, identify “outliers”, make informed judgments and corrections, and take appropriate steps that contribute to data quality enhancement. More importantly, the availability of unit records permits the creation of detailed databases that have detailed time series for the purposes of both cross-sectional and time series analysis. It should be noted that under present arrangements, unit records are preserved neither at the HQ nor the Oblast levels. This is in part attributable to the limited computer storage capacities. With the obtaining of enhanced capacity, it should be entirely feasible to store all records. SSC should adopt a policy that leads to such data being stored at the HQ level.

3.3.3 Balance between national and international standards

As noted above, SSC has generally made progress in adapting international classifications. In the area of industry statistics, it has replaced the Classification of Branches of the National Economy of the Soviet Union (CBNE). Recently an economic activity classification (termed KVED) comprising a compatible fifth digit extension of NACE Rev 1 has been developed and implemented. There are some residual implementation issues arising from the fact that not all the legislation referring to the previous industrial classification has been appropriately updated by the government bodies responsible. This causes difficulties in applying the new coding scheme. For example, there are tax exemptions for health care enterprises, but the corresponding legislation has not been updated to reflect the fact that pharmacies which used to be classified as health care are now classified as retail trade. As a result, enterprises that are pharmacies are complaining about being assigned a new classification code.

Geographical classifications are based on a national standard that is defined for administrative purposes. The challenge is to keep the standard up to date as administrative boundaries change.

PRODCOM and a revised CPA are being developed in close co-operation with the corresponding Ministries, the Scientific Research Institute and the regional offices. The introduction of these classifications is planned for 2003. The revised CPA will be given the status of a national classification whereas PRODCOM will be used only for statistical purposes.

CIOCOP and COFOG have not yet been fully applied. In legislation concerning reporting burden size classes are apparently:

- micro enterprises < 10 employees;
- small enterprises < 50 employees;
- large enterprises ≥ 200 employees.

Other important international classifications now in use include the Harmonized System and International Standard Classification of Occupations.

A new accounting standard was recently introduced. The SSC national accounts area played an active role in the formulation of this new standard. This has helped to ensure that the standard goes some way to meet national accounts needs and that it is well understood by Central Office staff. However, it is not known whether the regional office staff responsible for editing the data is equally up to date. Also, as the new accounting standard has not long been in place, it is likely that further changes to questionnaires are required to align them better with the new standard. Furthermore, there are likely to be problems that should be discussed with the Ministry of Finance.

In health, ICD Revision 10 has been used from year 2000. In education, ICED Version 7 will be introduced in 2002 (in partnership with Swedish DIDA). In tourism, the standards developed by the World Tourism Organisation are being followed. In housing, the EU regulations are being taken into

account. Thus the overall impression is that the statistical office is moving steadily forward in the adoption of international standards for social statistics, though there is still more to do.

The classifications are probably reasonably well known amongst the Central Office staff responsible for survey design and for specifying the coding procedures. However, it is not clear if the same is true for the regional office staff that actually has to apply the procedures.

With the subscription to the SDDS, greater momentum is likely towards greater use and implementation of international standards.

3.4 Main statistical products

3.4.1 Dissemination and release policy

In January, 2003 Ukraine became the 52nd country-subscriber to the Special Data Dissemination Standard (SDDS) established by the IMF. Subscribers to the SDDS are expected to enhance the availability of timely and comprehensive statistics and therefore contribute to the pursuit of sound macroeconomic policies; the SDDS is also expected to contribute to the improved functioning of financial markets.

Although subscription is voluntary, it carries a commitment by a subscribing member to observe the standard and to provide certain information to the IMF about its practices in disseminating economic and financial data. A member country's subscription, which can be made at any time, is to be communicated in writing to the Secretary of the IMF.

The SDDS, in taking a comprehensive view of the dissemination of economic and financial data, identifies four key aspects of data dissemination⁴:

- The data: coverage, periodicity, and timeliness;
- Access by the public;
- Integrity of the disseminated data; and
- Quality of the disseminated data.

For each of these dimensions, the SDDS prescribes two to four monitorable elements--good practices that can be observed, or monitored, by the users of statistics.

The lists identify 18 data categories that provide coverage for the four sectors of the economy, and prescribe the periodicity (or frequency) and timeliness with which data for these categories are to be disseminated. In recognition of differences in economic structures and institutional arrangements across countries, the SDDS provides a degree of flexibility. Certain categories are marked for dissemination on an "as relevant" basis. Further, some data categories or components of data categories are identified as encouraged rather than prescribed. With respect to periodicity and timeliness, a subscribing member may exercise certain flexibility options while being considered in full observance of the SDDS. The Ukraine has exercised the flexibility option in respect of the timeliness of quarterly national accounts and the analytical accounts of the central bank.

⁴ See IMF web page presenting an overview of the SDDS.

The monitorable elements of the SDDS for access, integrity, and quality emphasize transparency in the compilation and dissemination of statistics.

- To support ready and equal access, the SDDS prescribes (a) advance dissemination of release calendars and (b) simultaneous release to all interested parties.
- To assist users in assessing the integrity of the data disseminated under the SDDS, the SDDS requires (a) the dissemination of the terms and conditions under which official statistics are produced and disseminated; (b) the identification of internal government access to data before release; (c) the identification of ministerial commentary on the occasion of statistical release; and (d) the provision of information about revision and advance notice of major changes in methodology.
- To assist users in assessing data quality, the SDDS requires (a) the dissemination of documentation on statistical methodology and (b) the dissemination of component detail, reconciliations with related data, and statistical frameworks that make possible cross-checks and checks of reasonableness.

Consistent with this comprehensive view of data dissemination, dissemination itself is broadly defined to include electronic dissemination in addition to the more traditional formats.

3.4.2 Assessment of relevance, accuracy, and reliability of data

As noted elsewhere in this report, the outdated system of indicators, statistical and information technologies result in less than timely and relevant provision of necessary information needed for developing socio-economic policy, and also in incompatibility of Ukrainian and international statistics, and difficulties in data comparisons.

The list of indicators produced by the statistical system, and accordingly, the raw data collected for their compilation, is, on the one hand, excessive and incompletely systematised, and, on the other hand, there are large gaps in information needed for comprehensive and effective analysis of the current economic and social situation of Ukraine and forecasting its development. This is particularly so in the case of reliable national accounts of different frequency. Besides, the existing data collection system does not fully meet international practice and standards. Despite resource constraints SSC has been forced into new collections without abandoning outdated collections dictated by tradition rather than real need. Pressure for detailed data at the regional level in particular has prevented SSC from abandoning the dependence on a system of complete reporting.

The major issue is the rajon level data requirements. Rajon and regional government users are demanding very detailed, frequent data with a tight time schedules. Reliable, detailed data at rajon level implies large sample sizes, with correspondingly large resource implications and a heavy respondent burden. For example, there has been a demand for indices of industrial production at rajon level. This would require virtually a census. While there were good reasons for having very detailed data in the era when there were needs to control a planned economy, it is no longer appropriate. In the market economy, where the day to day operations of private enterprises are not under the control of rajon or regional governments, there is little justification to continue to service the needs of local administrations on the same scale as previously. Production of data at rajon level should be reduced to a level more in line with that in developed market economies, i.e., sufficient to support decisions regarding the local environment within which economic activities are conducted, but not to control the activities themselves.

This implies a need to educate users. One way of doing this is by charging the costs of producing any statistics that are beyond what could be considered as *public good*. This would include very detailed

statistics at rajon level. A more radical approach is simply to stop production of very detailed data on the grounds of relevance and use.

There are other practices that impact on relevance. There are still enterprise questionnaires, for example foreign investment, that collect cumulative data. This is a heritage of the old accounting system that focussed on achievement of annual targets. It is not good practice in a market economy where short term forecasting is a significant need. With cumulative data, corrections to data for earlier periods cannot be distinguished from genuine period to period changes.

A number of questionnaires request data for the same period of the previous year. This is another undesirable heritage from the old system. First, it involves unnecessary burden if the data have previously been collected. Second, same period previous year comparisons do not provide latest trends. This practice is also strongly recommended against by the IMF, as the comparisons tend to provide erroneous conclusions. However, the compilation and use of seasonally adjusted data is hampered by the lack of sufficiently long compatible time-series in many areas. Preparation of the seasonally-adjusted statistics should be one of the most essential and challenging tasks to be implemented in the near future.

Assessing the quality of data produced is complex and has not been systematically attempted. However, there are a number of practices and circumstances that point towards problems of accuracy. In the first place, there is no explicit quality management framework. However, senior management appear receptive to quality improvement suggestions. Given the need for radical changes, the focus is correctly more on reengineering than on continuous improvement.

The National Bank, Ministry of Industrial Policy, Taxation Administration, Transport Agriculture, Customs (external trade), Health, Education, and Welfare provide aggregate level data based on administrative records to SSC. It is not clear to what extent the quality of these data have formally assessed.

The response rates in most enterprise surveys are very high for the large and medium size enterprises. This is likely because rajon staff have intimate knowledge of the enterprises in their areas. As previously noted, many enterprises actually collect the blank questionnaires from the rajon offices. With smaller enterprises the proportions of enterprises failing to respond are much higher. The main problem is in determining whether a non-responding enterprise is inactive or simply not replying. It appears that in compiling estimates, non-responding enterprises are assumed to be inactive. There is a general practice of assuming that any enterprise that cannot be contacted is inactive and hence should be assigned zero values. This approach tends to lead to a downward bias in reported levels. Furthermore, with increased levels of non-response over time, the resulting time series are non-comparable, and may exaggerate declines.

SSC does appear to have a formal data revision policy. The departments have their individual practices. For example, when the Industry Statistics Department publish data for year Y it includes data for year Y-1 for comparison purposes, and the latter data are revised relative to those published for the first time the previous year. However, in general terms, there seems to be a lot of resistance to making revisions. *No revision or minimal revision* is the unwritten policy. If, for example, the national accountants uncover an error in the incoming data after estimates for the first quarter have been published, they have difficulty in revising those estimates subsequently.

The Central Office of SSC does not receive unit records from the rajons and oblasts. Thus, it lacks the means to verify data and identify outliers. Furthermore, since little emphasis is placed on time series analysis, errors in a particular series are not identified.

3.4.3 Views of users – public and private sector

The main users of data are in the public sector. At the central government level, users continue to express the need for extremely detailed data in traditional formats. Convention rather than a real need or effective use, drive this demand. In addition, officials in the key user ministries press for new indicators appropriate to policy making in a market economy environment. Illustrative of this pressure is the demand for very detailed quarterly GDP estimates. Reference has already been made to the data demands of rajon administrations. Taken together, severe pressures are placed on SSC to satisfy demand. It is this pressure that has led SSC into mounting collection efforts that are excessive by international standards.

Although the private sector has yet to emerge as a significant data user, it is likely that it will start becoming an important user as reforms take root and the private sector becomes the engine of growth. What concerns the private sector most at this point in time is the increasing burden imposed by the growth in the range and frequency of data collected by the authorities. A second apparent concern on the part of the private sector relates to the confidentiality of information reported to the SSC and fears on its part about data sharing with the tax authorities.

It is clear that users need to be educated about the nature and role of the statistical system in a market economy. They need to be persuaded that traditional data formats and sets, relevant for central planning, no longer are useful. They need to become acquainted with market oriented statistics and their use in policy formulation and analysis.

These elements are taken up and addressed in the design of the project in a variety of ways including user education, improved dissemination, and the creation of a metadata base.

Part II: A CORE PROGRAM

4 Outline of strategic development plan

4.1 Long-term vision to meet basic data needs

At the broadest level, the statistical system must be capable of collecting and disseminating reliable, timely and relevant data on the social, economic and environmental condition of the country to its citizens, businesses, governmental institutions and other interested parties. To meet these goals a core work program needs to be designed that in turn meets basic data needs for *Macro-economic management; Preparation of poverty reduction programs; Monitoring progress towards the fulfillment of the Millennium Development Goals; and the Promotion of private sector development*. These elements represent in a sense the demand side for data.

The determination of a core work program that satisfies the data needed to meet the above requirements presents challenges. The core work program needs be balanced in scope and reflect the appropriate priorities of the main stakeholders made up of domestic public and private sector users. At the same time it should cater to the needs of external data users comprising the major development partners made of the international agencies. The needs of a new class of international users made up of private investors cannot be ignored.

A further necessary condition that must be satisfied is that the information generated is not only readily available but is also trustworthy. To meet the latter objective, the statistical system should be impartial, operate at arms length from political interests, and contribute to the objectives of good governance based on transparency and accountability.

Strategic goal can, therefore, be stated as: **To enable Ukraine to deepen its economic reforms through better economic management and improved public sector efficiency.**

The following elements can be identified as expected results/outcomes:

1. Sustainable and balanced economic growth
2. Poverty reduction in targeted areas
3. Increase in size of private sector.

Measurement of these outcomes will be based on national and international assessments of economic and social progress based on more timely and improved statistics for policy formulation.

The broad organizing framework for economic statistics is provided by the 1993 SNA; the MDG provide a framework for social data. These can be used in the formulation of a core work program utilizing a combination of Censuses; Enterprise and Household Surveys and exploiting administrative data sources.

In pursuit of its long term goals, the SSC management has defined its mission in the following terms:

“The mission of the State Statistical Committee of Ukraine is to collect, process and disseminate accurate, timely, coherent and trustworthy statistical data concerning the economy

and social conditions in Ukraine, required by government, business and society to make informed decisions.”

In furtherance of its mission it has articulated the basic principles and values to which it will adhere to in implementing statistical program and operations. These are guided by, and build on, the UN Fundamental Principles of Official Statistics. The key guiding principles that it has chosen to emphasize can be summarized as follows:

- **Trustworthiness:** To build and retain public trust, produce statistics that are based processes that are transparent and lead to statistics that meet strict professional considerations, including scientific principles and professional ethics.
- **User Satisfaction:** Official statistics are to provide information to all sections of society on the economic, demographic, social and environmental situation. SSC will ensure equal access to these data through impartial release practices and reasonable pricing policies. To facilitate correct interpretation of the data, sources and methods will be made available along with the data. To prevent misuse of official statistics, SSC will comment on erroneous interpretations of data in an objective manner.
- **Respondent Confidence:** SSC will respect the confidentiality of individual data and ensure that such data are used exclusively for statistical purposes. Respondent burden will be minimised by ensuring that survey questionnaires do not duplicate one another, that they contain only essential requests for data, and that they are sent to the minimum number of respondents consistent with the production of good quality statistics. This involves coordination between the units and agencies involved in the statistical system.
- **Investor Satisfaction:** SSC will adopt cost-effective and efficient collection and delivery systems through good use of resources. It will use all available data sources, be they statistical surveys or administrative records, to generate data that meet standards of quality, timeliness, costs and the burden on respondents.
- **Staff Satisfaction:** Recognizing that staff is its most valuable resource, SSC will ensure that staff maintains a high degree of professionalism. SSC will provide extensive training in statistical and management methods, support research and innovation, and encourage professional ethics.
- **Coordination and Partnership:** SSC will ensure effective coordination among departments responsible for producing statistical data in order to achieve consistency and efficiency in the statistical system. It will use international concepts, classifications and methods in order to promote consistency of data and efficiency of operations. It will engage in bilateral and multilateral cooperation with national and international statistical agencies around the world.

4.2 Identification of Strategic goals, with time-bound targets

The SSC has identified six interlinked strategic themes that will serve as guidelines as it goes about the process of modernizing the Ukrainian statistical system. These themes are:

A: Interfaces with Users and Respondents, and Coordination

Satisfying user demand without undue burden on respondents is the cornerstone of the strategy. As a first step it is important user demand needs to be understood. In addition to understanding users' needs, there is scope for shaping demand in the context of a market economy

Minimizing respondent burden is an important strategic choice in order to enhance cooperation. It involves introduction of sampling surveys and more extensive use of administrative data.

SSC needs to play a strong role in coordinating the State statistical system. This involves establishing a new National Statistical Council as well as continued cooperation with national and international statistical organisations.

- *to ensure a comprehensive and ongoing assessment of user needs;*
- *to promote better understanding by the users of the data available and the methods by which they are produced;*
- *to ensure relevant, accurate and timely data are readily accessible to governments, private businesses and individuals;*
- *to measure and reduce the respondent burden, and to take it into account in making decisions about development of the statistical programme;*
- *to make more extensive use of administrative data to replace or supplement survey data; and*
- *to better coordinate the elements of the State Statistical System.*

B. Legal and Statistical Infrastructure, Standards and Methods

The new legislation governing statistics came into force on January 1, 2002. The revised act contains most of the provisions required for effective operation of the statistical system and largely is in accordance with the UN Principles but leaves room for further improvements pertaining to a legal basis for a decennial population census, clarifying the confidentiality provisions, and reinforcing the coordination role of SSC.

The statistical infrastructure underpinning data collection, processing and dissemination will be enhanced through development and use of internationally accepted statistical concepts and classifications and practices. Sampling will be increasingly promoted in place of full coverage in order to handle the increasing number of small businesses.

- *to ensure statistical legislation reflects the UN Principles;*
- *to develop and introduce statistical classifications harmonised with international standards and to establish an automated system for their storage, access and maintenance;*
- *to develop and implement a statistical business register in accordance with international standards and recommendations;*
- *to upgrade the household area frame using data from the 2001 population census; and*
- *to develop and introduce enhancements in sampling, questionnaire design, seasonal adjustment methods.*

C. Data Development

Given the mission of the Statistical system is to collect, process and disseminate accurate, timely, coherent and trustworthy statistical data concerning the economy and social conditions in Ukraine, *required by government, business and society to make informed decisions, data development is at the core of the strategy.* Past emphasis on data for serving the needs of a centrally planned economy will be replaced by a need to meet the needs of the different stakeholders in a market economy.

- *reorientation of data content towards topical issues;*
- *reduction in the length of questionnaires and improvements in their design;*
- *reduction in sample sizes through increased use of stratified sampling procedures;*
- *consolidation of requests for annual data into a single integrated annual survey;*
- *consolidation of requests for sub-annual data into a single integrated survey; and*
- *increased use of seasonal adjustment procedures.*

D. Organisational Development and Management

The organisational structure of an office must facilitate efficient operations, and must be flexible and capable of adapting to changing needs. The present organizational structure is a heritage of the past and will be reformed in stages. It will be addressed through reorganisation of the central office staff and subcontracting some central office functions to selected regional offices whose structure will be reoriented. Restructuring the regional offices along functional lines (questionnaire dispatch, data collection, data processing, etc) will produce efficiency gains. Human resource management procedures will be enhanced. A performance review system will be implemented, a training strategy will be articulated and the training infrastructure will be rationalised and extended. To assist in planning and financial management, a system for monitoring staff working hours by project will be introduced and used as the basis for providing human resource estimates for all activities. In addition, a corporate quality framework will be introduced.

- establishment of more flexible and efficient structures at central, regional and district levels;
- development of strategies and systems to help in planning, human resource management, and training;
- development and implementation of a comprehensive training strategy and infrastructure; and
- development and implementation of a corporate quality framework.

E. Information and Communications Technology

Information and communications technology (ICT) provides the backbone for efficiency gains and quality improvements and thus upgrading the ICT is a strategic theme. Procurement and development decisions will be made in accordance with a single, coherent and up-to-date ICT Strategy. They will include upgrading of: desktop hardware and software; internal computer network; database management and data processing systems; security, archiving and confidentiality protection systems; and data dissemination and exchange systems.

Upgrading of:

- desktop hardware and software;
- internal computer network;

- database management and data processing systems;
- security, archiving and confidentiality protection systems; and
- data dissemination and exchange systems.

F. Development of Other Components of State Statistical System

SSC is not the only player in the State Statistical System. Several ministries and departments produce statistics. Their activities will be enhanced and coordinated to avoid the possibility of duplication or conflicting data.

4.3 Proposals for Institutional strengthening

Successful implementation of the core statistical work program resulting in sustainable improvements in data will demand parallel actions to strengthen organization effectiveness. The introduction of new management approaches and practices to underpin the capacity of SSC to take on the statistical tasks in an efficient manner is critically important. Actions designed to strengthen the organizational capacity of the system would also go a long way in the development of sustainable work programs. Failure to introduce organizational change and management development could, on the other hand, have adverse implications on both the execution of the project and its impact in the long run. Equally critical to the success of the Project is the education of users and stakeholders in the unique role of data in a market economy environment. User appreciation and acceptance of the nature of new data sets and how they are policy relevant, is essential if SSC is to obtain support from users in its efforts to transform the statistical system. Educating users will ensure greater acceptance of the changes being introduced in the content and scope of the work of SSC.

Proposals for a restructuring of the organizational structure of the statistical system and the introduction of new methods of management need to be considered against the above background.

Three broad aspects concerning the organisational structure of a national statistical system merit mention. These are: first, the extent to which responsibility for statistics is assigned to a single government statistical agency or spread amongst several; second, the way in which responsibilities are divided between the lead statistical agency and other agencies; and third, concerns the division of responsibilities between the national Central Office and regional statistical offices.

There are essentially two basic models for organizing national statistical services: centralised and decentralised statistical systems. In the *centralised model*, responsibility for data collection is primarily concentrated in one statistical agency. Statistics Canada and most West European nations have adopted this model. In the *decentralised model*, data collection is divided among several agencies, one agency being responsible for, say labour statistics, another for agricultural statistics, and so on, with one agency being designated the nominal leading agency. The US statistical system provides an example, with the Office of Budget and Management playing a coordinating role. Ukraine currently has a centralized system and there do not appear to be pressing reasons for a modification of the current model.

As regards the regional dimension, staff can be concentrated in a few locations or they can be spread across the regions, substantially depending upon the overall organisational and administrative structure of the government. Three possible models exist:

Large Head Office Model. In this model, staff and functions are focussed in the head office. For example, Statistics Canada is strongly centralised, having relatively small regional offices whose main focus are personal interviews and dealing with data users. The advantages of this arrangement are the operational efficiency and the scope for head office control and enforcement of standards.

Dispersed Head Office Model. In this model staff and various functions are dispersed amongst regional offices, with each regional office specialising in different functions. For example, in Australia, 50% of the staff are in regional offices, and each regional office is responsible for a specified set of surveys and infrastructure functions. The Tasmanian State Office handles all agricultural statistics; the Victoria State Office maintains the statistical business register. This arrangement preserves some of the processing efficiency of the large head office model in circumstances where staff must be located in the regions in line with government policy.

Regional Office Model. In this model, large regional offices all have identical functions, including all types of data collection within the region. This arrangement is typified by the German statistical system. The advantage of this arrangement is the close geographical contact with respondents. The disadvantages are the duplication of overhead costs and the scope for variations in applications of standards, procedures and systems across regions.

The Ukrainian statistical system, for reasons of both history and the administrative structure of the government now in place, is a system essentially fitting the Regional Office Model. There do not appear to be any overwhelming reasons for altering the broad structure now in place.

A number of observations are in order. This structure differs from most western country statistical offices.

First, despite budget cuts the overall number of staff - around 13,500 - is very large in relation to staff levels in other statistical systems. The distribution between the three tiers is less than optimal. The size of the HQ Central Office relative to the regions is small. The scope for correcting the imbalances in order to implement the reform program is constrained by the limits on staffing at each level placed by the Ministry of Finance under the terms of an IMF program.

The three tier system has contributed to some duplication of functions and overhead costs by reproducing the Central Office structure in every regional office – the so-called “mirror” structure.

The number of permanent staff at Rajon level staff is considerable in relation to current needs and circumstances. The arrangements are a legacy of the past when Rajon administrations controlled enterprises within the Rajon and needed the data to do so.

The current skill mix of staff shows imbalances. There are shortages of experienced specialists in sampling and IT. The shortages can in part be attributed to the issue of salary levels especially in relation to private sector salary levels for IT professionals. Major changes in salary levels are outside the control of SSC. Moreover, the present system whereby only certain staff can get bonuses or are allowed to work on personal contracts is viewed by many as inequitable, and the long-term aim should be to eliminate such differences in conditions.

SSC has attempted to overcome present constraints by outsourcing certain activities. For sampling expertise, it contracts out work to the Scientific Research Institute. The Head of the Institute reports to the SSC and the Institute staff provide service to their clients in the SSC subject matter areas. The subject matter areas themselves are also developing expertise in response to the pressure to adopt sampling. There is a considerable risk of spreading sampling skills too thinly and a duplication of efforts.

The Case for A Reallocation of Responsibilities

An overriding issue is that of the appropriate distribution of functions and staffing between the three tiers of the statistical system in order to make the system reflect the changing nature of statistical operations and the mode of data collection. Acceptance of the need to turn to sample surveys as a primary method of data collection to replace the current reliance on complete reporting demands a reorientation of the responsibilities and functions of statistical offices at the three levels of the system. The reorientation would require a clear division of responsibilities between the three tiers to remove duplication. In a re-

engineered system, the functions of the offices at the three tiers would ideally take the following broad form:

- HQ Office: Overall management and oversight of the statistical system and definition of statistical policy; establishment of standards and methods; design of all surveys; data management and dissemination; staff training;
- Oblast Offices: Oversight of Rajon level offices; manage statistical survey operations; data capture and verification and validation; maintain regional data bases and engage in dissemination of data to meet regional needs; develop sample frames and business registers;
- Rajon Offices: Responsible for all field operations connected with data collection; initial data validation; update business registers and frames; interact with local level users and disseminate local area data;

A realignment of functions and responsibilities along the lines outlined above is essential and imperative if the SSC is to vigorously pursue a program of reforms and begin implementing the work program identified by the current project utilizing data collection methods based on sample surveys. A realignment of functions will demand a restructuring of the organizational setup of the HQ, the Oblast and Rajon statistical offices. It must be stressed that the present allocations of responsibilities and functions between the three tiers of the statistical system are neither appropriate nor conducive to enhancing the system's potential capacity and emerge as a robust, efficient and cost effective statistical system. It must be further stressed that meeting the overarching objectives of establishing a strong, efficient and cost effective statistical system in the Ukraine will demand structural and institutional changes. If no actions are taken to restructure the system, there are high risks of failure. It should also be noted that effective implementation of the core work programs will demand institutional and structural changes. The new approach to data collection, relying more heavily on the use of sample surveys, can only be satisfactorily implemented with a reformed organizational structure that embodies specialized units dealing with sampling, questionnaire design etc. and an effective field unit for data gathering. Similarly, the full gains from the use of enhanced IT capacity will only be achieved if the necessary institutional and structural reforms are completed. The current role of the Computer Center is anomalous. The guiding philosophy and rationale is based on the use of mainframe computing equipment. To meet the goals of greater user orientation and enhanced dissemination of data, it is necessary that the institutional arrangements in place are supportive. In brief, the institutional and structural reforms have to be seen as a key first step leading to the implementation of the proposed changes in the work program.

