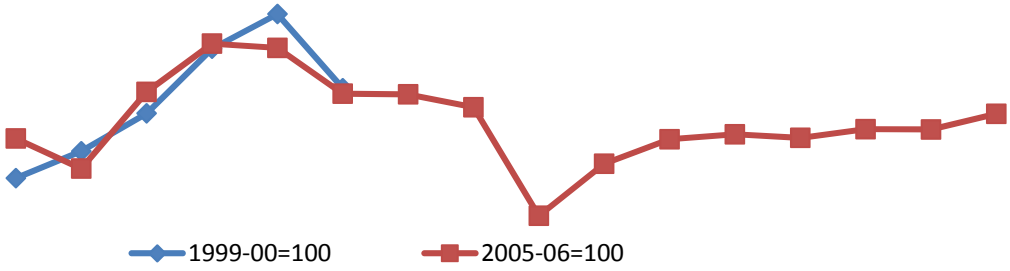
National Accounts of Pakistan

Backward Revisions for the years 1999-2000 to 2004-05

on base year 2005-06



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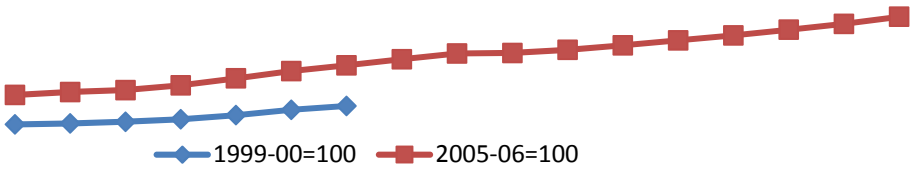

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Foreword

Pakistan Bureau of Statistics (PBS) completed change of base of national accounts from 1999-2000 to 2005-06 in April, 2013. PBS compile and publish number of macroeconomic aggregates such as Gross Domestic Product (GDP), Gross National Income (GNI), Per Capita Income, Gross Fixed Capital Formation (GFCF) and Expenditure on GDP every year. The current series of GDP and GFCF at constant and current prices by industrial origin is comprised of the period from 2005-06 to 2015-16 with 2005-06 as the base year. However, there is consistent and growing demand for a longer time series on common base year by policy makers, planners, academicians and researchers as well as international agencies like IMF etc.

In order to meet the requirements of both domestic and international data users, PBS has initiated work on compilation of new series of national accounts on 2005-06 base while incorporating the concepts of 2008 SNA. The current document shed light on the compilation of new series of National Accounts of Pakistan for the period of 1999-2000 to 2004-05. The effort has been made to put in all the details of compilation of value added and GFCF at current and constant prices for all the industries along with description of sources of data. The notable methodological differences between value added estimates of 1999-2000 base and 2005-06 have also been highlighted. Further, actual numbers of value added and GFCF estimates at current and constant prices of both the bases along with growth rates for each industry are also given in order to facilitate the comparison.

The task of compilation of backward series of National Accounts at current and constant prices for the period of 1999-2000 to 2004-05 has been completed by the team of national accountants led by Mr. Arif Mahmood Cheema, Member (National Accounts). I hope this series will be useful for various government departments, research organizations, independent researchers and educational institutions. Suggestions for the improvement are warmly welcomed.

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(January, 2017)

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Preface

The backward series of National Accounts of Pakistan at current and constant prices for the period of 1999-2000 to 2004-05 has been another achievement by National Accounts Wing of Pakistan Bureau of Statistics. National Accounts Wing is responsible of compilation of variety macroeconomic statistics including GDP, per capita income and gross capital formation etc. These estimates are compiled following the international recommendations like System of National Accounts (SNA) 2008, International Standard Industrial Classifications (ISIC) Rev.4, Central Product Classification (CPC) version 2, Classification of the Functions of the Government (COFOG) etc. The current series of national accounts is available from 2005-06 to 2015-16 (Provisional) while implementing the results of rebasing for the year 2005-06. National Accounts Wing started work on the compilation of backward series of national accounts in order to meet the demand of researchers, academicians, planners and international agencies for a longer time series on harmonized concepts and methodologies.

The current publication incorporates the detail of compilation of gross value added (GVA) and GFCF estimates at current and constant prices at detailed industrial levels for the years 1999-2000 to 2004-05 on the methodology adopted during the change of base of national accounts from 1999-2000 to 2005-06. All the details have been documented in order to facilitate the enhancement of understanding of the macroeconomic aggregates of Pakistan. This document provides overall methodological review of the compilation of the backward series of national accounts of Pakistan. I hope this document will be useful for the user of the national accounts statistics.

The exercise for the revision of national accounts took a long time and completion of this task is result of lot of dedicated efforts from the team of national accountants. It is a fact that it was not possible without team work. I appreciate the hard work of the team. Mr. Liaqat CSO, shouldered the task zealously and coordinated with the NA team for digging out the old memories. It was a difficult job which need special aptitude. I congratulate all the staff of National Accounts Wing for their determined efforts to complete this task.

Continuous support of Mr. Asif Bajwa, Chief Statistician, Pakistan Bureau of Statistics has enabled us to come up with such a valuable document. His encouragement has always been a source of inspiration for the staff of National Accounts Wing. Suggestions for the improvement are welcome.

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(January 4, 2017)

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List of abbreviations and acronyms

ACO	Agriculture Census Organization
CAA	Civil Aviation Authority
CMI	Census of Manufacturing Industries
CNG	Compressed Natural Gas
CPI	Consumer Price Index
FISIM	Financial Intermediation Services Indirectly Measured
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GNI	Gross National Income
GVA	Gross Value Added
IC	Intermediate Consumption
IPP's	Independent Power Producers
ISIC	International Standard Industrial Classification
KESC	Karachi Electric Supply Company
KIBOR	Karachi Inter Bank Offer Rates
LPG	Liquefied petroleum gas
LSMI	Large Scale Manufacturing Industries
M&Q	Mining & Quarrying
NGOs	Non-Governmental Organizations
NLC	National Logistics Cell
NNI	Net National Income
NPISH	Non-Profit Institutions Serving Households
OGDCL	Oil and Gas Development Company Limited
PA&D	Public Admin & Defense
PASHA	Pakistan Software Houses Association
PBS	Pakistan Bureau of Statistics
PIA	Pakistan International Airlines
PPI	Producer's Price Index
PPL	Pakistan Petroleum Limited
PRACS	Pakistan Railway Advisory & Consultancy Services Limited
PSIC	Pakistan Standard Industrial Classification
QIM	Quantum Index of Manufacturing
SHMI	Small and Household Manufacturing Industries Survey
SNA	System of National Accounts
SSMI	Small Scale Manufacturing Industries
TVA	Trade Value Added
WAPDA	Water and Power Development Authority
WPI	Wholesale Price Index
WRT	Wholesale and Retail Trade

CHAPTER 1

Overview

1. Introduction

Pakistan Bureau of Statistics (PBS) changed the base of National Accounts from 1999-2000 to 2005-06 in April, 2013 incorporating the concepts of System of National Accounts (SNA) 2008. The main macro-economic aggregates such as Gross Value Added (GVA), Gross Domestic Product (GDP), Gross National Income (GNI), Net National Income (NNI), GNI per capita and Expenditure on GDP have been compiled and released from 2005-06 to 2015-16. Keeping in view, requirement of academicians, researchers and policy makers, PBS has initiated work on the generation of backward series of macro-economic aggregates to produce a longer time series. It is the documentation of backward series of GVA of the base 1999-2000 from 2005-2006 to 1999-2000, based on the change of base 2005-06.

2. Why Data Revisions?

Data produced by statistical agencies are often subject to a revision process which can be viewed either as routine revisions or occasional revisions. In each case, the main purpose is to achieve better quality of the published data. While the former are regularly made to incorporate the new available information in order to improve the quality of the statistics, the latter occur at irregular intervals depending on major accounting events.

Occasional revisions are produced at longer and infrequent intervals. The nature of such revisions may be statistical, which results from changes in surveys or in estimation procedures, or conceptual, which results from changes in concepts, definitions or classifications. The effect of an occasional revision increases according to the interval that occurs between two successive revisions.

From a conceptual point of view, the need of occasional revisions arises because of any one or a combination of following reasons:-

- Changes due to new surveys
- Changes due to modifications in definitions or interpretations of the System of National Accounts (SNA)
- Introduction of new calculation methods
- Important economic events that have a significant impact on the national accounting system.

These occasional revisions ask for a deep analysis of the impact they have on the national accounting system and of the strategy that accounts should follow to implement them. The main effect of these revisions is to affect all national accounts. Time series associated to the national accounts aggregates have to be revised according to the new changes.

The need for series of economic data that are homogeneous and at the same time cover the longest possible time span is strongly felt by national accountants, statisticians, econometricians and economic analysts (Fonzo, 2003). The reconstruction of the national accounts time series is associated to a revision process usually referred as ***backward calculation*** (Panaretos), ***backward projection*** (Escosura, 2014) or ***retropolation*** (Escosura, 2014, Panaretos,). Retropolation of national accounting data is necessary after a revision of the national accounts has taken place (Panaretos).

3 An Overview of Backward Calculation Techniques

The methods for backward calculation of national accounts data can be distinguished as "i. Annual backward calculations and ii. Benchmark years and interpolation".

In both methods several variants are possible and also a combination of both methods is thinkable. For example in the Netherlands case a number of variants of the first class of methods were used in the past. Until now, the second class was not used except from the revision of the national accounting data in the interwar period. The former class of methods is well known in National Statistical Institutes and methods belonging to them are currently used to revise time series. The latter has not been intensively applied till now to revise national accounts series.

3.1. Annual Backward Calculations

Annual backward calculation is based on the principle that the retropolated figures are calculated year by year back in time. Several methods can be used to obtain such results. The differences among them depend more or less on accuracy, and consequently time used in carrying out the revision process and more or less on the intensive use of statistical techniques. The well-known methods belonging to the backward calculation class are the following:

a) Full Revision Method

The full revision method is a very complete one. Figures to be revised, covering all the years in the backward calculation period, are estimated by applying the same principles that underlie the revision. This means that in the case of the application of 2008 SNA, past years are estimated according to the new rules, concepts and definitions. This procedure, due to its detailed level of analysis, asks for the existence of a very good system of basic statistics suitable to be re-used according to the new classifications and revisions. Clearly, this method is time consuming, requires much resources and difficult to apply.

b) Revision by Superposition of Corrections

Time series figures concerning the years of the backward calculation period are determined by superposing corrections on the figures before revision. Starting point is the consistent data set of national accounts which was compiled in the past. Corrections resulting from the revision process are added to this basic set. The revision process involves all the past years. Two cases can be distinguished when applying this method: The former corresponds to a superposition of a set of corrections already calibrated on the complete accounting context; the

latter implies the revision of the concerned item, the extension of the revision of the concerned items to all periods and the consolidation of all accounts.

c) Simple Proportional Method

The simple proportional method is a simplified version of the annual backward calculation method. The revision year is expressed both under the new and the old accounting system rules. Then in order to reconstruct the past revised values of the series, a simple proportional rule is applied to the old time series values. The simple proportional method offers an easy technique to carry out backward calculation, especially in a first attempt to determine the new path of the involved time series. Clearly, it is an approximate solution that does not analyze in a very deep way the revision effects on time-series but on the contrary is a low resource and less time consuming approach to the backward calculation.

d) Growth Rates Method/ Retropolation

Starting from the balanced set of national accounts figures for the revision year, time-series figures for the past are determined by applying backwards the growth rates associated to the time series before revision. Obviously, if revised growth rates for a certain variable are available, they are used. The revision process works at the level of detail chosen. Afterwards, the figures are balanced again in the framework of a consistent national accounts system.

Underlying this procedure is the implicit assumption of an error level in the old benchmark's series whose relative size is constant over time. In other words, no error is assumed to exist in the old series' rates of variation that are, hence, retained in the spliced series (Moreno, 2014 cited in Escosura, 2014). Official national accountants have favored this procedure of linking national accounts series on the grounds that it preserves the earlier benchmark's rates of variation. It is worth noting that the retropolation approach produces a hybrid result in which levels computed at a given set of relative prices are projected backwards with growth rates obtained from an earlier set of relative prices (Escosura, 2014).

3.2. Benchmark Years and Interpolation

The second group of basic methods for backward calculation of national accounts is based on a two-step procedure. In the first step detailed estimates for one or more benchmark years are calculated. In the second step, figures for the remaining years are determined by interpolation. The benchmark years and interpolation method can be applied in different ways i.e. the full benchmark year method and the layer correction method.

The revision year is that one for which the new definitions and accounting rules are used for first time. The new figures for that year are determined at a very detailed level using the new accounting rules. Revision years and benchmark years are strongly connected. Actually the revision year is an outstanding example of a benchmark year and is the starting point for the backward calculation of the data. It is obvious that the benchmark years are crucial points in the time series and they should include as much information as possible. That's why benchmark years are usually years in which population, agricultural or industrial censuses are conducted.

Furthermore the economic situation is of great importance for the choice of the benchmark years. The corrections which are carried out for the revision year have to be determined for the other benchmark years as well. After a number of revisions have been carried out in due time for all benchmark years, strata of corrections matrices are available (one for each revision).

a) Full Benchmark Year Method and Interpolation

In the full benchmark year method, figures for the benchmark years are estimated in a detailed way, using new definitions, classifications and sources. After the revision corrections for the benchmark years have been determined, the corrections for the intermediate years are calculated by interpolation.

According to Panaretos, benchmark year's interpolation method has a number of advantages which are as under:

- The method is transparent and relatively fast
- The revision corrections are determined explicitly
- Decisions taken in the past in the balancing of the data are upheld
- In the case of new revision, only the revision corrections for the benchmark year have to be determined

Contrary to the retropolation approach, the interpolation procedure assumes that the error is generated between the two periods. Consequently, it modifies the annual rate of variation between benchmarks (usually upwards) while keeps unaltered the initial level–that of the old benchmark. As a result, the initial level will be probably lower than the one derived from the retropolation approach (Escosura, 2014).

b) Layer Correction and Interpolation

Figures for the benchmark years are determined starting from the original, balanced data set. Corrections, resulting from revisions, are balanced and then superposed to the basic set of original data. In this way, layers of correction matrices become available (one for each revision). Corrections for the intermediate years are determined by means of interpolation of the correction matrices. Afterwards, figures for the years between the benchmark years are determined by integrating the original data and the corrections.

According to this method, corrections are determined for all years in the period to be revised. However, not all years are treated in the same way. Especially in estimating the revision corrections the difference between benchmark years and other years is evident. The figures for the benchmark years are estimated with the help of detailed information. The figures for the other years are estimated more roughly.

CHAPTER 2

Industry/ Sector-wise Methodology

In this series, different variations of the annual backward calculations have been applied, varying from the growth rates to fresh estimations, as detailed below. The calculations are at the most detailed level appropriate; the descriptions here are at the summarized level. The industry-wise methodology adopted for the backward calculations of GVA and GDP at constant prices is described in the following paragraphs:-

A: AGRICULTURE

Agriculture is comprised of four sub-sectors namely crops, livestock, forestry and fishing. The methodology used to derive the back-ward series of GVA at constant basic prices for the years 2005-06 to 1999-2000 is outlined in the following paragraphs.

A-I: Crops

In the 1999-2000 base estimates, the crops sub-sector was used to be divided into two groups called major crops and minor crops. While major crops were comprised of 12 crops namely Wheat, Maize, Rice, Sugarcane, Cotton, Gram, Barley, Bajra, Jowar, Sesamum, Rape seed & mustard and Tobacco and the remaining ones were used to be grouped together to form another group termed as minor crops.

The GVA estimates of crops, after change of base from 1999-2000 to 2005-06, are divided into three sub-groups called i) important crops, ii) other crops and iii) cotton ginning and miscellaneous. The sub-group known as important crops is comprised of Wheat, Maize, Rice, Sugarcane and Cotton while all other crops are included in the sub-group called minor crops. An important distinction between old and new base estimates was the inclusion of cotton ginning in crops sub-sector which was previously covered in large scale manufacturing. This regrouping of activities was inevitable after the adoption of Pakistan Standard Industrial Classification (PSIC) 2010 which was based on International Standard Industrial Classification (ISIC) Revision-4 released by United Nations in 2008. Own account capital formation in agriculture is new addition in 2005-06 base and grouped with cotton ginning. It also has been adjusted in the backward series.

In order to extract the back-ward series of GVA estimates of crops from 2005-06 to 1999-00, a slight adjustment in crop group of the old base series has been made. The crop-wise information on output for the time period in question was available with PBS and same is used in the derivation of back-ward series. The output of those 7 crops not making part of important crops in new base estimates has been deducted from the total output of 12 major crops of 1999-2000 base. Information on inputs at aggregate level was available in the PBS but not at crop level for all the crops. Crop-wise information was available for some inputs like seeds and ploughing & plunking, which are valued according to the area under cultivation of each crop. Like outputs, value of inputs was also derived separately for important and other crops. The crop-wise information was used to estimate value of inputs such as seeds and ploughing & plunking for

important and other crops. Whereas the remaining inputs such as fertilizers, pesticides and water were bifurcated between important and other crops by applying the fixed proportions of these crops in the base year after deducting the sum of value of inputs like seeds and ploughing & plunking.