At the broadest level, the structural changes that are essential call for a contraction of the Oblast and Rajon level statistical offices with a concurrent expansion of the HQ office. The role of the Computer Center requires rationalization through its integration into the main SSC structure. It is appreciated that this may not be entirely feasible in the short term for several reasons. Foremost amongst these are the freeze imposed by the Ministry of Finance on changing the staff complement at each of the three tiers of the statistical system. The policy underlying the freeze is government wide and SSC is unlikely to be able to obtain a waiver. Additionally, the policy is linked to the current IMF program of fiscal austerity. Were a waiver be obtained, there are nevertheless considerations that need to be factored in. These include the near impossibility of moving staff from the regions into Kiev because of the acute housing situation in the capital. Furthermore, there is the issue of skills. The skills of staff at the Rajon and Oblast level do not match the skill requirements at the HQ level.

In the face of these circumstances, changing the staff strength at the level of the three tiers in the short term is problematic. A medium term strategy is therefore needed. The overall aims of the strategy should be to expand the size of the HQ whilst reducing the size of the Oblast and Rajon offices in gradual stages. To achieve these goals, it is suggested that SSC adopt the following guidelines:

- Staff reductions at the Oblast and Rajon levels be achieved through attrition of staff through retirements and resignations;
- Given the new and changed functions of Oblast and Rajon offices, in service training and reorientation courses be mounted to equip staff with needed skills e.g. data inputting and validation; survey interview skills; compilation and updating of sample frames and business registers; cartography; and principles of data dissemination.
- Negotiate with the Ministry of Finance for a transfer of some staff currently located in the Computing Center to the HQ of the SSC. It is noted that these staff are paid from the budget of the Central Government and their transfer would not breach the existing freeze. In return for the waiver, SSC should agree upon a gradual reduction, over say a five year period, in staffing at the Oblast and Rajon levels by a predetermined number. These proposals are likely to be favourably received by the Ministry of Finance, as they would result in savings to the national budget.

The alternative of moving certain HQ Office functions to regional offices, whilst retaining central control, in essence moving towards a geographically dispersed Central Office model does not appear to be a viable option. Under such an arrangement, were it pursued, development and/or operation of a new survey or of the business register could for example be handled in a regional office. This is not entirely feasible given the present skill deficiencies at the Oblast level. Moreover, the important objective of greater integration of functions at the HQ level would not be met.

As the rationalization of the overall structure of the statistical system is a key and critical factor to the successful implementation of statistical reforms in Ukraine, key elements of the requirements outlined above, particularly those concerning the Computer Center, will need to be developed and adopted.

A concurrent issue is that concerning the internal organizational structure of the statistical office. The internal structure of a statistical office can take several forms. It could either take a subject matter approach in establishing units, or a functional approach. The *subject matter approach* typically contributes to specialization by subject areas and the development of pools of subject matter expertise. Thus, at the extreme, staff deployed in say a unit dealing with agricultural statistics, would typically be made up of specialist agricultural statisticians. However, they would need to have the requisite knowledge of sampling methods, survey operations, and data management practices. Over time a unit so constituted would become a self-contained unit with few interactions with other units in the institution. There would emerge a tendency to have staff that are in a sense “Jacks of all trades but masters of none.” There are clearly disadvantages that out weigh any gains from an overall institutional viewpoint. It is generally acknowledged by most management specialists that the vibrancy and effectiveness of a modern organization are best ensured by the existence of a strong team culture that draws on the best talents available. Advocates of these views argue that efficiency is best ensured through a process of specialization and the use of specialists in a team based approach in implementing particular tasks. Thus, in the example cited in the case of producing agricultural statistics, under a *functionally based approach*, the task would draw on specialist sampling experts, questionnaire designers, field operational units, IT personnel etc. to design, execute and analyze an agricultural survey. Staff with requisite skills would be grouped in functional groups. Each of these groups would be staffed so that there is a critical mass of specialists available in the organization. Specialization in this manner would contribute to the more efficient use of skills, better contribute towards the overall mission goals of the statistical office and at the same time reduce the tendency towards the emergence of self contained cells or units. The task of creating a cooperative and reinforcing team culture is greatly facilitated through adoption of a functional approach in the structuring of an institution.

The characterization outlined above is somewhat abstract but favors a functional approach to statistical organization. Typically many statistical organizations, particularly those operating under the centralized model, have tended to begin with an organizational structure that has a subject matter orientation but over time moved towards a structure that blends the subject and functional approaches. The current broad patterns in many statistically advanced countries indicate an organizational structure grouping functions in the following manner:

- Economic data collection, processing and analysis - often referred to as *subject matter areas* or *branches* - concerned with the collection of economic data by individual surveys and from individual administrative sources and including the business register;
- Social data collection and processing - the other subject matter areas concerned with social statistics;
- National accounts, balance of payments and economic analysis - areas concerned with integration and analysis of data from surveys and administrative sources;
- Marketing and dissemination – assessing user requirements, segmenting users into groups, managing output;
- Concepts, standards and methods - developing, promoting, and monitoring use of a common conceptual framework, survey best practice, and quality management;
- Information technology - developing and promoting effective use of data processing, data and metadata management, and communications technology;
- Management and services - budgeting, planning, personnel, pay, training.

These functions may be combined or split in a variety of different ways. In summary, there is no right organisational structure. The important point is that all the functions are present and communicate effectively. Further guidance regarding the organisational structure is provided in reports and papers by the ECE/UN (1997) and Conference of European Statisticians (1998).

The current structure of the SSC HQ is essentially a cross between the subject matter and functional approaches. A Chairman, who in turn is assisted by four Deputies, heads the SSC. The Deputies in turn have oversight of a number of sectoral statistical and administrative departments. All in all there are 21 sectoral units, 16 whereof being sectoral departments and 5 – administrative units. The organizational chart below depicts the current distribution of functions across the head office. It will be observed that many of the units deal with specific subject matter fields, - agricultural statistics, national accounts, household surveys etc., the five administrative units are essentially functionally oriented. Special arrangements are in place in respect of the IT, data dissemination and methodology functions. These are staffed by personnel funded from the national budget but have distinct identities with a degree of autonomy that permits them to engage in revenue earning activities. Of these the largest is the Computing Center (ICCI) staffed by some 200 persons. The Center is structured in a manner that “mirrors” the Departments/units of the SSC. The various units in the Center deliver support services to counterpart units in the SSC.

The critical question that arises is: Is the present distribution of functions across SSC optimal in terms of being able to support the new work program and the modalities for data collection as envisaged under the reform program now under development? There are other secondary questions. These include: Is the structure in place effective and efficient from the perspective of resource use? Does it facilitate good communication within and between functions, in particular between data collection areas and the national accounts area? Are the current arrangements conducive to supporting task oriented matrix management?

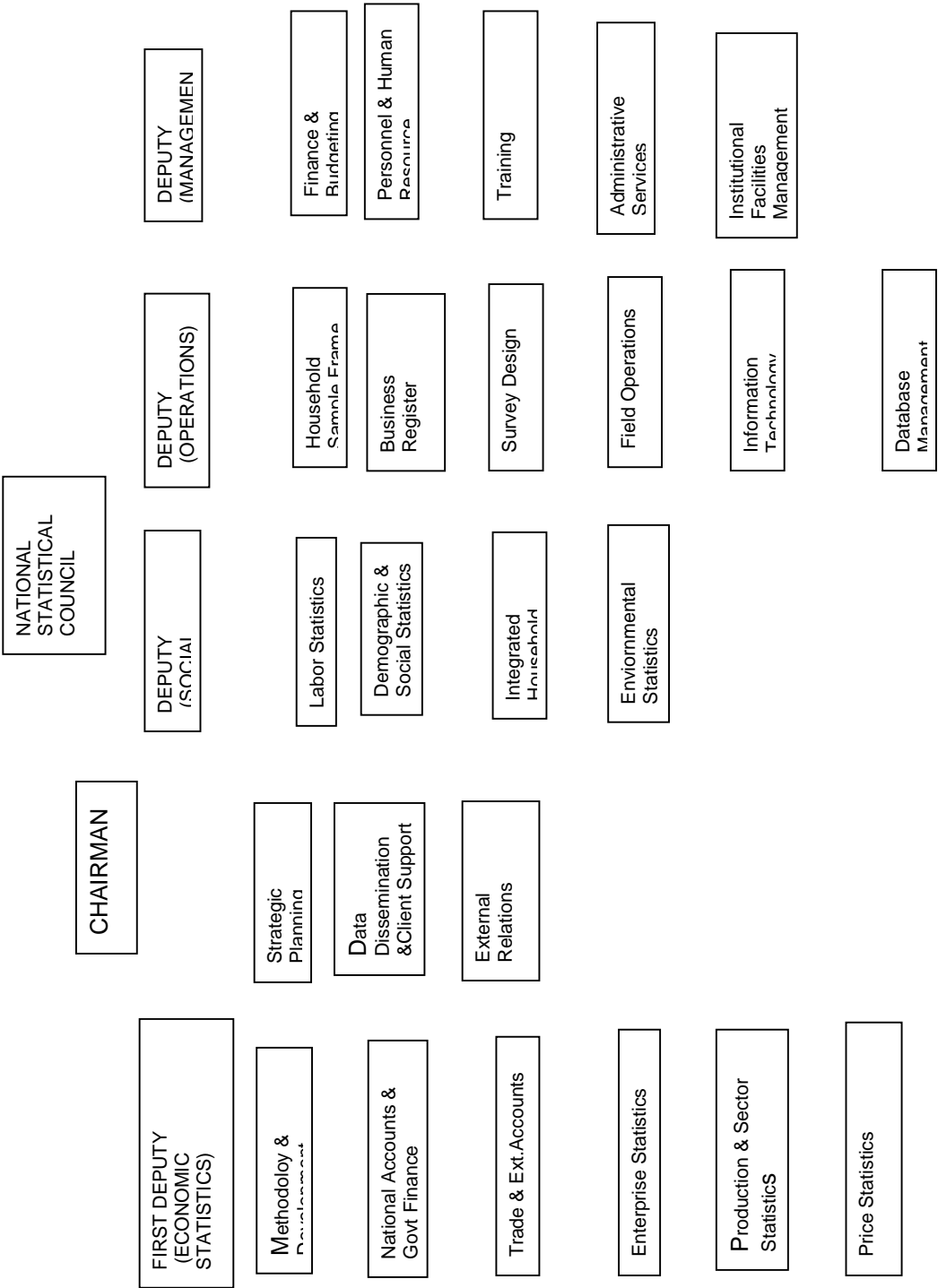
A broad response to these questions would be that there is considerable room for streamlining the present structure to contribute in a positive manner to overall institutional strengthening. A realignment of functions is therefore recommended. The starting point for the proposed realignment is the nature of the proposed work program of SSC, the new modes for data gathering with emphasis on the use of sampling procedures, and the introduction of new management approaches designed to achieve greater efficiency and cost effectiveness. The proposals also take account of the need for adoption of management practices that contribute to the development of a new corporate culture that emphasizes client orientation, enhanced data quality and maximum returns to the resource inputs. The proposals do take full account of prevailing public service rigidities such as the freeze on staff expansion, the inability to vary the compensation package for staff and limits set by available staff skills.

It will be noted that the proposed work program emphasizes the consolidation of primary data gathering centered around a limited number of surveys supplemented by accessing administrative records. It will be further observed that proposals concerning data gathering emphasize the critical role of sampling as a tool. On the issue of better servicing of client needs and stress placed on data dissemination, the role that IT can and should play has also been emphasized. Based on these considerations, an optimal arrangement would lead to an organizational structure that demarcates the following grouping of functions into a number of clusters.

- **Statistical infrastructure:** Sampling frames, business registers and classifications.
- **Methodology and Design:** Sample design, experimentation and questionnaire design.
- **Field Operations:** Data collection
- **IT Function:** Development and management of institutional databases and metadata bases; technical support to operating divisions.
- **Operating Departments:** Household surveys, enterprise surveys; price statistics national accounts; external trade and financial statistics; social statistics; demography.
- **Data dissemination and client support.**
- **Management Services:** Strategic planning; Finance and Budgeting; Human resource management including training; External Relations.

These proposals are translated into an organizational structure and are depicted in Chart 1 shown below. It is appropriate to elaborate on the proposed clustering and to provide some rationalization for the proposed structure.

Chart 2.



Statistical infrastructure: A sample frame of household units will need to be developed based on the results of the Population Census of 2001. While the Census will provide a listing of all households in small area localities, internal migration and population shifts will result in making the listings outdated over time. It is therefore essential that steps be taken to design a master sample frame that is continuously updated. While the work of updating will be carried out by the Oblast and Rajon offices, the HQ unit will need to provide leadership, technical support and guidance and become the repository of the master sample frame. Similarly, the development and maintenance of a business register will demand strong intellectual leadership at the HQ level to guide the work of compilation at the second and third tiers of the statistical system. Work on classifications is critical to the development of a functioning business register. It is also critical to almost all statistical operations both in the survey context and the realm of administrative statistics.

Methodology and Design: At the present point in time the responsibility for methodological development is a shared one between the Institute and the Methodology Department. This divided responsibility is in part attributable to the limited staff skills available within the SSC. SSC has had to turn to an external entity to engage in methodological work, including sample design, and provide inputs to SSC. The present arrangements are not optimal and SSC must over time develop an in-house capacity. The Methodology Department, once strengthened and fully operational, should come to play a pivotal role through interactions with other units in SSC in developing sample designs, experimenting with alternative designs, designing questionnaires and pre-testing them. In the longer term, the work of these unit(s) will come to provide intellectual leadership and contribute to improvements in data quality.

Field Operations: As the SSC moves towards the launch of more complex sample surveys, and as response rates deteriorate, it is inevitable that interviewing respondents will assume greater importance. Furthermore, making meaningful improvements in data quality will demand greater contact with respondents, both households and enterprises. While most of the burden will fall on Oblast and Rajon offices, HQ will need to play a role in establishing guidelines, plan and manage field operations, train field operatives and to evolve new approaches on the basis of feed back obtained from the field.

IT Function: The role to be played by IT in the future will need to be different. At present data entry is done at the Oblast level but only summary reports in the form of standardized tables are transmitted to the Computer Center which in turn is responsible for the preparation of aggregated tables and supplying summary tables to the subject matter departments for further analysis, reporting to client agencies and the preparation of reports for general publication. The Computer Center, as noted earlier, has traditionally relied upon main-frame systems and has devoted most of its staff resources to designing customized systems and software. Some staff resources are deployed for hardware maintenance and engineering support. The Center has also taken data processing for external clients on a fee-paying basis. Again as noted earlier, the Center enjoys a semi-dependent status although it reports to the Chairman of the SSC. Under the current project, the IT function will need to be drastically redefined and restructured. Data entry and initial validation will continue to be performed at the Oblast levels. **A key recommended change is that the full set of unit records in electronic form be transmitted to the HQ Operating Departments to permit them to undertake fuller validations, make appropriate imputations for missing data and analysis the data.**

The above recommendation requires some elaboration. The access to unit records at the HQ level represents best practice and is the norm in almost all statistical systems. It has several benefits. It provides professional staff with the ability to review all data, identify “outliers”, make informed judgments and corrections, and take appropriate steps that contribute to data quality enhancement. More importantly, the availability of unit records permits the creation of detailed databases that have detailed time series for the purposes of both cross-sectional and time series analysis. It should be noted that under present arrangements, unit records are not preserved neither at the HQ nor the Oblast levels. This is in part

attributable to the limited computer storage capacities. With the obtaining of enhanced capacity, it should be entirely feasible to store all records. SSC should adopt a policy that leads to such data being stored at the HQ level.

With the setting up of Local Area Networks in the Operating Departments, it will be feasible to engage in greater data sharing. Each of the Operating Departments would need to have IT professionals to perform specialized functions. In the proposed IT environment, the need for customized systems and software would be largely eliminated. The Operating Departments would rely on commercial software. The role of the Computer Center under the scenario painted above would change. The Center would have responsibility for equipment maintenance, and providing IT training to staff in the other units of the SSC. However, its major functions would be to develop and maintain the institutional database along with a meta database. The proposals outlined above represent best practice in most of the advanced statistical offices in market economy countries.

There are several implications arising from the above proposals. In the first place, sizable savings can be achieved. Moving aspects of the IT function from the a central location to where data operations are actually carried out (in the field and in the Operating Departments) will ensure that IT plays an effective role in contributing to enhanced productivity and greater efficiency. The proposed arrangements would achieve several specific objectives which include:

- increasing staff resources available for data work in the main SSC Departments; permitting maximum exploitation of PC based technology;
- a desirable downsizing of the of the Computer Center whose current staffing was set in a period when mainframe driven applications were the norm;
- enable the restructured Center to focus on the development and maintenance of the institutional database and meta database; engage in strategic planning in the IT area; develop its revenue earning activities;

Some additional remarks are in order. The shift in staff resources from the Center to the main Departments of SSC may be constrained by current limits on staffing imposed by the Ministry of Finance. The Senior Management of SSC should enter into negotiations with the Ministry of Finance at an early date to obtain a waiver. It should be stressed that what is being proposed is a rationalization of existing resources rather than an increase in staffing. A clear case can be made on the grounds of efficiency. Should bureaucratic rigidities preclude a resolution of the issue, SSC management will need to explore other options. One such option could be to have the Computer Center “loan” staff to the main SSC Departments. The issue is of the greatest importance and needs to be addressed before the World Bank loan is finalized. Failure to resolve the issue in a satisfactory could jeopardize the entire reform effort.

A second issue deserving close attention concerns the current practice, in part because of computer storage capacity, of not retaining permanently, unit records. As a consequence, it is currently not feasible to engage in time-series analysis as the requisite individual data sets are not available. It is imperative that in acquiring new hardware, account is taken of the need to provide adequate computer storage capacity. The design of the institutional database will need to factor in the need to incorporate unit records into the database.

Data dissemination and client support: The existing organizational structure does provide for these functions. The emphasis is on submitting detailed periodic reports --- monthly, quarterly and annual--- to various governmental agencies. Until recently, in the absence of confidentiality of data requirements, individual records, in some instances were transmitted to other agencies. This is true at all three tiers of the system. These tasks are performed by the respective operating departments. In addition,

SSC does publish a number of reports and statistical publications for the general public. Special data requests from private sector entities are channeled to the Information Center, which works in cooperation with the operating departments in meeting such requests. The SSC is precluded from charging fees whereas the Center is not.

Some rationalization of present policies and practices is needed in the light of changed circumstances. In a market economy environment, the private sector will in time emerge as a important and significant user of data. Present processes are not sufficiently geared to meeting these demands. New policies and procedures are needed along with the necessary institutional arrangements. The policy regarding imposing fees should be reviewed and brought into line with the best practices of other statistical agencies. SSC should have the power to make cost recovery in instances when it meets special requests from clients in both the public and private sectors.

As regards meeting regular, as opposed to special requests, data needs of other agencies, there is a clear need to review the content and frequency of regular reports. As central planning has given way to markets, the nature, scope and frequency of existing reports are brought into question. The need for much of the information currently provided needs closer scrutiny. It is important to establish how the data are actually used by the recipient agencies. It should be remembered that continuing the supply in accordance with old norms is not only a heavy cost, but contributes to a diversion of resources from other high priority areas. SSC should in the near term enter into a dialogue with the principal users and redefine user needs. The process is likely to be long and contentious and will require educating users.

Management Services: The present structure of SSC has all of the conventional units dealing with administrative, financial, human resource and external relations functions. No radical restructuring is therefore called for. What is at issue is how these functions are defined and carried out.

There are several areas that require reinforcement and re-engineering. These include budgeting and planning, training of staff within the context of human resource management, strategic planning and financial management with emphasis on accountability.

As providers of essential information national statistical offices have to take the quality of their products and services very seriously. This has been a central pre-occupation of most statistical systems. As the performance of statistical services, and indeed of government services in general, have come under closer scrutiny in many countries, quality management has lately become a focal issue. Obviously, there are many sides to the 'quality' of official statistics. To mention some of the most important aspects: official statistics must be

- relevant
- timely and
- accurate,

but they should also be

- produced cost-effectively, and
- without too much of a burden for data providers.

Each of these major quality aspects of official statistics requires its own quality management approach. National statistical offices appear to adopt various approaches to quality management. Some have opted for a system of Total Quality Management (TQM), others aim at certification along the lines of the ISO-9000 system. For example, in 1996, Statistics Netherlands adopted a comprehensive quality program, laid down in the form of a 'business plan' for the next decade. Two specific components of this

overall quality program merit mention. First, Quality Guidelines about *need* to be established and be accompanied by a system of ‘*statistical auditing*’. The focus of statistical auditing in this sense is on the quality of the *statistical production process*. This implies that it relates *primarily* to the quality elements ‘timely’, ‘accurate’, ‘produced in a cost-effective manner’ and ‘without too much of a burden for data providers’. ‘Relevance’, though an important part of the quality guidelines, is usually not covered *in depth* by the statistical audits. There are other mechanisms to measure user satisfaction with the output in general and with individual sets of statistics in particular. These too are set out in the business plan. In the Netherlands, the business plan incorporates six elements:

- A relevant work program
- Reduced respondent burden
- Effective statistical information
- Comprehensive quality management systems
- Adequately trained and motivated staff
- An efficient, well managed, flexible organization

As in the Netherlands, similar activities have been underway at Statistics Canada for a number of years.⁵

The present approach to planning in SSC has been exhaustively discussed. The annual plan is an aggregation of data demands without scrutiny of genuine needs for, or uses of, the data requested. It should be recalled that the plan specifies products and dates without priorities, strategies, methods or resource implications. Resource requirements are needed to make informed choices between options. Neither does SSC have full control over its contents, as issues involving resource implications for the SSC are determined in isolation. The Plan is approved without being accompanied by a corresponding allocation of resources. Often, the SSC is required to collect additional statistics with no additional budget. It is further noted that SSC does not have in place a system of costing out specific statistical programs. The process of budgeting is essentially in the nature of intricate negotiations and bargaining with the Ministry of Finance.⁶ Since SSC does not at present have an accounting system that could chart the true costs, especially of staff inputs, of undertaking a particular statistical program, its budgeting processes are dependent on rule of thumb calculations. It is in a weakened bargaining position vis-à-vis the Ministry of Finance. What is required, for both purposes of the budgeting exercise and resource management, is a system that permits the measurement of staff time inputs into each program. This will demand the introduction of time recording by every staff member. With the impending introduction of Program Budgeting by the Ministry of Finance on a government wide basis, SSC will be under pressure to introduce processes that will enable it to conform. Time reporting would represent one such element. It is recommended that SSC management launch a pilot project for time reporting for a selected statistical

⁵ See Quality systems and statistical auditing. A pragmatic approach to statistical quality management; *Willem de Vries and Richard van Brakel*

⁶ The process starts with an agreement with the Ministry of Finance and in May the MoF sends out so-called “control figures”. The SSC then makes counter-proposals. The proposals are based on the number of employees and their wages (so-called “protected” items), estimated payments to be made for services and utilities. Utilities are calculated as a forecasted consumption in physical units (e.g. electricity in kilowatt-hours) according to existing norms. Oblasts are required to “defend” the budget expenditures of the previous year. There is usually a gap of about 20% between the MoF and SSC figures, despite hard bargaining. This gap is filled normally from the “Special fund” receipts from paid services, lease, etc.

activity at all three levels of the statistical system. After sufficient experience has been gained, the scheme should be extended to all staff.

An aspect of budgeting that merits special mention concerns the provision of funding for replacement of hardware. The issue is of particular relevance to the current project, which will finance the purchase of a sizable amount of hardware. Given the rapid rate at which equipment becomes obsolete, it is important to adopt arrangements that create a special Amortization Fund into which annual contributions are made. Future purchases of replacement equipment could then be met from such a Fund. Establishing such a Fund will demand the concurrence of the Ministry of Finance. To this end SSC should enter into negotiations with the Ministry immediately.

Beyond the budgeting and Annual Work Plan preparation, there is a need to establish a capacity to deal with the preparation of strategic plans for the medium term. The functions of a new Strategic Planning Department should include responsibility for the preparation of policy papers for discussion by reconstituted National Statistical Council. The new Department should, amongst its duties, play the role of a secretariat to that body.

An important dimension of human resource management is represented by skill upgrading and knowledge enhancement. This is all the more important in an organization that is in the process of change involving the introduction of new products, processes and servicing of a new set of clients. SSC faces these challenges as it embarks on a new phase of reforms. Although SSC has benefited from training delivered by donor agencies under a variety of technical cooperation programs, the benefits have accrued to a limited number of staff and insufficiently internalised. At the same time, the training provided by the Institute of Statistics has been directed largely to theoretical subjects. The programs offered are insufficiently geared to the imparting of practical skills and applications directly linked to ongoing work programs. Furthermore, budget cuts in recent years have led to a situation that no more than a handful of staff are enrolled in courses at the Institute.

Under the proposed World Bank financed project, a sizable effort will be made to deliver training as part and parcel of the work program of the project. It is imperative that such training is internalised and placed on a sustainable basis so that there is a multiplier effect. It should be further stressed that training and knowledge renewal are a continuing function in an organization that wishes to remain at the cutting edge. Investing in staff has the greatest returns. It is therefore imperative that the necessary institutional arrangements are developed to permit these goals and objectives to be achieved. To this end, SSC should establish a Training Department that would take responsibility for developing and sustaining a program of in-service training, preparation of training materials for dissemination to the lower tiers of the statistical system, and be involved in the defining of long term institutional needs for different skills. The Department should play a direct role in organizing short training courses, with a heavy practical orientation, drawing on staff from across SSC.

The future role and functions of the Institute need to be more carefully defined. The Institute should focus on formal statistical education, an area where it has a comparative advantage. It is, however, not well positioned to get involved in training, which is distinct and separate from statistical education.

Role of Second & Third Tier Statistical Entities

By way of recapitulation, it should be noted that there are 27 regional statistical offices with an average of 225 staff each, for a total of about 6000. The 650 or so rajon statistical offices have an average of about 10 persons each, for a total of about 6500. Each regional office has the full range of functions, organised along the same lines as the HQ Central Office.

Historically the Oblast level offices were responsible, along with the Rajon offices, for all data collection based on questionnaires, instructions, and appropriate software developed by HQ⁷. These arrangements made sense in an era of central planning when the prime data users were the Oblast Administrations who had oversight over the operations of state owned enterprises. They were also the source for a large part of investment funds. The Oblast statistical offices were in one sense the audit arms of Oblast Administrations. Thus, close relations existed between the Administrations and the Statistical entities. A system of detailed reports – monthly, quarterly and annual - existed. Reporting to HQ could in one sense be seen as an ancillary responsibility. Submissions to HQ were in the form of consolidated standard tables, based on which aggregate national statistics were generated. These factors explain in large part the rationale for the large size of Oblast statistical offices. The replication of the HQ organizational structure can thus be explained in terms of the functions discharged. Hence, for all intents and purposes, the Oblast level statistical offices played a pivotal role as data collectors and as interlocutors with the regional administrations who wielded considerable power in economic management.

The Rajon statistical offices are variable with respect to number of staff, equipment and functions, but in essence, Rajon staff: hand delivered enterprise questionnaires to be collected by enterprise from Rajon offices and hand deliver those that are not picked up; collected household data by personal interview; received or collected enterprise data; forward data to the Oblast statistical office; edited and aggregated data (mostly manually) to produce Rajon level statistics. .

The structure described above, so vastly different from most western country statistical services, continues to exist despite the elimination of central planning. Oblast Administrations no longer exercise management control over enterprises; they do not provide investment funds; their main power appears to be largely over the granting of various permits and licenses. In these changed circumstances, there appears little justification for their demanding data in formats, frequency and in terms of detail as previously. There is no evidence that the data that they receive is effectively used or even needed. On the other side of the equation, the Oblast statistical offices face new realities: reduced budgets; and increases in work loads as new data series are developed to meet the needs of a market economy. Two other developments must be noted. First, with the enactment and enforcement of the new Statistical Law, Oblast statistical offices are precluded from supplying data in such detail lest the confidentiality provisions of the law be breached. Second, as sample surveys replace complete coverage in the near term, Oblast offices will no longer be in a position to provide Oblast and Rajon level data that meet statistical confidence levels. These developments are beginning to create tensions between the providers of data and data users.

These issues need to be addressed head on. In the first place, SSC should engage the Oblast Administrations and their supporters at the national level in order to reach a common understanding of the new realities. The modalities for achieving a full understanding should be pursued through a series of workshops on Statistical Policy and the Workings of a Market economy for administrators at both the national and Oblast levels. These workshops have been proposed and incorporated in the work program that is to be taken up under the World Bank project. A second step will require a needs assessment in respect of Oblast level data needs and a new “contract” with the Administrations. The contract would need to spell out the range of data that would be made available on a regular basis. Oblast administrations, which indicate a desire for more than the “contracted” data, would be serviced on a cost reimbursable basis. These arrangements would in large measure follow the practice in most West European economies.

With greater reliance on sample surveys as the primary means for data gathering, and a redefined output mix through consolidation of current surveys as proposed in the work program, and reduced demands from Oblast Administrations, the tasks handled by Oblast statistical offices will change

⁷ In recent years, the HQ has taken on direct responsibility for national level sample surveys. A case in point is the household survey of living conditions. The vast majority are carried out in the regions

significantly. While Oblast statistical offices will still continue to be in the forefront of data gathering, the manner in which data will be collected will change. These changes will impact on both the nature of work done and the load carried.

The changes will call for greater focus by Oblast Offices on a number of activities important in the context of changed modalities for data collection and handling. These include:

- **Household Sample Frames:** For canvassing sample surveys of households, sampling frames will need to be developed and maintained. The frame would entail regular updating of listings and accompanying cartographic maps.
- **Business Registers:** Enterprise surveys will need to be supported by business registers. Oblast offices would need to be actively engaged with local licensing authorities to help maintain statistical registers.
- **Field Operations:** Oblast and Rajon offices would remain in the forefront for data gathering and take responsibility all field operations. The function of data collection would come to occupy center stage, replacing the preparation of reports to Oblast Administrations.
- **Data Quality:** Validation of all data collected in their respective jurisdictions would be a key responsibility in order to improve data quality.
- **Data Input:** All data collected at the local level would be inputted and the electronic files containing unit records would be then transmitted to HQ for further processing and storage in an institutional database.
- **Servicing Local Clients:** While the production of regular reports to Oblast Administrations would be curtailed, demand for special reports to serve the needs of both Oblast Administrations and private sector users is likely to increase. In addition, a more pro-active role would be taken in data dissemination.
- **Local Database:** Oblast offices would need to create and maintain an Oblast Database to support the servicing of clients and engaging in dissemination of data. Inputs for the Oblast Database would be from HQ with some supplemental data, especially social data, obtained from local sources.

The redefinition of functions and responsibilities outlined above is likely to show up a possible surplus of staff at the Oblast level in the immediate future. Staff reductions through redundancies are clearly difficult to implement because of the social costs especially in regions of the country where alternative employment opportunities are not available because of depressed economic conditions. Staff reductions will there need to be achieved through attrition resulting from deaths and retirements. Where opportunities exist, it may be desirable to offer re-training to equip staff to seek employment in expanding parts of the economy.

New Structure for Oblast Offices

Based on the areas of focus outlined above, the Oblast statistical offices should be restructured in a manner that is supportive of the new mission of these offices. A suggested set of clusters/departments is listed below:

- Sample Frames & Cartography
- Business Registry
- Field Operations for Household Surveys

- Field Operations for Enterprise Surveys
- Editing and Coding of Household Surveys
- Editing and Coding of Enterprise Surveys
- Data Entry
- Oblast Database/ IT Services
- Data Dissemination/ Client Services
- Social and Demographic Statistics
- Finance and Budgeting
- Human Resource Management and Training
- Administrative services

The arrangements proposed above have been cast in the form of a Chart 2, reproduced below. It must be stressed that the organization structure that is proposed is likely to be an interim one. It will in all probability the issue will need to be revisited after staff reductions have taken place through attrition.

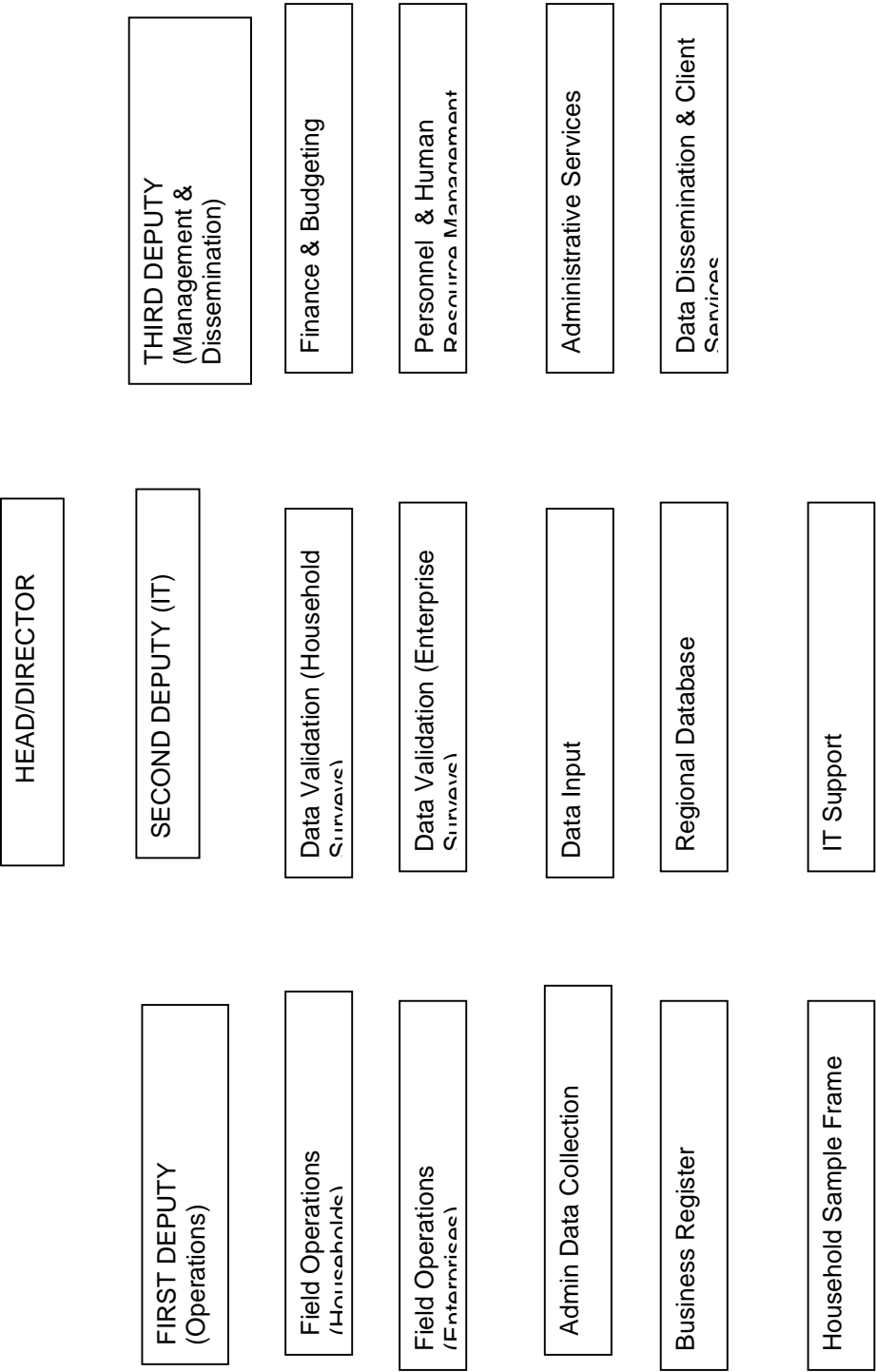
As regards the Rajon offices, no major structural changes are proposed. However, the primary role of these offices will need to be data collection. Data reporting to Rajon Administrations should be handled by the Oblast offices.

4.4 Proposed sequencing of activities.

The program design calls for a broad range of activities that are carefully integrated. The appropriate implementation strategy will need to ensure simultaneous movement in each of the cluster of activities. Within this general framework, the activities envisaged under organizational development will need to proceed as a launching and lead activity. Certain of the key activities are highlighted below, along with the broad sequencing of activities within each cluster.

1. Creation of an environment within which **Organizational Development** involving reform and strengthening can be best advanced through exposing stakeholders to the nature of a statistical system in a market economy, the SNA as an organizing framework, the importance of managing resources and priority setting. This activity should be completed before proceeding with the core program. The four elements of the core program will be implemented concurrently and in tandem to ensure balanced development.
2. Creating and enhancing the **Statistical Infrastructure** to support statistical activities, including the development of business registers, sampling frames, database development, adoption of classifications and development of physical infrastructure including IT capacities.
3. Based on the institutional sectoring arrangements embodied in the 1993 SNA, the MDG goals, several data gathering activities will need to be launched. These encompass **Household Sample Surveys, Enterprise Statistics, Surveys of Economic Activity, Price Statistics, Financial & Monetary Statistics, External Trade & BoP, and National Accounts**. For social statistics data gathering will essentially be based on administrative records augmented by data from household surveys.

Chart 3.



- 4. Statistical Training should be identified** as a separate element in the project to help develop a facility to permit sustainable long-term capacity to meet the long term needs of the statistical system.
5. Given the relative weaknesses in the IT area, separate activities, beyond the procurement of hardware and software, involving data base development and dissemination will need to be pursued.

4.4.1 Rationale

Implementation of the core work program will demand the initial creation of a deeper appreciation of the orientation of a modern statistical system. Secondly, the necessary statistical and physical infrastructure needs to be in place to permit the execution of the core work program. The core work program, while defined in the Master Plan, would need to be elaborated and updated annually. The core program is built upon a consolidation of existing surveys centered around an integrated multi-topic household income- expenditure survey patterned on the LSMS and an integrated business enterprise survey designed to collect the full accounts of corporate entities. The rationale for consolidating survey activities is provided by the need to maximize the use of resources, preclude over-stretching capacities, and to permit better management. In addition, it is designed in a manner that would reduce respondent burden. The core program incorporates key statistical series that are commonly compiled in most market economies to meet the data needs of all stakeholders.

The program emphasizes training and skill development as a key variable for building a sustainable capacity. Training should be seen as a distinct component in the project. However, skill development, linked with the practical aspects of statistical operations, should be viewed as part and parcel of the mainline activities associated with data gathering and handling. For reasons of efficiency and maximum impact, skill development should be woven in with the substantive data related activities. External consultants should be required to offer hands on training in the context of providing technical inputs. The emphasis should be on learning by doing. The project cycle should be: initial training --> identification of tasks → local execution → review of progress and finalization

4.4.2 Intermediate targets and triggers

A number of key steps and targets can be identified as part of the overall implementation of the project. A full implementation schedule will need to be established immediately after the formal launch of the project. This should be viewed as an overall road map. A more detailed work program would need to be developed at the beginning of year. In the first year several initiatives that will demand attention are:

- Review and revise legislation incorporating international best practice to guarantee independence of the system and respect for statistical confidentiality.
- Establish mechanisms for coordination and effective management – human resources and financial
- Establish National Statistical Council
- Restructure SSC HQ, Oblast and Rajon offices
- Launch development of statistical and physical infrastructure.
- Adopt international classifications
- Pre-test new surveys
- Start development of institutional sector accounts as recommended in the 1993 SNA
- Launch new surveys
- Develop detailed plans for second year.

4.5 Funding and sustainability – both domestic and external sources

Financing of the entire project will have two components: an externally funded portion from the World Bank loan and a second part funded from the national budget. Loan funds will be utilized largely for financing consultancy services, acquisition of equipment, hardware, software, travel costs of consultants, building renovations etc. In addition to costs to be met from the World Bank loan, the national budget will bear the operational costs (salaries, survey costs, maintenance of equipment, transportation, rent etc), as well as the taxes and financing of the PIU operation costs on an incremental basis. The table below provides a summary statement of the major components to be financed from the loan. A note of caution is in order. The estimated budget requirements do not take account of an adjustment for inflation and are based on crude estimates of current costs. Once proper costing and budgeting processes are in place, these estimates will undoubtedly be refined. A detailed set of estimated costs are shown in the section 6.3 of this report.

	Total	WB	Government
TOTAL	\$33.01	\$28.41	\$4.60
Component A. Organizational development and management	\$3.59	\$3.23	\$0.36
Component B. Statistical infrastructure	\$0.88	\$0.82	\$0.06
Component C. Data development	\$6.87	\$6.59	\$0.29
Component D. Strengthening of information basis for decision-making and forecasting at the Ministry of Economy	\$0.54	\$0.52	\$0.02
Component E. Introduction of modern information and communication technology	\$20.61	\$16.86	\$3.74
F. Project Implementation Unit	\$0.52	\$0.39	\$0.13

A number of observations are in order. The resources flowing from the World Bank loan will largely be directed to meeting the investment costs associated with physical and statistical capacity building. These resources are not meant to cover operational costs associated with either current or new statistical operations. The latter set of costs will have to be covered by the regular enhanced budget of SSC. It will be essentially to have firm understandings with of Government of Ukraine on this issue and the even more important point of a longer term commitment that the Government will provide adequate budgetary resources annually to cover the costs of agreed work programs as identified in the project and loan documents. The entire sustainability of the project will depend on these commitments being honored by the Government.

4.6 Risks and assumptions

A number of broad observations are in order before evaluating the specific risks that the project is likely to face. These observations are linked to the assumptions that the Government remains committed over the long haul to modernization of the statistical system by committing itself to providing adequate and sustained budgetary support.

The single most important risk is linked with the absorptive capacity of the system to gain full benefit from the investments and programs associated with the project. Reducing the risk will demand careful and systematic pursuit of the management reforms, skill development and staff enhancements.

While organizational structures do matter and contribute to the vibrancy and effectiveness of an organization, they are not the sole and sufficient condition to achieving efficiency and institutional goals.

It is generally acknowledged that human factors and the clarity of goals and the cultivation of an appropriate environment are crucial factors that determine outcomes in terms of institutional efficiency and the fulfilment of project goals.

Along with changes in the structure of SSC, it will be necessary to develop a corporate culture that emphasizes team building, accountability and transparency, and quality enhancement. Additionally, senior managers need to come to accept that the biggest asset available to SSC is its staff and further investments in people are as critical as investments in hardware and equipment. Finally, SSC management needs to recognize that the reform process is likely to be prolonged and it must remain open to modifying plans and approaches as it moves forward.

The current organizational structure, as has been noted, is largely hierarchical. Beyond the linkages between the National Accounts Department and the operating departments, and the service providing links between the Computer Center and other Departments of SSC, there are few interactions between Departments. Departments attempt to be self-contained entities. Data and experience sharing is limited, attributable in part to the structure and in part because of the limited infrastructure in the form of an institutional database and a SSC wide LAN. As a consequence a team approach to problem solving is not much in evidence. While the new organizational structure will contribute to team building, managers will need to take a pro-active role in encouraging cooperation across departments through a more open system of data and experience sharing accompanied by joint task forces to implement programs.

Establishing a more transparent data system will be facilitated by the creation of a metadata base. It will lead to users becoming more aware of the nature of the data and increase confidence in the impartiality and integrity of the statistical system. There are other pay-offs, as it will lead to greater confidence on the part of respondents that the confidentiality of data reported by them is indeed respected. To this end, the confidentiality provisions of the Statistical law must be enforced and are seen to be enforced. It will be necessary for SSC to engage in campaigns to educate the public about the nature and role of the statistical system. The project incorporates activities of this nature. What is demanded is that these be pursued as vigorously as the launch of new collections or the acquisition of new equipment.

Current practices down play data revisions when new data become available. The reluctance to issue revisions contributes to a reduction in transparency. SSC should adopt and announce a clear-cut policy that it would revise all preliminary statistics once new data become available. Most statistical offices adopt such an approach and SSC should emulate these practices.

Data quality would be greatly enhanced through the adoption of new guidelines and the abandonment of certain current practices. Presently, statistical compilations are largely based on an aggregation of reported data. The validation procedures in place are limited in scope. There is little evidence of there being procedures for elimination of “outliers”, estimating or imputing values for missing data, or adding cautionary statements about data quality. SSC should adopt procedures in these areas that are common in the more developed statistical systems.

Staff competence and productivity are in part linked to the extent to which they have the opportunity to avail themselves to up grade their knowledge and skills on a continuous basis. SSC has not been able to do as much as it should have because of limits imposed by budgetary constraints and the rapid changes brought about by the transition. The current project has recognized the importance of training and made resources available for the purpose. It should vigorously pursue the objective of delivering training through short courses and workshops. The resources invested will clearly lead to sizable returns through improved productivity.

Staff morale is an important factor in determining the efficiency of an organization. Low compensation levels and limited avenues for career progress represent two of the key negative factors that contribute to low morale. SSC can do little to reverse these tendencies, as it must operate within the constraints of overall public sector policies. However, it can take some modest steps that would counter

these negative factors. Amongst the steps it should take are adoption of a system of annual staff evaluation and appraisals that are transparent and objective and provide feedback. Additionally, a system of awarding certificates or small tokens to high performers would go a long way in helping to improve morale.

SSC managers would greatly benefit by adopting a more participatory system of management that would permit feedback and a flow of new and innovative ideas from staff. In the medium term, what is needed is a new institutional culture that is supportive of reform and change.

The critical risks that can be foreseen are:

- a) absorption capacity of the agencies: human resource availability with appropriate skills and adequate budgetary support are likely to be the most serious risks to a successful implementation of the project.
- b) Staff loss through attrition: given the low levels of staff remuneration, relative to prevailing compensation levels in the private sector, could seriously affect the ability to hire and retain staff.
- c) Successful project pilot activities are introduced into regular practice with a considerable time lag: should this occur, the pace of reforms and the achievement of project goals could be adversely affected;
- d) management failure: resistance to change or an inability to adapt to change could seriously limit the speed of project implementation and the achievement of the outcomes identified in the project.
- e) inadequate local funding: should the budgetary authorities not allocate resources to fund work programs, the projected outputs are unlikely to be forthcoming.
- f) vested interests resisting change and acceptance of new approaches, particularly pertaining to dissemination: the greatest risk in this regard is linked to users continuing to demand data sets which have customarily delivered (extremely detailed local area statistics), thereby distorting the work program of SSC.

Other potential controversial issues that are likely to pose risks include political interference in the dissemination of data either through suppression of data or through other pressures that affect data integrity. Lack of data transparency may contribute to public controversies and jeopardize the standing of SSC. An unwillingness to adopt sampling methods, thereby perpetuating the system of complete reporting, could seriously impact on the ability of SSC to introduce new methodologies and best practice. Less than full acceptance of international standards and classifications could contribute to lack of data comparability

4.7 Assessment against alternative strategic choices

An Adaptable Program Loan (APL) was considered as an alternative in 1999 with a 3-phase 10- to 12-year program. However, the idea was rejected and instead a 5-year project financed with an investment loan is being planned. The reason that the APL mode was rejected is that in the situation where there are multiple TA providers the longer-term program is considerably more difficult to coordinate, while the simpler operation makes it more feasible, especially as the timing of this 5-year project makes it possible to tune it into the next phase of the National Statistical Program based on the all the TA providers plans and thus not only to avoid duplication but also to build up on each other's activities.

The most significant policy decisions affecting Project design have to do with timing, centralization, decentralization and outreach to the private sector. The Project, for instance, contemplates not a one-stroke attempt at modernizing the statistical system but a phased step-by-step modernization of the statistical system. The starting point is the SSC, and accompanying modernization in some line

ministries. Similarly, the Project opts for a decentralized distribution of data processing and survey execution by delegating to the regional offices. A sizable expansion in survey activity already strains the centralized system far beyond its ability to deliver results efficiently. It will be necessary to retrain and reorient existing decentralized facilities and personnel in the use of higher and more demanding standards and methodologies and in the production of unfamiliar data sets.

Arguably, Project design could have focused almost exclusively on official agencies and activities. To do so, however, would have sacrificed the important benefits – particularly in building confidence in the SSC and its data – of bringing private-sector users into the reform process both as customers and data suppliers. Industry, commerce and the NGO community are important development agents whose active contribution to the modernization of SSC will make them more likely to utilize the resulting, improved statistical product for increased private participation in the economy and better informed policy dialogue.

Finally, the Project's organizational approach linking well-organized and well-defined components within a given framework and strategy rejects the alternative: numerous loosely defined components. The advantage of defining five major objective-related parts - further divided into components and sub-components for costing, implementation, and monitoring progress - is both more efficient and cost effective. This structure also makes it easier to coordinate the project activities with those under other related projects managed and financed by other development agencies. Particularly, one of the biggest components – “Data development” – is arranged according to the data dimensions suggested by the SDDS. The initially proposed separate components for the NBU and the MOF, the activities directed for improvement of the GFS and banking statistics are placed under Fiscal, Financial, and External sectors subcomponents in “Data development”.

5. Time-bound implementation program

5.1 Improving policy, regulatory, and institutional framework

The first component of the Project, comprising 5 sub-components, is geared to improve policy, regulatory, and institutional framework of the Statistical system:

A. Organizational development and management

A1. Streamlining the organizational set-up of the Ukrainian statistical system

Organizational restructuring of SSC is one of the most important components of the Project. The need for organizational structure improvement is linked to the modification of data collection, processing, storage and transfer system, introduction of new elements or strengthening of the existing elements of statistical infrastructure, and from further requirements for data dissemination. The institutional restructuring will lead to the establishment of new divisions and liquidation of the old ones, re-allocation of functions between central and regional offices, as well as between subject-matter and functional departments and divisions.

Strengthening of field activities will be focused upon. Future role of rayon and oblast offices will be determined by an analysis of information flows and development of the new data collection plan, as well as information technology deployment.

A2. Building of institutional management systems

The sub-component will address the issue of establishing modern management systems:

- Financial Management and Planning
- Human Resources Management
- Document Management System
- Quality Management

Financial management and planning (strategic and operational) systems will be introduced. Program budgeting will lead to the introduction of new procedures for priority setting and developing the core data collection plan. The systems will also contribute to better management of resources.

Human Resources Management system will upgrade personnel selection and career planning and training. In addition, appropriate incentive systems will be developed linked to staff performance and evaluation. It is planned to introduce time-reporting (essential for resource accounting and planning), and the personnel performance assessment system.

SSC will also build a **Quality Management** framework based on principles that include user demand satisfaction, establishment of partnerships with respondents and administrative data providers, and within the agency; continuous incentives for quality improvement; full involvement of staff in quality improvement initiatives.

Establishment of a single information system for **Document Management** will contribute to increased efficiency, improved dissemination and the creation of the common information space and communication channels.

A3. Strengthening of the system of staff training and re-training (see Section 5.2)

It is planned to launch a system of continuous and obligatory staff training aimed at skill development. A number of training centers, furnished with equipment, modern training programs and manuals, will be established. Staffs of the Institute of Statistics, Accounting and Audit, and the Research Institute of Statistics are likely to play a key role.

A4. Development of statistical data dissemination and users' education strategy

Comprehensive assessment of the needs of statistical data users will be pursued. Information presentation and dissemination, in particular, through application of geographical information systems will be developed. Users' education strategy, periodic users' satisfaction surveys, and establishment of the National Statistical Council will provide better cooperation with users and better understanding by the users of statistical data.

A5. Improvement of relations with respondents and data providers

Workshops for users will be mounted to provide users with a better understanding of the functioning of the statistical system.

The activities and time frame for implementation have been tailored to country circumstances both in terms needs and the current circumstances. The desired reforms and changes factor in international norms and guidelines. The key activities linked to improving the legal and institutional framework are covered by human resource development (staff status and incentives, training programs), changing the institutional culture; financial management and budgeting; outreach to main users and greater consultations; and focused dissemination

5.1.1 Actions and timeframe

The following actions are recommended to be taken in pursuit of improving policy, the regulatory and institutional framework in which the SSC operates:

1 Study Tours for Senior Managers: The senior management team at SSC should visit the statistical offices of the Czech Republic, Poland/and or Hungary to obtain first hand insights into the experience of these countries in managing the process of statistical reform during the transition period. Four themes should be central to the discussions:

- Educating stakeholders and obtaining their support for statistical reforms;(the participatory mechanism)
- Introduction of financial and human resource management tools;
- Introduction of modern IT and organizational change
- Data dissemination.

2 Statistical Policy Seminars: The Seminars should have the participation of high-level Government officials, representatives of the private sector researcher and SSC managers. The key underlying themes would be the changed role of statistics in a market economy, the role of various stakeholders, safeguards for maintaining the integrity of the statistical system, the importance of priority

setting, and adoption of international standards and best practices. The seminar would also present an opportunity to “market” the current project and raise the profile of SSC. Statistics Canada has successfully conducted such seminars in a number of transition countries and should be invited to provide senior staff to conduct and moderate the seminar.

3 Directory of Statistical outputs: Presently there is no comprehensive and consolidated documentation describing the various statistical series and indicators compiled in the Ukraine. The study by a local consultant reviewing the range of statistics presently compiled pointed out this gap. SSC should begin compiling a comprehensive list of all available data series. (including information on the years for which these series are available). The Directory would serve several purposes, inter alia, help identify:

- a) data gaps;
- b) over-lapping series and duplications;
- c) data collected but not used in publications.

Based on such an identification, SSC should take steps to rationalize and eliminate series that no longer serve the nation’s needs. The Directory would also provide the basic building blocks for the preparation of the proposed Metadata Base as well as the database. Additionally, it would enable SSC to better inform users of what data sets are available and contribute to improved dissemination.

4 User Need Assessment: Given the pressures felt by SSC from users, and its need for inputs in the formulation of annual and medium term work programs, there is a need for a more formal approach to assessing users needs. It is suggested that SSC carry out a regular survey (say once every 2-3 years) to obtain feedback from the users. A special survey of the users at the oblast’/rayon government level should be conducted separately. In addition SSC should revive a national committee to engage in a dialogue with various stakeholders. This should be seen in the larger context of educating users. To ensure that the body constituted is effective, a small secretariat should be constituted within SSC to prepare documentation, follow up on decisions and to conduct the above mentioned user survey.