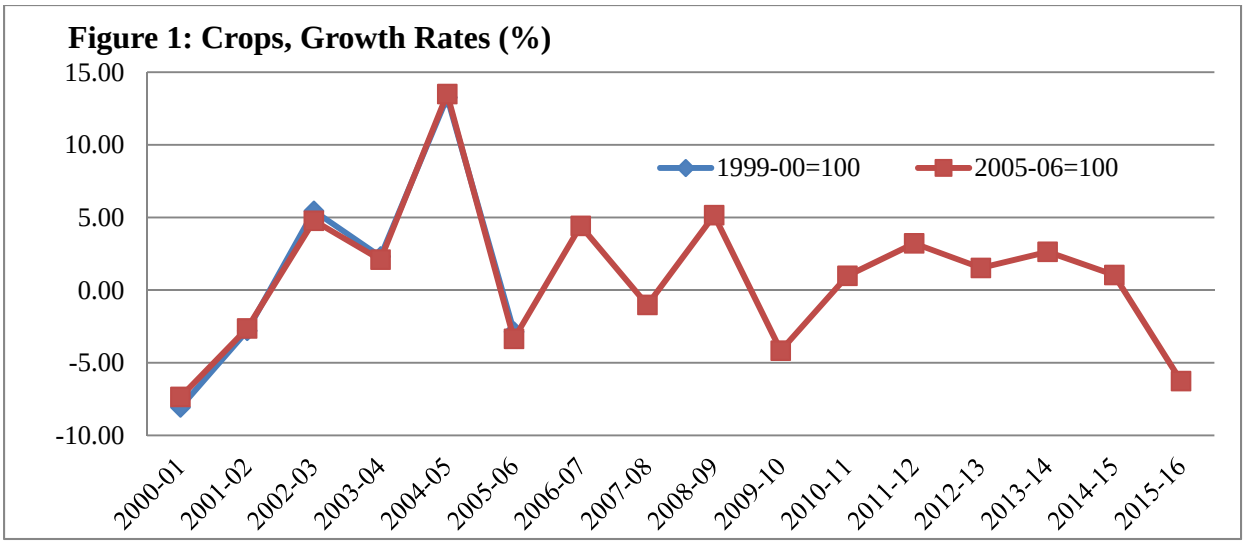
The aforementioned information on output and inputs was used to derive the GVA of important and other crops on 1999-2000 base from 1999-2000 to 2005-06 and the growth rates thus derived were then applied to figures of GVA of important crops and other crops at constant basic prices of 2005-06 to have the back series of both groups of crops for the years 2004-05 to 1999-2000. Further, two more groups i.e. cotton ginning and own account capital formation (Misce. GVA) are also added in new base which were not part of old base series. The GVA of cotton ginning for the year 2005-06 at new base, was extrapolated backward by using the growth of cotton production whereas GVA of other small components known as miscellaneous GVA, was extrapolated back-ward by a fixed growth rate of 0.8%. The GVA of miscellaneous components is also included in cotton ginning. The GVA of these three groups i.e. important crops, other crops and cotton ginning is then added up to find the total of backward series of crops sub-sector. Comparison of GVA / growth rates of crops for 1999-2000 base and 2005-06 base is given in table 1 and figure 1 below:-

Table 1: Comparison of GVA of Crops for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Constant GVA 1999-2000 base						Constant GVA 2005-2006 base							
	Major Crops	GR	Minor Crops	GR	Total (Crops)	GR	Imp. Crops	GR	Other Crops	GR	Cotton Ginning	GR	Total Crops	GR
1999-00	342200		125679		467879		413529		261177		53438		728144	
2000-01	308474	-9.86	121673	-3.19	430147	-8.06	375550	-9.18	247347	-5.30	51715	-3.22	674612	-7.35
2001-02	300911	-2.45	117217	-3.66	418128	-2.79	365420	-2.70	240032	-2.96	51392	-0.62	656844	-2.63
2002-03	321505	6.84	119446	1.90	440951	5.46	385035	5.37	253146	5.46	50052	-2.61	688233	4.78
2003-04	327057	1.73	124121	3.91	451178	2.32	392617	1.97	260470	2.89	49583	-0.94	702670	2.10
2004-05	385058	17.73	125993	1.51	511051	13.27	462326	17.75	270391	3.81	64841	30.77	797558	13.50
2005-06	370005	-3.91	126457	0.37	496462	-2.85	452759	-2.07	257597	-4.73	60472	-6.74	770828	-3.35

GR stands for Growth Rates

The growth rates of major crops in the 1999-2000 base are roughly comparable with those of important crops in 2005-06 base but notable differences exist in the growth rates of minor crops in 1999-2000 base and other crops in 2005-06 base (Table 1). The year-to-year variation in the production of grams, which was part of major crops in 1999-2000 base but is now covered under other crops in 2005-06 base, is the major contributory factor behind generating these differences.



A-II: Livestock

Livestock estimates are based on livestock population, poultry & poultry products. The data on livestock is based on livestock census conducted after every 10 years by Agriculture Census Organization wing (ACO) and geometric growth rates between two consecutive censuses are utilized for annual projection until the next census. For bench mark estimates of 1999-00, annual livestock population has been projected by using inter-census growth of 1985-86 and 1995-96. Estimates up to 2004-05 were based on projected series of livestock population whereas in 2005-06 new livestock census was conducted. So estimates of 2005-06 (1999-00 base) were prepared using 2005-06 census data but the previous series was not updated in the light of new data. Therefore, whole series from 1999-00 to 2005-06 is not smooth as there is huge gap between 2004-05 and 2005-06.

For preparation of backward series from 2005-06 to 1999-00 the gap between 2004-05 and 2005-06 has been covered by smoothing livestock series in two stages. In the first stage, livestock population of 1995-96 census has been extrapolated by applying new inter-census growth between 1995-96 and 2005-06 for subsequent years, and second stage, this extrapolated population has been used to estimate the output and GVA of livestock for the years 1999-00 to 2004-05. In table 2, updated and revised figures are given in column “New”.

In 1999-00 base, livestock output was comprised of various groups namely net sale of animals, natural growth, livestock products and poultry & products. However, in 2005-06 base all groups are parallel to 1999-00 base except “natural growth”. Now in 2005-06 base this group is called as “Natural growth and Regeneration” which includes animals of all age groups except died and slaughtered whereas in old base, value of new born animals was used to be taken only.

After smoothing of old base series, new growth of each component of output i.e. net sales, natural growth, livestock production and poultry & its products have been applied and then these are summed up to have total output. Similarly growth rates of the individual components of intermediate consumption have been applied and then combined together to have overall

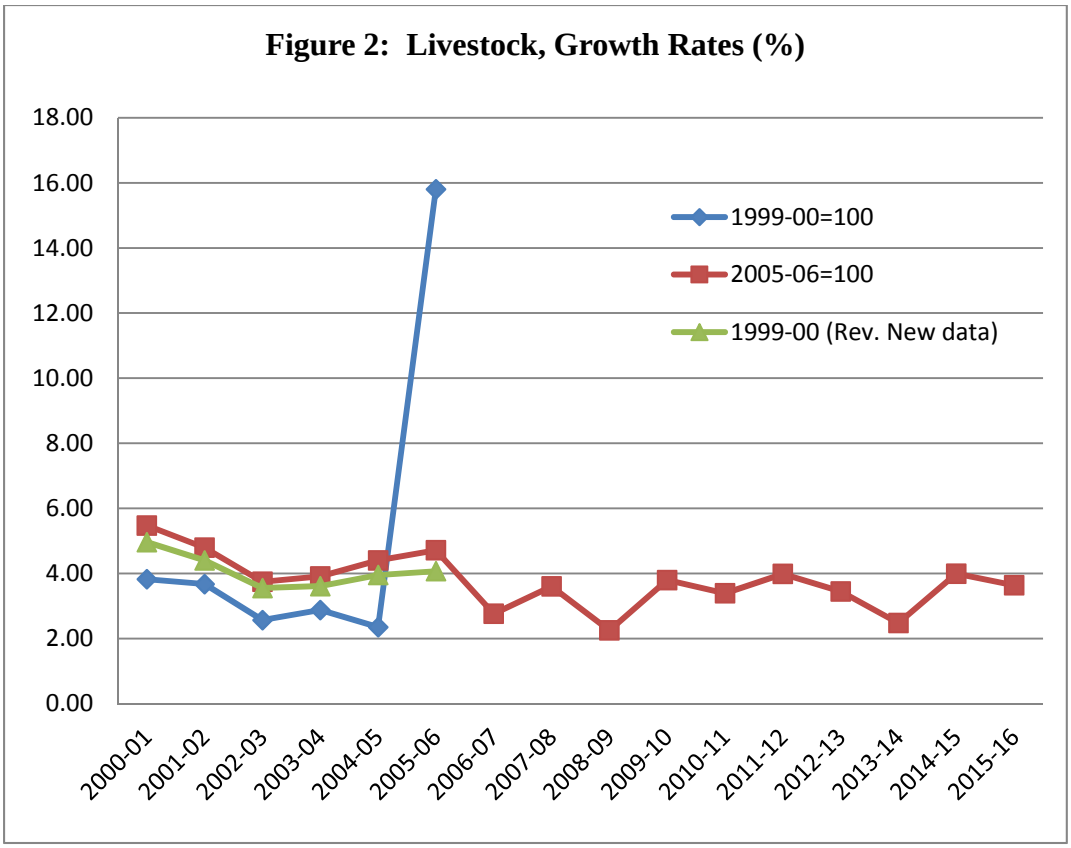
intermediate consumption. Then the GVA estimates of backward series of livestock from 2005-06 to 1999-00 have been derived.

In the GVA estimates of livestock in base year 2005-06, there is an addition of a new component known as “Other Value Added” which contains value added of animal husbandry as well as of hunting. For backward series of value added of hunting, data has been taken from provincial budget books. The aforementioned components have been added up to obtain the overall value added of livestock for the period 2005-06 to 1999-2000. Comparison of GVA of livestock for 1999-2000 base and 2005-06 base is given in table 2 below:-

Table 2: Comparison of GVA of Livestock for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Constant GVA 1999-2000 base				Constant GVA 2005-06 base	
	Original		New			
	Livestock	Growth Rate	Livestock	Growth Rate	Livestock	Growth Rate
1999-00	417120		464208		718984	
2000-01	433066	3.82	487240	4.96	758335	5.47
2001-02	448968	3.67	508684	4.40	794665	4.79
2002-03	460495	2.57	526720	3.55	824422	3.74
2003-04	473745	2.88	545758	3.61	856646	3.91
2004-05	484876	2.35	567316	3.95	894348	4.40
2005-06	561500	15.80	590421	4.07	936498	4.71

The differences in growth rates of GVA of livestock in 1999-2000 and 2005-06 bases exist for all the years and are principally due to the incorporation of the 2006 census population of livestock. Figure 2 is the graphical illustration of table 2. Original growth rates and the revised growth rates at 1999-2000 base are compared. The higher growth rate for the year 2005-06 has been absorbed by the years 1999-2000 to 2004-05. Also shown are the growth rates at 2005-06 base for the backward series of 2005-06 to 1999-2000 period.



A-III: Forestry

The figures of value added of forestry for the base year 1999-2000 were available in the PBS, which were used to derive the growth rate for all the years from 2005-06 to 1999-00. The growth rates thus derived have been applied to the GVA of forestry for the new base year 2005-06 to obtain the back-ward series of value added of this industry. Since there is no change in the methodology and data, the old growth rates are used for retropolation. Comparison of GVA of forestry for 1999-2000 base and 2005-06 base is given in table 3 below:-

Table 3: Comparison of GVA of Forestry for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Constant GVA at 1999-2000 base		Constant GVA at 2005-2006 base	
	Forestry	Growth Rate	Forestry	Growth Rate
1999-00	23447		47010	
2000-01	25571	9.06	51269	9.06
2001-02	24436	-4.44	48993	-4.44
2002-03	27150	11.11	54435	11.11
2003-04	26293	-3.16	52716	-3.16
2004-05	17785	-32.36	35658	-32.36
2005-06	17596	-1.06	35279	-1.06

A-IV: Fishing

The old base figures of value added of fishing were also available. The growth rate for all the years from 2005-06 to 1999-00 were calculated by using these figures and were applied to the 2005-06 figure of new base to obtain the back-ward series of value added of fishing industry. Since there is no structural and data change, the old growth rates have been applied. Comparison of GVA of fishing for 1999-2000 base and 2005-06 base is given in table 4 below:-

Table 4: Comparison of GVA of Fishing for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Constant GVA at 1999-2000 base		Constant GVA at 2005-2006 base	
	Fishing	Growth Rate	Fishing	Growth Rate
1999-00	15163		39569	
2000-01	14715	-2.95	38400	-2.95
2001-02	12901	-12.33	33666	-12.33
2002-03	13346	3.45	34828	3.45
2003-04	13611	1.99	35519	1.98
2004-05	13691	0.59	35728	0.59
2005-06	16540	20.81	43163	20.81

Tables 18 and 19 are referred for comparison.

B: INDUSTRY SECTOR

Included in this group are the mining and quarrying, manufacturing (large scale manufacturing, small scale manufacturing and slaughtering), electricity generation and distribution and gas distribution and construction activities. The change of base of national accounts from 1999-2000 to 2005-06 document is referred to see the conceptual changes being incorporated. The industries/ sectors are discussed one by one in detail according to their data availability and the changes in methodology of the two bases.

B-I: Mining and Quarrying

Gross value added of mining and quarrying is based on production of mines and minerals. In 1999-00 base gross output of mining and quarrying was prepared by using quantities reported by mineral departments. The GVA for new base year 2005-06 has been compiled by following through following steps:-

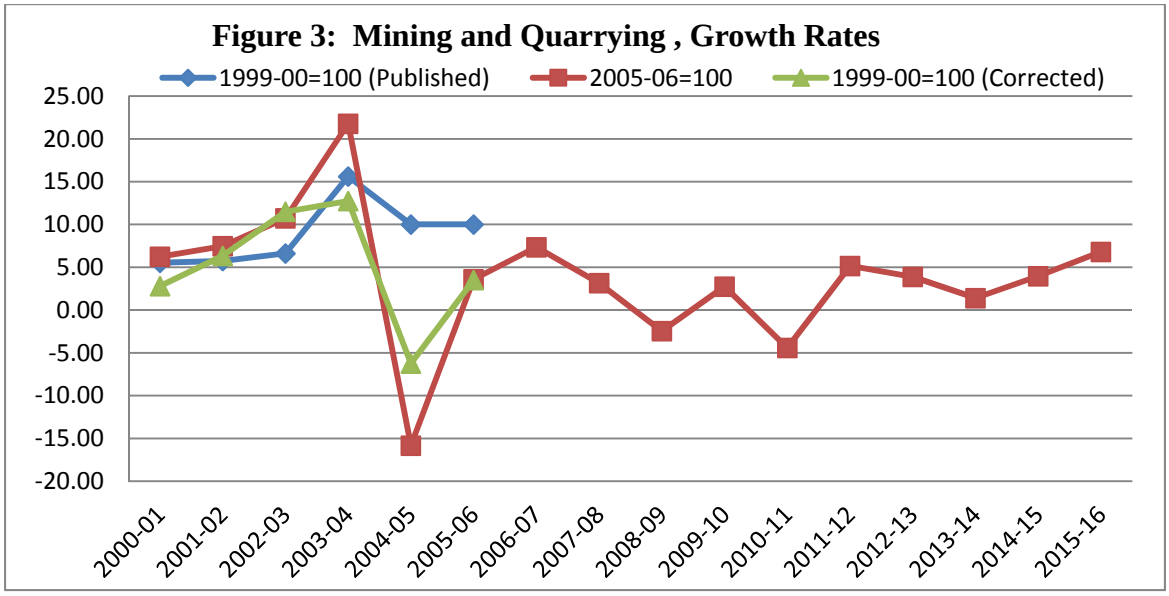
- The constant GVA of natural gas, crude oil, coal and other minerals has been compiled by applying the growth rates of GVA of these components in 1999-2000 base to the GVA of 2005-06 base, backward from 2004-05 to 1999-2000.
- The backward series of GVA of surface minerals has been compiled by applying the growth rate of other minerals for respective years.
- The GVA of crushing of stones (new addition in 2005-06 base) has been compiled by applying the growth rate of other minerals for respective years.

- The GVA of allied services has been compiled by applying the combined growth of natural gas and crude oil.
- Exploration services are basically compiled at current prices and have been converted into constant prices by applying the WPI crude oil deflator.

The aforementioned components have been added-up to obtain the overall GVA of the industry. Comparison of GVA and growth rates of Mining and Quarrying for 1999-2000 base and 2005-06 base are given in table 5 and figure 3. The growth rate of GVA in 2005-06 base estimates has significantly changed to 21.8% during 2003-04 as compared to 12.7% in 1999-2000 base estimates (including exploration costs) due to exploration services which have been compiled by applying the deflator to current estimates. The increase in valued added in 2003-04 has also resulted in the decline of growth rate in 2005-06 base estimates for the year 2004-05 to -15.8% as compared to -6.3% in 1999-2000 base estimates (including exploration costs).