5 Financial & Budget Management: With the proposed introduction of a system of Program Budgeting at the national level, SSC will need to introduce its own system of financial and budget management. Almost all statistically advanced countries have effective systems in place to permit costing their activities based on time reporting and use of other resources. SSC is presently exploring the introduction of such systems into its management processes. Building upon work prior to the launch of the current Project, it is suggested that during the first year of the Project four activities be carried out: a) a workshop to expose all managers on the scope, content, operation of an effective financial management system and the benefits thereof; b) train key staff; c) with the assistance of a consultant design, test and launch a pilot exercise d) Based on the experience gained, make plans for the launch of the system to all branches of SSC in the second year of the Project. External assistance should be contracted with the statistical office of say Canada or the UK who have considerable experience.

6 Human Resource Management: Parallel to work under activity 1.6, SSC should embark on the introduction of new practices for human resource management. Two core activities should be the introduction of staff time reporting – critical to work under 1.6- and a system of staff performance appraisals. The pattern of execution should follow that for 1.6. As a first step, SSC with inputs of either a UK or Canadian expert should develop a classification of tasks carried out in the various branches of SSC. Additionally, a system for assessing staff performance incorporating reporting forms, the criteria for assessments, and training of managers in the use of the system should be put in place.

7 Statistics in a Market Economy: Given that there is yet an inadequate appreciation of the nature of a market economy and the role data plays in such an economy in decision making processes in

both the public and private sector, it is important to expose both data producers and users to key aspects. To this end it is proposed that workshops be conducted for staff from both SSC and the key agencies of the government. A total of four workshops are proposed to provide opportunities for staff at the national, oblast and rayon levels. The workshops should cover the following themes a) contrast between decision making processes in a centrally planned and a market economy b) demarcation of the private and public sector roles in decision making c) a brief discussion of the analytical framework of the SNA as the center piece to data organization d) importance of dissemination and openness whilst recognizing the need for protecting individual records, and e) scope of the current project and its goals. These workshops should be viewed as educative and designed to reorient participants who would be middle level managers and professional staff.

8 Statistical Organization: The workshop for all middle level SSC and oblast statistical units would have a two fold goal :a) to provide participants an understanding of the goals, modalities and programs to be conducted under the Project and to gain support for institutional and organizational change and b) to seek inputs and feedback. The stress would be to create an environment for change and promote ownership of the project.

Most of the activities are to be undertaken in the first year of the project in order to create an appropriate environment in which the core activities associated with data development and dissemination can be executed. The planned activities will seek to involve the active participation of all major stakeholders, both producers and users of data.

5.1.2 Proposed outputs with targets

The Project, in overall terms, aims to raise the quality, coverage, timeliness and responsiveness of the official economic and social statistics that Ukraine produces so that their reliability and effective dissemination make them useful influences in maintaining the momentum of market reforms and growth-oriented economic strategy and in advancing the cause of poverty reduction. The activities connected with improving policy, regulatory, and the institutional framework, will have critical impact on the achievement these goals and objectives. Exposing managers to best practice and heightening awareness will sharpen their ability to manage change and pursue reforms. Heightening awareness amongst users about the role, nature and functioning of a statistical system in a market economy environment will contribute to a clear understanding of the data and have it can be more effectively used in the context of promoting macro economic stability, important to the pursuit of policies that promote private sector development, poverty eradication, and pursuit of the MDG. Introduction of modern management tools in the form of financial and human resource management tools will enable SSC to use available resources more effectively and efficiently.

5.1.3 Benefits and outcomes

The activities under the component will:

- provide exposure to the SSC management and staff to best practices;
- give the stakeholders better understanding role of Statistical Systems in market economies;
- establish needs of all stakeholders;
- put in place budgeting and financial management systems geared to Program Budgeting;
- establish comprehensive Human Resource system;
- refine organizational structure of the SSC.

5.2 Human resource development

An important dimension of human resource management is represented by skill upgrading and knowledge enhancement. This is all the more important in an organization that is in the process of change involving the introduction of new products, processes and servicing of a new set of clients. SSC faces these challenges as it embarks on a new phase of reforms. Although SSC has benefited from training delivered by donor agencies under a variety of technical cooperation programs, the benefits have accrued to a limited number of staff and insufficiently internalised. At the same time, the training provided by the Institute of Statistics has been directed largely to theoretical subjects. The programs offered are insufficiently geared to the imparting of practical skills and applications directly linked to ongoing work programs. Furthermore, budget cuts in recent years have led to a situation that no more than a handful of staff are enrolled in courses at the Institute.

Under the Project, it is planned to launch a system of continuous and obligatory staff training aimed at skill development. A number of training centers, furnished with equipment, modern training programs and manuals, will be established. Staffs of the Institute of Statistics, Accounting and Audit, and the Research Institute of Statistics are likely to play a key role. The activities are to be implemented under the sub-component **A3. Strengthening of the system of staff training and re-training** (see Section 5.1)

5.2.1 Actions and timeframe

1 Review of current situation; formulation long-term strategy; design of program for continuing education including distance learning: Consultants will undertake a major assessment of the current arrangements for staff training, identify needs over the medium term, and formulate a long term program for training staff at all levels in the statistical system. The study should focus in particular on the need for balance between theoretical and practical training. Institutionalization of programs such as the Survey Skills Program should receive particular attention. In addition, it should pay attention to courses designed to improve IT skills of staff employed in SSC.

2 Procurement of equipment and teaching materials: The Training Institute is poorly endowed with equipment and teaching materials. To enhance its capacity, needed equipment and teaching materials should be procured.

3 Study tour to Training Institutes: Two senior staff members of the Institute should visit the Training Institutes in Poland/Hungary to obtain first hand insights into the functioning and orientation of similar institutes. The main goal should be to enable them to formulate proposals leading to the restructuring of the Institute to better serve the needs of SSC.

4 Development of course content: Training modules will be developed for key training programs with primary focus on surveys, data validation, imputations, national accounting practices etc. No activities are planned for Year 1.

5.2.2 Proposed outputs with targets

The activities under the component will result in:

- Master plan for training in place with new curriculum
- Necessary equipment in place to support training
- Awareness of best practice
- New teaching material, including material for distance learning in place

5.2.3 Benefits and outcomes

In terms of direct benefits, the broad goals are to achieve the following outcomes:

Strengthening of the system of staff training and re-training will ensure:

- continuous and obligatory staff training, coherent with the professional development, planning and promotion;
- introduction of new forms of training;
- coordination of staff training and re-training system.

A strengthened training capacity will enable SSC to have in place the necessary infrastructure to train staff. The training offered, practical in scope, will be linked to the data development program. In addition training modules will be offered to middle managers to enable them to lead new initiatives, build teams, and adopt better management processes. The orientation of all training will be to upgrade staff skills and ensure that the process of renewal is placed on a sustainable basis.

A key outcome will be the emergence of disciplined approach to addressing skill development on a sustained basis. Training would contribute to more efficient use of the human resources available at SSC and lead to productivity gains.

5.3 Statistical infrastructure development

A national statistical system needs to be based on a sound management and technical infrastructure necessary to support and sustain an ongoing set of statistical programs. This includes the legislative basis to protect independence, provide authority, and preserve confidentiality, the organizational basis for at least a central statistical office, and the basic technical capacity in statistical methodology, informatics, collection, and dissemination. Particular statistical programs depend on this infrastructure for conducting censuses surveys and the use of administrative data. Achieving the goals will demand that particular attention be paid to enhancing the efficiency and effectiveness of the statistical system through the adoption of “best practice” and the consolidation of current practices.

The component **B. Statistical infrastructure** embraces improvement of the basic elements of the statistical infrastructure: sample frames, statistical registers (including establishing a register for individual entrepreneurs) with an on-line access, classifications, and the legislative basis underpinning the statistical system. The following are four sub-components:

- B1. Improvement of household sample frame;
- B2. Establishment of the statistical register of enterprises and individual entrepreneurs;
- B3. Introduction of the unified classification system;
- B4. Improvement of the legislative basis of the state statistical system.

5.3.1 Actions and timeframe

The activities to be pursued under this component of the project are identified below:

1 Development of Household Sample Frame: The Population Census of 2001 will provide a basis for the development of such a frame. Work in this area should begin with a workshop that would deal with

the key features of a household sample survey frame focusing on the attributes of such a frame, procedures for creating a frame based on the census of population, its updating, and cartographic requirements. Participants should include both SSC and oblast officials. Following the workshop a detailed step-by-step work program should be developed. A pilot program for one oblast should be carried to provide a basis for a nation-wide frame, to be taken up in the second year of the Project.

2 Enterprise Register: SSC has, with assistance from INSEE, been pursuing the development of an Enterprise register. Depending on the progress achieved, the main effort would be to make the register operational. The active cooperation of other administrative agencies (licensing authorities, taxation agencies etc) will need to be obtained to ensure that effective arrangements are in place for updating the register. Staff of other agencies involved should be given basic training on the concepts and classifications employed in the preparation of the register.

2.3 International Standards & Classifications: SSC has already made progress in the adoption of a number of European and global classification systems. Based on the progress, further work should be launched to introduce other pertinent classifications. As a first step, SSC should identify immediately prior to the launch of the Project a particular classification for adoption in the near term. Once so determined a workshop should be organized. The main thrust of the workshop should be to acquaint participants with the underlying principles governing the classification, the structure of the classification the extent to which modifications is needed to suit Ukrainian conditions and to develop a work plan.

4 Support for user Interactions: In order to improve user interactions and create an ongoing dialogue with users, it is highly desirable that a number of user groups be established. It is suggested that SSC consider creating groups on a) national accounts; b) poverty; c) price statistics; d) labor statistics; e) enterprise statistics and f) social indicators. The composition of the groups, the terms of reference for each group, the modalities of how the groups would operate including the frequency of meetings should be established. It is further suggested that the relevant parts of draft Directory of Statistical Outputs should be submitted to the Groups for consideration.

5 Review of Statistical Legislation & revisions: Although the statistical law was revised recently, there are certain features that require review. These include the adherence to best international practice regarding the status of the statistical system as enunciated in the IMF's SDDS and the UN Statistical Commission's Principles of official statistics. The consultant appointed for this review should be requested to recommend amendments to the existing law, particularly regarding stipulations on equal information access, relationship between the SSC and other data providers, as well as data confidentiality, taking into account Ukrainian circumstances and the practices of other European countries. The issue of establishing a consultative and a participatory mechanism (e.g. National Statistics Council) to enable adequate consultations with users should also be addressed.

5.3.2 Proposed outputs with targets

The importance of introducing sampling - both for the establishment surveys and the household surveys- is duly recognized. Sampling techniques have developed greatly over the last few decades to become an effective way to collect data - within desired levels of accuracy and at substantially reduced costs. With greater and greater individual ownership of "real" sector establishments, farms and household enterprises, the needs for sampling may soon become the only option available for the timely collection of data within a given cost.

The introduction of sampling and sampling techniques is very much dependent on the availability of complete and up to date sampling frames. The existence of a reliable, complete and most up to data

sampling frame is a sine qua non for the introduction of sampling in any field inquiry be it in the household or establishments sectors. A system for the development and updating of a comprehensive sampling frame must be a major future effort of the SSC. This requires a detailed analysis of the various sources of information for the building up of a “frame”, possible “gaps” in the system and how they can be remedied; a system for updating through additions and deletions etc. An equally detailed investigation has to be made of land lot records for agriculture as a “directory” and household listings for designing samples for household surveys.

The activities will establish (i) a household sample frame based on the 2001 population Census; (ii) monitoring of structural changes in the economy in the course of creation, restructuring and liquidation of economic entities; (iii) conditions for extensive application of sample surveys; (iv) interaction with the databases of other ministries and agencies for establishing special-purpose registers and databases; (v) revised legal framework.

5.3.3 Benefits and outcomes

In terms of direct benefits, the broad goals of the activities are to achieve the following outcomes:

The availability of an effective household sample frame will directly lead to the ability to greatly improve the sample design of household surveys. Improved sampling will not only contribute to improvements in the geographic coverage of surveys, but also result in effective coverage all segments of the population. These improvements will in turn lead to upgrading the quality of data, reducing the cost of data collection, and opening up new opportunities for conducting data collection. It should be noted that sample surveys will be key to measuring living standards, poverty monitoring, and tracking progress in the attainment of the MDG. Other data sets generated by sample surveys will provide users with information pertaining to labor market developments along with information on internal migration. In brief, improving the infrastructure for the conduct of household surveys is a key investment with wider ramifications for both the statistical system and for data users.

As note elsewhere in this report, the present system of data collection with reliance on complete reporting is becoming untenable as the number of small enterprises increases under program of economic reforms. SSC has neither the resources nor the capacity to continue with the present approach. It needs to move urgently to a system of enterprise/business surveys if it is to avoid becoming overwhelmed and if it to improve the quality of information flows. Furthermore, it has to fall into step with international best practice. The conduct of effective and efficient surveys of businesses will demand the availability of an updated business register. Thus, the investments made in developing and updating a business register are critical to the emergence of a strong statistical system.

The adoption of international standards and classifications is important three broad reasons. Firstly, they are an essential part of moving towards implementation of the 1993 SNA, compilation of the indicators incorporated in the MDG, and poverty measurement. Secondly, if the SSC is to meet its reporting obligations to international agencies, including the new obligations assumed through its subscription to the IMF's SDDS, the SSC has no real alternative to an adoption of the prescribed international classifications and standards. Thirdly, if Ukrainian statistics are to become more comparable, (of importance to policy makers), the statistics compiled will need to be based on accepted global standards.

A revised legal framework will contribute to establishing the parameters for the statistical system to enable it to operate effectively.

5.4 Upgrading/developing statistical operations

The activities in this cluster represent the core activities to be mounted in relation to data collection. They include the creation of user friendly databases along with a meta database. The activities to be launched cover both modifications to existing data collection and the launch of new programs and are to be implemented under component **C. Data development**.

It consists of 10 sub-components, and the first three being:

C1. Household sample surveys
C2. Integrated annual enterprise statistics
C3. Sub-annual surveys of economic activities
are geared to upgrade data collection mechanisms.

The focal point of the data collection modernization is (i) development and implementation of multi-purpose sample household surveys; (ii) integration of the existing enterprise surveys; (iii) revision of data collection periodicity; and (iv) introduction of sampling methods into enterprise surveys. Streamlining of current data collection processes by:

- reorientation of data content towards topical issues;
- reduction in the lengths of questionnaires and improvements in their design;
- reduction in sample sizes through increased use of sampling procedures;
- consolidation of requests for annual data into a single integrated annual survey;
- consolidation of requests for sub-annual data into a single integrated survey;

These efforts are likely to enable the reallocation of resources and permit the collection of new data sets linked to business expectations surveys and the compilation of leading indicators .

Sub-components C4-C10 will be directed at the adoption of international standards in the following key areas:

C4. National accounts
C5. Price statistics
C6. Government finance statistics
C7. Money and banking statistics
C8. Foreign trade and balance of payments
C9. Demography, social statistics and poverty statistics
C10. Other statistics

Implementation of the international standards in major data areas involves both enhancement of source data and improving compilation methodology. Along with the SSC, the MOF and the NBU will be involved.

5.4.1 Actions and timeframe

The activities listed below constitute the core work program to be taken up by the statistical system including that by agencies other than SSC. The integrated statistical work program builds upon two essential frameworks. These are the 1993 System of National Accounts (SNA) which offers a broad

framework covering the range of economic statistics and the MDG framework in the context of social statistics.

Based on the SNA categorization, statistical collections can be appropriately organized. For estimating the **Government sector's contribution** to GDP, the revenue/expenditure and development budgets of the government represent the primary data source. For the **Non- Financial Corporate sector** made up of all incorporated business, irrespective of size and type of sector activity, most countries obtain the data either from tax returns or by canvassing special surveys of enterprises. The data for the **Corporate Financial Sector** are generally obtained from statutory returns filed with the Central Bank. For estimating the contribution or share of **Households** to GDP, most countries rely upon a combination of tax records and household surveys of expenditure. The **Rest Of The World Accounts** are based on the balance of payments compiled from a combination of data from administrative records and special surveys.

The range of surveys, administrative and other data sources that need to be put in place are discussed in a subsequent chapter of this report. It must however be emphasized that the framework presented above does not take account of the social, demographic and other data sets that are needed. To meet these needs, separate collection arrangements need to be established. For most **demographic statistics**, the data can be obtained from the decennial census of population and vital registration records. **Social statistics** – health, education, welfare, and living conditions -can for the most part be derived from administrative records supplemented by survey data. The framework for these is provided by the MDG. The 48 key indicators encompassed by the MDG represent the core social and poverty related indicators that have been accepted at the international level for monitoring progress. Much of the information for compiling the MDG indicators will be based on administrative records; other information, especially that pertaining to poverty will need to be collected through household inquiries. The HIES would be the main vehicle for collecting such data. Collecting **Labor market information**, vital to measurement of trends in employment and unemployment and hours worked, requires the special surveys.

I. In order to reduce the data collection burden on both the SSC and respondents, and based on the strategy outlined in the previous chapter, it is desirable to develop a compact program of surveys and arrangements for tapping administrative records to satisfy the major data needs of the nation.

As noted earlier, the compilation of national accounts demands the availability of basic data. Based on these considerations and the review of the current work of SSC, it needs to put in place a work program that emphasizes an optimal and cost effective approach. As noted earlier, the consolidation of the large number of surveys and activities, which strain the capacity of SSC, should be viewed as a central driving force. The suggested program of work now being put forward attempts to take an integrated approach; it aims to maximize the potential role of other agencies of the Government in generating data and supporting SSC. The task of building a credible system of economic and social statistics should be as a national task requiring co-operative efforts. The overall work program that emerges, while still large, attempts to deal with resource issues and implementation capacity given the existing levels of staff.

The consolidation of the survey program can be achieved through the launch of the following surveys:

- An **Integrated Business Enterprise Survey (IBES)** to collect information from enterprises.
- A **Household Income and Expenditure Survey**.
- A monthly **Production Survey**
- Monthly **Survey of Prices**
- A **Quarterly Labor Force Survey**

- **A Quarterly Agricultural Survey**

Integrated Business Enterprise Survey

The IBES should be designed and launched as an annual survey to replace the existing data collection from enterprises. It should be designed to collect relevant data for compilation not only of the National Accounts, but provide information for the estimation of the Balance of Payments, private capital flows and investment indicators. The recent introduction of commercial accounting standards should facilitate reporting by enterprises. The survey should cover all enterprises, irrespective of sector of operations, and should be modular in structure, covering the full set of financial accounts appropriately disaggregated to support the national accounts compilations. Other appropriate modules to obtain output information, employment and wage data, should accompany the main form.

The problems associated with the collection of data from a large number of small establishments (un-incorporated businesses) with poor records would be overcome without much loss of information. These largely household based activities, conventionally covered through establishment surveys, could be covered through the new HIES, discussed below. The second point to note is that the survey would be multi-sectoral and therefore capture activities that are currently not covered by on-going sector specific surveys. Thirdly, the scope of the survey, in terms of the number of units covered, will be manageable if all large enterprises above a certain size cut-off are covered on a 100% basis while the smaller enterprises are surveyed through a sample. The IBES would lead to the elimination of a number of the current industry and business surveys that no longer provide relevant data.

Household Income and Expenditure Survey

As noted earlier, a cluster of economic activities are anchored at the household level. The 1993 SNA addresses this issue in part through the institutional sectoring arrangements. It is therefore suggested that small-scale manufacturing, service and agricultural activities conducted at the household level be captured systematically through household inquiries. The current Household Expenditure Survey, launched in 1999, requires some re-design to incorporate full accounting of both non-farm and agricultural activities. It is further suggested that the modular structure permits the incorporation of other information on topics of interest from a policy viewpoint. If appropriately redesigned, the HIES could generate a large part of the data needed for preparation of the household institutional sector national accounts, measurement of poverty and living standards, calculation of household consumption, and weights for the CPI. Information collected through the modules would provide both wage data and earnings from business, agricultural and other secondary activities. Other modules could include crop production and labor activities. Separate modules on demographic characteristics, health and nutrition could also be considered for canvassing at less frequent intervals on a rotational basis. These and other modules, reflecting emerging priorities could generate adequate measures of social changes and permit poverty monitoring. The HIES could be integrated with a community level survey to aid analysis. There is a case for increasing the sample size into to provide better estimates for the main aggregates at the Oblast level. The resources needed for an enlarged HIES can be found from savings that would be available from the elimination of a number of ongoing survey programs, which would become redundant. A consolidation of the survey programs would yield sizeable savings, which could be utilized to strengthen the overall survey infrastructure, provide resources for better supervision and data improvements.

Production Surveys

SSC currently carries out a number of sector specific surveys of manufacturing, construction, distributive trades, transport etc. These surveys lack a common content and are geared to the generation of

indicators. They are insufficiently directed towards a systematic measurement of input and output elements required in the context of national accounting. These surveys are also focused towards physical measurement with less emphasis on monetary values. It is recommended that these surveys be consolidated and re-oriented. The methodologies developed for the IBES could be readily adapted and applied to the new monthly surveys. The IBES questionnaires could be simplified and used for the new consolidated survey, which could be named the **Monthly Survey of Economic Activity**. The survey, if appropriately designed, would generate data sets for quarterly national accounts, preparation of monthly indices of production, wage trends, etc. The current practice of seeking cumulative information should be abandoned. This practice gives rise to errors, imposes an additional burden on respondents and is not in conformity with international best practice.

Price Statistics

The area of price statistics requires special attention. Price statistics have developed in an ad hoc manner. Considerable more work is needed in developing an integrated work program on price statistics that would provide a basis for the calculation of appropriate deflators, track price developments in the economy, and provide policy makers with the tools to address future inflationary pressures as they emerge.

An appropriate framework for price statistics should encompass **consumer prices**, producer prices, and import/export prices. Beyond that prices for calculation of PPP based national accounts to facilitate international comparisons are needed. Considerable progress has been made in the computation of the CPI on the basis of international recommendations with assistance from the IMF. However, there is scope for streamlining the computations by using better weights, a rationalization of the specification of item to be priced, and more careful selection of the outlets from which prices are collected. The present Retail Price Index, based on old Soviet era methods, is a good example of excessiveness mentioned in Chapter II, it is both flawed and provides information of no major value. It is recommended that this survey be abandoned and the resources channeled into the development and improvement of the CPI.

Current work on the collection of **Producer Prices** is somewhat disjointed. A program needs to be developed with the goal of calculating a well-based Producer Price Index with appropriate sub-indices for the main branches of production. Such disaggregated indices should serve as deflators.

The need for **import/export price indices** is clearly evident. Indices in this area should be based on actual price collections rather than unit values. It is widely recognized that unit values are highly volatile in part because of the lack of homogeneity of items imported or exported. Therefore, a system for collecting actual import and export prices needs to be developed.

Quarterly Labor Force Survey

SSC has in the recent past launched a quarterly Labor Force Survey. This survey is based on ILO standards and has a large enough sample size to provide Oblast level estimates of employment, unemployment and under-employment. The survey is also of extreme importance as a unique source of data for assessment of the Non-observed economy (NOE). The LFS represents a powerful vehicle for collecting other data of policy relevance through the addition of modules that could be rotated. For instance, modules dealing with internal migration, access to social amenities, and social issues could be added. The LFS thus provides a mechanism for collection of policy relevant data in a cost effective manner, by reducing the need for special surveys.

Quarterly Agricultural Survey

The economic reforms in Ukraine have radically changed the structure of this sector and have led to the emergence of a) large agricultural enterprises b) medium sized farms and c) private lot cultivation. The collection of data on current agricultural output needs to factor in these structural characteristics. Data for the units under a) can be collected through enterprise survey of the type mentioned under monthly Production statistics. Output from private plots is best collected through the HIES. It is the medium sized farms for which a special quarterly survey needs to be designed. Such a survey should ideally be a sample survey based on a special register of such farm units. The survey should be so structured that it generates comprehensive information on both inputs and outputs both in quantity and value terms. Output in volume terms, net incomes, farm employment, production inputs etc. should be collected.

Other Surveys

Many of the other surveys currently undertaken should be carefully reviewed and action taken to eliminate those that do not yield policy relevant data or have outlived their usefulness. Others could be collapsed and integrated into the main surveys listed above. There is one other major survey that merits special mention. SSC carries out a sample survey of enterprises to assess business sentiments and tendencies. This is a valuable tool for assessing business expectations, and an important input into forecasting. The survey should be reviewed with the objective of improving its focus.

Administrative Data

Statistical systems in most countries rely on administrative data sources to a considerable extent. The areas primarily relate to data on external trade, based on Customs records, public finance data, based on Government revenue/expenditure accounts, banking statistics, and a whole range of social statistics based on use of and access to public facilities in sectors such as health, education, and welfare services. The challenges are how best to ensure that the data available conform to established international classifications and definitions. The statistical agency faces this as a major challenge and needs to work in harmony and in cooperation with the various agencies responsible for maintaining these administrative records. In the Ukrainian context, the SSC needs to engage these agencies in a variety of ways: identify data needs, work towards acceptance and implementation of standard classifications; arrange for smooth flows of data on a timely basis and train the staff of the other agencies in an appropriate manner.

As a first step, SSC needs to carefully identify its requirements, engage the agencies involved, and help train staff.

II. Presented below are the activities associated with core programs in economic and social statistics.

Household Sample Surveys

3.1 Refinement of Household Expenditure Survey: SSC has made commendable progress in launching in 1998 the new household expenditure survey. Based on the experience gained, and taking account of data needs, especially for national accounting, it would be product to review the existing questionnaire. An amended questionnaire, particularly in the measurement of non-farm incomes, should be drafted. In addition new modules incorporating data sets identified by users should be developed and tested during the first year. Present methods for data validation and imputations for missing data should be evaluated and new procedures put in place to improve data quality. As progress is made in improving the sample frame, work should begin towards improvements in the design of the survey.

3.2 Upgrade analytical capacity of staff: The first of three workshops should be organized. The workshop should deal in particular with methods for imputing values for missing data, data presentation, use of statistical methods for assessing data quality, and calculation of derived measures.

3.3 Refinement of Quarterly Labor Force Survey: As in the case of the Household Expenditure Survey, the existing questionnaire should be reviewed and improved upon. New modules for collecting urgently needed data e.g. internal migration, access and use of public services should be developed and tested during the year for introduction in the LFS in the second year of the Project.

3.4 Survey Skills Program: The practical program offered by Statistics Canada for training professional staff in all aspects of survey operations from design, execution to analysis is highly rated and valued by other statistical offices globally. Several Central European countries have taken advantage of the program offered by Statistics Canada. The approach calls for a team of three staff to participate in the six-week program in Ottawa. Following the completion of the training in Ottawa, the staff members with Canadian experts assisting, run a comparable program in their home country. The program is then institutionalized in the Training Institute or Center of the recipient country there by contributing to long term and sustainable capacity building. SSC should negotiate a program with Statistics Canada and send three staff members to be trained in Canada in the course of the first year of the current Project. The launch of the domestic part of the program should be taken up in the second year.

3.4 Training in sampling: The objective is to train a core professional group in sampling applications. The core group would ultimately be responsible for the design of all sample surveys. No activity is planned in Year one.

4. Enterprise Statistics

4.1 Enterprise versus establishment statistics: Current ambiguity about the establishment and enterprise statistics impacts on the work program of SSC. Given the SNA emphasis on institutional sectoring as a basis, it is imperative that there is clear understanding of the nature of the two approaches. To this end, a workshop should be held to clarify the essential differences and the implications that arise from adoption of one or the other approaches. The workshop should take up the basic concepts, the implications for data availability for small areas, the emphasis and role of commercial accounting standards in enterprise surveys, and survey as an introduction to the adoption of the IBES has a comprehensive tool for data collection. The workshop should thus be designed to provide an initial introduction towards the introduction of the IBES, serving a multiplicity of data objectives in the national accounts, BOP, financial data, and private sector area.

4.2 Integrated Business Enterprise Survey: The IBES should be seen as one of the key instruments for collecting data from enterprises for purposes of the national accounts, the BOP, and other data needed for monitoring economic trends in the non-financial corporate sector, consolidating a number of current surveys, and generally improving the availability of data on the private sector. In moving towards the goal of launching of the IBES, the first step entails the design of the survey involving coverage, the questionnaire, and obtaining support of major respondents. It is therefore proposed that these activities be pursued and the questionnaire tested and evaluated in the course of the first year of the Project.

4.3 Analytical use of enterprise data in National Accounts, BoP, and External Debt: Enterprise data collected through the IBES will result in the availability of a rich body of data. The data will provide the basis for compilation of many of the components items in the national accounts and the BoP. Staff

will be trained in the use of the data and to map the data into the economic accounts. No activity is planned in Year 1.

4.4 Sampling in enterprise surveys: The IBES or for that matter other enterprise surveys conducted by SSC will need to consider a strategy that calls for full coverage of large enterprises and a system of sampling of medium and small sized enterprises. SSC has limited know-how in the use of sampling in the area of enterprises. A workshop that explores best practice in other countries and its applicability in Ukraine should be conducted to expose staff to the opportunities and potential for using sampling. The workshop should also deal with basic methodological issues in the area of sampling enterprises.

4.5 Development of manuals: Documentation of procedures employed in statistical operations is essential for two broad purposes. Firstly, the documentation will represent a specification of the processes and approaches that will be used and thus serve as a guide and a reference source. Secondly, systematic organization of the assembled material will become a training aid. No activity is planned for Year 1.

5. Surveys of Economic Activity

5.1 Monthly/Quarterly Surveys of Large Enterprises in a) Agriculture; b) Manufacturing c) Retail-Wholesale d) Transport: Presently a large number of sectoral surveys are conducted by SSC. These are outdated in terms of the concepts employed, they aim at complete reporting both in terms of the units covered and the data collected, and at the same time do not contribute meaningfully to the data needed for policy formulation and monitoring trends. The use of “cumulative reporting” is less than satisfactory. To achieve the goals set by SSC to reduce the number of surveys and the collection of data less than relevant to current needs, a complete redesign and rationalization is called for. As a first step, a workshop to explore optimal arrangements for sampling, a modified questionnaire with common features, emphasis on data needed for the compilation of indices of production and providing a basis for the estimation of quarterly national accounts is imperative. Following the workshop, work should begin in designing a new survey program to replace existing surveys. The new program would need to have linkages to the IBES.

5.2 Business Expectations Survey: SSC currently conducts a Business Expectations Survey covering major enterprises in the economy. The survey is an important tool in assessing the business outlook and in the formulation of short economic policy. The scope, content and coverage of the current survey require review leading to a more streamlined and more focused questionnaire. The data currently generated could be vastly improved and its use in policy formulation enhanced. To this end, the external consultant should evaluate the present survey, develop a new or modified survey based on international best practice and user requirements. The revised questionnaire should be tested with the ultimate aim of replacing the existing questionnaire. The present sample of firms should be evaluated with the goal of introducing a more efficient sample. Activities in current year should culminate in the launch of a modified survey in Year 2.

5.3 Compilation of Leading Indicators: The importance of a set of leading indicators cannot be understated as a tool for monitoring short term trends in a market economy and as an instrument for assessing near term economic developments. These indicators play a key role in fine-tuning policy and managing the economy. No activity in year 1

5.4 Indices of Production: SSC currently compiles such indices based on monthly and quarterly data on production. However, the underlying data are weak. With improved data availability and fuller coverage of production, the indices will be re-weighted and revised. No activity in Year 1

6. Price Statistics

6.1 General Introduction to Price Statistics: Although SSC has, with some external assistance, embarked upon a development of price statistics, there is as yet no integrated framework in place to pursue the compilation of a comprehensive set of price indices at the producer, consumer and trade level. Nor is the current work linked to deflation of the major macro aggregates. Before launching activities in the price area, it is important that staff be exposed to the integrated nature of prices, best practice employed by market economies in measuring prices and compiling indices. Key methodological issues in price statistics need to be understood e.g. base weighted versus current based indices, importance of outlet selection, commodity specifications. To this end, a workshop highlighting these issues should be organized in Year 1 of the project as a prelude to work on specific indices.

6.2 Consumer Price Indices: To some extent this is an area where considerable progress has been made with IMF inputs. There is however considerable scope for improving the present set of indices. In Year 1 two main activities should be pursued: a workshop dealing with the various technical and methodological issues involving the calculation of a CPI, and the development and testing new commodity specifications, more efficient sampling of outlets, and the calculation of weights based on the HES patterns of expenditure taking account of imputations for own account consumption.

6.3 Producer Price Indices: SSC currently compiles such indices based on monthly and quarterly data. However, the underlying data are weak and unsystematically collected. With improved data availability and fuller coverage, the indices will be revised. The indices will measure price trends more comprehensively and contribute to improved deflation of the national accounts. No activity is planned for Year 1.

6.4 Import and Export Price Indices: This will be largely a new activity designed to be a better measure of price trends covering external trade.

7. Financial & Monetary Statistics

7.1 Banking & Monetary Statistics: The primary responsibility for compiling banking and monetary statistics rests with the National Bank. However, the SSC is an important user of the data, especially in the compilation of the economic accounts of the nation. It is important that there are trained staff at both the National Bank and at SSC. To this end, staff members of both institutions should receive training at the IMF in Washington DC.

7.2 Survey of Financial Institutions: No activity is planned in Year 1.

7.3 Government Finance Statistics: As in the case of banking statistics, the SSC is an important user of government finance data, while the Ministry of Finance is the compiler of such data. To this end staff from both the Ministry and SSC should be beneficiaries of IMF courses. No other activities are scheduled for Year 1.

7.4 Public and Private External Debt Statistics: Public debt data are compiled by the Ministry of Finance. The Ministry will be assisted in developing an improved data base. Some data are assembled by the National Bank on private debt. The IBES will aid in the collection of more comprehensive data and lead to the preparation of more complete information on both the stock of private debt and flows. No activity is planned in Year 1.

8. External Trade & BoP

8.1 Balance of Payments: SSC shares responsibility with the National Bank for compilation of the Bop. A member of the SSC staff should be enrolled in the IMF BoP course.

8.2 Special Problems in trade data compilation: There are numerous problems in the area of trade statistics based on Customs returns. As a first step, an external consultant should review the current status of trade data and formulate a plan of action to be taken up in Year 2.

9. National Accounts

9.1 Overview of SNA 1993: Although staff in the National Accounts department of SSC have been trained in the methodology of the SNA, staff in other parts of SSC lack familiarity with the SNA framework. Staff in the major user agencies are even less familiar and are still grounded in the MPS system. Such unfamiliarity on the part of users impacts on demands made for data and affects the quality of analysis. Furthermore, given the nature of the SNA as an organizing framework for data collection, it is important that staff at SSC (not directly involved in compiling the national accounts) and staff at other important agencies are exposed to the key features of the SNA. A workshop, repeated, for the widest possible group of participants should be organized in Year 1.

9.2 Supply & Use Accounts: Although SSC has made considerable progress in adapting the methodology for compiling supply and use tables, staff face many practical issues e.g. treatment of military goods exported, inventory valuation changes etc. A workshop designed to identify issues, including the need for new data to improve weak areas in the accounts, appropriate estimation procedures and resolution of other outstanding issues is proposed. The outcome of the workshop would permit the establishment of a step-by-step approach to improving the existing supply and use tables.

9.3 Institutional Sector Accounts: Although the institutional sector accounts represent a critical component of the SNA, progress in the compilation of such accounts must await the availability of new data. Since no new data are likely to be available in Year 1 of the Project, no activities can be planned for the compilation of such accounts.

9.4 Deflators: For the calculation of constant price GDP estimates a set of deflators are essential. Available⁸ deflators are weak and there are many unresolved practical issues. As a first step towards bringing about improvements, it is proposed that a workshop with an orientation similar to that for supply and use accounts be organized with the goal of establishing a step-by-step approach to introducing improvements.

9.5 Special areas and issues (to be defined): No activity is planned for Year 1 beyond the identification of issues that will require special attention. The issues are likely to include hard to estimate aggregates (e.g. ownership of dwellings, depreciation, capital stocks). Additional items are likely to include rebasing of national accounts, the use of chain-linked indices, assessment of the non-observed economy, etc.

As a part of the identification process it might be suggested to undertake the exhaustiveness of the Ukrainian NA according to the Tabular Approach developed by Eurostat

⁸ See paper by Silke Stapel, "Enlargement and Exhaustiveness: the Eurostat Pilot Project with the EU Candidate Countries", presented at the OECD Joint Workshop on Measurement of the Non-observed Economy, October 16-20, 2000 - see <http://www.oecd.org/std/DNM/>, meetings, Joint Workshop. A summary statement on the Tabular Approach is reproduced in the Annex.

9.6 Use of National Accounts: Staff in the key user agencies are somewhat unfamiliar with the richness of the analytical framework of the SNA. A workshop designed to introduce them to deeper analysis(e.g. total factor productivity measures) and approaches involving statistical methods such as time series and trend analysis, etc. would greatly improve the relevance of the national accounts in the context of policy formulation. Improved policies based on sound analysis would greatly advance the overall reform process in Ukraine.

9.7 Quarterly National Accounts: SSC compiles quarterly GDP estimates on the basis of available information. However, because of data gaps and weaknesses the estimates are less than reliable. With improved data flows as a result of new surveys, it will be feasible to improve the quarterly GDP estimates. No activity scheduled for Year 1.

9.8 Regional National Accounts: As in the case of quarterly GDP estimates, SSC does prepare regional estimates of GDP. These estimates are partial and do not fully meet user needs. With improved data flows as a result of new surveys, it will be feasible to improve the quarterly GDP estimates No activity scheduled for Year 1.

9.9 Social Accounting Matrix: Social Accounting Matrices are an integral part of the 1993 SNA and represent a powerful tool for both modeling and for addressing analysis of poverty, the distribution of output etc among different social strata in the economy. Improved data flows, especially in respect of households, and more elaborate national accounts, including input-output tables, will permit the compilation of SAMs. No activity scheduled for Year 1.

9.11 Input-Output Tables: There is a long tradition of preparing I-O tables in the Ukraine. However, these tables prepared in the past, relied upon MPS concepts. With new data becoming available as a result of various survey, it will be feasible to produce improved I-O tables. No activity scheduled for Year 1.

10. Demographic Analysis

10.1 Improvement of current population estimates: Estimates of current population are prepared based on vital registration records. However, information on external migration is not available. Open borders with other CIS countries mean that movements are not recorded. As an initial step, SSC needs to interact with the agencies responsible to put in place administrative arrangements. The experience of EU countries, with open borders, might be helpful. As regards internal migration, current estimates are weak. The feasibility of including a migration module in the LFS should be explored. The primary activity in Year 1 would be to engage a consultant to review issues and formulate proposals, including a draft module for testing.

10.2 Use of Census Data in small area database: The population census to be carried out in late 2001, the first since the attainment of independence, will generate a wealth of information and provide a basis for creating a database for small areas. The design of such a database, taking into account user needs, should commence in Year 1. A consultant should develop detailed proposals.

10.3 General demographic analysis: Demographic statistics underpin many social indicators. Based on the recent Population Census and improved data flows from household survey, SSC will be better placed to embark upon more analysis of demographic trends covering internal migration, fertility, morbidity and other demographic variables. No activities are scheduled for Year 1.

11. Social Statistics

11.1 Overview of social statistics: A workshop for both SSC and other agency staff to take stock of existing social statistics and identify gaps and weaknesses should be a launching activity. The workshop should help in raising the level of cooperation between the agencies and enable discussion of classifications in use. An external consultant would act as moderator and help in developing a framework for social statistics that incorporates the use of survey data to supplement administrative records.

11.2 Use of administrative data: A second workshop would be organized to follow up on the issues taken up under 11.1. A key issue taken up would be the introduction of international classifications, appropriately modified, and their harmonization and use across various agencies. The workshop should also take up the arrangements for greater data sharing between agencies and identify procedures for reconciling conflicting estimates. Another key element of the work will relate to the compilation of the indicators encompassed by the MDG.

11.3 Social Statistics for small areas: Need for social statistics for small areas is unlikely to be made by the household surveys envisaged under this project. Yet there is a clear demand for such statistics. Meeting this need will demand a more orderly exploitation of administration records and registers. No activity is planned in Year 1.

11.4 Development of Annual Ukrainian Dev. Indicators using HDI/WDI model: A consultant, after review of present work, should identify a comprehensive set of policy relevant social indicators that conform to international standards. He should identify the data sources to be used, both administrative and survey, in the compilation of the selected indicators. He should also design a user friendly compendium of social statistics that would incorporate analysis of trends and assessments of social conditions.

11.5 Social Indicators for Poverty Analysis: Another key element of the work will relate to the compilation of the indicators encompassed by the MDG. The HIES and other household surveys will be the primary sources of data for poverty analysis using well tested analytical frameworks as recommended by the World Bank. No activity is planned for Year 1.

12. Other statistics

12.1 Other statistics in Energy, Environment etc (to be defined in consultation with users): No activity is planned for Year 1.

5.4.2 Proposed outputs with targets

Three key issues merit stress:

- **Networking and data sharing:** Data needed for compilation of national accounts and other policy relevant indicators be obtained to the maximum extent possible through gaining access to data generated by administrative processes and maintained by other agencies;
- **Integrated Surveys** based on a carefully designed sample survey program that does not strain the capacity of the SSC
- **Information Technology** will need to play an important role in overcoming the handicaps faced by the SSC;

The overall strategy should help develop **networking arrangements** with other key agencies such as the Ministries of Finance, Economy, the National Bank, and private sector associations through

which a maximum effort to tap into existing information will need to be made. Wherever feasible, data transmission be done through electronic means, thus maximizing the use of **information technology**. to improve its in house capacity to process, store and manage a comprehensive data base, SSC needs o create a functioning database.

The following represent some of the major benefits and outcomes accruing from the successful implementation of the core data development activities identified in 5.4.1

Household Surveys

Revised HIES to better meet needs of SNA; map survey outputs to NA; Deepen use of data in poverty analysis and MDG etc; Improved labor force data and analytical capacity; Sustained capacity to train middle level professional staff in all aspects of survey operations; In-house expertise in sampling techniques

Enterprise Surveys

Increased knowledge on role and use of these surveys; Capacity to carry out IBES; map data to NA, BOP; produce institutional Sector accounts and comprehensive enterprise statistics. Effective use of IBES data. Capacity to develop and execute sample surveys of enterprises. Manuals available to guide survey operations.

Surveys of Economic Activity

Comprehensive statistics on current activity in key sectors. Revised survey will track business trends and improved forecasts. New indices to aid forecasting. Improved measures of short-term economic activity

Price Statistics

Increased knowledge on role of prices and methods. More robust CPI. New indices Producer & Trade Price Indices

Financial & Monetary Statistics

Trained staff in other agencies including the Central Bank. Survey to yield data for preparation of inst. Sector accounts. A Debt Reporting System in place

External Trade & BoP

Improved trade and BoP estimates

National Accounts

Improved knowledge of SNA. Revised accounts using new data. Inst. Sector accounts completed Revised deflators. Complex computation issues resolved. Improved capacity in use of NA in analysis New NA series in place. Compilation of SAM; its use in poverty analysis; as basis for modeling Increased capacity to refine NA

Demographic Analysis

More robust estimates of population with data on migration. Database on small area population statistics. Improved capacity for demographic analysis.

Social Statistics & MDG

Enhanced know-how on international recommendations including the MDG. Incorporate int. classifications, arrange for better data flows from other agencies. Database for small areas in place Analytically useful indicators for monitoring poverty and social trends. New indicators for poverty assessment, including estimation of poverty line and implementing MDG indicators.

Other Statistics

Other policy relevant statistics and indicators

5.4.3 Benefits and outcomes

The successful implementation of the program outlined above over the life span of the project will result in the flow of comprehensive statistics that are essential to support decision making in the context of the functioning of a market economy. These information flows should meet the needs of all

major stakeholders made up of government entities, the private sector, international investors and agencies and civil society in general.

5.5 Investment in physical infrastructure and equipment

It will be recalled that under the Soviet organizational structure, data processing was centralized at each level of the statistical system. These responsibilities were assigned at the central level to a Computer Center. Similar Centers existed at the level of the Republics and Oblasts. The various Computer Centers were in turn organized and structured in a manner to “mirror” the statistical departments. Thus, for each Department in the statistical office there was a counterpart Department in the corresponding Computer Centers. The Computer Centers were largely staffed with systems engineers and programmers. The Computer Centers were equipped with main frame machines. Like their counterparts in the statistical Departments, staff worked in isolation from their colleagues in the other Departments of the Computer Centers.

During the transition, the SSC has largely kept in place organizational structures that were previously in place even though mainframe equipment was replaced with PCs at the HQ level. A LAN system was also established. The purchase of the new equipment was financed through a World Bank Institution Building Loan.

At present data entry is done at the Oblast level but only summary reports in the form of standardized tables are transmitted to the Computer Center which in turn is responsible for the preparation of aggregated tables and supplying summary tables to the subject matter departments for further analysis, reporting to client agencies and the preparation of reports for general publication. The Computer Center, as noted earlier, has traditionally relied upon main- frame systems and has devoted most of its staff resources to designing customized systems and software. Some staff resources are deployed for hardware maintenance and engineering support. The Center has also taken data processing for external clients on a fee-paying basis. Again as noted earlier, the Center enjoys a semi-dependent status although it reports to the Chairman of the SSC. Under the current project, the IT function will need to be drastically redefined and restructured. Data entry and initial validation will continue to be performed at the Oblast levels.

The above recommendation requires some elaboration. The access to unit records at the HQ level represents best practice and is the norm in almost all statistical systems. It has several benefits. It provides professional staff with the ability to review all data, identify “outliers”, make informed judgments and corrections, and take appropriate steps that contribute to data quality enhancement. More importantly, the availability of unit records permits the creation of detailed databases that have detailed time series for the purposes of both cross-sectional and time series analysis. It should be noted that under present arrangements, unit records are preserved neither at the HQ nor the Oblast levels. This is in part attributable to the limited computer storage capacities. With the obtaining of enhanced capacity, it should be entirely feasible to store all records. SSC should adopt a policy that leads to such data being stored at the HQ level.

With the setting up of Local Area Networks in the Operating Departments, it will be feasible to engage in greater data sharing. Each of the Operating Departments would need to have IT professionals to perform specialized functions. In the proposed IT environment, the need for customized systems and software would be largely eliminated. The Operating Departments would rely on commercial software. The role of the Computer Center under the scenario painted above would change. The Center would have responsibility for equipment maintenance, and providing IT training to staff in the other units of the SSC. However, its major functions would be to develop and maintain the institutional database along with a

meta database. The proposals outlined above represent best practice in most of the advanced statistical offices in market economy countries.

5.5.1 Actions and timeframe

Six road clusters of activities and actions have been identified. They cover an initial comprehensive review of the IT requirements of SSC and development of a detailed design leading to the acquisition of hardware and software; establishment of a data - and metadata storage systems; establishment of an effective data dissemination capacity; ensuring data confidentiality and security; procurement of ICT equipment; and upgrading skills of IT staff.

1. Development of a detailed design of the state statistics system ICT improvements.

Decisions about procurement and development of software and hardware facilities will be made on the basis of a *detailed design of the state statistics system ICT improvement strategy*, harmonised with various statistical development activities indicated in this and other documents. This subcomponent assumes a general ICT design to be developed.

2. Source data collection, processing and storage systems

This will include:

- development of unified survey management systems including appropriate subsystems for primary data input, storage and processing, which could be customized to any questionnaire according to its description in the form of metadata;
- introduction of electronic means of data collection;
- development of electronic data exchange (EDI) technology for administrative data;
- Establishment of central data base as well as data storage facilities for primary data upgrading of data processing software.
- Establishment of a system for meta-data storage and management.

3. Storage and dissemination of statistical output

The activities supplement and support implementation of the statistical data dissemination and users education strategy, which will be developed under sub-component A4, by establishing the necessary ICT facilities, such as Unified output data- and metadata base with an on-line access, which would become a single source of information for various types of data

4. Ensuring data confidentiality and security

Activities will allow for the development of a general concept of confidentiality protection and statistical data security. The implementation will ensure protection of primary data and aggregated statistical information from partial or complete corruption or unauthorized access; and increase respondents confidence in the state statistics system.

5. Technical infrastructure

The sub-component deals with procurement and installation of ICT equipment to upgrade:

desktop hardware and software;

internal computer network;

database management and data processing systems;

security, archiving and confidentiality protection systems; and
data dissemination and exchange systems.

The equipment will include:

- (i) communication equipment to establish local area networks at the headquarters and oblast statistics departments, as well as a corporate network, which will unite the local area networks and ensure synchronous access to the centrally stored data and to applications based on client-server architecture, contained in the configuration of the distributed enterprise system;
- (ii) server equipment to enable operation of a number of subsystems at central and regional levels: internal and external communications, data storage, processing and dissemination.
- (iii) personal computers and printers;
- (iv) other office equipment.

6. Computerization and human resources

The activities under this sub-component enable the provision of specialized training to SSC staff, covering topics such as administration of local and corporate networks, databases, data storage and protection system, Internet technology, optical character recognition technology, hardware maintenance, etc. Training in application of modern information technology will be provided to the staff involved in data collection, processing, and dissemination, e.g. application of standard office packages, desktop publishing systems, statistical data analysis packages, database management systems, communication packages. Taking into account the number of staff to be trained, it is planned to develop electronic courses on a number of widely used technologies. It will enable conducting a portion of training remotely, therefore considerably cutting down the costs.

5.5.2 Proposed outputs with targets

The key outputs and outcomes are summarized below:

Completion of Master plan for IT strategy; specifications for hardware
New database in place
New meta database created and incorporated into database
On line access to major users, data access policies established
Hardware in place along with new software
Other equipment acquired
Trained staff in place

The proposed program and investments have an over-riding target. The target in question is to put in place modern IT facilities that are supportive of the expanded data development program and at the same time permit SSC to discharge its responsibilities in data dissemination. The investments are also seen as supportive of more cost effective approaches in data handling, data management and dissemination.

There are several implications arising from the above proposals. In the first place, sizable savings can be achieved. Moving aspects of the IT function from the a central location to where data operations are actually carried out (in the field and in the Operating Departments) will ensure that IT plays an effective role in contributing to enhanced productivity and greater efficiency. The proposed arrangements would achieve several specific objectives which include:

- increasing staff resources available for data work in the main SSC Departments; permitting maximum exploitation of PC based technology;
- a desirable downsizing of the of the Computer Center whose current staffing was set in a period when mainframe driven applications were the norm;
- enable the restructured Center to focus on the development and maintenance of the institutional database and meta database; engage in strategic planning in the IT area; develop its revenue earning activities;

An aspect of budgeting that merits special mention concerns the provision of funding for replacement of hardware. The issue is of particular relevance to the current project, which will finance the purchase of a sizable amount of hardware. Given the rapid rate at which equipment becomes obsolete, it is important to adopt arrangements that create a special Amortization Fund into which annual contributions are made. Future purchases of replacement equipment could then be met from such a Fund. Establishing such a Fund will demand the concurrence of the Ministry

5.5.3 Benefits and outcomes

Information and communications technology provides the backbone for efficiency gains and quality improvements. Upgrading the IT capacity is a major component of the strategy of the overall reform program.. Procurement and development decisions should be made in accordance with a single, coherent and up-to-date *IT Strategy*. This activity refers the development of such a strategy. It can take as its starting point and build on the ICT strategy formulated in 2000.

Desktop access to modern software is indispensable if staff are to be expected to implement the developments proposed in this strategy whilst continuing to conduct operations efficiently. In particular, proposals for streamlining regional office operations depend upon good computer access in the regional offices. Desktop hardware and software have not been upgraded for five years and are becoming seriously out of date. This activity envisages the procurement of desktop hardware and software in accordance with the IT Strategy.

Transfer of responsibilities to regional offices and increased flow of data and information between the regional offices and the central offices depend upon vastly improved communications.

Traditionally data processing and storage systems have been developed by SSC independently for each separate collection. This is resource intensive in terms of systems development and maintenance and is unsustainable in the present climate where IT experts are in short supply. The approach that the leading statistical offices around the world are now following is to make increasing use of general purpose, off the shelf software, in particular database management systems for data storage.

This activity envisages the procurement of modern database management systems in accordance with the IT Strategy, and their application for each new or redesigned survey processing system.

The past practice of in-house development of data processing and storage systems is unsustainable in the present climate where IT experts are in short supply. The modern approach is to make increasing use of general purpose, off the shelf software, in particular statistical data process software that can readily interface with data held in data management systems.

An aim of the project is to review and upgrade security, archiving and confidentiality protection systems to take into account the new systems and procedures and in the light of current best practice.

The introduction of a data will ensure that SSC data holdings are more visible, accessible and readily integrated. In the first instance the database will be accessible only within SSC. In the second phase selected data will be available to users. The development of a meta database will add greater transparency to the data and permit users to understand more fully the nature of the data.

Over the next five years electronic dissemination can be expected to become increasingly important, in particular dissemination through the Internet. To this end, the website will be redesigned with the twin objectives of increasing the data dissemination capabilities and of providing additional information to users.

6 Investment and Financing Plan

6.1 Input requirements

6.1.1 Capital expenditures (works and equipment)

The basis of the estimates takes account of a detailed review of current capacity and resource availability. The estimates have been built up on a comprehensive assessment of the technical viability of proposed investment.

Past under investment in both physical and statistical infrastructure has left SSC in a weakened position. Current resource endowments are inadequate to permit the launch of a meaningful data improvement and enhanced dissemination program that is justified for a country at this stage of the transition process. The proposals presented in this project proposal are technically sound and take account of experience in other transition countries such as the Russian Federation that have launched a program of reforms of the statistical system. Thus, the technical designs are appropriate for the country's needs. In Ukraine, as noted elsewhere in this report, some progress has been made by way of statistical reforms. The present level of development provides a basis for an acceleration of the reform and modernization process. The country has a demonstrable capacity to pursue the reforms detailed in this project. The Government has shown a determination to pursue reforms by committing budgetary resources in the future to ensure that the desired results from the investments do accrue fully.