Table 5: Comparison of GVA of Mining and Quarrying for 1999-2000 base and 2005-06 base

Year	Published GVA 1999-2000 base		GVA 1999-2000 base inc. Exploration Cost		Constant GVA 2005-2006 base	
	Mining and Quarrying	Growth Rate	Mining and Quarrying	Growth Rate	Mining and Quarrying	Growth Rate
1999-00	81052		100296		192658	
2000-01	85528	5.52	103102	2.80	204673	6.24
2001-02	90431	5.73	109638	6.34	219954	7.47
2002-03	96418	6.62	122240	11.49	243541	10.72
2003-04	111473	15.61	137816	12.74	296588	21.78
2004-05	122621	10.00	129206	-6.25	249636	-15.83
2005-06	128288	4.62	133740	3.51	258628	3.60



B-II: Manufacturing

For compilation purpose, Manufacturing is divided into three subgroups, i.e. Large Scale Manufacturing Industries (LSMI), Small Scale Manufacturing Industries (SSMI) and Slaughtering. The methodology of compilation of GVA estimates for each sub-sector is described below in turn:-

a) Large Scale Manufacturing Industries (LSMI)

Large Scale Manufacturing Industries (LSMI) has witnessed a structural change in the rebasing of national account from 1999-2000 to 2005-06. Details can be seen in the change of base document. The notable changes between two bases are as under:-

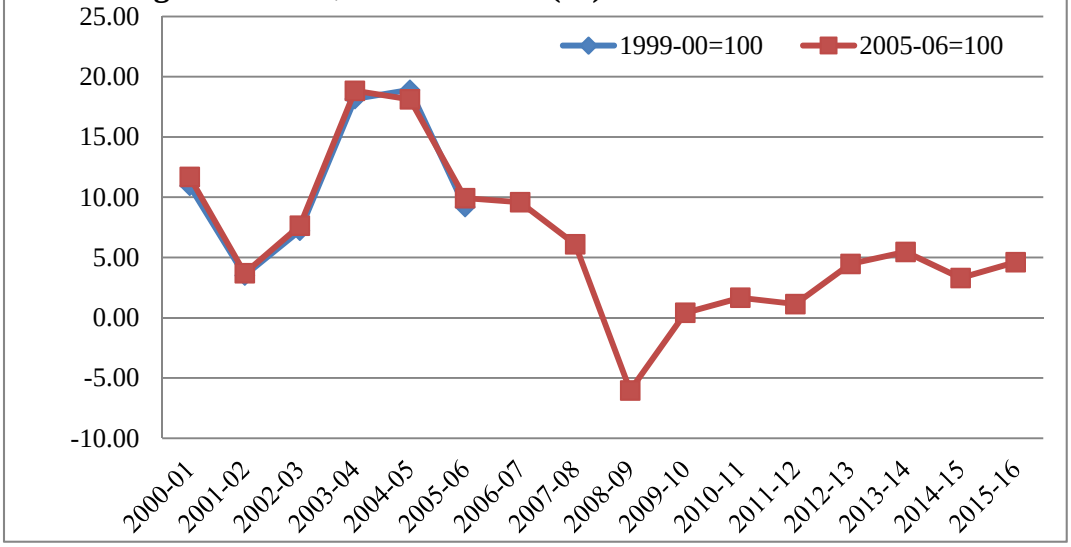
- Cotton ginning, which was part of LSM prior to 2005-06 rebasing, is now part of agriculture industry.
- Results of papers and paper products of Census of Manufacturing Industries (CMI) 2005-06 had to be enhanced by the figures for printing and publishing of newspapers, which were estimated by special study because this activity albeit being part of manufacturing was not covered in the CMI.
- GVA of meat and meat products were deducted from the results of CMI 2005-06.
- The GVA of LSM in 1999-2000 base was valued at factor cost whereas in the 2005-06 base it has been valued at basic prices.
- The GVA of LSM in 1999-2000 base was used to be extrapolated by QIM comprising of 100 items whereas in the 2005-06 base it is extrapolated by QIM comprising of 112 items.
- The estimates of GVA of LSM were not adjusted for FISIM in 1999-2000 base but in 2005-06 base they are adjusted for FISIM allocated to manufacturing. The GVA is extrapolated first by QIM and then FISIM is allocated.

GVA of LSMI at constant prices at 1999-2000 base was used to be extrapolated forward by applying the Quantum Index of Manufacturing (QIM) comprising 100 items having total weight of 75.0750. In principle, the same methodology has been maintained in new base 2005-06 but with QIM comprising of 112 items having total weight of 70.3317.

The GVA of LSMI at new base for the year 2005-06 has been extrapolated back ward by applying the specifically compiled QIM comprised of 99 items excluding cotton ginning having weight of 3.3682. Due to exclusion of cotton ginning, deviation in growth rates has been observed between newly generated backward series of LSMI at 2005-06 base and old series at 1999-2000 base for the years 2000-01 to 2005-06. The FISIM was adjusted independently of QIM for each year. The comparison of GVA at constant prices as well as of growth rates of LSM for 1999-2000 base and 2005-06 base is presented in the table 6 below and graphically illustrated in figure 4.

Table 6: Comparison of GVA of LSM for 1999-2000 base and 2005-06 base (Rs. Million)					
Year	Constant GVA 1999-2000 base			Constant GVA 2005-06 base	
	GVA	Growth Rate (inc. C.G)	Growth Rate (exc. C.G)	LSM (2005-06=100)	Growth Rate
1	2	3	4	5	6
1999-00	338602			485202	
2000-01	375687	10.95	11.68	541868	11.68
2001-02	388859	3.51	3.69	561874	3.69
2002-03	416955	7.23	7.64	604803	7.64
2003-04	492632	18.15	18.83	718695	18.83
2004-05	585781	18.91	18.12	848943	18.12
2005-06	639585	9.18	9.92	933139	9.92

Figure 4: LSM, Growth Rates (%)



b) Small Scale Manufacturing Industries (SSMI)

Small Scale manufacturing covers industrial establishments & households units, engaged in manufacturing activity having less than ten employees. Annual Estimates of GVA of SSMI for the base year 2005-06 have been compiled using information from "Small and Household Manufacturing Industries Survey (SHMI) 2006-07", which are extrapolated at constant prices for subsequent periods by applying an inter-survey annual compound growth rate of 8.20% between 2006-07 and 1996-97. In the 1999-2000 base, SSMI was used to be extrapolated by a fixed growth rate of 7.51% based on the study conducted for change of base from 1980-81 to 1999-2000

The backward series of SSMI at constant prices for the base year 2005-06 has been compiled by applying the growth rate of the same sector in the base year 1999-2000. Resultantly, no change in the growth rates between 1999-2000 base and 2005-06 base has been observed. The

comparison of GVA of SSMI at constant prices for the two bases is presented in the table 7 below:-

Table 7: Comparison of GVA of SSMI for 1999-00 base and 2005-06 base (Rs. Million)

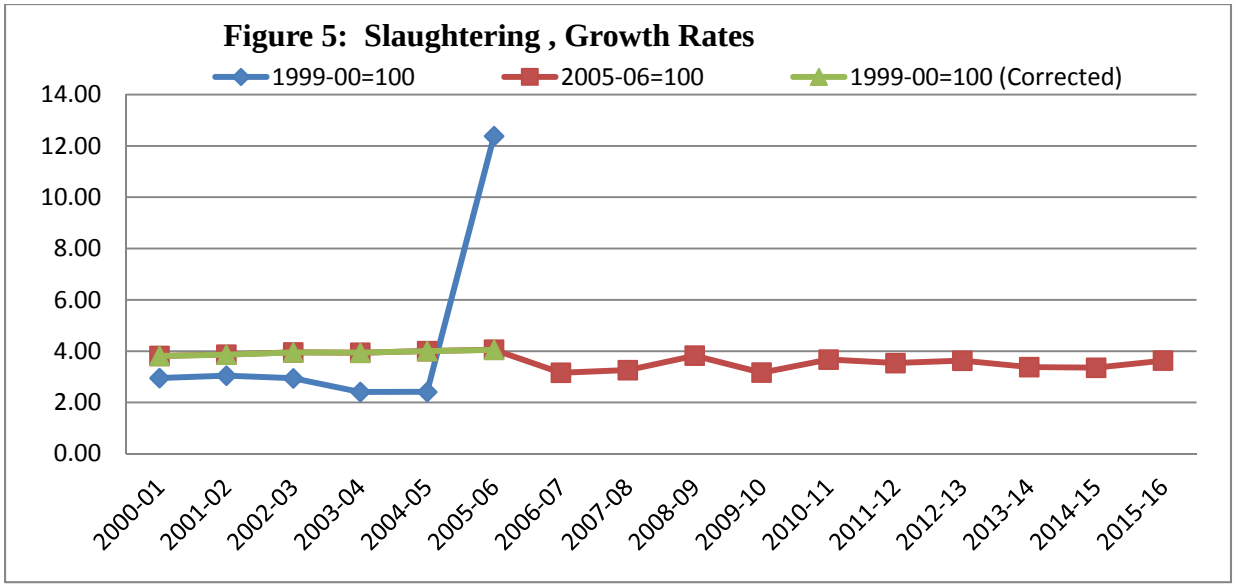
Year	Constant GVA at 1999-2000 base		Constant GVA at 2005-2006 base	
	GVA SSM	Growth Rate	SSM (2005-06 = 100)	Growth Rate
1	2	3	4	5
1999-00	132369		58878	
2000-01	142310	7.51	63300	7.51
2001-02	152997	7.51	68054	7.51
2002-03	164487	7.51	73165	7.51
2003-04	176841	7.51	78660	7.51
2004-05	190121	7.51	84567	7.51
2005-06	206656	8.70	91922	8.70

c) Slaughtering

The output of slaughtering is divided into two groups namely meat and other products whereas intermediate consumption includes value of animals slaughtered. So gross value added for the year 1999-2000 was the difference between output and intermediate consumption which was used to be extrapolated by applying the growth rate of meat of respective years. However, an extra ordinary increase in growth was observed between the years 2004-05 and 2005-06 due to use of new meat production in 2005-06.

For compilation of backward series of slaughtering, in the first stage inter-census growth of all the components of meat i.e. beef, mutton and poultry during 1995-96 and 2005-06 censuses were applied to obtain the total production of meat for the periods in question. In the second stage, growth rate of meat based on its aggregate production were derived which were subsequently used for the derivation of the value added estimates of slaughtering. All components of output as well as intermediate consumption are parallel to those in 1999-00 base, so there is no structural change in this activity and consequently no adjustment was needed. After incorporating the data changes, the growth rates have been re-determined as shown under the “New” column and applied for retropolation. The comparison of GVA of slaughtering at constant prices for the two bases is presented in the table 8 below. The behavior of the jump, visible in figure 5, is similar to that of livestock, slaughtering is heavily dependent on it.

Table 8: Comparison of GVA of Slaughtering for 1999-2000 & 2005-06 base (Rs. Million)						
Year	Constant GVA 1999-2000 base				Constant GVA 2005-2006 base	
	Original		New			
	Slaughtering	GR	Slaughtering	GR	Slaughtering	GR
1999-00	51830		52919		59762	
2000-01	53360	2.95	54935	3.81	62039	3.81
2001-02	54985	3.05	57057	3.86	64436	3.86
2002-03	56602	2.94	59312	3.95	66982	3.95
2003-04	57966	2.41	61646	3.94	69618	3.94
2004-05	59363	2.41	64113	4.00	72404	4.00
2005-06	66712	12.38	66712	4.05	75339	4.05



B-III: Electricity Generation & Distribution and Gas Distribution

These two activities are estimated independently and then combined together for the purpose of presentation. Methodology adopted for backward series is as under:

a) Electricity Generation and Distribution:

In order to construct backward series it was imperative to harmonize the structure of old and new series. For this purpose following structural changes have been adopted in the new base:

Structural Changes in New Base:

1. The output was roughly at the same level in both the basis, however, the only difference was that subsidy was added in the output of 2005-06.

2. In old base the word “others” was used for IPPs and captives however in 2005-06 they have been given separate status.
3. Water supply was part of this sector in 1999-00 however in 2005-06 it has been excluded.

Structural Changes in Old Base:

a) Subsidy which was not part of output in the old base has been included since 1999-00 to 2005-06 in the old base.
b) Water supply was also excluded since 1999-00 onwards.

Methodology

i. First step in compilation of backward series was to harmonize the structure of both the basis. So, GVA of Water Supply at constant prices was excluded from the overall GVA of Electricity generation from 1999-00 to 2004-05.
ii. Subsidies received by WAPDA and KESC were added in their output. The figures of subsidies were taken from the General Government Services Section of PBS. Figures at current prices were calculated for the period 1999-00 to 2005-06.
iii. The current prices of the new old series were deflated using deflators of CPI (Electricity). Growth rates at constant prices were calculated for this newly developed old series (incorporating subsidies and excluding Water Supply).These growth rates were used for backward series.
iv. The GVA for electricity generation at constant prices for new base 2005-06 was extrapolated backwards for 2004-05 till 1999-00 with the growth rate of old series.

b) Gas Distribution:

Structural Changes in Old Base:

Structural changes, which are recorded in the change of base document, are given below,.

1. Compressed Natural Gas was included in the distribution in 1999-00 but in 2005-06 base it has been included in trade and excluded from this sector.
2. OGDCL and PPL were part of the old base however in new base they were excluded as their major activity was exploration. Double counting has been rectified.
3. Output of Mari Gas Company was comprising of exploration activities and distribution activities in old base. However in new base only distribution activities have been made part of output while exploration activities have been excluded from its output. It is a component of mining industry.

Methodology:

i. First step in compilation of backward series was to harmonize the structure of both the basis. So, GVA of CNG at constant prices was excluded from the overall GVA of Gas Distribution from 1999-00 to 2005-06.

ii. Growth rates of old series, after excluding CNG, LPG, OGDCL, PPL and exploration part of Mari Gas, were calculated. These growth rates were used for backward series.

iii. The GVA for gas distribution sector at constant prices for new base 2005-06 was extrapolated backwards till 1999-00 with the growth rate of harmonized series.

iv. GVAs at constant prices for Electricity generation and distribution and gas distribution were then added up to obtain overall GVA at constant prices for electricity and gas sector.

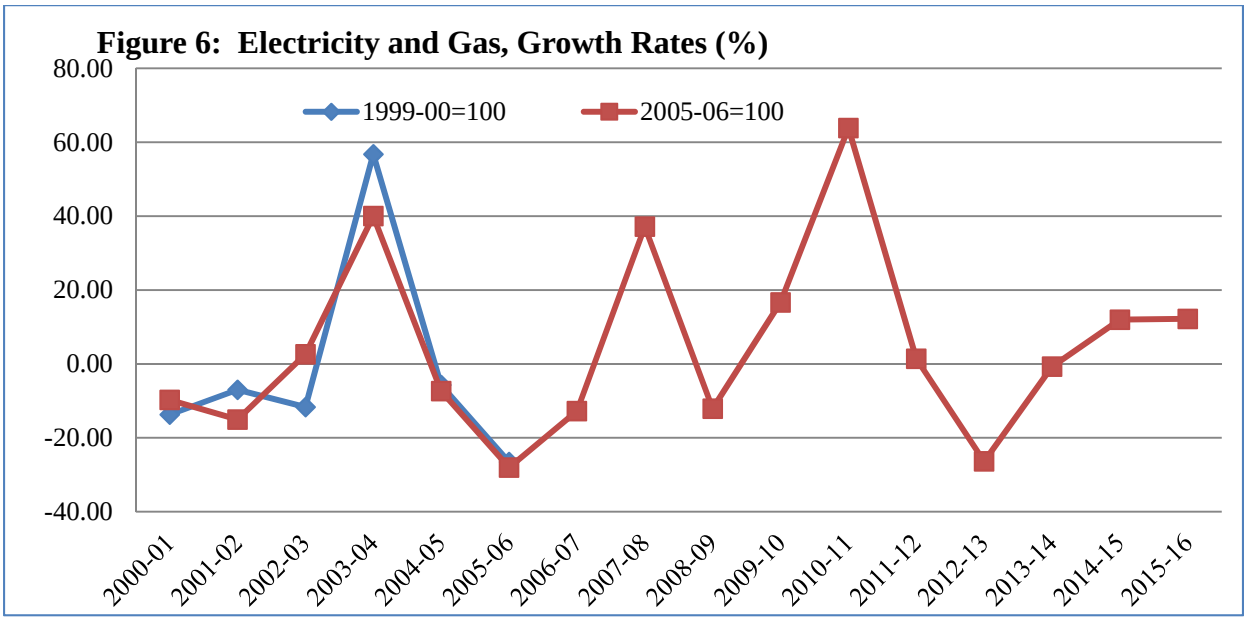
v. This methodology is in-line with the one, used in the compilation of annual GVA in the new base.

The comparison of GVA of electricity generation & distribution and gas distribution at constant prices for the two bases is presented in the table 9 below while graphical is shown in figure 6.