The estimated investment costs have been calculated using parameters from other similar projects, in particular the comparable project in the Russian Federation. Equipment costs have been based on current prevailing prices and the estimated volume of data flows to derive the amount of hardware/software required.

	Th. US \$
Procurement of management systems software	300.00
Procurement of network equipment	3,675.00
Procurement of central switch, firewall, supplementary switches	375.00
Procurement of network equipment for regional level	3,000.00
Procurement of network equipment for rajon level	300.00
Procurement of server equipment	4,070.00
Procurement of server equipment for regional level	350.00
Procurement of network printers for central level	2,400.00
Procurement of network printers for regional level	120.00
Procurement of server equipment for central level	1,200.000
Procurement of personal computers and software	7,850.00
Procurement of personal computers and software for central level	700.00

Procurement of personal computers and software for regional level	4,500.00
Procurement of personal computers and software for rajon level	2,650.00
Procurement of DMS and its full adaptation to the needs of the SSCU at regional and central levels	300.00
Procurement of equipment for register maintenance	140.00
Renovation of training classes premises	300.00
TOTAL	16,635.00

6.1.2 Recurrent expenditures

Recurrent expenditures will consist of the PIU operational budget at about \$500,000 for 5 years.

6.1.3 Technical assistance

Technical assistance in the form of consultancy services and training, both in country and out of country, will constitute a very sizable project inputs. This will in large measure be critical to the success of the project. To achieve maximum impact a number of steps will need to be taken. First and foremost it is important that SSC has in place the absorptive capacity to take full advantage of the resource inputs generated by the Project. It will need to ensure that counterpart resources, both in terms of staff and funding for new surveys, are available. This will call for both additional budgetary resources and a redeployment of existing resources.

There are broadly three possible modalities that could be applied. Each has its strengths and weaknesses. The first option would be to invite well-reputed national Statistical Offices to bid for the consulting inputs being sought. The main advantage would be that this would lead to a kind of twinning arrangement resulting in a total system approach. The downside risks associated with such arrangements are several. In the first place, national offices in the statistically advanced countries are generally stretched and may not be able to make the commitment to deliver in a sustained manner the required inputs. Secondly, these offices do not have a deep understanding of the prevailing circumstances in the Ukraine. Past experience both in the Ukraine and elsewhere has been mixed. SSC managers were less than enthused with the experience to-date with cooperation efforts.

A second approach could be to hire individual consultants for specified tasks and activities. The main attraction of such an approach is that SSC would be able to hire the “best and the brightest”. However, the gains would be far outweighed by the disadvantages of such arrangements. For a start, such arrangements would place an enormous hiring burden on the SSC’s PIU, but more importantly they would virtually eliminate the possibility of coordinating the activities of different consultants. It is vitally important that consultants interact and act as teams given the intricate inter-connections between the various activities to be taken up. For example, a specialist in the design of the household survey cannot make an effective contribution without interacting with specialists in IT or sampling. On balance, it would be prudent not to proceed with this option.

A third option would entail contracting with a specialist firm of consultants specializing in the implementation of similar statistical capacity building projects. It would be highly desirable that the firm has an established track record, a core of experts who have close familiarity with statistical conditions in transition countries and have, more importantly, deep understanding and knowledge of international methodologies and best practice. The number of firms with such attributes is limited. A careful search would be needed. It would be best to advertise the Project inviting interested parties to submit proposals in a pre-qualifying stage.

In the final analysis, it may prove necessary to use a combination of the three options outlined above. It would, under these circumstances, be necessary to package components of the Project in a manner that leads to optimal arrangements that are also cost effective. Preparation of the parcels cannot be done at this stage. However, whichever approach is ultimately taken, it is imperative that the Project incorporates provision for the services of a full-time resident Chief Technical Coordinator (CTC). The person appointed would need to be a highly experienced professional with strong managerial skills. The Chief Technical Coordinator would have the key role of providing continuity, linking the different activities and ensuring that local consultants work in tandem and in harmony with external consultants. The CTC would also have the critical role of working closely with the PIU and SSC in monitoring progress, identifying bottlenecks and in facilitating arrangements for placing local SSC staff in training programs outside the country. A more detailed job description will need to be developed after the Project contents and modalities are accepted. It is premature at this stage to finalize matters.

Consultancy costs are based on estimated time inputs and prevailing rates payable to high caliber consultants. An allowance been made for physical contingencies and price increases during implementation.

Turning to the identification of training institutes, a subject by subject approach has been taken. Based on the current Project outline, some institutes and agencies are listed below: However, SSC staff, because of insufficient language skills and proficiency in English is likely to find difficulty in gaining entry to many of the institutes and training centers. It is therefore suggested that the lead-time prior to the launch of the Project be utilized to develop basic English language skills of SSC staff. Note should be taken of the fact that the IMF Institute periodically conducts courses in Russian.

National Accounts

US Bureau of Economic Analysis, Washington DC
The IMF Institute, Washington DC
The Institute of Social Studies, The Hague (Diploma Program)

Price Statistics

US Bureau of Labor Statistics, Washington DC

Sampling Methods

US Census Bureau, Washington DC
University of Michigan, Ann Arbor

Survey Methods

Statistics Canada program in Survey Skill, Ottawa

Balance of Payments

The IMF Institute, Washington DC

Money & Banking

The IMF Institute, Washington DC

Government Finance

The IMF Institute, Washington DC

Agricultural Statistics

US Department of Agriculture, Washington DC

Information Technology

To be determined

Demographic and Social Analysis

University of North Carolina, Raleigh
University of Michigan, Ann Arbor

As regards the identification of teaching materials is concerned, it is somewhat premature to do so. A diagnostic evaluation of the Institute at SSC is required to ascertain its current capacity and the future role it is to play. In any event, SSC has access to all UN, IMF and EUROSTAT manuals and methodological documents. What may be necessary are translations of such documentation into Ukrainian as appropriate

The table below provides cost details on Technical assistance, both consultancy and training (local and foreign):

	2004	2005	2006	2007	2008	TOTAL
Consultancy	2.18	2.66	1.80	0.95	0.21	7.79
Training	1.30	1.70	1.10	0.65	0.23	4.98
GRAND TOTAL	3.79	4.87	2.98	1.75	0.48	13.87
Component A. Organizational development and management						
Consultancy	0.39	0.61	0.31	0.22	0.07	1.60
Training	0.32	0.23	0.26	0.04	0.03	0.88
TOTAL	1.03	1.36	0.65	0.41	0.14	3.59
Component B. Statistical infrastructure						
Consultancy	0.26	0.25	0.07	0.00	0.00	0.58
Training	0.08	0.04	0.02	0.00	0.00	0.14
TOTAL	0.34	0.29	0.09	0.00	0.00	0.72
Component C. Data development						
Consultancy	1.02	1.21	1.19	0.69	0.14	4.25
Training	0.69	0.69	0.46	0.29	0.10	2.23
TOTAL	1.70	1.90	1.66	0.98	0.24	6.48
Component D. Strengthening of information basis for decision-making and forecasting at the Ministry of Economy						
Consultancy	0.14	0.19	0.07	0.00	0.00	0.41
Training	0.03	0.03	0.00	0.00	0.00	0.06
TOTAL	0.17	0.22	0.07	0.00	0.00	0.46
Component E. Introduction of modern information and communication technology						
Consultancy	0.37	0.39	0.16	0.03	0.00	0.95

Training	0.17	0.72	0.37	0.32	0.10	1.68
TOTAL	0.54	1.11	0.52	0.35	0.10	2.63

6.2 Financing plan

6.2.1 Government budget

The national budget will bear the operational costs (salaries, survey costs, maintenance of equipment, transportation, rent etc), as well as the local taxes and financing of the PIU operation costs on an incremental basis. Those two latter items are included in the project financing directly and amount to about \$4.6 million.

The estimate is based on the following assumptions:

1. Small local consultancy assignments, usually under \$8,000, are individual consultants, which are taxed at 7%;
2. Bigger local consultancy assignments (e.g. software installation, etc.) local firms, which are taxed at 13%, will be contracted;
3. For organization of local workshops, training, etc. specialized firm/firms will be hired (taxed at 13%);
4. Goods are taxed at 20% (VAT);
5. Works will be taxed at 13% (local firms).

It also recommended that the operational costs of the PIU are financed incrementally, with the government co-financing increasing from 10% in the year 2 to 40% in the year 5 of the project.

6.2.2 Donors

The project design was coordinated with the other donors TA activities. No direct financing is planned.

6.3 Detailed budget

The detailed project budget by components and subcomponents, along with the breakdown for the WB and Government financing, is presented in the table below. (Please note that the estimates do not include adjustments for inflation neither unallocated funds which are advised to be at about 10% of the total project costs).

	Total	WB	Government
TOTAL	\$33.01	\$28.41	\$4.60
Component A. Organizational development and management	\$3.59	\$3.23	\$0.36
Subcomponent A1. Streamlining the organizational setup of the Ukrainian statistical system	\$0.48	\$0.46	\$0.02
Subcomponent A2. Building of institutional management systems	\$1.38	\$1.23	\$0.15
Subcomponent A3. Strengthening of the system of staff training and re-training	\$1.00	\$0.85	\$0.15
Subcomponent A4. Development of the statistical data dissemination and users education strategy	\$0.54	\$0.50	\$0.04
Subcomponent A5. Improvement of relations with respondents and data providers	\$0.19	\$0.18	\$0.01
Component B. Statistical infrastructure	\$0.88	\$0.82	\$0.06
Subcomponent B1. Improvement of household sample frame	\$0.07	\$0.06	\$0.00
Subcomponent B2. Establishment of the statistical register of enterprises and individual entrepreneurs	\$0.40	\$0.36	\$0.04
Subcomponent B3. Introduction of the unified classification system	\$0.37	\$0.36	\$0.01
Subcomponent B4. Improvement of legislation	\$0.03	\$0.03	\$0.00
Component C. Data development	\$6.87	\$6.59	\$0.29
Subcomponent C1. Household sample surveys	\$0.83	\$0.80	\$0.03
Subcomponent C2. Integrated annual enterprise statistics	\$0.51	\$0.49	\$0.03
Subcomponent C3. Subannual surveys of economic activities	\$0.63	\$0.62	\$0.02
Subcomponent C4. National accounts	\$1.05	\$1.02	\$0.03
Subcomponent C5. Price statistics	\$0.26	\$0.25	\$0.01
Subcomponent C6. Government finance statistics	\$0.56	\$0.51	\$0.05
Subcomponent C7. Money and banking statistics	\$0.19	\$0.18	\$0.02
Subcomponent C8. Foreign trade and balance of payments	\$0.92	\$0.89	\$0.03
Subcomponent C9. Demographic, social and poverty statistics	\$0.43	\$0.41	\$0.02
Subcomponent C10. Other statistics	\$1.50	\$1.44	\$0.06
Component D. Strengthening of information basis for decision-making and forecasting at the Ministry of Economy	\$0.54	\$0.52	\$0.02
Subcomponent D1. Improvement of data supply for analytical purposes	\$0.12	\$0.11	\$0.02
Subcomponent D2. Establishment of new short- and medium-term forecasting models	\$0.42	\$0.41	\$0.00
Component E. Introduction of modern information and communication technology	\$20.61	\$16.86	\$3.74
Subcomponent E1. Development of a detailed design of the state statistics system informatisation	\$0.11	\$0.11	\$0.00
Subcomponent E2. Source data collection, processing and storage systems	\$1.47	\$1.26	\$0.21
Subcomponent E3. Storage and dissemination of statistical results	\$1.75	\$1.43	\$0.32
Subcomponent E4. Ensuring data confidentiality and security	\$0.12	\$0.12	\$0.00
Subcomponent E5. Technical infrastructure	\$15.56	\$12.45	\$3.11
Subcomponent E6. Computerisation and human resources	\$1.59	\$1.49	\$0.10
F. Project Implementation Unit	\$0.00	\$0.00	\$0.00
F1. Staff	\$0.48	\$0.36	\$0.12
F2. Equipment	\$0.03	\$0.02	\$0.01
F3. Other operating costs	\$0.02	\$0.01	\$0.01

6.4 Cost-effectiveness analysis

National statistics are a public good and generally financed from tax revenue. There is only very limited potential for cost recovery, mainly through data dissemination. Therefore, only marginal financial returns are expected from this project. However, there can be a fiscal impact contributing to a better budgeting process and a potential increase in revenues due to better information and coverage, as well as a possible increase in recurrent costs to cover enhanced operations of the national statistical system. Thus a project of this nature is not amenable to a cost-benefit analysis.

On the other hand, the economic benefits from the project are considerable. First and foremost a well functioning statistical system is an essential and vital institution in a market economy. Information flows are critical to the orderly functioning of markets. Furthermore, information availability promotes greater transparency and contributes to good governance. More directly, good statistics have a direct impact. First, improvements in the efficiency of statistical operations and agencies will result in broader coverage of and higher quality data from given levels of expenditure. Second, better data will enhance the potential for evidence-based decision making, at policy, program and project levels. Third, the project would help address the significant costs of missing or inaccurate data that impact on the ability to macro-manage the economy.

The project's cost-effectiveness can be broadly assessed in terms of alternative designs that achieve the same desired results. The extreme option of leaving the statistical function entirely to private initiatives is clearly untenable as impartiality would be gravely compromised. It would also lead to lopsided development of statistics. Official needs would not be fully met. The option of developing a decentralized system, with different agencies and ministries engaging in information gathering, would lead to duplicative efforts with the attendant inefficiencies, higher costs and less than satisfactory gains from economies of scale. The present design provides the benefits from the project that are expected to outweigh its costs, that is, why the net development impact of the project is expected to be positive.

There is a likelihood of increase in recurrent costs to cover enhanced operations of the statistical system, which might be partly offset by cost reduction achieved through better management and the abolition of costly and archaic methods, processes, and duplication of effort. However, a net increase in the recurrent budget will be necessary.

In order to evaluate the impact on economic development, three types of estimates have to be performed: (i) an overall assessment of the value and costs of delivering current statistics and of generating new and upgraded information; (ii) the long-term cost effectiveness of streamlining statistical work and of the efficiency and accuracy gains in reducing labor-intensive statistical operations; and (iii) the impact of reliable data on policy making. Since the outcomes of such technical assistance projects are generally intangible and cannot be observed in the short run, evaluation methods are highly speculative and may have to rely on agreed assumptions.

The investment in information and communication technology infrastructure should produce discrete productivity benefits as well as affect the way current functions such as data entry, validation, processing, transmission, and dissemination are performed. A separate analysis of the estimated impact of the technology changes on various stages of data production and dissemination could be undertaken by the PIU as part of project implementation.

The technical design of the project is based on a detailed analysis of the strengths and weaknesses of the statistical system against standards and best practices, e.g. on statistical methodologies and management. The proposed improvements and developments in management of statistical agencies,

statistical infrastructure, and statistical operations and the choice of technology are appropriate to the Ukrainian situation, as well as international good practice and standards. The specifications for works and equipment, including computing and communications equipment, have been reviewed by technical specialists and are consistent with World Bank procurement practices and local requirements.

7 Implementation Plan

7.1 Mechanisms for implementing the master plan

The project is expected to be implemented over a five year period. Although the project will incorporate assistance to a number of agencies and ministries including the National Bank, the Ministry of Economy and European Integration, and the Ministry of Finance, the principal beneficiary will be the SSC given its status as the central agency responsible for statistics in Ukraine.

7.1.1 Executing agencies

Given the central role of SSC, both as the central statistical agency and the principal implementer of the project, it is best placed to take on the role of Executing Agency. Other key institutions would be the National Statistical Council to act as a coordinating body at the highest level of government with participation from line ministries, the central bank and from other civil society groups and the private sector. Such a body would usually define the national statistical strategy, policies, priorities and broad implementation arrangements, oversee national program elaboration and implementation, and bear the responsibility for results and their quality. The PIU which would be an administrative/technical group with appropriate authority reporting to the coordination body for management and coordination of program design, implementation, and monitoring and evaluation. The organizational responsibilities and accountabilities would be governed by appropriate set of Terms of Reference developed in agreement with the Bank's Task Team Leader and in consistency with the World Bank *Guidelines for Selection and Employment of Consultants by World Bank Borrowers*. .

Implementation arrangements need to ensure the timely and reliable flow of funds to the implementing units at all levels. Slow disbursement and inadequate resources for the sectors and institutions involved are two of the biggest roadblocks to a sound functioning of national statistical systems. Procurement for all financed activities will be carried out in accordance with the Bank's Guidelines for Procurement under IBRD Loans and IDA Credits. Consulting services by firms or individuals financed by the project will be awarded in accordance with the Bank's Guidelines: Selection and Employment of Consultants by World Bank Borrowers (January 1997, revised in September 1997 and January 1999)

Specific disbursement procedures will take into consideration IBRD/IDA's disbursement policies and procedures. The key considerations for the disbursement procedures will be: (a) a link between physical progress and project expenditures; (b) the need for a sufficient balance in the Special Account for decentralized and emergency activities; and (c) an efficient and effective flow of funds to meet the needs of the project during a relatively short implementation period. Where appropriate capacity exists, the use of Project Management Report (PMR)-based disbursement will be encouraged to facilitate the disbursement process, provide adequate funds in the Special Account, and ensure, where possible, close monitoring of the link between physical progress and expenditures. In other cases, traditional disbursement procedures will be used until there is sufficient capacity to convert to PMR-based disbursement

The Project will be subject to the standard IBRD/IDA audit requirements, including submission of audit reports within six months of the end of the fiscal year. The selected independent auditor, acceptable to IBRD/IDA, will need to have appropriate expertise in auditing.

7.1.2 Management and coordination

Successful implementation will demand strong management arrangements. The PIU will play a key role in project implementation. However, its ability to play an effective role will demand strong support from the senior management of SSC. To this end, it is suggested that a Project Steering Committee be established, with its membership comprising the senior managers at the level of the Deputy Chairpersons of SSC. As the Project transcends the activities of SSC and extends into several other agencies, it would be appropriate to co-opt senior level representatives from other agencies e.g. the National Bank of Ukraine, the Ministry of Finance etc that would be receiving assistance under the Project.

Although the Project implementation plans, drawn up at the launch stage, will be fairly comprehensive, it should be viewed as indicative. Experience with similar sized projects in other countries has demonstrated that shortfalls and deviations from meticulously designed project plans are inevitable. The need for flexibility must be factored in. It is therefore suggested that beyond the overall Project plan, an **Annual Implementation Plan** should be developed prior to the commencement of the year. It should also be noted that detailed specification of the various actions/activities to be taken up in pursuit of the Project components, cannot be meaningfully done in advance. An appropriate approach would be to hold detailed discussions between SSC and the external consultants to develop a **Component Initiation Agreement** just prior to the commencement of activities under a particular component. Such an agreement would spell out in considerable detail all of the actions planned together with understandings about the timing, types and nature of inputs to be provided by the parties to the Agreement. This approach has been successfully used in China by the Chinese National Bureau of Statistics and Statistics Canada, and is now being used by NBS in its other technical cooperation projects.

The complexity, size and scope of the Project are in several ways unique. The Project covers a whole range of subject areas; it involves a number of national agencies and it seeks to create a new statistical system demanding an entirely new culture. There is only limited experience from other country situations that can be drawn upon. In most technical assistance projects in the field of statistics, the projects are designed to improve or modify particular aspects or segments of the statistical system. In the present case, the Project is all embracing, requiring a mix of skill inputs ranging from management practices, IT applications to the entire range of subject fields in different branches of economic and social statistics. It is therefore necessary to evolve arrangements that fit the unique circumstances in relation to this Project.

7.2 Implementation alternatives considered and rejected

7.3 Sustainability issues

Sustainability of the project benefits depends critically on the government's commitment to provide budgetary support beyond the implementation phase, particularly for activities not directly connected with data collection but indispensable for maintaining the improved statistical process: staff training, statistical research, maintenance of newly installed statistical and physical infrastructures.

The project on the whole is a modest-risk undertaking. Among the typical risks, common to projects of this nature, are such as an insufficient absorption capacity of the data-producing agencies for project implementation; departure of newly recruited and re-trained staff from the statistical system; delays in the implementation of experience gained through pilot surveys; delays in availability and disbursement of funds.

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective Commitment of the Government to support statistical work in the country by providing adequate resources for statistical observations and related activities and administrative reporting.	N	
Commitment of the SSCU and other major data collection agencies to sustain the reform of the statistical system after project implementation completion and the withdrawal of consultants.	N	
From Components to Outputs Absorption capacity of the SSCU is sufficient for the project implementation.	M	A detailed assessment of staff participation in each component implementation is being performed with necessary adjustments to the implementation schedule/components' activities.
The new organizational structure and management systems are not acknowledged by the SSCU staff.	N	Staff participation and ownership in the development of the new organizational structure
Newly recruited and re-trained staff is not retained in the statistical system	M	Establishment of a new system of staff assessment and rewards, better work environment should partly mitigate this risk
Local government officials do not accept rationalization of statistical data at the local level.	M	Educational round tables/workshops are being planned
Successful project pilot activities are introduced into regular practice with a considerable time lag.	N	Better budget programming should ensure availability of funding for the new surveys
Close cooperation over the implementation issues between the SSCU and other beneficiaries (MOF, MOE, NBU) is not established.	N	Establishment of the participatory Administrative Council to supervise the Project implementation
Overall Risk Rating	M	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N(Negligible or Low Risk)

The process of modernization might have a direct and, in some cases, disturbing impact on the statistical staff. While improving their work environment through human resource development and the introduction of modern equipment for data processing and communication, some staff will gain from

retraining, from acquiring new skills and added responsibilities. Others, however, will face job loss, retraining, perhaps relocation. Some may simply find that adapting to new ways is stressful. These factors should not be underestimated. The project design have factored these issues into the new human resource policies that will be adopted by SSC.

There are also potential controversial issues resulting from improved data availability and accuracy, e.g. changes in poverty measures could affect household subsidies; improved population numbers might affect election procedures as well as level of regional subsidy; consumer price index revision might affect collective bargaining and provoke salary reviews both in public and private sectors.

7.4 Monitoring and evaluation

7.4.1 Mechanisms for monitoring and reporting progress

The monitoring and evaluation of statistical capacity building efforts is a crucial part of the program. It will help assess existing deficiencies, determine needs and priorities, and help allocate program resources. Recent work by a task force of the PARIS21 consortium has highlighted the need for a structured approach to the measurement and monitoring of statistical capacity, requiring the examination of the impact, outcome, output and component levels. The PARIS 21 methodology will be applied.

Key variables that will be monitored closely will include:

<p>USER SATISFACTION</p> <p>Rate of user satisfaction increases from x to y by end of program (include consultation, usefulness of products, etc.)</p> <p>Targeted statistical products are easily accessible in relevant media with metadata and interpretation of findings, etc.</p>
<p>STATISTICAL QUALITY:</p> <p>sound data sources used; coverage of statistics improves or is more relevant</p> <p>Increase in surveys response rates (e.g. from % to %)</p> <p>Validation is carried out for at least % of data sources and statistical products</p>
<p>TIMELINESS</p> <p>Reduction in time lag between data collection and dissemination</p> <p>Statistical outputs are released within the time limits and with frequency meeting SDDS requirements</p>

In the interim, the intermediate outcomes identified (called “outputs” in the logframe) will be used as proxies of progress towards the outcomes.

Intermediate outcomes will be assessed at the output level. These measures are different than activities completed (which is tracked at the input level) in that they measure the value added of those components. For instance, not only will training conducted to measured, but also the % of staff who have improved statistical skills set or % of staff audited who use and upkeep skill set.

Progress in implementation of the components will be measured by assessing the extent to which the Master Plan is implemented. A robust system of monitoring and evaluation will be established to assess, on a regular basis, the extent to which programs are making the expected impact, and resulting in the anticipated outputs and subsequent outcomes.

As part of the program, and in their capacity as coordinators of the statistical system, SSC will conduct annual assessments of the state of the statistical system. There are a number of tools now available, all of which should be examined and used where appropriate. The results of recent work will be used if possible, including the Data Quality Assessment Framework (DQAF) of the IMF, and the indicators of Statistical Capacity Building prepared by PARIS21.

Measuring the impact of better statistics on improved decision making and resource management is a more difficult and less precise task than measuring outcomes and outputs. If better statistics are to have the required impact, government, the private sector, and civil society organizations (CSOs) will need to use data in their management processes and their decision making systems. It is assumed that the institutional framework, including incentives and capacities for policy makers and managers to use statistical data, needed for this to happen will exist or will be addressed through other programs, such as those involved with institutional reform and change.

Any formal evaluation whether there is evidence that statistical data is used in policy and management processes will not be undertaken by the task manager as these are in either public sector and/or individual sector reform programs. The impacts are assumed to be tracked at the CAS level, given the sector issues. Efforts will be made by the task team to link to these broader sector reforms in order to report on whether the information is being used in public sector management.

A schedule of reporting against progress will be established with the SSC, using the indicators and monitoring framework set out above. For Bank supervision, this will typically be a six-monthly cycle, while the SSC will use the M&E system for management on an on-going basis. SSC will also prepare an annual report on the implementation of the project Plan, together with a work plan for the following year to include a focus on progress towards outcomes and intermediate outcomes, as well as implementation progress. As well as being submitted to the World Bank, this will also be widely published within the country, to both users and producers of statistics.

A performance evaluation will be conducted half way through the program. The evaluation will involve SSC, other producers of official statistics, representative from users, including government, NGOs, the private sector, and donor and international organizations. It will also include an audit of operation procedures, and a preliminary assessment of outcomes, and will be used to improve program implementation.

7.4.2 Summary of targets and indicators

The DQAF/PARIS21 indicators will be used to measure both outcomes and outputs of each program, together with regular assessments of progress against the Statistical Master Plan. This will be supplemented, where appropriate and possible, with assessments based on the IMF's the Special Data Dissemination Standard (SDDS).