Table 9: Comparison of GVA of Electricity Generation & Distribution and Gas Distribution for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Constant GVA 1999-2000 base		Constant GVA 2005-2006 base					
	Electricity and Gas & Water Supply	Growth Rate	Electricity Generation & Distribution	Growth Rate	Gas Distri-bution	Growth Rate	Electricity Gen. & Distr. and Gas Distribution	Growth Rate
1999-00	139626		178679		11267		189946	
2000-01	120465	-13.72	163907	-8.27	7954	-29.40	171861	-9.52
2001-02	112026	-7.01	135000	-17.64	10246	28.82	145246	-15.49
2002-03	98932	-11.69	137706	2.00	11185	9.16	148891	2.51
2003-04	155078	56.75	194859	41.50	13960	24.81	208819	40.25
2004-05	146214	-5.72	171722	-11.87	20221	44.85	191943	-8.08
2005-06	107391	-26.55	93406	-45.61	23414	15.79	116820	-39.14

Figure 6: Electricity and Gas, Growth Rates (%)



B-IV: Construction

The structure of construction industry has remained same in the new base year 2005-06 as was in the old base of 1999-2000. The estimates of GVA of construction industry are compiled primarily at current prices by incorporating construction expenditures incurred by various industries which are compiled through direct annual surveys/census of establishments. The estimates of value added in the backward series of construction industry at current prices from 2005-06 to 1999-2000 have been compiled by applying the current growth rates in 1999-2000 base series for the respective years. The estimates at constant prices have been obtained by applying the WPI building material deflator with 2005-06 as the base year.

The estimates of backward series for the period of 2005-06 to 1999-2000 at constant prices for 2005-06 base year as well as for 1999-2000 base year are presented in the table 10 given below:-

Table 10: Comparison of GVA of Construction for 1999-2000 base & 2005-06 base (Rs. Mill)

Year	Constant GVA 1999-2000 base		Constant GVA 2005-2006 base	
	Construction	Growth Rate	Construction	Growth Rate
1999-00	87386		136943	
2000-01	87846	0.53	144129	5.25
2001-02	89241	1.59	143355	-0.54
2002-03	92789	3.98	149255	4.12
2003-04	82818	-10.75	139024	-6.86
2004-05	98190	18.56	162348	16.78
2005-06	108195	10.19	189946	17.00

C: SERVICES SECTORS

C-I: Wholesale and Retail Trade

Wholesale and Retail Trade (WRT) is the combination of several distinct groups. The updated output, if any, of the components entering in this sector have been used to determine revised growth rates. These new growth rates are used for backward extrapolation of the components as described below:-

1) Crops

The old base figures of Trade Value Added (TVA) of each crop were available which were used to derive growth rates for all the years from 2005-06 to 1999-00 and then applied to the 2005-06 figure of new base to extrapolate the backward series of trade value added of each crop. The crop-wise trade value added was aggregated to obtain the figures of crop group.

2) Livestock

The livestock series of GVA in the old base series was not smooth and so was the trade value added of livestock owing to a huge jump in GVA during the year 2004-05. The same smoothened process which have already been described in detail during discussion in livestock section in agriculture, have been adopted for smoothing the trade value added of livestock. In old base series, livestock component was comprised of three sub-groups, i.e., milk, poultry & poultry products and other products whose respective market shares and trade margins were applied to the output of these three components to make a new series of trade value added of livestock on old base 1999-2000. The TVA of these three groups has been extrapolated backward by applying their respective growths of old base to the new base TVA of 2005-06.

In new base estimates, one more group i.e., live animals sold for slaughtering is also included in trade of livestock and estimates of TVA for the backward series for this component have been extrapolated backward by applying the fixed growth rate of net sales of animals. The TVA of all these groups are then added up to make a back series of trade value added of Livestock.

3) Forestry

The backward series of forestry is based on the growth rates of old base series of same industry which were derived from the old base figures of trade value added. The same growth rates for all the years were then applied to the new base figure of TVA for the year 2005-06 to derive the backward series of trade value added for forestry for the years 2005-06 to 1999-2000.

4) Fishing

The old base figures of trade value added of fishing are also available which were used to derive the growth for all the years from 2005-06 to 1999-00. These growth rates were applied to the 2005-06 figure of new base year to obtain the estimates of backward series of fishing trade value added.

5) Large Scale Manufacturing

The estimates of trade value added of large scale manufacturing for backward series were derived by applying the growth rate of specifically constructed Quantum Index of Manufacturing (QIM) comprising of 99 items whose detail has already been described during the discussion on large scale manufacturing above.

6) Small Scale Manufacturing

The trade value added of small scale has been extrapolated backward from 2005-06 to 1999-00 by using a same constant growth as was used to be in old base series.

7) Slaughtering

The output of slaughtering has also been smoothened due to an outlier for the year 2004-05 by following the same method as was described in livestock section above. The proportion of market share and trade margins being used in the 2005-06 base were applied to the specifically derived output of the two components of slaughtering i.e., meat and other products to make a new and smooth base series of trade value added of slaughtering.

8) Imports

The imports are categorized into three major groups i.e. consumer goods, capital goods and intermediate goods whose total value added figures on old base were used to derive the growth rates for all the years from 2005-06 to 1999-00. These growth rates were then applied to the 2005-06 figures of new base to obtain the estimates of backward series of trade value added of imports.

9) CNG (special stores)

The CNG was not part of old base series and thus is an addition in the new base estimates of trade value added. The estimates of TVA for backward series of CNG are based on the figures of production of CNG for the previous years which were taken from the year book on energy. These figures of production were then converted into trade value added by applying trade margin and Input-Output ratio used in the base year 2005-06.

10) Repair & Maintenance of Vehicles

The estimates of backward series of output of Repair & Maintenance of Vehicles have been derived by using the growth rates of mechanized road transport. The trade margins, which are being used in the new base estimates, have been applied to this output to make the trade value added of this component.

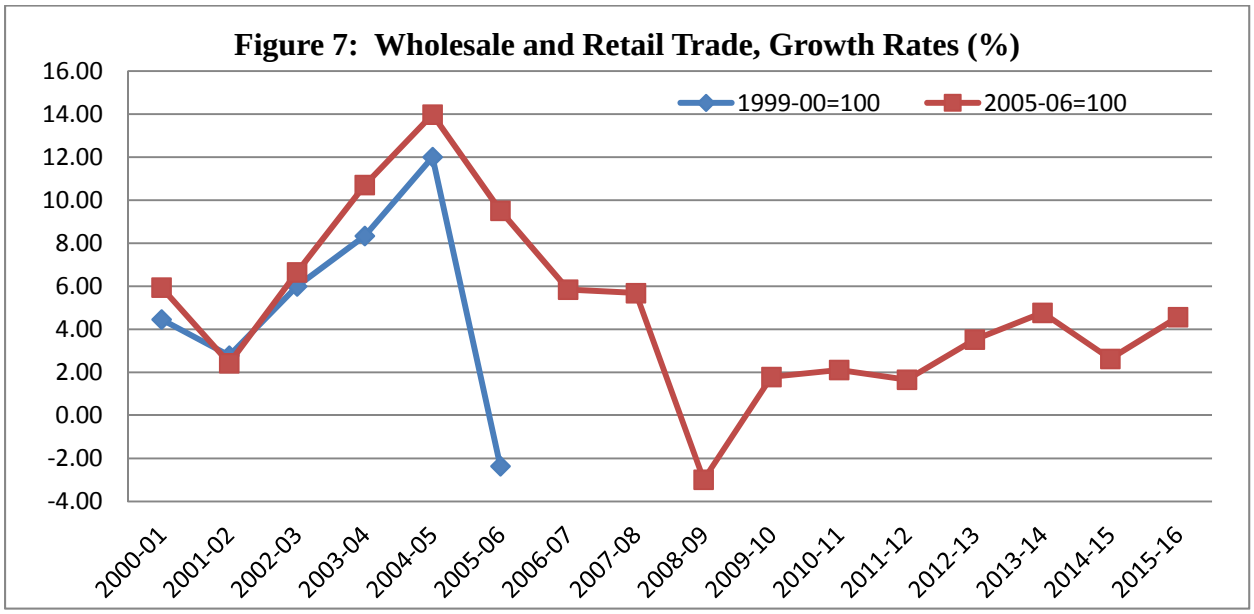
11) Hotels & Restaurants

The GVA estimates of trade value added of Hotels & Restaurants have been extrapolated backward by applying a fixed growth rate of 10% to the new base GVA of 2005-06. It is pertinent to mention that in the old base estimates, this activity was used to be extrapolated at the same 10% growth rate in contrary to the new base estimates where it is extrapolated at constant growth rate of 4.92%.

All the components mentioned above were then added up to make a backward series of WRT for base year 2005-06 and same is presented along with figures of 1999-2000 base in the table 11 below:-

Table 11: Comparison of GVA of Wholesale and Retail Trade (WRT) for 1999-2000 base and 2005-06 base (Rs. Million)				
Year	Constant GVA 1999-2000 base		Constant GVA 2005-2006 base	
	WRT	Growth Rate	WRT	Growth Rate
1999-00	621842		963832	
2000-01	649564	4.46	1021145	5.95
2001-02	667615	2.78	1045916	2.43
2002-03	707665	6.00	1115503	6.65
2003-04	766693	8.34	1234956	10.71
2004-05	858695	12.00	1407619	13.98
2005-06	838426	-2.36	1541563	9.52

The growth rates of GVA of WRT for 1999-2000 and 2005-06 bases are roughly comparable except for the year 2005-06 where a significant difference has been observed. This difference is mainly due to use of livestock census data in the trade value added of livestock and slaughtering industries for the year 2005-06. Further, correction of the detected error in the compilation of value added of WRT during 2005-06 where GVA of slaughtering was used in the value added compilation of WRT instead of output, is another reason behind generating that difference in growth rate between old and new base estimates. The accumulated changes are shown in figure 7.



C-II: Transport, Storage and Communication

Transport, Storage and Communication are three distinct activities and have been covered separately in the 1999-2000 and 2005-06 bases. For compilation purpose, transport activity is further divided into various activities comprising of railways, road transport, pipeline transport, water transport and air transport. The foreign airlines data decreased from 2002-03 to 2003-04

and the incorporation of this decreasing trend in the backward series has widened the growth rates due to the base effect. The detail of all the activities along with their old base growth rates which were used to derive the GVA estimates at constant prices and newly derived back series is presented in the table 13.

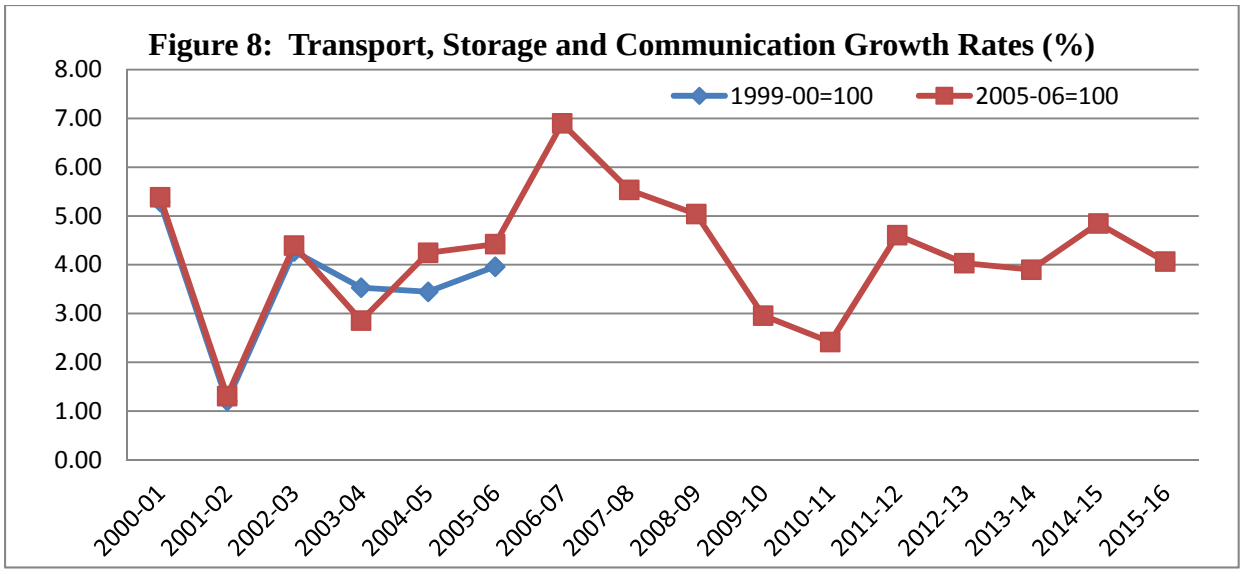
The estimates of backward series for all the activities included in the transport sub-sector, except road transport, for the years 2005-06 to 1999-2000 were derived separately using their specific individual growth rates of respective years on 1999-2000 base which were applied to the GVA of 2005-06 base of each activity. The road transport data is quantitative. The road transport activities is further divided into mechanized (buses, passenger wagons, trucks, NLC, oil & water tankers, pick-ups, taxies and rickshaws etc.), and non-mechanized categories. The output for each aforementioned component at constant prices for the years 2005-06 to 1999-2000 was derived separately using their specific individual growth rates based on actual quantities of respective years. The output of oil and water tankers (new addition in 2005-06 base) was derived by using the growth rates of trucks for respective years. The IC was derived by using the I/O ratio of 2005-06 base. The component-wise GVA was derived separately by taking difference of output and IC, which was later added-up to obtain the GVA of road transport subsector.

The estimates of backward series of storage sub-sector for the years 2005-06 to 1999-2000 were derived by using growth rates of same sub-sector of respective years on 1999-2000 base which was applied to the GVA of 2005-06 base. The detail of newly derived GVA figures at constant prices of storage industry on 2005-06 base and old base growth rates which were used to derive the estimates is presented in the table 13. The estimates for the backward series of communication industry have also been derived by applying the old base growth rate to the GVA of 2005-06 base and same are also presented in the table 13.

All the components mentioned above were then added up to make a backward series of Transport, Storage and Communication for base year 2005-06 and same is presented along with figures of 1999-2000 base in the table 12 and figure 8 below.

Table 12: Comparison of GVA of Transport, Storage and Communication for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Constant GVA 1999-2000 base		Constant GVA 2005-2006 base	
	Transport, Storage and Communication	Growth Rate	Transport, Storage and Communication	Growth Rate
1999-00	400983		777376	
2000-01	422195	5.29	819237	5.38
2001-02	427296	1.21	829927	1.30
2002-03	445552	4.27	866381	4.39
2003-04	461276	3.53	891117	2.86
2004-05	477171	3.45	928947	4.25
2005-06	496073	3.96	970028	4.42



C-III: Finance & Insurance Sector

Finance & Insurance Sector (FIS) is composed of State Bank of Pakistan, Scheduled Banks, Non-Scheduled Banks, Leasing Companies, Modarba Companies, Insurance & Pension Funds and Financial Auxiliaries. The noteworthy conceptual changes have been occurred in the FIS due to incorporation of the concept of Financial Intermediation Services Indirectly Measured (FISIM). The concept of FISIM is introduced in the new methodology in the light of 2008 SNA. The whole Sector is now FISIM based. Generally, the backwards estimates of FISIM have been prepared following the same methodology as was used during the change of base of national accounts from 1999-2000 to 2005-06[1]. It is worth mentioning that "call money rate" was used as a reference rate of interest instead of "KIBOR" in the estimation of FISIM for scheduled banks for years 1999-2000 and 2000-01 as the later was not available for those periods. Further, backward estimates of GVA of stock exchange and asset companies have been compiled by using the all shares index of stock exchanges and deflated by CPI.

All components discussed above have been added up to obtain the estimates of GVA of Finance & Insurance Sector. The comparison of GVA of Finance and Insurance Industry at constant prices for newly derived series with the already existing series is presented in the table 14.

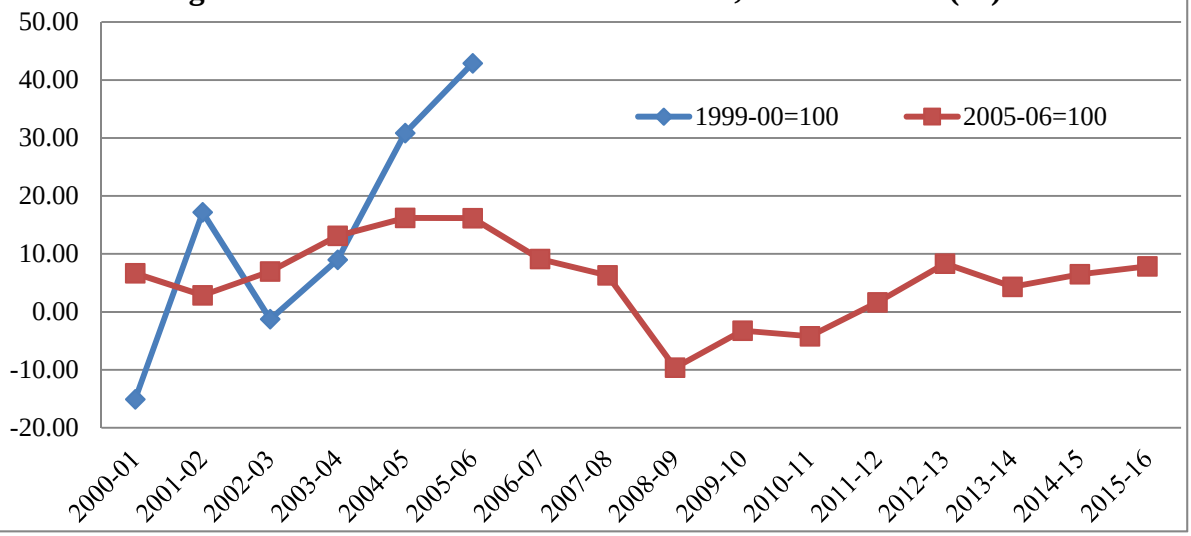
[1] See "National Accounts of Pakistan: Change of base from 1999-2000 to 2005-06" for detail

Table 13: Activity-wise detail of Transport, Storage and Communication (Rs. Million)													
Name of Agencies	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 (2005-06 base)	2000-01/ 1999-00	2001-02/ 2000-01	2002-03/ 2001-02	2003-04/ 2002-03	2004-05/ 2003-04	2005-06/ 2004-05
Railways	1358	4199	1457	915	1339	6692	7474	209.14	-65.30	-37.22	46.33	399.88	11.69
Water Transport	16422	17636	16550	22046	23687	28005	33167	7.40	-6.16	33.21	7.44	18.23	18.43
Air Transport	53605	53077	53449	59985	52596	45975	43670	-0.98	0.70	12.23	-12.32	-12.59	-5.01
Pipeline Transport	8686	6165	7337	6838	6805	6157	5203	-29.02	19.01	-6.80	-0.48	-9.53	-15.50
Communication	112681	120774	118985	124394	134986	143376	130709	7.18	-1.48	4.55	8.52	6.22	-8.83
Road Transport	562903	594835	609176	628009	645513	669332	721597	5.67	2.41	3.09	2.79	3.69	7.81
i) Mechanized	498159	529630	543589	561904	578976	604111	655916	6.32	2.64	3.37	3.04	4.34	8.58
a) Intercity	234234	244608	249900	258130	315390	328926	364362	4.43	2.16	3.29	22.18	4.29	10.77
b) Within city	263926	285022	293689	303774	263586	275185	291555	7.99	3.04	3.43	-13.23	4.40	5.95
ii) Non-Mechanized	64744	65205	65586	66105	66537	65221	65681	0.71	0.58	0.79	0.65	-1.98	0.70
Storage	21721	22550	22973	24195	26191	29411	28209	3.82	1.88	5.32	8.25	12.29	-4.09
TOTAL Unadjusted	777376	819237	829927	866381	891117	928947	970028	5.38	1.30	4.39	2.86	4.25	4.42

Table 14: Comparison of GVA of Finance and Insurance for 1999-2000 & 2005-06 bases (Rs. Mill)				
Year	Constant GVA 1999-2000 base		Constant GVA 2005-2006 base	
	Finance and Insurance	Growth Rate	Finance and Insurance	Growth Rate
1999-00	132454		157924	
2000-01	112455	-15.10	168431	6.65
2001-02	131761	17.17	173234	2.85
2002-03	130081	-1.28	185309	6.97
2003-04	141768	8.98	209602	13.11
2004-05	185501	30.85	243563	16.20
2005-06	265056	42.89	282920	16.16

Incorporation of the FISIM in the GVA estimates of FIS have generated significant differences in the growth rates at 1999-2000 base and 2005-06 base. About 78% is the contribution of the FISIM component. The difference of the two approaches is clear from the figure 9.

Figure 9: Finance and Insurance Services, Growth Rates (%)



C-IV: Housing Services

In 2005-06 based estimates, housing services is comprised of three sub-sectors namely ownership of dwellings, Real Estate agents activities related to residential housing, and Co-operative Housing Societies in contrast to 1999-2000 base where it was comprised of ownership of dwellings only. The important points regarding housing services are as under:-

- In the 1999-2000 base, this industry was known as “Ownership of Dwelling” whereas in the 2005-06 base it is known as “Housing Services”.
- Real estate activities are now covered under housing services which were part of other services known as “Social, Community and Personal Services” in the 1999-2000 base.

- Co-operative housing societies are also new addition to the housing services in the 2005-06 base.
- GVA was used to be extrapolated by growth rate of 3.51 in 1999-2000 base which is now being extrapolated by applying the constant growth rate (4.00%) of two and more room dwellings between 1981 and 1998 census.

For the purpose of backward series of housing services on 2005-06 base, the growth rate of aggregate of GVA of real estate agents activities, which was part of Social, Community and Personal services, and Ownership of Dwellings at 1999-2000 base has been used for the years 1999-2000 to 2005-06. The growth rates of newly generated backward series of housing services and old base series are almost same and their comparison is given in Table 15 below.

Table 15: Backward Series Housing Services (2005-06=100) (Rs. Mill.)

Year	Constant GVA at 1999-2000 base						Constant GVA at 2005-06 base	
	Ownership of Dwellings (OD)	Growth Rate	Real Estate	Growth Rate	Total (OD+ Real Est.)	Growth Rate	Housing Services (2005-06= 100)	Growth Rate
1999-00	110425		6353		116778		411458	
2000-01	114593	3.77	6577	3.53	121170	3.76	426933	3.76
2001-02	118604	3.50	6809	3.53	125413	3.50	441883	3.50
2002-03	122466	3.26	7047	3.50	129513	3.27	456330	3.27
2003-04	126764	3.51	7294	3.50	134058	3.51	472342	3.51
2004-05	131214	3.51	7549	3.50	138763	3.51	488921	3.51
2005-06	135820	3.51	7813	3.50	143633	3.51	506081	3.51

C-V: General Government Services

Details of the sector have been documented in the change of base document 2013. This sector includes the non-market goods and services producing industry under it. All government market producers are included in other industries like railway, airlines etc.. Market producing autonomous bodies have been included in their industries but non-market producing bodies, controlled by the government are included here. In the new base estimates, the output of the autonomous bodies and rent of residential buildings which were not covered in old base estimates, have also been covered. These two components are not significant but it improved the coverage. The estimates of backward series from 2005-06 to 1999-2000 have been compiled by following the steps, described as under:-

- In the first step backward series for wages & salaries and depreciation of Public Admin & Defense (PA&D) were calculated using their respective growth rates in old base series which were then used to obtain the backward series for PA & D of the general government sector.
- For autonomous bodies actual data was available only for the year 2005-06. The forward and backward series were calculated by using the growth rates of wages and salaries of PA&D. Further, depreciation for autonomous bodies was also calculated

by using the growth rates of depreciation of PA&D. Both figures were then added up to obtain the value added figure for autonomous bodies.

- In the next step, figures for PA & D and autonomous bodies were added to obtain the overall GVA figures for General Government Services from 2005-06 to 1999-2000.

The comparison of GVA along with growth rates at constant prices of general government services between 1999-2000 base and 2005-06 base is presented in the table 16 below:-

Table 16: Comparison of GVA of General Government Services for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Constant GVA at 1999-2000 base		Constant GVA at 2005-06 base	
	Public Admn. & Defense	Growth Rate	General Government Services	Growth Rate
1999-00	220291		314369	
2000-01	225152	2.21	321514	2.27
2001-02	240585	6.85	343739	6.91
2002-03	259148	7.72	370484	7.78
2003-04	267321	3.15	382762	3.31
2004-05	268826	0.56	385699	0.77
2005-06	295959	10.09	425218	10.25

C-VI: Other Private Services

Other private services industry is comprised of various distinct activities such as renting of machinery, computer related activities, other business activities (legal, accounting, auditing, market research, business consultancy, architectural & engineering services and advertising), education, health & social work, membership organizations, NGOs, recreational, cultural & sports activities, other services (washing, dry-cleaning, hairdressing, pet caring, shoe shining etc.) and activities of household as employers (domestic staff). The important points need to be considered for compilations of backward series of other private services are as under:-

- In the 1999-2000 base, this industry was known as “Social, Community and Personal Services” which has been re-named as “Other Private Services” in the 2005-06 base.
- Real estate activities used to be included in this sector which is now covered under housing services.
- In the base 1999-2000 the activities of Membership Organizations and NGO’s were covered under one title “NPISH”. However, these activities are covered under separate titles in the 2005-06 base.
- Renting of machinery is the new addition to the GVA of other private services in the 2005-06 base.
- Autonomous bodies producing education services at market prices is also a new addition in 2005-06 base.

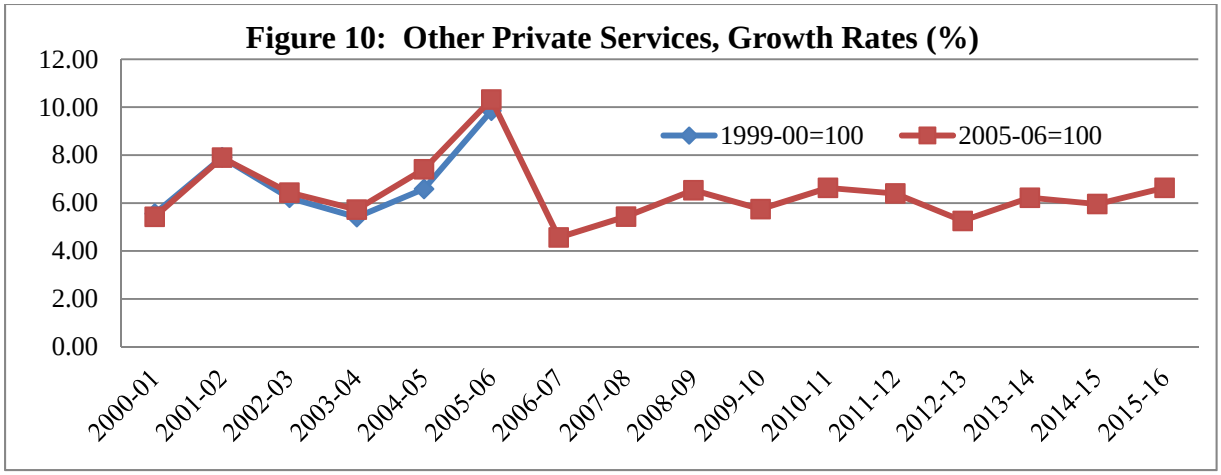
The backward series of other private services at 2005-06 base has been compiled by applying the growth rates of GVA of respective activities covered under Social, Community and Personal Services in the 1999-2000 base but with following exceptions:-

- The GVA of computer related activities covered under Software Export Board, which is a new addition in 2005-06 base, has been extrapolated backward by applying the growth rate of "Pakistan Software Housing Association" (PASHA) in 1999-2000 base.
- The GVA of autonomous bodies providing education services at significant market prices, which was not part of GVA in 1999-2000 base, has been obtained by applying the growth rate of education activities for the respective years.
- The GVA estimates of backward series of Membership Organizations and NGO's have been obtained by applying the growth rate of "NPISH" in 1999-2000 base.
- The backward estimates of renting of machinery have been obtained by applying the overall growth rate of all the activities included in other private services due to non-availability of any other relevant indicator. However, no significant change in the overall growth rate was observed due to insignificant contribution of renting of machinery in other private services.

Resultantly, minor differences in growth rates of old base series of Social, Community and Personal Services and newly generated series of other private services have been observed for the years 2000-01 to 2005-06 and same are presented in the table 17 below. It is a heavy sector with smaller changes proportionally, hence smaller changes in the growth rates as shown in figure 10.

Table 17: Backward Series Other Private Services (2005-06=100) (Rs. Millions)

Year	Constant GVA 1999-2000 base		Constant GVA 2005-2006 base	
	Social, Community & Personal Services	Growth Rate	Other Private Services (2005-06=100)	Growth Rate
1999-00	321551		424886	
2000-01	339437	5.56	447960	5.43
2001-02	366285	7.91	483320	7.89
2002-03	389067	6.22	514431	6.44
2003-04	410125	5.41	543900	5.73
2004-05	437152	6.59	584219	7.41
2005-06	480217	9.85	644514	10.32



CHAPTER 3

Summary

In this chapter summary of the techniques and the results is presented. The crops sub-sector incorporated the structural as well data changes. Livestock component has been updated with the help of new data. There are structural changes in the LSM and data changes in slaughtering. Their treatment is like crops and livestock respectively. There are structural and data changes in the electricity generation and distribution and gas distribution. Wholesale and retail trade is resultant of other sectors, those changes have been introduced. Transport is a combination of different sub-components which have been updated and accumulated. Finance and insurance services component is totally based on new methodology. Minor changes are introduced in the general government services and other private services. Forestry and fishing remained unchanged, hence the original growth rates have been applied. Similar behavior is of the mining and quarrying sector. Construction and housing services remained unchanged, original growth rates have been applied.

Table 18 shows the GVA and growth rates (un-adjusted for fisim) of agricultural, industry and services sectors from 1999-2000 to 2005-06 at constant base prices of 1999-2000 and 2005-06. Table 19 shows the detailed industry-wise figures from 1999-2000 to 2005-06 at constant base prices of 2005-06. Table 20 shows the original and the backward series growth rates.

1. Un-adjusted summary tables (without FISIM)

The industry-wise GVA at constant prices for the period from 1999-2000 to 2005-06 on 2005-06 base is presented in the table 18 below:-

Table 18: Comparison of GVA by industry for 1999-2000 base and 2005-06 base backward series (Rs. Mill)

Base Year	Industry	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Constant GVA 1999-2000 base	Agricultural Sector	923609	903499	904433	941942	964827	1027403	1092098
	Growth (%)		-2.18	0.10	4.15	2.43	6.49	6.30
	Industrial Sector	830865	865196	888539	926183	1076808	1207268	1256827
	Growth (%)		4.13	2.70	4.24	16.26	12.12	4.11
	Services Sectors	1807546	1863396	1952146	2053979	2173947	2358559	2511551
	Growth (%)		3.09	4.76	5.22	5.84	8.49	6.49
	Total (GDP)	**3562020**	**3632091**	**3745118**	**3922104**	**4215582**	**4593230**	**4860476**
	Growth (%)		**1.97**	**3.11**	**4.73**	**7.48**	**8.96**	**5.82**
Constant GVA 2005-06 base	Agricultural Sector	1533707	1522616	1534168	1601918	1647551	1763292	1785768
	Growth (%)		-0.72	0.76	4.42	2.85	7.03	1.27
	Industrial Sector	1123389	1187871	1202919	1286637	1511403	1609841	1665794
	Growth (%)		5.74	1.27	6.96	17.47	6.51	3.48
	Services Sectors	3049845	3205220	3318019	3508438	3734679	4038968	4370324
	Growth (%)		5.09	3.52	5.74	6.45	8.15	8.20
	Total (GVA)	**5706941**	**5915707**	**6055106**	**6396993**	**6893634**	**7412101**	**7821886**
	Growth (%)		**3.66**	**2.36**	**5.65**	**7.76**	**7.52**	**5.53**

Table 19: Backward Series of Gross Value Added (GVA) (2005-06=100) (Rs. Million)								
S. No	**Industry**	**1999-2000**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**
A.	**Agricultural Sector (1 to 4)**	**1533707**	**1522616**	**1534168**	**1601918**	**1647551**	**1763292**	**1785768**
	1. Crops (i+ii+iii)	728144	674612	656844	688233	702670	797558	770828
	Crop (i + ii)	674706	622897	605452	638181	653087	732717	710356
	i) Important Crops	413529	375550	365420	385035	392617	462326	452759
	ii) Other Crops	261177	247347	240032	253146	260470	270391	257597
	iii) Cotton Ginning	53438	51715	51392	50052	49583	64841	60472
	2. Livestock	718984	758335	794665	824422	856646	894348	936498
	3. Forestry	47010	51269	48993	54435	52716	35658	35279
	4. Fishing	39569	38400	33666	34828	35519	35728	43163
B.	**Industrial Sector (1 to 4)**	**1123389**	**1187871**	**1202919**	**1286637**	**1511403**	**1609841**	**1665794**
	1. Mining and Quarrying	192658	204673	219954	243541	296588	249636	258628
	2. Manufacturing (i+ii+iii)	603842	667208	694364	744950	866972	1005914	1100400
	i) Large Scale	485202	541868	561874	604803	718695	848943	933139
	ii) Small Scale	58878	63300	68054	73165	78660	84567	91922
	iii) Slaughtering	59762	62039	64436	66982	69618	72404	75339
	3 Electricity generation & distribution and Gas distribution	189946	171861	145246	148891	208819	191943	116820
	4. Construction	136943	144129	143355	149255	139024	162348	189946
	Commodity Producing Sectors (A+B)	**2657096**	**2710487**	**2737087**	**2888555**	**3158954**	**3373133**	**3451562**
C.	**Services Sectors (1 to 6)**	**3049845**	**3205220**	**3318019**	**3508438**	**3734679**	**4038968**	**4370324**
	1. Wholesale & Retail trade	963832	1021145	1045916	1115503	1234956	1407619	1541563
	2. Transport, Storage & Communication	777376	819237	829927	866381	891117	928947	970028
	3. Finance & Insurance	157924	168431	173234	185309	209602	243563	282920
	4. Housing Services (OD)	411458	426933	441883	456330	472342	488921	506081
	5. General Government Services	314369	321514	343739	370484	382762	385699	425218
	6. Other Private Services	424886	447960	483320	514431	543900	584219	644514
D.	**GDP {Total of GVA at bp (A+B+C)**	**5706941**	**5915707**	**6055106**	**6396993**	**6893634**	**7412101**	**7821886**

2. Limitations

According to Escosura (2006, 2014), the most recent benchmark provides a higher GDP level for the overlapping year, as its coverage of economic activities is wider. Thus, the backwards projection of the new benchmark GDP level with the available growth rates computed at the previous benchmark's relative prices implies a systematic upwards revision of GDP levels for earlier years. This phenomena is clearly depicted in tables 18 and 19

.