The Logframe for the Project is provided below:

UKRAINE: Modernization of the Statistical System

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Sector-related CAS Goal:	Sector Indicators:	Sector/ country reports:	(from Goal to Bank Mission)
(i) Implementation of a broad-based poverty reduction strategy and attaining job-creating, sustainable economic growth	Trends in poverty and unemployment levels, reduction; trends in GDP and investment growth rates	Household survey and other poverty survey reports Government statistics CAS monitoring activities and Economic and Sector work	Sustained commitment to reform, efficient management of resources leads to improvement in social outcomes and reduction of poverty.
(ii) Support of institution-building activities	Improved management of public resources and streamline public expenditure		Willingness to restructure public institutions
Project Development Objective:	Outcome / Impact Indicators:	Project reports:	(from Objective to Goal)
Sustainable state statistical system which efficiently provides timely and accurate data for policy evaluation and decision making	Improved poverty monitoring, better informed economic and social policy evaluation and decision making	CAS monitoring activities and Economic and Sector work Supervision reports IMF SDDS-related reports. Data users surveys	Statistical information is appropriately used for policy making. Public access to statistical data is not restricted.
Output from each Component:	Output Indicators:	Project reports:	(from Outputs to Objective)
A: SSCU's ability to formulate and carry out statistical policy in the country is enhanced. Organizational, managerial, human resource, and participatory capacity are developed.	Annual data collection plans and long-term strategy programs are based on Program Budgeting System. Staff assessment reviews are carried out annually. Training plan in place updated at least annually and training courses regularly take place. User education and data providers motivation activities are regularly implemented. Participatory mechanism for seeking advice on the major data outputs of the statistical system, modes and time frame for delivery is established. Increase of rate of response from ...% to ...%. Reporting and processing burden diminished: number of statistical forms decreased by ... %.	Quarterly project progress reports Data providers surveys Data users surveys	Commitment of the Government to support statistical work in the country by providing adequate resources for statistical observations and related activities and administrative reporting. Commitment of the SSCU and other major data collection agencies to sustain the reform of the statistical system after project implementation completion and the withdrawal of consultants

<p>B: Basic elements of the statistical infrastructure – sample frames, statistical standards, legislative arrangements – are in place.</p>	<p>The HHSF is upgraded based on the 2001 population census results.</p> <p>Statistical register, based on of the Unified Register and the Tax Administration Register, is operative and regularly updated. Process of transition to the new Classification structure is completed</p> <p>Necessary improvements and modifications to the Law on Statistics are done to reflect agreements on effective statistical coordination and new data collection mechanism.</p>	<p>Quarterly project progress reports</p> <p>Supervision missions</p> <p>Disbursement Reports</p>
<p>C: Improved coverage, accuracy, and policy relevance of the data produced by the SSCU and other major data collecting agencies.</p> <p>More efficient data collection system, based on sample surveys, is introduced.</p>	<p>Achieved full compliance with the international statistical standards.</p> <p>Reduction of magnitudes of revisions by ...% on the average</p> <p>Reduction of discrepancies between different GDP estimates by ...%</p>	<p>Quarterly project progress reports</p> <p>Disbursement Reports</p> <p>Data providers surveys</p> <p>Data users surveys</p>
<p>D: Ministry of Economy and European Integration policy analysis units' capacities strengthened to provide better informed policy advice to the Government on the key economic and poverty analysis issues by improvement of the information database and the staff analytical skills</p>	<p>Data presentation and processing standards, based on the relevant database output formats for analytical purposes upgraded.</p> <p>Relevant short- and long-term forecasting models are introduced and used in policy analysis.</p>	<p>Analytical, planning, and implementation documents prepared by project teams, consultants, etc.</p> <p>Quarterly project progress reports</p> <p>Supervision missions</p>
<p>E: Efficiency of the statistical process (data collection, processing, transmission and dissemination) is improved by introduction of better communication and information technology.</p>	<p>Integrated meta- and database of all major economic and social statistics is available for users</p> <p>Steady growth of number of visits to the SSCU website</p> <p>% increase in the number of users provided with electronic copies of main statistical publications</p> <p>...% increase in the number of surveys implemented using electronic data collection methods</p> <p>...% increase in the number of questionnaires collected using electronic data collection</p>	<p>Assessment of ICT capacity building according to the framework developed by the SSCU</p> <p>Quarterly project progress reports</p> <p>Supervision missions</p> <p>Quarterly reports on number of visits to the HQ and regional websites</p>

C7. Money and banking statistics
 C8. Foreign trade and balance of payments
 C9. Demography, social statistics and poverty statistics
 C10. Other statistics

D. STRENGTHENING OF INFORMATION BASIS FOR DECISION-MAKING AND FORECASTING AT THE MINISTRY OF ECONOMY AND EUROPEAN INTEGRATION

541.7

TA recipients are trained to take over the full range of activities

D1. Modernization of data presentation and processing for analytical purposes
 D2. Application of new short- and medium-term forecasting models

E. INTRODUCTION OF MODERN COMMUNICATION AND INFORMATION TECHNOLOGY

20,607.6

The Government provide resources for maintenance of the IT elements after the completion of the project.

E1. Development of a detailed design of the State Statistical System Informatization
 E2. Source data collection, processing and storage systems
 E3. Storage and dissemination of statistical output
 E4. Ensuring data confidentiality and security
 E5. Technical infrastructure
 E6. Computerization and human resources

F. PROJECT MANAGEMENT

600.0

Close cooperation over the implementation issues is established between the SSCU and other beneficiaries (MOF, MOE, NBU).

PIU is staffed with competent personnel.

Annex 1

Major Related Projects, Financed by Other Development Agencies

<i>Component</i>	Implementation Progress	Development Objective
<i>International Monetary Fund</i>		
Project: Ukraine - Technical Assistance		
Subscription of SDDS	Completed	<ul style="list-style-type: none"> ▪ Preparatory work to accede to the IMF Special Data Dissemination Standard (SDDS)
Statistical Infrastructure	In progress	<ul style="list-style-type: none"> ▪ Adoption of a new Statistical Law ▪ Preparatory work for Ukraine subscription to the SDDS ▪ Rationalisation and reallocation of resources by SSC among programs
National Accounts and Prices	In progress	<ul style="list-style-type: none"> ▪ Implementation of the FAME computer system for compiling quarterly national accounts ▪ Introduction of seasonally adjusted quarterly national accounts and improved deflation methodology of GDP by the expenditure approach ▪ Implement an official data revision policy for national accounts
Government Finance Statistics	In progress	<ul style="list-style-type: none"> ▪ Co-ordination of the activities of the newly created inter-agency working group on GFS ▪ Compilation of GFS data in a format suitable for publication in IMF International Financial Statistics
Monetary and Balance of Payments Statistics	In progress	<ul style="list-style-type: none"> ▪ Compilation of the Reserves Template in the prescribed IMF format ▪ Development of form for publishing data on international investment position ▪ Preparation of revised survey forms for collecting direct investment data
<i>Statistics Sweden</i>		
Project: Co-operation program between Statistics Sweden and the State Statistics Committee of Ukraine		
Population census and demographic statistics	In progress	<ul style="list-style-type: none"> ▪ Facilitation of data processing of population observations, including switch to ICD-10 ▪ Assistance on organising household register

Statistical data dissemination – Statistical libraries	In progress	<ul style="list-style-type: none"> Improvement of work of the library Facilitation of Internet access
Education statistics	In progress	<ul style="list-style-type: none"> Sharing of experiences in education statistics to ensure international comparability
Criminal justice statistics	In progress	<ul style="list-style-type: none"> Sharing of experiences in criminal justice statistics
Household budget survey	In progress	<ul style="list-style-type: none"> Improvement of the quality of household budget survey data Insuring international comparisons Acquaintance with the new methods of poverty assessment
Energy statistics	In progress	<ul style="list-style-type: none"> Exchanging experiences on studying the activity of enterprises engaged in supply or consumption of energy products Making recommendation on methods for data collection and compilation for energy balances compilation in Ukraine Development of survey of energy resource traders
Business statistics with focus on trade and services statistics	In progress	<ul style="list-style-type: none"> Acquaintance with the sampling model in business statistics, common frame and classifications, distributed response burden etc. and classifications used in trade and service Assistance to transform statistical system used to compile the retail and wholesale trade statistics in Ukraine to the statistics meeting the needs in a market economy Development of a scheme of compilation of structural and short-term trade statistics for the formal business sector. Advice on the frame, sample size and method, sample rotation, questionnaire, enlargement, non-response, outliers, quality control and dissemination of the results Consultancy dealing with the design of frame, sample, collection, production and enlargement in services statistics surveys Improvement of indicators in structural and short-term service statistics, taking into account the main users
Macro-economic research – Conjecture surveys and forecasting	In progress	<ul style="list-style-type: none"> Introducing the technique to conduct regional and special conjecture surveys and the methods to compare the results from numerical statistics with tendency surveys Acquaintance with methodology to weight the respondents' answers (conjecture surveys) and the use of official statistics and tendency surveys in analyses and in forecasts
Macro-economic research – SNA macro-indicators	In progress	<ul style="list-style-type: none"> Acquaintance with Compilation of National Accounts and Financial Account in Sweden Consultancy on Financial account compilation Consultancy on compilation of input-output tables

Macro-economic research – Statistical methods	In progress	<ul style="list-style-type: none"> ▪ Consultancy on use of calibration methods ▪ Assistance on the use of different data sources for calibration techniques ▪ Consultancies on representative data to be collected through «small» samples, mathematical models ▪ Consultancies regarding different methods to be used to assess the indicators from sample surveys ▪ Consultations on how juridical persons register can be used to conduct sample surveys by different types of statistics; specific aspects of constructing the mathematical models for different samples by different types of statistics
Gender statistics	In progress	<ul style="list-style-type: none"> ▪ Consultancy on needed and available statistics ▪ Review of draft of publication “Women and men in Ukraine”
Organisation of commercial activity of statistical bodies	In progress	<ul style="list-style-type: none"> ▪ Assistance on establishment and development of SSCU commercial activity ▪ In-depth study of separate issues of Statistics Sweden commercial activity in view of creating the concept, model and program of SSCU Ukraine commercial activity development ▪ Implementation of project of calculation of statistical works
DFID (Great Britain)		
Project: Support for the SSCU		
Modernisation of social statistics	Planned	<ul style="list-style-type: none"> ▪ Development and improvement of methodology for household sampling on the basis of Population census data ▪ Development and implementation of modeling techniques to improve the representativeness of poverty data at the regional level. ▪ Methodology for reconciling data from different data sources in order to obtain reliable estimates of employment/unemployment at the regional level. ▪ Development of methodology for recalculation of historical time series of economic activity, employment and unemployment indicators based on Census results ▪ Improvement of publications on social profile. ▪ Improvement of demography statistics, especially in view of processing census data ▪ Improvement of social statistics at regional level ▪ Improvement of indicators of living standards of households and poverty indicators
Methodology and training	Planned	<ul style="list-style-type: none"> ▪ Training for the staff of departments of methodology and planning, increasing thereby potential of the basic group with regard to transfer of their knowledge to other employees; creation an analytical potential for further development of methods and standards ▪ Assistance to the SSC with regard to organization and realization of educational courses for the employees of the SSC, regional departments, main users, representatives of press and others.

Statistical management and planning	In progress	<ul style="list-style-type: none"> Introduction of strategic management and planning programs into statistical system, including headquarters and regional statistical departments Development of a harmonized approach to organization of management and change management within the framework of a SSC, preparation of a precise exposition of basic goals, aims and tasks Preparation of a group of effective managers at all levels, including regional departments Creation of the organized system of planning for the SSC
Tacis (Eurostat of the European Communities)		
Project: Statistics 2		
Enterprise statistics	Completed	<ul style="list-style-type: none"> Creation of a system of statistical indicators for enterprises according to international requirements and standards. Creation of a system of regular statistical observations of activities of enterprises in industry, agriculture, trade, capital construction and transport
Foreign trade statistics	Completed	<ul style="list-style-type: none"> Development of appropriate long-term strategy in the field of statistics of foreign trade with the purposes of compliance with international requirements and standards. Introduction of appropriate methodology with the purpose of improving quality and timeliness of statistics of foreign trade and balance of payments
Statistical classifications	Completed	<ul style="list-style-type: none"> Development of methodological framework for creation of a system of automated management of national statistical classifications of Ukraine. Development of methodological provisions and organizational measures on introduction of national statistical classifications harmonized with international (European) classifications
Enterprise register	Completed	<ul style="list-style-type: none"> Perfecting the existing register and creation on its basis of a statistical register
Publications and dissemination	Completed	<ul style="list-style-type: none"> Creation of a system of publication and dissemination of statistical information and work with different groups of users of internal and external market, including the technology of storage, processing, analysis, publication and dissemination of information on the basis of using the experiences and strategy of similar activities in international organizations and recipient countries of the EU
Training centre	Completed	<ul style="list-style-type: none"> Creation of a complete training and methodological complex for educating the SSC statisticians, the experts of regional departments, and other ministries and agencies in modern statistical methods of processing, analysis and provision of statistical data with use of modern computer equipment
Macroeconomic analysis	Completed	<ul style="list-style-type: none"> Creation of modern, compliant with the international standards, methodology of macroeconomic analysis and forecasting based on using SNA and other indicators at macroeconomic level

Social statistics (labour market)	Completed	<ul style="list-style-type: none"> Creation of a system of statistical measurement of informal employment. Development of a system of regular sample statistical observations for measuring the labour cost, index of labour costs, wage and salaries and use of working hours by groups of occupations
Project: Statistics 4		
Enterprise statistics	Completed	<ul style="list-style-type: none"> Enabling a set of reliable economic indicators on statistics of industry, trade, construction, services, agriculture, which can be used by the economic and political actors and investors
Business register	Completed	<ul style="list-style-type: none"> Establishment of statistical observations on the basis of the statistical register
Statistical classifications	Completed	<ul style="list-style-type: none"> Development and introduction of the national system of statistical classifications according to the international standards
Statistics of foreign trade	Completed	<ul style="list-style-type: none"> Increasing the quality and timeliness of statistical data on foreign trade according to the international standards
Distribution and publication of the statistical data	Completed	<ul style="list-style-type: none"> Increasing correspondence of publications to the conventional international experiences. Development of public relations policy. Gaining user confidence. Publication of separate statistical indicators
Macroeconomic indicators	Completed	<ul style="list-style-type: none"> Increasing data quality and reaching international comparability of SNA indicators Perfecting SNA
Establishment of educational centre	Completed	<ul style="list-style-type: none"> Creation of a modern training centre for training and and improving professional skills of SSC experts, regional statistical agencies and official bodies in the field of methodology of collection, processing, analysis and dissemination of statistical data according to the international standards
Social statistics	Completed	<ul style="list-style-type: none"> Improving the quality of data on statistics of employment and poverty

Project: Statistics 7		
Agriculture Statistics	Planned	<ul style="list-style-type: none"> Law of Ukraine on Agricultural Census harmonized with European legislation to be drafted; methodology for multipurpose sampling of agricultural enterprises taking into account of their specialisation and using the register of agricultural enterprises to be prepared; to provide better understanding of concepts, methods, in the first turn, sampling methods, for measuring economic indicators characterising agricultural activity by the staff of the SSC and regional statistical offices.
Construction and Investment Statistics	Planned	<ul style="list-style-type: none"> methodology for calculation of index of construction production for national and regional level to be prepared; list of conjuncture indicators of construction statistics to be supplemented with such indicators as availability and receipt of orders; draft methodology for calculation of index of receipt of orders to be prepared; system for organization of collection of data on statistics for permissions to be improved; an amendment to the Law of Ukraine on construction of cities aimed at obtaining information on permission for construction directly from organization carrying out construction (customer) to be drafted; systems of indicators and collection of data on capital investments and investments of foreign economic activity to be improved; algorithm for calculation of index of flows and stocks of investments of foreign-economic activity harmonized with international practice to be defined; pilot survey of weight structure of volumes of construction works by type of activities and type of construction required for the purpose of calculation of price index on construction production to be conducted; publication “Construction in Ukraine” to be prepared.
Environment Statistics	Planned	<ul style="list-style-type: none"> to make proposals as for improving statistical recording of hazardous wastes, consisting of: System of indicators and their methodology, as well as primary recording of movement of hazardous wastes at enterprises; Conclusions as for statistical classifications to be used for recording of hazardous wastes; Ways for improvement of statistical observation over the transboundary movement of hazardous wastes, as well as participation in developing national and local registers of emissions and movement pollutants; Enhance skills of staff responsible for organization of statistical observation over hazardous wastes. to prepare publication providing comparative characteristics of methodologies used for statistical recording of hazardous wastes before and after the project.

Structural Statistics	Planned	<ul style="list-style-type: none"> ▪ Better knowledge of SSC staff as for definitions, measurement methods of structural economic indicators and linkages between structural statistics and other sub-systems of enterprise statistics; ▪ Improvement of methodology and technology for processing results of annual structural enterprises surveys; introduction of sample survey for the small-scale enterprises of all types of economic activity; ▪ Organization of preparatory works aimed at introduction of survey on purchases; ▪ Improvement of sample design for small-scale enterprises taking into consideration the regional aspect; ▪ Further works to be carried out on development of unified database on enterprises statistics.
Industry statistics	Planned	<ul style="list-style-type: none"> ▪ SSU staff to be with improved knowledge on definitions, methods for measuring basic conjuncture indicators; ▪ Methodology for calculation of turnover index, including regional aspect to be prepared and published; ▪ Experimental calculation of turnover index for Ukraine as a whole and for 2 regions to be made; ▪ Algorithm for calculation of indices by commodity group (investment goods, durables, consumer), including regional aspect to be developed; ▪ Methodology for calculation of index for orders, including regional aspect to be prepared
Innovation Statistics	Planned	<ul style="list-style-type: none"> ▪ SSC staff to have better understanding of concepts, definitions and methods of measurement of economic indicators, characterising scientific and innovation activity; ▪ Approaches to be used to develop an internationally comparable system of indicators of innovation activity to be defined; ▪ Pilot surveys on innovation covering construction and service enterprises to be carried out (local budget) ▪ Approaches to study innovation activity of enterprises of different types of activity, including service area, to be defined ▪ Methodology of calculation of index of scientific production comparable with international requirements to be drafted.
Non-financial Services	Planned	<ul style="list-style-type: none"> ▪ better understanding by the SSC staff of concepts and measurements methods in the area of service statistics, methods for calculation annual and short-term indicators recommended by EU to be provided; ▪ methodology for calculation of annual and short-term service statistics indicators to be prepared; ▪ pilot survey to be carried out; ▪ new methods of statistical observations in the service statistics area to be introduced.

National Accounts - Measurement of NOE	Planned	<ul style="list-style-type: none"> ▪ Better understanding by the SSC staff of international concepts, definitions and methods for measurement of NOE to be enabled; ▪ Approaches to be used to improve NA in terms of measurement of NOE (data sources, methods used) to be defined; ▪ Pilot survey to determine the level of underestimation of incomes of enterprises and hidden employment to be prepared and carried out; ▪ Adjustment of data on output, intermediate consumption and other elements of value added and components of GDP using the results of the survey to be made.
Price Statistics	Planned	<ul style="list-style-type: none"> ▪ principles for selecting trade and service enterprises to calculate CPI to be developed; ▪ methods to be used to select construction organizations to calculate price index in construction in line with EU methods to be determined. ▪ SSCU staff to have better understanding of concepts, definitions and methods of price indices calculation.
Regional Statistics	Planned	<ul style="list-style-type: none"> ▪ an integrated system of regional indicators to be used for carrying out interregional comparison of the level of social and economic development, assessment of regions' capacities and ranking regions to be created; ▪ a catalogue of regional statistical indicators to be developed; ▪ a database of indicators to be developed; ▪ information from the database to be disseminated; ▪ statistical publications of regional statistical bodies to be unified; ▪ yearbook and CD-ROM "Regions of Ukraine" to be prepared; ▪ staff to be with enhanced knowledge and skills of in the field of regional statistics; ▪ efficient and open process of production and dissemination of statistical information at the regional level to be in place; ▪ all groups of users to have an equal access to statistical data.

Training Centre	Planned	<ul style="list-style-type: none"> ▪ A list of skill requirements for positions of civil servants of statistical bodies to be developed; ▪ Needs in upgrading skills of employees of statistical bodies to be specified; ▪ Principles for maintaining the database of trainers to be developed; ▪ Procedure for organization of monitoring of training process to be defined; ▪ Methodology for measurement of efficiency of training process to be prepared and approved by methodological commission of the SSC; ▪ Group of trainers in the field of sampling surveys to be prepared; ▪ Five seminars on the subjects listed below to be organized in Training centre of the SSC; identification of principle type of activity of enterprise in statistical register; calculation of producer price indices; methodological principles for setting up and application of database of regional indicators; theory and practice of compilation of regional accounts; application of modern software for production of publications; ▪ The following documents to be published: i) Training manual on statistical methodology; ii) Training manual for training of trainers on enterprise statistics; ▪ Training centre to be fully equipped with required training equipment.
Regional GDP	Planned	<ul style="list-style-type: none"> ▪ The SSCU staff to study main principles of European System of National and Regional Accounts (ESA '95), as well as the system's requirements to regional accounts: methodology approaches for calculation of regional GDP to be specified; the most optimal methods of data collection and calculation to be determined; ▪ Calculation of final annual regional GDP to be improved: methodology of calculation of regional GDP by production method using the final data to be developed; ▪ Preliminary annual and inter-annual estimates to be introduced; ▪ Methodology of preliminary annual regional gross domestic product estimation by productive method in current and comparable prices to be developed; ▪ Methodology of inter-annual regional GDP estimates to be developed; ▪ Experimental calculations of regional GDP using the methods developed to be made.
SNA	Planned	<ul style="list-style-type: none"> ▪ The quality of accounts by institutional sector to be improved; ▪ The SSCU staff to be better aware about ESA '95 requirements, methodology of estimation of macroeconomic indicators for short time series. ▪ Ukrainian publication by institutional accounts to be enlarged through introduction of additional breakdowns of sectors – sub-sectors, and in case of institutional peculiarities – through separation of separate specific segments; ▪ Methodology of calculation of prompt estimates of macroeconomic indicators and tracing of tendencies of their development to be prepared; ▪ A number of macroeconomic indicators and their short-term forecasts to be published quarterly.

Information Technology	Planned	<ul style="list-style-type: none"> ▪ Concrete recommendations as for technical and program tools, information technologies for data processing at different levels to be developed. ▪ Recommendations should include technical specification of hard and software, alternative versions, approximate cost of identified hard and software, costs for implementation of these tools into practice, training costs etc.
Business Register	Planned	<ul style="list-style-type: none"> ▪ Statistical register to be introduced in practical work of the SSCU which covers units of statistical observation of economic process; ▪ Statistical register to include instrument for co-ordination of statistical observations and recording of reporting burden on enterprises in order to avoid duplication of requesting the same indicators in different surveys, uneven reporting burden on enterprises. ▪ Statistical and institutional units to be determined in statistical register according to EU requirements and needs of SNA`93 and ESA`95. ▪ Simple and clear system of linkage between observation units, taking into account regional distribution of these units to be set up. ▪ Sampled population to be selected taking into account regional dimension and process of forming the list of objects to be surveyed for every statistical tasks by given list of criteria to be improved. ▪ The feedback with structural survey to be established and statistical register has included information obtained from the survey: on actual type of activity, calculated by top-down method; business activity and situation of enterprises to be determined in the course of carrying out statistical survey; local units, missing in administrative register, to be identified in statistical register; ▪ Software for identification of principal type of activity by top-down method in annual structural survey to be developed; ▪ Software to control the process of inclusion of enterprises in statistical surveys to be developed; ▪ The sample survey of activity of enterprises to be carried out; ▪ The following documents to be prepared: identification of principal type of activity of enterprises; procedure for changing principal type of activity in the register; procedure for forming population to carry out statistical surveys; program and procedure for carrying out survey of activity status of enterprises; methodological documents on identification of statistical units while classifying them under relevant institutional sectors.

Statistical Classifications	Planned	<ul style="list-style-type: none"> ▪ Classifications of institutional sectors according to existing organisational and legal forms of keeping business to be harmonised; ▪ Institutional units in statistical register to be identified; ▪ Methodological basis for introduction and use classification served the purposes of national accounts to be prepared; ▪ Classification of individual consumption harmonised with COICOP to be prepared and published; ▪ The data on price index, and household incomes and expenditures to be presented on the basis of COICOP; ▪ Practical knowledge in the area of identification of principal type of economic activity of enterprise to be obtained.
OECD		
Technical assistance project		
	In progress	<ul style="list-style-type: none"> ▪ Assistance for participation of SSCU specialists in the workshops on SNA, organised for groups of countries. ▪ Provision of methodological materials
INSEE		
Cooperation program		
	In progress	<ul style="list-style-type: none"> ▪ Program includes activities under Statistics 2 and Statistics 4 and is aimed at co-ordination of works under these projects

Annex 2. Statistical Law
UNOFFICIAL TRANSLATION

THE LAW OF UKRAINE

ON Introducing Changes to

THE LAW OF UKRAINE ON THE STATE STATISTICS

The Verchovna Rada of Ukraine *decrees*:

To amend the Law of Ukraine on the State Statistics (Information Bulletin of the Verchovna Rada of Ukraine, 1992, No. 43, page 608) by setting it forth as follows:

“THE LAW OF UKRAINE ON THE STATE STATISTICS

This Law regulates legal relations in the field of statistics, specifies rights and functions of the state statistics bodies, establishes the organisational basis for performance of state statistical activity with the end of obtaining comprehensive and objective statistical information about economic, social, demographic and ecological situation in Ukraine and its regions and provision of this information to the state and the society.

General provisions

Definition of Terms

This Law uses the terms beneath in the following sense:

administrative data – data obtained on the basis of observations conducted by the national authorities (with the exception of the state statistics bodies), local authorities and other legal persons as determined by the legislation, for the purposes of fulfilment of administrative responsibilities and tasks within their competencies;

state statistics – centralised system of collection, processing, analysis, dissemination, storage, protection and use of statistical information;

state statistical activity – a set of activities associated with the performance of state statistical observations and rendering of information services, which is targeted at collecting, processing, analysing, disseminating, storing, protecting and using statistical information, as well as at ensuring its reliability and improvement of statistical methodology;

inquirer – a legal or natural person that inquires statistical information from state statistics bodies;

information system of the state statistics bodies – a set of technical, programming, communication and other facilities which enable collection, accumulation, processing, dissemination, storage, protection and use of statistical information;

confidential information – statistical information with limited access that is owned, used or disposed by an individual respondent and may be disseminated only subject to the respondent's consent and on terms agreed with the respondent;

user – a legal or natural person who uses statistical observation data;

state statistics bodies – a specially authorised central executive body in the domain of statistics and bodies established by and subordinated to, or controlled by it, as specified in Article 11 of this Law;

plan of State Statistical Observations – an official paper that enumerates the statistical observations being undertaken by the state statistics bodies and specifies the procedure and timing of their implementation;
respondent – a person or a group of persons subject to statistical observations in accordance with the legislation and defined in Article 4 of this Law;

statistical information (data) – official state information, describing large-scale phenomena and processes occurring in the economic, social and other spheres of life in Ukraine and its regions;

statistical methodology – a set of scientifically-grounded techniques, rules and methods used for studying statistical characteristics of the large-scale social and economic phenomena and processes that establish an order of collection, processing and analysis of statistical information;

statistical observation – a systematic and scientifically organised process of collecting data by state statistics bodies about phenomena and processes that take place in economic and social and other spheres of life in Ukraine and its regions, their registration in line with a special program, designed on the basis of statistical methodology.

Legal Basis of the State Statistical Activity

The legal basis of the State statistical activity shall be the Constitution of Ukraine, this Law, other laws and legal acts which regulate relations in the sphere of statistics, information, computerisation, scientific and technical activity, standardisation as well as Ukraine's international agreements in the domain of statistics, binding nature whereof being approved by the Verchovna Rada of Ukraine.