Table 20: Comparison of Growth Rates of Gross Value Added (GVA) 1999-2000 base and 2005-06 base													
S. No	**Industry**	**1999-2000 base**						**2005-06 base**					
		2000-01	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**
A.	**Agricultural Sector (1 to 4)**	**-2.18**	**0.10**	**4.15**	**2.43**	**6.48**	**6.30**	**-0.72**	**0.76**	**4.42**	**2.85**	**7.03**	**1.27**
	1. Crops (i+ii+iii)							-7.35	-2.63	4.78	2.10	13.50	-3.35
	Crop (i + ii)	-8.06	-2.79	5.46	2.32	13.27	-2.85	-7.68	-2.80	5.41	2.34	12.19	-3.05
	i) Important Crops	-9.86	-2.45	6.84	1.73	17.73	-3.90	-9.18	-2.70	5.37	1.97	17.75	-2.07
	ii) Other Crops	-3.19	-3.66	1.90	3.91	1.51	0.40	-5.30	-2.96	5.46	2.89	3.81	-4.73
	iii) Cotton Ginning							-3.22	-0.62	-2.61	-0.94	30.77	-6.74
	2. Livestock	3.82	3.67	2.57	2.88	2.34	15.80	5.47	4.79	3.74	3.91	4.40	4.71
	3. Forestry	9.06	-4.44	11.11	-3.16	-32.36	-1.10	9.06	-4.44	11.11	-3.16	-32.36	-1.06
	4. Fishing	-2.95	-12.33	3.45	1.99	0.59	20.80	-2.95	-12.33	3.45	1.98	0.59	20.81
B.	**Industrial Sector (1 to 4)**	**4.13**	**2.70**	**4.24**	**16.26**	**12.12**	**4.10**	**5.74**	**1.27**	**6.96**	**17.47**	**6.51**	**3.48**
	1. Mining and Quarrying	5.52	5.73	6.62	15.61	10.00	4.60	6.24	7.47	10.72	21.78	-15.83	3.60
	2. Manufacturing (i+ii+iii)	9.29	4.46	6.90	14.01	15.51	8.70	10.49	4.07	7.29	16.38	16.03	9.39
	i) Large Scale	10.95	3.51	7.23	18.15	19.92	8.30	11.68	3.69	7.64	18.83	18.12	9.92
	ii) Small Scale	7.51	7.51	7.51	7.51	7.51	8.70	7.51	7.51	7.51	7.51	7.51	8.70
	iii) Slaughtering	2.95	3.05	2.94	2.41	2.41	12.38	3.81	3.86	3.95	3.94	4.00	4.05
	3 Electricity generation & distribution and Gas distribution	-13.72	-7.01	-11.69	56.75	-5.72	-26.60	-9.52	-15.49	2.51	40.25	-8.08	-39.14
	4. Construction	0.53	1.59	3.98	-10.75	18.56	10.20	5.25	-0.54	4.12	-6.86	16.78	17.00
	Commodity Producing Sectors (A+B)	**0.81**	**1.37**	**4.19**	**9.29**	**9.45**	**5.10**	**2.01**	**0.98**	**5.53**	**9.36**	**6.78**	**2.33**
C.	**Services Sectors (1 to 6)**	**3.09**	**4.76**	**5.22**	**5.84**	**8.49**	**6.50**	**5.09**	**3.52**	**5.74**	**6.45**	**8.15**	**8.20**
	1. Wholesale & Retail trade	4.46	2.78	6.00	8.34	12.00	-2.40	5.95	2.43	6.65	10.71	13.98	9.52
	2. Transport, Storage & Communication	5.29	1.21	4.27	3.53	3.45	4.00	5.38	1.30	4.39	2.86	4.25	4.42
	3. Finance & Insurance	-15.10	17.17	-1.28	8.98	30.85	42.90	6.65	2.85	6.97	13.11	16.20	16.16
	4. Housing Services (OD)	3.77	3.50	3.26	3.51	3.51	3.50	3.76	3.50	3.27	3.51	3.51	3.51
	5. General Government Services	2.21	6.85	7.72	3.15	0.56	10.10	2.27	6.91	7.78	3.31	0.77	10.25
	6. Other Private Services	5.56	7.91	6.22	5.41	6.59	9.90	5.43	7.89	6.44	5.73	7.41	10.32
D.	**GDP {Total of GVA at bp (A+B+C)**	**1.97**	**3.11**	**4.73**	**7.48**	**8.96**	**5.80**	**3.66**	**2.36**	**5.65**	**7.76**	**7.52**	**5.53**

3. FISIM Adjusted Backward Series

The incorporation of FISIM is an important conceptual and methodological improvement in the value added estimates being produced by the PBS on 2005-06 base. To facilitate the comparison for a longer time period, FISIM adjusted value added estimates for the backward series for the years 1999-2000 to 2005-06 have also been produced. For this purpose, the same industry-wise yearly growth rates, which were used for the calculation of estimates for various industries as described in chapter 2, were applied to the base year figures of FISIM-adjusted value added estimates of respective industries. Resultantly, a comparable backward series comprising FISIM adjusted estimates was obtained and same is presented in the table 21 below. Table 22 compares the growth rates of the original and backward series after the FISIM adjustment. Figure 11 shows the original and the backward series growth rates while the figure 12 shows the systematic upward revision of the GDP levels.

Table 21: Backward Series of Gross Value Added (GVA) at Constant Basic Prices of 2005-06 (FISIM adjusted)

S. No	Industry	2005-06 base (Rs. Million)						
		1999-2000	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06 (Fisim Adj.)**
A.	**Agricultural Sector (1 to 4)**	**1524840**	**1513844**	**1525297**	**1592631**	**1637993**	**1753002**	**1775346**
	1. Crops (i+ii+iii)	723902	670728	653067	684252	698603	792884	766274
	Crop (i + ii)	**670464**	**619012**	**601674**	**634200**	**649020**	**728043**	**705802**
	i) Important Crops	410119	372453	362406	381860	389379	458513	449025
	ii) Other Crops	260346	246560	239268	252340	259641	269530	256777
	iii) Cotton Ginning	53438	51715	51392	50052	49583	64841	60472
	2. Livestock	714642	753755	789866	819443	851472	888947	930842
	3. Forestry	46728	50961	48699	54108	52399	35444	35067
	4. Fishing	39569	38400	33666	34828	35519	35728	43163
B.	**Industrial Sector (1 to 4)**	**1087468**	**1150635**	**1166111**	**1247508**	**1464252**	**1559566**	**1616157**
	1. Mining and Quarrying	189467	201284	216311	239508	291676	245502	254345
	2. Manufacturing (i+ii+iii)	584594	645940	672234	721209	839339	973847	1065323
	i) Large Scale	469699	524554	543921	585478	695731	821817	903323
	ii) Small Scale	57081	61368	65977	70932	76259	81986	89116
	iii) Slaughtering	57815	60017	62336	64799	67349	70045	72884
	3 Electricity generation & distribution and Gas distri.	179034	161988	136902	140338	196823	180916	110109
	4. Construction	134372	141424	140664	146453	136414	159300	186380
	Commodity Producing Sectors (A+B)	**2612308**	**2664479**	**2691408**	**2840138**	**3102245**	**3312568**	**3391503**
C.	**Services Sectors (1 to 6)**	**3018414**	**3172044**	**3283529**	**3471922**	**3695703**	**3996484**	**4324274**
	1. Wholesale & Retail trade	952268	1008893	1033367	1102119	1220139	1390730	1523067
	2. Transport, Storage & Comm.	768938	810345	820919	856977	881444	918864	959499
	3. Finance & Insurance	157923	168430	173233	185308	209601	243562	282919
	4. Housing Services (OD)	410370	425804	440714	455123	471094	487629	504743
	5. General Government Services	314369	321514	343739	370484	382762	385699	425218
	6. Other Private Services	414545	437058	471557	501911	530663	570001	628828
D.	**GDP {Total of GVA at bp (A+B+C)**	**5630722**	**5836522**	**5974937**	**6312061**	**6797948**	**7309052**	**7715777**

Table 22: Comparison of Growth Rates of Gross Value Added (GVA) 1999-2000 base and 2005-06 base													
S. No	**Industry**	**1999-2000 base**						**2005-06 base**					
		2000-01	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**
A.	**Agricultural Sector (1 to 4)**	**-2.18**	**0.10**	**4.15**	**2.43**	**6.48**	**6.30**	**-0.72**	**0.76**	**4.41**	**2.85**	**7.02**	**1.27**
	1. Crops (i+ii+iii)							-7.35	-2.63	4.78	2.10	13.50	-3.36
	Crop (i + ii)	-8.06	-2.79	5.46	2.32	13.27	-2.85	-7.67	-2.80	5.41	2.34	12.18	-3.05
	i) Important Crops	-9.86	-2.45	6.84	1.73	17.73	-3.90	-9.18	-2.70	5.37	1.97	17.75	-2.07
	ii) Other Crops	-3.19	-3.66	1.90	3.91	1.51	0.40	-5.30	-2.96	5.46	2.89	3.81	-4.73
	iii) Cotton Ginning							-3.22	-0.62	-2.61	-0.94	30.77	-6.74
	2. Livestock	3.82	3.67	2.57	2.88	2.34	15.80	5.47	4.79	3.74	3.91	4.40	4.71
	3. Forestry	9.06	-4.44	11.11	-3.16	-32.36	-1.10	9.06	-4.44	11.11	-3.16	-32.36	-1.06
	4. Fishing	-2.95	-12.33	3.45	1.99	0.59	20.80	-2.95	-12.33	3.45	1.98	0.59	20.81
B.	**Industrial Sector (1 to 4)**	**4.13**	**2.70**	**4.24**	**16.26**	**12.12**	**4.10**	**5.81**	**1.34**	**6.98**	**17.37**	**6.51**	**3.63**
	1. Mining and Quarrying	5.52	5.73	6.62	15.61	10.00	4.60	6.24	7.47	10.72	21.78	-15.83	3.60
	2. Manufacturing (i+ii+iii)	9.29	4.46	6.90	14.01	15.51	8.70	10.49	4.07	7.29	16.38	16.03	9.39
	i) Large Scale	10.95	3.51	7.23	18.15	19.92	8.30	11.68	3.69	7.64	18.83	18.12	9.92
	ii) Small Scale	7.51	7.51	7.51	7.51	7.51	8.70	7.51	7.51	7.51	7.51	7.51	8.70
	iii) Slaughtering	2.95	3.05	2.94	2.41	2.41	12.38	3.81	3.86	3.95	3.94	4.00	4.05
	3 Electricity generation & distribution and Gas distribution	-13.72	-7.01	-11.69	56.75	-5.72	-26.60	-9.52	-15.49	2.51	40.25	-8.08	-39.14
	4. Construction	0.53	1.59	3.98	-10.75	18.56	10.20	5.25	-0.54	4.12	-6.86	16.78	17.00
	Commodity Producing Sectors (A+B)	**0.81**	**1.37**	**4.19**	**9.29**	**9.45**	**5.10**	**2.00**	**1.01**	**5.53**	**9.23**	**6.78**	**2.38**
C.	**Services Sectors (1 to 6)**	**3.09**	**4.76**	**5.22**	**5.84**	**8.49**	**6.50**	**5.09**	**3.51**	**5.74**	**6.45**	**8.14**	**8.20**
	1. Wholesale & Retail trade	4.46	2.78	6.00	8.34	12.00	-2.40	5.95	2.43	6.65	10.71	13.98	9.52
	2. Transport, Storage & Comm.	5.29	1.21	4.27	3.53	3.45	4.00	5.38	1.30	4.39	2.86	4.25	4.42
	3. Finance & Insurance	-15.10	17.17	-1.28	8.98	30.85	42.90	6.65	2.85	6.97	13.11	16.20	16.16
	4. Housing Services (OD)	3.77	3.50	3.26	3.51	3.51	3.50	3.76	3.50	3.27	3.51	3.51	3.51
	5. General Government Services	2.21	6.85	7.72	3.15	0.56	10.10	2.27	6.91	7.78	3.31	0.77	10.25
	6. Other Private Services	5.56	7.91	6.22	5.41	6.59	9.90	5.43	7.89	6.44	5.73	7.41	10.32
D.	**GDP {Total of GVA at bp (A+B+C)**	**1.97**	**3.11**	**4.73**	**7.48**	**8.96**	**5.80**	**3.65**	**2.37**	**5.64**	**7.70**	**7.52**	**5.56**

Figure 11: Gross Value Added, Growth Rates (%)

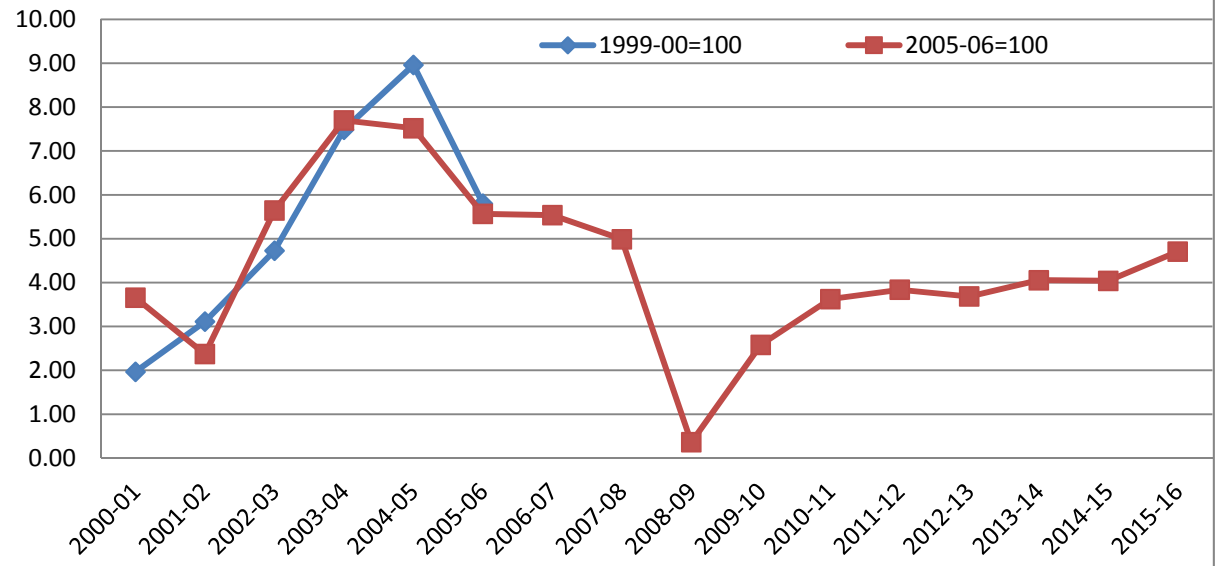
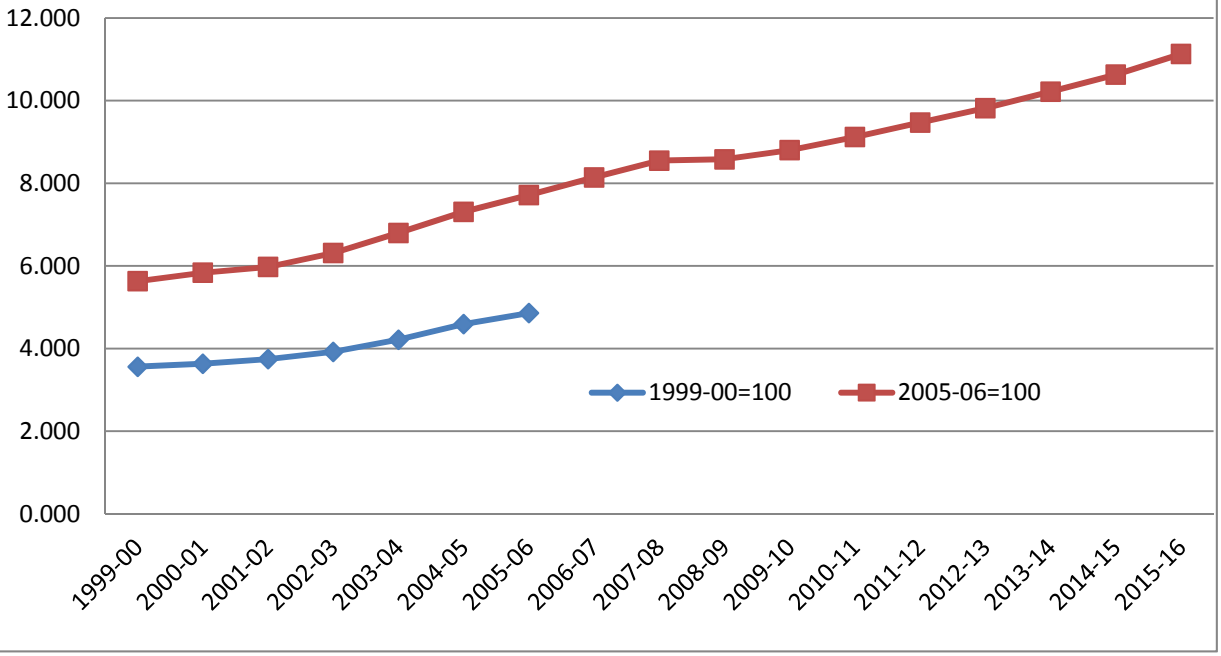


Figure 12: GVA (Trillion Rs.)