State Policy in the Domain of Statistics

State policy in the domain of statistics is directed at establishing a uniform system of recording and statistics in Ukraine as a whole and at its harmonisation with the international standards and methodology.

Subjects of the Law

This Law applies to the following subjects:

- a) state statistics bodies and employees that participate in statistical observations on behalf of those bodies either on permanent or temporary basis;
- b) respondents:
 - legal persons, their branches, divisions, representative offices and other separate structural units located in the territory of Ukraine;
 - legal persons, their branches, divisions, representative offices, other separate structural units located beyond Ukraine and created with participation of Ukrainian legal persons;
 - natural persons staying in Ukraine irrespective of their citizenship and groupings of such persons;
 - natural persons – citizens of Ukraine which are staying beyond Ukraine and groupings of such persons;
- c) users of data of statistical observations.

State statistical activity

Main Principles of Pursuing the State Statistical Activity

The State statistical activity is performed by the state statistics bodies in accordance with this Law and under tasks within their competencies on the basis of professional independence and autonomy.

Interference of any national and local authorities, other legal persons, public associations, officials and other persons in the state statistical activity, in particular, with regard to the contents of statistical information, selection of its sources, statistical methodology, forms and terms of collection and dissemination of data of statistical observations, etc., is prohibited.

Statistical Information

Statistical information, obtained on the basis of the statistical observations by the state statistics bodies, may exist as primary data on the respondents and as statistical data undergone one or more phases of processing and stored on paper, magnetic and other media or in electronic form as well as analytic materials prepared on the basis of these data.

Primary data – information on quantitative and qualitative features of phenomena and processes, submitted by respondents in the course of statistical observations.

Statistical data – information obtained by conducting statistical observations that is processed and presented in a formalised way in accordance with generally accepted principles and methodology. Statistical data – a result of aggregation and grouping of primary data under the condition of ensuring their depersonalisation – are the aggregated depersonalised statistical information (data).

Statistical information is also the data of banking, financial and balance of payments statistics, etc. that are compiled on the basis of administrative data, obtained by the National Bank of Ukraine and by specially authorised national authorities (except for the state statistics bodies) in compliance with their competencies. The respective responsibilities of the above bodies, as well as the framework for the organisation of collection, processing, analysis, dissemination, storage, protection and use of such statistical information are established by special laws.

Statistical Information Sources

With a view to compiling statistical information, the State statistical bodies may use the following information sources:

- primary data and statistical data referring to respondents who are subject to statistical observations;
- administrative data from the national authorities (except for the state statistics bodies), local authorities, other legal persons;
- data of banking, financial and balance of payments statistics, etc.;
- statistical information of international organisations and statistical agencies of other countries, etc.;
- estimates and calculations produced on the basis of the above-mentioned data.

The decision as to the selection of statistical data source is taken by the state statistics bodies independently with due regard to the quality and timeliness of information submitted, expenses and the burden that it would impose on respondents.

Statistical Methodology

Statistical methodology is based on the results of scientific research, international recommendations and statistical practice experiences, taking into account the specific national and historical aspects of the country.

Main provisions of statistical methodology shall be published.

Statistical methodology is the basis of statistical reporting documents and statistical observations.

Statistical reporting documents are approved by the state statistics bodies and comprise statistical observation programs, reporting forms and guidelines on their completion, questionnaires, census (query) forms, other statistical forms required in statistical observations and state classifications of technical, economic and social information, etc. Statistical reporting documents may be published on paper, magnetic and other media or transmitted through telecommunication facilities.

Statistical Observations

Statistical observations are conducted by the state statistics bodies by collecting statistical reports, conducting one-off collections, censuses (polls), sample and other surveys.

Statistical observations may be full-coverage (comprehensive) and partial.

Full-coverage statistical observation covers all units of the statistical universe that is studied in the observation.

Partial statistical observation covers specific units of the universe that is studied in the statistical observation.

Statistical observations may also be distinguished between state statistical observations and other statistical observations.

State statistical observations are conducted according to the Plan of State Statistical Observations approved by the Cabinet of Ministers of Ukraine or according to a special decision of the Cabinet of Ministers of Ukraine. state statistical observations, carried out by the state statistics bodies with engagement of temporary employees, are conducted on the basis of decisions of the Cabinet of Ministers of Ukraine on terms and conditions, established by these decisions.

Other statistical observations are conducted in accordance with the Regulation on Conducting Statistical Observations and Provision of Paid Services by the State Statistics Bodies, approved by the Cabinet of Ministers of Ukraine.

Integrated State Register of Enterprises and Organisations of Ukraine

The Integrated State Register of Enterprises and Organisations of Ukraine is an automated system of collection, accumulation and processing of data on all legal persons, their branches, representative offices and other separate structural units located in Ukraine, as well as on legal persons, their branches, divisions, representative offices, other separate structural units located beyond Ukraine and established with participation of legal persons of Ukraine.

The Integrated State Register of Enterprises and Organisations of Ukraine provides a basis for unified state recording and identification of all the entities, listed in the first paragraph of this Article, and is the basis for carrying out state statistical observation.

State statistics bodies are responsible for establishment and maintenance of the Integrated State Register of Enterprises and Organisations of Ukraine, development of methodological and organisation guidelines of its operation.

National and local authorities, other legal persons which create and maintain registers and data bases on legal entities shall provide information to the state statistics bodies free of charge for the purposes of development and updating of the Integrated State Register of Enterprises and Organisations of Ukraine.

The Cabinet of Ministers of Ukraine approves Regulation on the Integrated State Register of Enterprises and Organisations of Ukraine.

State Statistics Bodies

State Statistics Bodies

The following constitute the state statistics bodies:

- a specially authorised central executive body in the domain of statistics as established in accordance with Article 106 of the Constitution of Ukraine;
- territorial state statistics bodies of the Republic of Crimea, regions, districts and cities/towns created according to the law by the specially authorised central executive body in the domain of statistics;
- functional state statistics bodies – enterprises, establishments and institutions created by and subordinate to the specially authorised central executive body in the domain of statistics in accordance with the legislation.

They are designed to form a single system of the Ukrainian state statistics bodies.

Main Tasks of the State Statistics Bodies

Main tasks of the state statistics bodies are as follows:

- accomplishment of the state policy in the domain of statistics;

- collection, processing, analysis, dissemination, storage, protection and use of statistical information about the large-scale economic, social, demographic and ecological phenomena and processes in Ukraine and its regions;
- ensuring reliability and objectivity of statistical information;
- development, improvement and implementation of statistical methodology;
- ensuring development, improvement and implementation of the system of state classifications of technical, economic and social information that are used in state statistical observations;
- development and maintenance of the Integrated State Register of Enterprises and Organisations of Ukraine;
- introduction of new information technologies in the area of statistical information processing;
- interaction of the information system of the state statistics bodies with the information systems of national and local authorities, other legal persons, international organisations and statistical services of other countries by means of information interchange, works in the area of methodology, software, technology etc. aimed at effective use of information resources;
- coordination of activities of national and local authorities and other legal persons with regard to organising the activity of collecting and using administrative data;
- ensuring availability, publicity and openness of statistical information, its sources and compilation methodology;
- storage and protection of statistical information.

Main Rights of the State Statistics Bodies

The state statistics bodies have the right to:

- make decisions on the issues of statistics, recording and reporting within their competence. Decisions taken by the state statistics bodies on these issues are obligatory for all the entities, this Law being applicable to. In case there are questions concerning statistical methodology in specific industries of the economy, to involve relevant state bodies in their handling;
- obtain, free of charge, in accordance with the procedure and within the terms approved by the specially authorised central executive body in the domain of statistics, and to use primary and statistical data, accounting data and other information required for conducting statistical observations, including information with restricted access as well as explanations added thereto from all the respondents including national and local authorities, banks, individual entrepreneurs and natural persons subject to statistical observations. In the course of state statistical observations of natural persons subject to such statistical observations, to apply the method of direct visits by employees of the state statistics bodies and temporary employees engaged in statistical observations to housing and ancillary premises and buildings, land plots, etc.;
- examine the status of primary records and statistical reporting, to check reliability of primary and statistical data provided by respondents. To apply, as approved by the specially authorised central executive body in the domain of statistics, the method of direct visits to industrial, business and other premises, land plots etc. of legal persons, their branches, divisions, representative offices and other separate structural units and individual entrepreneurs;
- oblige respondents to revise the state statistical reporting and other statistical forms in case of exposure of upward and other distortions in primary and statistical data. In case of failure to fulfil this requirement by a specified date, the state statistics bodies may independently make the required revisions with subsequent informing of respondents thereon;
- put forward proposals to the law and order bodies about prosecution, as specified by the laws, against officials and individual entrepreneurs violating this Law;
- consider cases of administrative infringements and to apply fines in accordance with the Laws;
- engage relevant central executive authorities and scientific institutions in the development of state classifications of technical, economic and social information;
- co-operate with international statistical organisations and statistical services of other countries;

- conduct statistical observations and provide services paid by customers;
- provide statistical information to inquirers in accordance with the Regulation on Conducting Statistical Observations and Provision of Paid Services by the State Statistics Bodies;
- comment on the cases of misuse or wrong interpretation of statistical information.

Main Responsibilities of the State Statistics Bodies

The state statistics bodies are obliged to:

- organise and carry out statistical observations of socio-economic and demographic processes, ecological situation in Ukraine and its regions;
- carry out state statistical observations of the population of Ukraine concerning its social-demographic and economic status, entrepreneurial activity, etc.;
- analyse social-economic, demographic and ecological phenomena and processes in Ukraine and its regions;
- provide the national and local authorities with statistical and analytic information in the amount, forms and according to the terms specified in the Plan of State Statistical Observations or individually approved by the decisions of the Cabinet of Ministers of Ukraine;
- ensure publicity of statistical data, publish statistical digests, bulletins, reviews, press releases and other statistical information in accordance with the Plan of State Statistical Observations, to hold press conferences;
- ensure equal access to statistical information by legal and natural persons;
- carry out fundamental and applied research in the domain of statistics;
- use international statistical standards and recommendations in the practice of the state statistics bodies;
- approve statistical methodology and statistical reporting documents for statistical observations (except for the state classifications of technical, economic and social information) and standard forms of primary recording documents needed for those observations;
- provide respondents with statistical reporting documents (except for the state classifications of technical, economic and social information) in accordance with the Plan of State Statistical Observations;
- assure maintenance of the Integrated State Register of Enterprises and Organisations of Ukraine and to allocate identification codes and classification codes to the economic entities;
- ensure development and improvement of technologies of statistical information processing;
- enable storage, accumulation, updating and protection of statistical information, and respect for its confidentiality;
- make international and interregional statistical comparisons;
- provide statistical data to international organisations and to ensure interchange of statistical information with statistical services of other countries in compliance with the requirements of the Ukrainian legislation.

Planning and Funding of Activities of the State Statistics Bodies

For the purpose of providing the state and society with statistical information the specially authorised central executive body in the domain of statistics shall develop with participation of other central executive agencies and organs concerned an annual Plan of State Statistical Observations.

The Plan of State Statistical Observations and the procedure of its development shall be approved by the Cabinet of Ministers of Ukraine. The state statistical observations shall be funded from the State budget of Ukraine.

Statistical observations not included in the Plan of State Statistical Observations may be fulfilled in case of availability of supplementary sources of financing or on account of customers of these works.

The specially authorised central executive body in the domain of statistics, territorial statistical bodies of the Republic of Crimea, oblasts (regions), rajons (districts) and cities/towns are funded from the State budget of Ukraine.

Enterprises, organisations and institutions, and separate units of state statistics bodies may operate on a self-funding basis.

Besides, for the purposes of development and maintenance of the state statistics bodies additional funding may be used unless prohibited by the legislation.

Relations between the State Statistics Bodies and Authorities Involved in Administrative Data Collection and Use

Relations between the state statistics bodies and other national and local authorities and other legal persons involved in administrative data collection and use envisage:

- mandatory reconciliation by the state statistics bodies of methodologies and reporting documents, connected with collection and use of administrative data, as well as methodology of compiling the banking, financial, and balance of payments statistics data, etc.;
- provision to state statistics bodies at their request and free of charge with administrative data collected by bodies involved in their collection and use, as well as with the banking, financial and balance of payments statistics data, etc..

Main rights, obligations and responsibilities of employees of the state statistics bodies and temporary employees, engaged in the conduct of statistical observations, OF respondents and data users of statistical observations

Rights and Responsibilities of Employees of the State Statistics Bodies and Temporary Employees, Engaged in the Conduct of Statistical Observations

Employees of the state statistics bodies who participate in statistical observations on a permanent or temporary basis shall act in accordance with this Law.

Rights and responsibilities of permanent employees of the state statistics bodies as well as of temporary employees, engaged by the state statistics bodies to conduct statistical observations, are established by this Law and other Ukrainian laws.

All employees of the state statistics bodies shall comply with requirements of protection of confidential information and bear responsibility for violation of those requirements in accordance with the legislation.

Main Rights and Responsibilities of Respondents

Respondents are entitled to know what primary data are being collected on them in the process of statistical observations, for which purpose, and who will use them, how and for what purpose.

Respondents are obliged to provide the state statistics bodies, within appropriate terms, and free of charge with complete and reliable statistical information, including the one with limited access, and with accounting reports in forms, provided for in the statistical reporting documents.

The contents, volume and methodology of compilation of indicators, addresses and terms of submitting statistical information specified in the statistical reporting documents are obligatory for all the respondents and shall not be changed without due permission of the state statistics bodies.

Main Rights and Responsibilities of Users of Statistical Observation Data

National and local authorities, other legal and natural persons are entitled to aggregated depersonalised statistical information. Subject to the provisions of Articles 9 and 24 of this Law concerning payment for services, this right guarantees access by users to such statistical information, possibility of its utilisation, dissemination and storage with the end of performing their tasks and functions and of ensuring their rights, freedoms and legitimate interests.

Natural persons are entitled to free and gratuitous access to statistical information related personally to them.

Use of statistical observation data by mass media, its dissemination through information networks, on paper, magnetic, optical and other media, in scientific works, etc. is allowed only with users' reference to their source.

Responsibility for Violation of Legislation on the State Statistics

Violation of the legislation on the state statistics entails responsibility of delinquent persons in accordance with the legislation.

Ensuring confidentiality of statistical information

Guarantees of the State Statistics Bodies with Respect to Ensuring Confidentiality of Statistical Information

Primary data obtained by the state statistics bodies from respondents during statistical observations as well as administrative data on the respondents obtained by the state statistics bodies from authorities involved in administrative data collection and use shall be confidential information, protected by Law, and may be used exclusively in an aggregate depersonalised form.

Dissemination of statistical information, on the basis whereof it is possible to identify confidential statistical information with respect to a particular respondent, is prohibited.

Statistical information obtained by the state statistics bodies in the process of statistical observations shall not be requested by the national and local authorities, other legal persons, citizens' associations, officials or other persons with the end of making a decision with respect to a particular respondent.

The above guarantees do not apply to information specified in Article 22 of this Law.

Statistical Information to which the Prohibition of Dissemination by the State Statistics Bodies Does not Apply

Statistical information, enabling to directly or indirectly identify a particular respondent or to obtain primary data thereon, may be disseminated subject to the respondent's consent and on terms agreed with him, or if it is obtained from generally available sources.

Prohibition of statistical information dissemination by the state statistics bodies does not apply to:

- depersonalised statistical information in a disaggregated form that does not enable to identify confidential statistical information with respect to a particular respondent;
- information on the names, addresses, phone numbers and activities of enterprises, establishments and organisations unless otherwise specified by legislation.

Ownership OF statistical information and access thereto

Ownership of Statistical Information

Statistical information obtained in the course of state statistical observations, as well as primary data obtained in the process of conducting other statistical observations shall be the property of the state and is managed by the state statistics bodies that possess, use and dispose this statistical information and determine the rules of its collection, processing, dissemination, storage, protection and use.

Ownership of the aggregated depersonalised statistical information obtained by the state statistics bodies in the process of statistical observations, conducted on account of its customer shall be regulated in the contracts on creation of the information that shall also envisage the terms of dissemination of this information by state statistics bodies.

Procedure and Terms of Access to Statistical Information

To meet the needs of the national and local authorities, other legal and natural persons for statistical information and for access thereto, special information services shall be established in the state statistics bodies.

The procedures of their establishment, their structure, rights and obligations shall be approved by the specially authorised central executive body in the domain of statistics.

Access to statistical information shall be ensured by its:

- regular issuing in press publications;
- dissemination by mass media;
- provision directly to national and local authorities, other legal and natural persons.

The state statistics bodies shall provide the national and local authorities with free statistical information specified in the Plan of State Statistical Observations or approved by individual decisions of the Cabinet of Ministers of Ukraine within the limits of funds allocated for these purposes by the State budget of Ukraine. The above information shall be delivered with due regard to the confidentiality requirements specified by this Law.

Procedures and terms of provision of statistical information to national and local authorities, other legal and natural persons at their request are established in accordance with the Law of Ukraine on Information and with this Law.

In case the information is provided on a contractual basis, the procedures and terms shall be specified in relevant contracts. Inquirers shall reimburse the costs, incurred by executing the requests on access to statistical information and its provision. Performance and payment of works pertinent to these requests shall be effected in compliance with the Regulation on Conducting Statistical Observations and Provision of Paid Services by the State Statistics Bodies.

There shall not be provided at request the statistical information of intra-agency nature used as input for further compilation of aggregated statistical data, development of statistical reports and other documents, state classifications of economic, technical and social information, et cetera, prior to their acceptance or approval.

International co-operation

International Co-operation in the Domain of Statistics

International co-operation in the domain of statistics is aimed at creating and operating the state statistics, meeting the requirements set by the state and society, at improving the efficiency of the state statistical activity, at establishing co-operation with international statistical organisations and statistical services of

other countries in the area of statistical methodology and practice, as well as with the end of exchanging the experience and information.

The state shall develop and support all types of international co-operation in the domain of statistics in concert with the national interests of Ukraine.

International Treaties

In case the effective international treaties, binding nature whereof being agreed by the Verchovna Rada, establish other rules than those, contained in this Law, the rules of international treaties shall apply.

Final clauses

1. This Law shall become effective from January 1, 2001.
2. Until bringing the legislation in line with the Law of Ukraine on Introducing Changes to the Law of Ukraine on the State Statistics, the Ukrainian laws and other legal acts shall apply in the part, not contradicting this Law.
3. The Cabinet of Ministers of Ukraine within a six-month term shall:
 - prepare and submit to the Verchovna Rada of Ukraine proposals on amendments to the Ukrainian laws, ensued by this Law;
 - bring its legal acts in line with this Law;
 - ensure approval, within the competencies, of regulations ensuing from this Law;
 - ensure revision and abolishment by central executive authorities of their legal regulations contradicting this Law.”

President of Ukraine

L. Kuchma

The city of Kyiv

July 13, 2000

N 1922-III

TRAINING INSTITUTIONS

Higher Educational Establishments for Professionals in the Domain of Statistics

- Dnipropetrovsk State University;
- Donetsk National University;
- Kyiv Taras Shevchenko National University;
- **Kyiv National Economic University;**
- Lviv National University;
- Odessa State Economic University;
- Kharkiv National University;
- Kharkiv State Economic University;
- Chernovtsy State University

Educational Institutions Subordinate to the State Statistics Committee (SSC)

- **Institute of Statistics, Accounting and Audit;**
- Drogobych technical school of statistics;
- Ivano-Frankivsk technical school of statistics;
- Kirovograd technical school of statistics;
- Donetsk Training Centre;
- Zakarpatiye Training Centre;
- Lviv Training Centre;
- Odessa Training Centre;
- Ternopil Training Centre;
- Kharkiv Training Centre;
- Khmelnytskyi Training Centre;
- Chernovtsy Training Centre;
- Chernigiv Training Centre;
- Belgorod-Dnistrovsky Training Centre

. The existence of the 10 Regional Training Centres under the Institute of Statistics, Accounting and Audit (ISAA), which itself comes under the SSC, gives ISAA a special importance in any new system for training in Ukraine.

The total number of universities with a Department of Economics is 39

Providing economic statistics	29
Providing economic statistics only during basic studies	16
Providing economic statistics only during major studies	9
Providing economic statistics during basic and major studies	4

Only a quarter of Ukraine universities with a Department of Economics provide lectures on official statistics through the economic statistics modules, a third of them during basic studies, a third during major studies and a third during both parts with different intensities.

It is important to have an idea of the extent of the teaching of the main topics in economic statistics and the number of universities teaching them:

Topics	Number of universities	
• Institutions of official statistics		4
• National Accounts	5	
• Methods of the data survey	20	
• Population statistics		12
• Statistics of the labour market		12
• Price statistics		12
• Statistics of production industries	10	
• Statistics of external trade	12	

In the first category is KNEU, which is a leading centre of statistical education in Ukraine. Apart from education, KNEU also carries out intensive research in the field of economics and statistics, publishes textbooks and teaching programmes in various branches of statistics, makes recommendations on the methods of teaching of statistics and renders assistance to statistical departments of other institutes and universities.

Statistics is taught during the third, fourth and fifth years at KNEU and accounts for 30 per cent of the overall time. The students study the following subjects:

- Theory of statistics, statistical modelling and forecasting, economic statistics, system of national accounts, social statistics, statistics of population, international statistics, statistics of market of goods and services, statistics of labour, statistics of firm (micro level), financial statistics.
- Mathematical statistics: elementary methods of analysis of statistical series; theory of probability; econometrics; econometric models; multidimensional statistical analysis; forecasting.

To some extent, students are involved in the actual practical work carried out by national and regional statistical offices. For example, students normally participate in the censuses of population as interviewers or in other types of surveys; some students are provided the opportunity to practise at the government agencies or at the enterprises.

In the second category of institutions, that is those where statistics is not taught as a predominant subject, are Kiev National University, which has an economics faculty. Nevertheless, the statistical departments of these institutions prepare the teaching process; compile programmes (curriculum), deliver lectures and training seminars involving practical exercises using PCs; arrange exams (as a rule, in written form); undertake some research work, often carried out in co-operation with other organisations such as official statistical bodies, enterprises, research organisations; and finally steer the research work of postgraduates.

Generally speaking, the teaching process comprises lectures (50 per cent of the overall time) and practical seminars where students discuss certain topics and issues introduced in the lectures (50 per cent) or in some cases have to do some exercises, such as, for example, compilation of various indices, construction of certain national accounts and so forth. It is understood that, as a rule, students work with actual statistical data during the seminars and practical work. This practical orientation is highly relevant to the needs of statistical offices.

In addition, there are special training and retraining courses for the employees of national and regional statistical offices, aimed at raising the level of skills, know-how and qualification of the staff. This is achieved by introducing them to international standards and acquainting them with modern statistical technologies and methodologies. This training is delivered by ISAA, which exists under the auspices of SSC.

2.1.1 KNEU

KNEU is highly relevant because it would be a major source of supply of new graduates in the next few years to enable the SSC to expand, see section 3.5 below. Thus its courses must allow enough flexibility to produce graduates who are relevant to the requirements of the SSC. Of course, like any other education institution, (as distinct from Training institutes), KNEU educates not just for the SSC but other Ministries, the National Bank and the private sector of companies and other bodies. This wider market should be remembered when assessing the merits of KNEU's curricula and degree structure. Satisfaction was in general expressed about the high academic standing of the education in economic statistics in KNEU. However, the view was also expressed that the numbers joining the SSC from KNEU were insufficient and that there was room for improving the relevance of its education to SSC's activities.

KNEU is independent of the SSC. In particular, SSC is not a member of KNEU's Management Board. However, KNEU has a formal cooperation agreement with the SSC. Thus, KNEU participates in some limited multiplier training arranged by the Training Centre of the SSC. Also, KNEU has substantial contacts with the Research Institute (of statistical technologies and methodologies) located within the SSC, hence the possibility of the SSC imparting an even stronger practical and modernising influence on KNEU's curricula than would be the case otherwise.

Unlike KNEU, ISAA is effectively the training arm of the SSC, with three technical schools and ten training centres in the regions. That relationship would increase the relevance of the training to the practical needs of the SSC, both through the orientation of the curricula more closely to those needs and through the training of the ISAA trainers. **ISAA should continue to have a major role in the statistical training of public employees in Ukraine.** ISAA is self-financing, though the SSC provides it with premises but no direct financial assistance. SSC employees, but not the very small numbers so far from the private sector, receive a substantial discount on their fees to ISAA.

The three technical schools are Drogobych, Ivano-Frankivsk and Kirovograd technical schools of statistics, which are already licensed for the Statistics major. The ten educational centres are Donetsk, Zakarpatye, Lviv, Odessa, Ternopil, Kharkiv, Khmelnytsky, Chernivtsy, Chernigiv and Belgorod-Dnistrovsky.

Until recently, all ISAA courses were through correspondence but SSC employees were given time off for exams. Correspondence courses are heavy on written material and require supporting text books and relevant scientific journals and statistical publications produced by other national and international bodies. The problem would not be so serious if these are deposited in publicly accessible websites, though a prior requirement would be fast and cheap internet connection. Recently, ISAA has begun to accept students for its Bachelor degree.

The teaching staff in the ISAA Statistics Department is very small, consisting of:

Doctor Professor	2
PHD Associate Prof	2
Senior lecturer	1
Assistant	-
Total	5

ISAA has four faculties: economic statistics, accounting and auditing, economics with cybernetics and economics. It undertakes three kinds of training for the SSC, see Annex 3 for syllabuses:

- (a) Refresher training: every civil servant is required to undergo refresher training once every five years, to update their knowledge and skills. Because of budgetary constraints, the numbers undergoing refresher training have been diminishing rapidly. Before 1996, the numbers trained were about 300, but that shrank to 150-200 in 1997, to 55 in 1998, 57 in 1999, 51 in 2000 and to 28 in 2001.

The fact that in 1999, the target number planned for training was 444 but the actual numbers trained were 57 suggests under-utilisation of training capacity in ISAA. In fact, the Rector of ISAA confirmed that ISAA could physically cope with 1500 trainees per annum but finances to support that number were lacking.

The refresher course is relatively light, involving 108 hours.

It would seem that the distinction between the terms Refresher, defined administratively, and the term Upgrading is not always clear. There is a strong case for dropping the administrative definitions of training and simply referring to Skills Enhancement, in which an expanded pool of particularly fast-stream trainees would be exposed to modern and innovative statistical technologies and methodologies.

- (b) Specialist re-training: these are for non-statistics graduates already employed in SSC who would wish to undergo specialist training in economic statistics in ISAA, leading to a Diploma. The course is over 2 years for those with a non-economics degree, otherwise over 1 to 1.5 years. The total number of hours involved are 2179. Categories 1 and 2 are compulsory, (see Annex 3) plus either 3.1.1 or 3.1.2, to be chosen by ISAA, plus either 3.2.1 or 3.2.2, to be chosen by the student.
- (c) A Bachelor Degree in Economic Statistics, Annex 3, admitting the best students by entrance examination. The heaviest modules are Statistical Theory (300 hours), then Data Processing and Computer Technology (270 hours), then Finance (270 hours)