CHAPTER 4

Backward Series of Gross Value Added (GVA) at Current Prices

1. Introduction

The national accounts aggregates at current prices are equally important like those at constant prices. Whereas the constant estimates are used to make comparisons in real terms, the current estimates are used to make the comparison for accounting period in question. More specifically, compilation of GNI per capita and various components of aggregate demand like household and government final consumption expenditure, gross capital formation and external trade are generally analyzed at current prices. So, keeping in view the requirement of data users, PBS has also compiled backward series of value added at current prices. The detail of compilation methodology at broader industry level as well as at activity levels, where required, is given in following paragraphs:-

2. Industry-Wise Methodology

A: AGRICULTURE

A-I: Crops

In old base crops were divided in two groups' i.e. ., Major crops and Minor crops. Where Major crops included 12 crops namely Wheat, Maize, Rice, Sugarcane, Cotton, Gram, Barley, Bajra, Jowar, Sesamum, Rape seed &mustard and Tobacco and rest of the crops are included in minor crops. While in new base the two groups are converted to important crops and other crops. Where Important crops include 5 crops namely Wheat, Maize, Rice, Sugarcane and Cotton with their byproducts and all remaining crops are included in other crops. Backward series of crops at current prices is extracted in the following steps:

1. Output of Major crops and Minor crops published in 1999-00 base at constant prices have been grouped according to 2005-06 base methodology and growth rates are obtained for each crop (Wheat, Maize, rice, Sugarcane and Cotton) in important crops and by sub groups i.e., Gram, Barley, Jowar, Bajra, pulses, vegetables, fruits, fodder green, spices, oil seeds, Rape & Mustered, Tobacco, and Sesamum in other crops. Inputs (seed, fertilizers, pesticides, water, ploughing & planking, transport charges and wastage) are taken as in 1999-00 with some adjustments in seed, ploughing & planking and wastage for important crops and other crops and growth rates are obtained.
2. Growth rates obtained in step 1 are used to derive each component of output as well as inputs to extract backward series from 2005-06 to 1999-00 at constant prices and GVA is taken as value of output *less* inputs at constant prices.
3. Backward series of output as well as inputs component wise obtained in step 2 is then inflated by applying their Whole Sale Price Indices (WPI) deflators in order to get output and inputs at current prices. WPIs are taken from Price Section and Pakistan statistical year book (2010) are used to develop Inflators (2005-06 base) for each component of output as well as inputs of crops for the years 1999-00 to 2005-06. Hence GVA of back

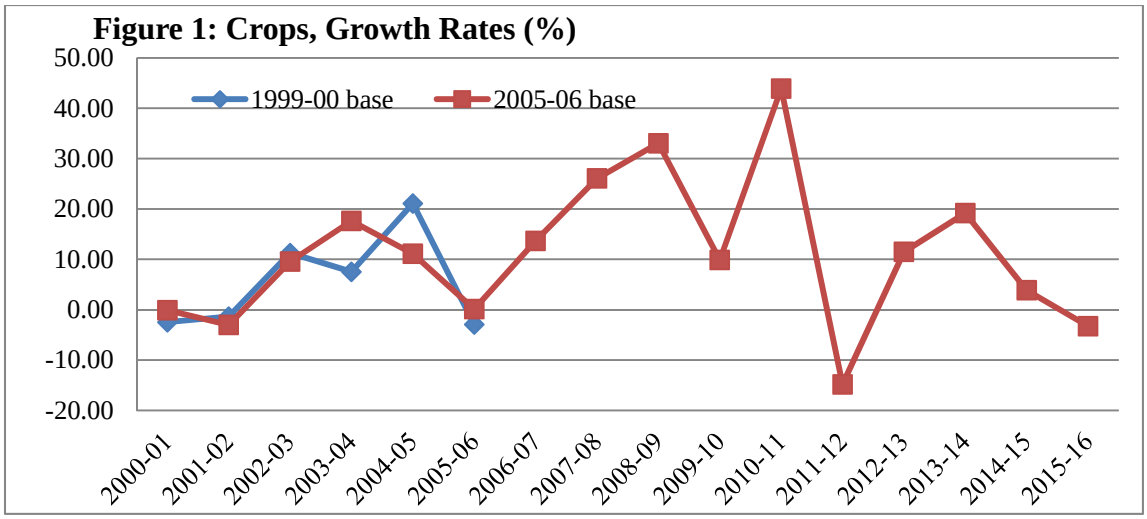
series of crops (Important & other Crops) at current prices is then taken as output minus inputs separately.

4. Two new groups are added in 2005-06 base which were not the part of 1999-00 base series. These are Cotton ginning and own account capital formation (Miscellaneous GVA). Cotton Ginning is extracted backward by using the growth of cotton production at constant prices and this constant series is then inflated by applying WPI deflator of cotton. Miscellaneous GVA is extrapolated backward by a fix growth of 0.8% at constant prices and growth of aggregate of GVA of Important crops, other crops and Cotton ginning at current prices is used to obtain backward series of Miscell. GVA at current prices.

Hence, backward series of GVA of important crops, other crops, cotton ginning and miscellaneous is aggregated to obtain the GVA of crops at current prices. The comparison of value added for crops at current prices is presented in table 1 and figure 1. The GVA of important crops at current prices has registered a growth of 16.0% during 2002-03 due to rice (15% growth each in production and WPI deflator) and WPI cotton (21.0%). In 2003-04, the growth rate of 22.3% in important crops is due to WPI wheat (18.6%), rice (8% growth in production and 9.8% growth in deflator) and WPI cotton (30.8%). During 2004-05, the growth of important crops at constant prices was 17.8% whereas it in only 8.6% at current prices primarily due to WPI cotton (-34.1%). A slight improvement in growth of important crops at current prices (-1.8%) as compared to growth at constant prices (-2.1%) has been observed due to WPI sugarcane (28.6%). The other crops has registered a growth of 20.5% during 2004-05 which is due to WPI deflator used in vegetables (24.2%), increase in production of fruits (14%), WPI potatoes (91.9%) and WPI tomatoes (47.4%). The double digit growth in cotton ginning during 2002-03 (14.9%) and 2003-04 (26.4%) is due to deflators (21.0% in 2002-03 and 30.8% in 2003-04). A negative growth in cotton ginning has been observed at current prices during 2004-05 due to WPI cotton (-34.1%) in contrast to constant growth which was 30.8%.

Table 1: Comparison of GVA of Crops for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Current GVA 1999-2000 base						Current GVA 2005-2006 base							
	Major Crops	GR	Minor Crops	GR	Total (Crops)	GR	Important Crops	GR	Other Crops	GR	Cotton Ginning	GR	Total Crops	GR
1999-00	342200		125679		467879		325520		187157		42620		555297	
2000-01	325579	-4.86	130679	3.98	456258	-2.48	317657	-2.42	190135	1.59	46966	10.20	554758	-0.10
2001-02	316857	-2.68	133136	1.88	449993	-1.37	299172	-5.82	195659	2.91	43064	-8.31	537895	-3.04
2002-03	370117	16.81	130450	-2.02	500567	11.24	347134	16.03	192649	-1.54	49470	14.88	589253	9.55
2003-04	411836	11.27	126372	-3.13	538208	7.52	424438	22.27	206090	6.98	62513	26.37	693041	17.61
2004-05	497556	20.81	154218	22.03	651774	21.10	461032	8.62	248301	20.48	60650	-2.98	769983	11.10
2005-06	464276	-6.69	168461	9.24	632737	-2.92	452759	-1.79	257597	3.74	60472	-0.29	770828	0.11



A-II: Livestock

In 1999-00, GVA of livestock at current prices was used to be obtained by applying a single inflator (Producer Price Index for fresh milk) to the constant GVA but in 2005-06 base each component of output as well as input is inflated separately in order to get value added at current prices. Same (2005-06 base) approach has been applied to extract backward series of livestock.

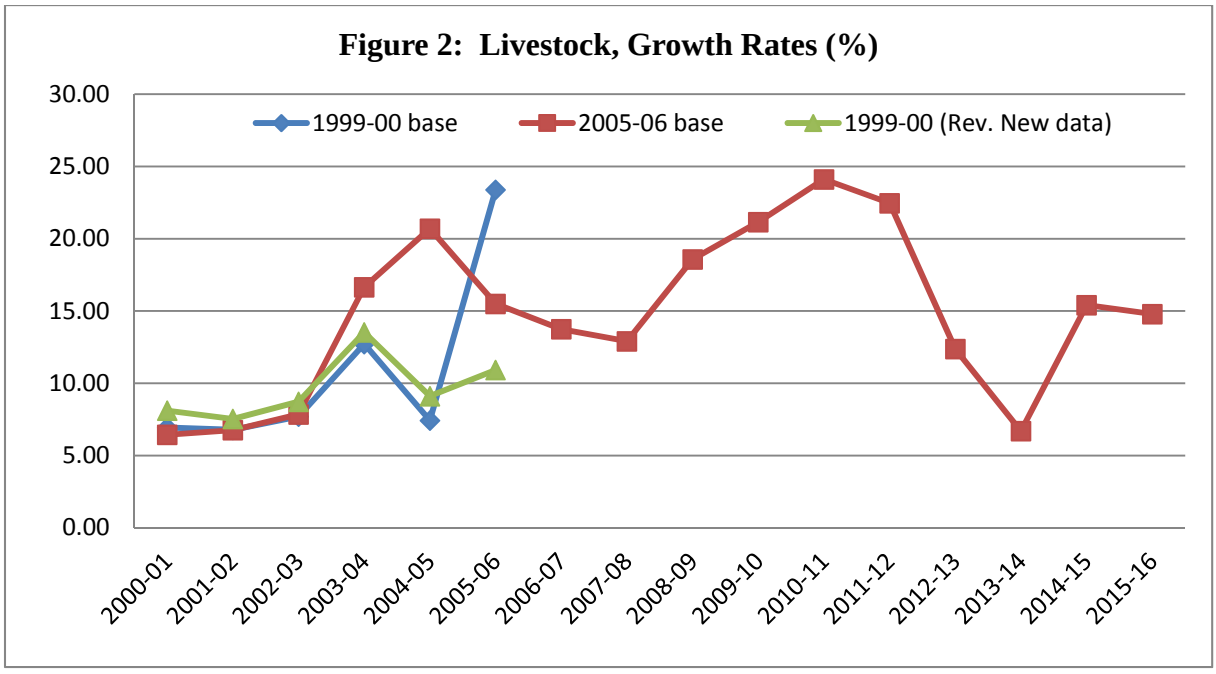
The backward series of output of livestock at constant prices was obtained separately for each component including natural growth & regeneration, sold for slaughtering, livestock products and poultry &poultry products. Therefore these components have been inflated separately by applying specifically compiled Wholesale Price Indices (WPI) prepared on 2005-06 base in order to get backward series of output of livestock. Same approach has been adapted to inflate components of intermediate consumption (IC) including poultry inputs & other inputs. The specific details are as under:-

- For natural growth and regeneration component, the combined WPI for meat and milk has been applied while the components of sold for slaughtering and livestock products have been inflated by using WPI meat and milk respectively.
- For the components of poultry & poultry products, WPI chicken and eggs have been applied separately. The aforementioned four components have been aggregated in order to obtain the total value of output for the backward series at current prices.
- Components of backward series of IC have also been inflated separately. The IC components of green fodders have been taken from the current value calculated in crops. Similar procedure has been adopted for dry fodders. The other inputs have been inflated by applying WPI milk whereas poultry inputs have been inflated by applying WPI chicken. These components form the total IC at current prices for the livestock industry.

Then backward series of value added of livestock at current prices is simply the difference of aggregated output and inputs. The backward series of the component "other value added" comprising of hunting & animal husbandry is originally taken at current prices and thus has been included in the value added of livestock to get overall GVA of this industry. For comparison of the GVA of livestock at current prices in 1999-2000 base and 2005-06 base, table 2 and figure 2 are referred. The overall GVA of livestock at current prices has registered a double digit growth during 2003-04, 2004-05 and 2005-06, which is primarily due to WPI deflators used in the output and inputs e.g. WPI milk & meat (15.9% in 2004-05 and 10.2% in 2005-06), WPI meat (23.0% in 2004-05 and 9.9% in 2005-06), WPI milk (11.3% in 2004-05 and 10.3% in 2005-06), WPI chicken (13.5% in 2004-05), and WPI eggs (24.8% in 2004-05) etc.

Table 2: Comparison of GVA of Livestock for 1999-2000 base and 2005-06 base (Rs. Mill)

Year	Current GVA 1999-2000 base		New		Livestock GVA 2005-2006 base			
	Livestock	G R	Livestock	G R	Constant	G R	Current	G R
1999-00	417120		464208		718984		469882	
2000-01	446058	6.94	501857	8.11	758335	5.47	500121	6.44
2001-02	476310	6.78	539662	7.53	794665	4.79	533933	6.76
2002-03	512976	7.70	586749	8.73	824422	3.74	575845	7.85
2003-04	578218	12.72	666097	13.52	856646	3.91	671742	16.65
2004-05	621170	7.43	726782	9.11	894348	4.40	810811	20.70
2005-06	766448	23.39	806151	10.92	936498	4.71	936498	15.50



A-III: Forestry

The output of forestry is comprised of timber, firewood and other products (resin, gums, mazri & silk worm etc.) whereas input is taken as 25% of output of timber and firewood and thus GVA is simply the difference of output and inputs. Components and compilation methodology of GVA is same in 2005-06 base as was in 1999-00 base.

In 1999-00 base constant GVA of forestry was used to be inflated by applying a combined PPI deflator for timber and firewood in order to get GVA at current prices, whereas in 2005-06 base WPI for firewood is applied in order to obtain GVA at current prices.

In the compilation of backward series of GVA of forestry at current prices, WPI for firewood has been applied. The comparison of GVA of forestry at current prices in 1999-2000 base and 2005-06 base is presented in table 3. Value added in forestry industry at current prices has decreased by 25% in 2004-05, which is due to decrease in production of timber (31.4%). Conversely, a positive growth of 17.7% has been observed in 2005-06 due to higher growth in deflator i.e. WPI firewood (18.9%).

Table 3: Comparison of GVA of Forestry for 1999-2000 base and 2005-06 base (Rs. In Mill)

Year	Current GVA 1999-2000 base		Forestry GVA 2005-2006 base			
	Forestry	G R	Constant	G R	Current	G R
1999-00	23447		47010		29947	
2000-01	26439	12.76	51269	9.06	33679	12.46
2001-02	25611	-3.13	48993	-4.44	32612	-3.17
2002-03	29148	13.81	54435	11.11	37167	13.97
2003-04	31597	8.40	52716	-3.16	39966	7.53
2004-05	23800	-24.68	35658	-32.36	29969	-25.01
2005-06	27545	15.74	35279	-1.06	35279	17.72

A-IV: Fishing

The output of fishing in 2005-06 base is comprised of marine and inland fish whereas inputs of marine and inland components are taken as 40% and 30% of their respective outputs. Hence GVA is calculated separately for marine and inland components in order to obtain over all GVA of fishing industry. Components of GVA are same in 2005-06 base as were in 1999-00 base except input-output ratios.

In 1999-00 base, GVA of fishing at current prices was used to be calculated by applying per unit (Kg) prices obtained from the figures of quantity and value supplied by the sources i.e. Marine Fisheries Department Karachi on annual basis. In 2005-06 base, WPI fish has been applied to inflate the overall constant GVA of fishing in order to obtain the GVA at current prices.

For backward series of fishing at current prices, specifically compiled WPI fish with 2005-06 base, has been used. For comparison of the GVA of fishing at current prices in 1999-

2000 base and 2005-06 base, table 4 is referred. The growth of value added of fishing industry at current prices in 1999-2000 base during 2005-06 was 74.3% due to incorporation of results of the study on fishing whereas value added in 2005-06 base has increased by 22.9% due to increase in production of inland fishing (25.6%).

Table 4: Comparison of GVA of Fishing for 1999-2000 base and 2005-06 base (Rs. Mill)

Year	Current GVA 1999-2000 base		GVA 2005-2006 base			
	Fishing	G R	Constant	G R	Current	G R
1999-00	15163		39569		38213	
2000-01	16546	9.12	38400	-2.95	37684	-1.38
2001-02	16377	-1.02	33666	-12.33	36894	-2.10
2002-03	16625	1.51	34828	3.45	33758	-8.50
2003-04	16728	0.62	35519	1.98	35707	5.77
2004-05	17490	4.56	35728	0.59	35111	-1.67
2005-06	30492	74.34	43163	20.81	43163	22.93

B: INDUSTRY SECTOR

B-I: Mining and Quarrying

The components of GVA of mining & quarrying (M&Q) are natural gas, crude oil, coal, other minerals (limestone, marble iron ore etc.), surface minerals, crushing of stone, allied services and exploration services. For current backward series of M &Q, above mentioned components of GVA in backward series at constant prices have been inflated by applying appropriate WPI deflators (converted to 2005-06 base). The components-wise detail is an under:-

- The backward series of GVA of natural gas at current prices has been obtained by applying WPI Gas to constant backward component.
- The backward series of GVA of crude oil has been compiled by applying WPI crude oil, which was derived as combination of diesel oil, mobil oil, motor spirit, furnace oil and kerosene oil.
- Similarly, WPI coal has been used for obtaining the backward series of coal at current prices whereas for all other components, WPI crude oil has been used as an inflator.
- Exploration services have been compiled directly because current data was available for all the years.

The final backward series of GVA of M&Q at current prices is the sum of all the above mentioned components. For comparison of GVA of M&Q at current prices in 1999-2000 base and 2005-06 base is presented in table 5 and figure 3 are referred.

The value added of M&Q at constant prices from 1999-2000 to 2003-04 was revised in the 85th meeting of the National Accounts Committee held on May 24, 2006 on account of exclusion of exploration costs from the value added as well as correction of natural gas figures which were mistakenly treated in millions instead of billions. These corrections were incorporated in the value added at constant prices but not in the value added at current prices resulting in extreme growth rates during 2003-04 (52%) and 2004-05 (-12.6%). The corrected

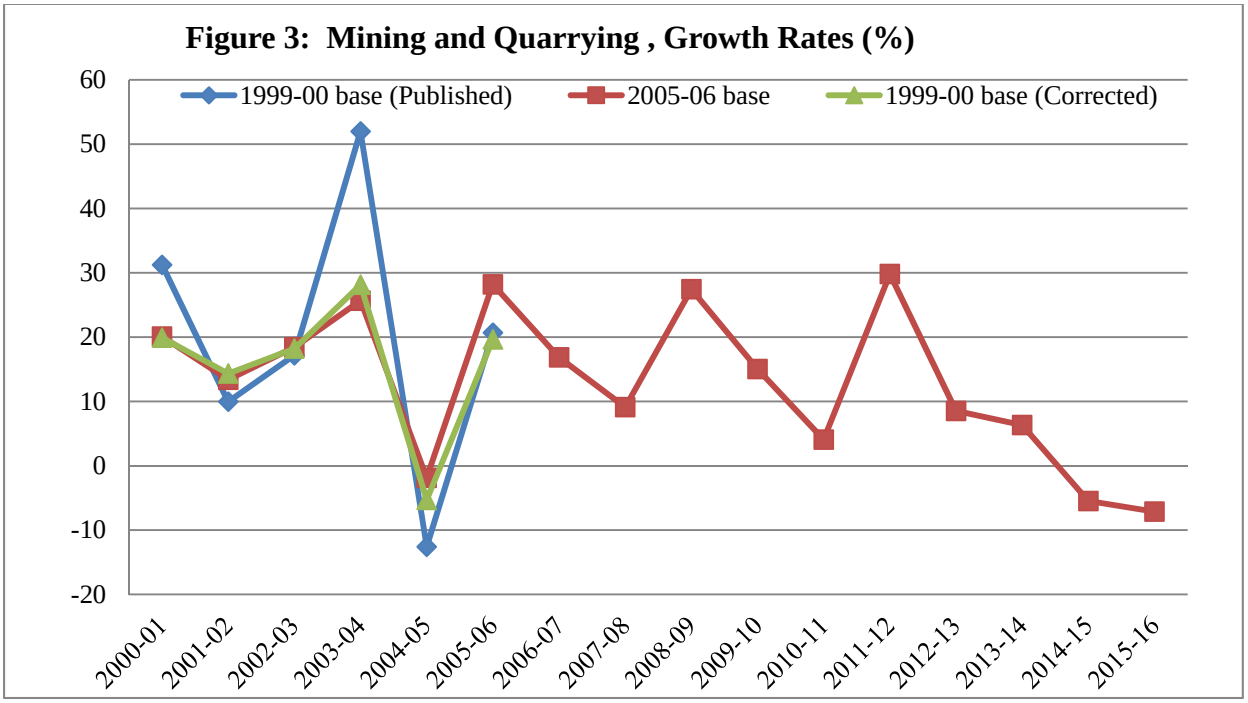
GVA at current prices in 1999-2000 base along with revised growth rates is given in table 5 and figure 3. Consequently, more stable and comparable pattern of growth in GVA has been emerged in 2005-06 base and 1999-2000 base (Figure 3).

In the estimates of backward series of GVA at current prices, natural gas and crude oil, having 55.6 % and 19.1% share in the value added in 2005-06 respectively, are the major determinants of double digit growth in 2005-06 base estimates. WPI deflators have also contributed towards improvement in the growth rates at current prices e.g. natural gas (22.5% in 2000-01, 9.5% in 2004-05 and 19.3% in 2005-06) and crude oil (20.7% in 2004-05 and 30.5% in 2005-06).

Table 5: Comparison of GVA of Mining and Quarrying for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Current GVA 1999-2000 base				Mining and Quarrying GVA 2005-2006 base			
	Original		New					
	M&Q	GR.	M&Q	GR.	Constant	GR.	Current	GR.
1999-00	81052		100296		192658		101502	
2000-01	106370	31.24	120277	19.92	204673	6.24	121887	20.08
2001-02	116952	9.95	137516	14.33	219954	7.47	138186	13.37
2002-03	137044	17.18	162558	18.21	243541	10.72	163642	18.42
2003-04	208290	51.99	208290	28.13	296588	21.78	205630	25.66
2004-05	182051	-12.60	197243	-5.30	249636	-15.83	201738	-1.89
2005-06	219682	20.67	235955	19.63	258628	3.60	258628	28.20

Figure 3: Mining and Quarrying , Growth Rates (%)



B-II: Manufacturing

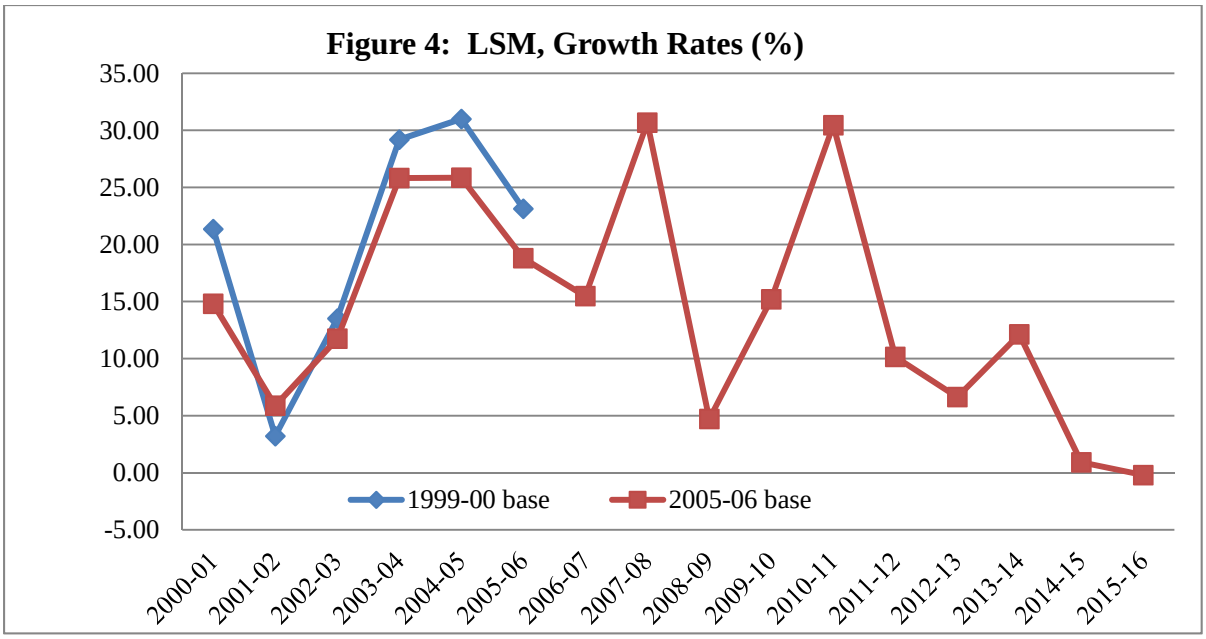
a) Large Scale Manufacturing Industries (LSMI)

The Gross Value Added (GVA) of Large Scale Manufacturing (LSM) at constant prices is used to be converted into current prices by applying the specifically developed Producer's Price Index (PPI) comprising of 50 items having total weight of 53.6524 with 1999-2000 as base year. PPI is being compiled in the PBS Karachi office in comparison to Consumer Price Index (CPI) and Wholesale Price Index (WPI) which are compiled at PBS Headquarters Islamabad. But due to old weights and non-existence of appropriate data collection mechanism from the producers, the PPI is subject to wider fluctuations, sometimes too difficult to explain, interpret and defend.

Therefore, in order to compile the backward series of GVA at current prices for LSM, specifically compiled Wholesale Price Index (WPI) has been used. So, keeping in view product structure of LSM, 83 items from the WPI (2007-08 base) with total weight of 58.7217 have been selected. In this regard, item-wise data of WPI on 2000-01 base and 1990-91 base for the period in question was obtained from the Statistical Year Book 2009, an annual regular publication of the PBS. The indices of 83 selected items on 2007-08 base were extrapolated backward by applying the growth rates of comparable items from 2000-01 base and 1990-91 base. Then weights of the WPI (2007-08 base) were used to compile the weighted average index to be used as deflator in LSM and same has been used in the compilation of current backward series of LSM. The comparison of GVA of LSM at current prices on 1999-2000 base and 2005-06 base is presented in the table 6 and figure 4. The value added growth at current prices in 1999-2000 base and 2005-06 base is roughly comparable for all the years. The slight difference is due to exclusion of cotton ginning in 2005-06 base estimates. The current growth of 18.8% in 2005-06 is due to WPI deflators (8.1%) e.g. refined sugar (41.7%), tobacco products (11.3%), leather without hairs (17.7%), motor spirit (34.6%), diesel oil (34.2%), kerosene oil (26.1%), furnace oil (49.0%), fertilizers (10.8%), auto tyres (14.7%), cement (17.0%) and electrical wires (16.0%).

Table 6: Backward Series of Large Scale Manufacturing (LSM) Industries (Current Prices)

Year	Current GVA 1999-2000 base		GVA 2005-2006 base				
	GVA	GR	Constant	GR	Deflator	Current	GR
1999-00	338602		485202		75.28	365258	
2000-01	410879	21.35	541868	11.68	77.38	419324	14.80
2001-02	424089	3.22	561874	3.69	79.01	443951	5.87
2002-03	481374	13.51	604803	7.64	82.03	496094	11.75
2003-04	621899	29.19	718695	18.83	86.85	624184	25.82
2004-05	814657	31.00	848943	18.12	92.53	785501	25.84
2005-06	1003062	23.13	933139	9.92	100.00	933139	18.80



b) Small Scale Manufacturing Industries (SSMI)

The GVA of Small Scale Manufacturing (SSM) at constant prices is used to be converted into current prices by applying the specifically developed Producer's Price Index (PPI) comprising of 29 items having total weight of 12.2269 with 1999-2000 as base year. The same problems/difficulties as encountered in LSM sector are also faced in SSM sector. The method used for the compilation of WPI deflators for LSM, has also been applied for SSM but with 25 commodities, relevant to SSM products, having total weight of 16.4643 and same has been applied for the compilation of backward estimates of value added. The comparison of GVA of SSM at current prices on 1999-2000 base and 2005-06 base is presented in the table 7. SSM has registered a growth of 19.1% in 2003-04 due to WPI deflator (10.7%) e.g. cotton yarn (23.4%), wheat flour (16.2%) and other cereal flour (18.8%). A higher growth in WPI items such as tobacco products (11.3%) and leather without hairs (17.7%) has contributed in growth of 11.5% in 2005-06.

Table 7: Backward Series of Small Scale Manufacturing (SSM) Industries at current prices (Rs.Mill)

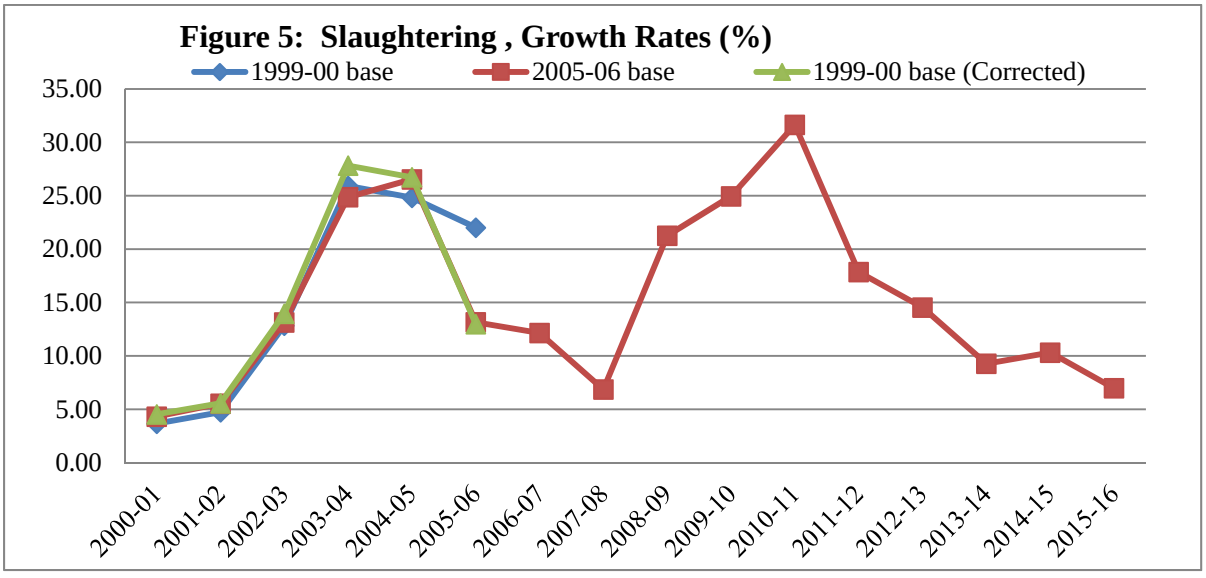
Year	Current GVA 1999-2000 base		SSM GVA 2005-2006 base				
	GVA SSM	G R	Constant	G R	Deflator	Current	G R
1999-00	132369		58878		82.95	48842	
2000-01	143463	8.38	63300	7.51	84.81	53687	9.92
2001-02	161734	12.74	68054	7.51	85.42	58129	8.27
2002-03	180558	11.64	73165	7.51	87.66	64137	10.34
2003-04	200626	11.11	78660	7.51	97.08	76362	19.06
2004-05	222176	10.74	84567	7.51	97.51	82459	7.98
2005-06	245962	10.71	91922	8.70	100.00	91922	11.48

c) Slaughtering

Components of GVA of slaughtering are meat and other products. Meat is also combination of poultry meat and other. Similarly, IC is comprised of live poultry and other live animals. For backward series of GVA at current prices, a combined WPI inflator comprising of chicken and meat with 2005-06 as base, has been applied to the value added estimates at constant prices. The comparison of GVA of slaughtering at current prices in 1999-2000 base and 2005-06 base is presented in the table 8 and figure 5. The data changes have also been incorporated and both value added estimates and growth rates have been re-determined and are presented under the "New" column. A double digit growth in current value added of slaughtering has been noted at current prices from 2002-03 onwards primarily due to aforementioned WPI deflators which have registered growth of 8.8%, 20.1%, 21.7% and 8.8% during 2002-03, 2003-04, 2004-05 and 2005-06 respectively.

Table 8: Comparison of GVA of Slaughtering for 1999-2000 base and 2005-06 base (Rs. Mill)

Year	Current GVA 1999-2000 base				Current GVA 2005-2006 base			
	Original		New					
	Slaughtering	GR.	Slaughtering	GR.	Slaughtering	GR.	Slaughtering	GR.
1999-00	51830		52919		61525		33831	
2000-01	53728	3.66	55314	4.53	63569	3.32	35292	4.32
2001-02	56272	4.73	58392	5.56	65806	3.52	37246	5.54
2002-03	63502	12.85	66542	13.96	68074	3.45	42139	13.14
2003-04	79961	25.92	85053	27.82	70347	3.34	52617	24.87
2004-05	99801	24.81	107787	26.73	72812	3.50	66580	26.54
2005-06	121770	22.01	121769	12.97	75339	3.47	75339	13.16



B-III: Electricity Generation & Distribution and Gas Distribution

Methodology adopted for current backward series for Electricity generation & distribution and Gas distribution is as under:

a) Electricity Generation and Distribution:

In order to construct backward series from 2005-06 (current base) to 1999-00 it was imperative to harmonize the structure of old and current series. For this purpose following structural changes have been adopted in the new base:

Structural Changes in 2005-06 Base:

1. The output was roughly at the same level in both the basis, however, the only difference was that subsidy was added in the output of 2005-06.
2. In old base the word "others" was used for IPPs and captives however in 2005-06 they have been given separate status.
3. Water supply was part of this sector in 1999-00 however in 2005-06 it has been excluded.

Methodology

i. First step in compilation of backward series was to harmonize the structure of both the basis. So, GVA of Water Supply at current prices was excluded from the overall GVA of electricity generation from 1999-00 to 2004-05.

ii. Subsidies received by WAPDA and KESC were added in their output from 1999-00 to 2004-05. The figures of subsidies were taken from the General Government Statistics Section of PBS.

b) Gas Distribution:

Methodology:

i. Compressed Natural Gas (CNG), which was included in the distribution in 1999-00 base but is part of wholesale and trade in 2005-06 base. So, GVA of CNG at current prices was excluded from the overall GVA of Gas Distribution from 1999-00 to 2004-05.

ii. OGDCL and PPL, which were part of the GVA in 1999-2000 base, have been excluded as their major activity was exploration. Further, output of Mari Gas Company comprised of exploration activities and distribution activities in 1999-2000 base. However in 2005-06 base, only distribution activities have been included in the output.

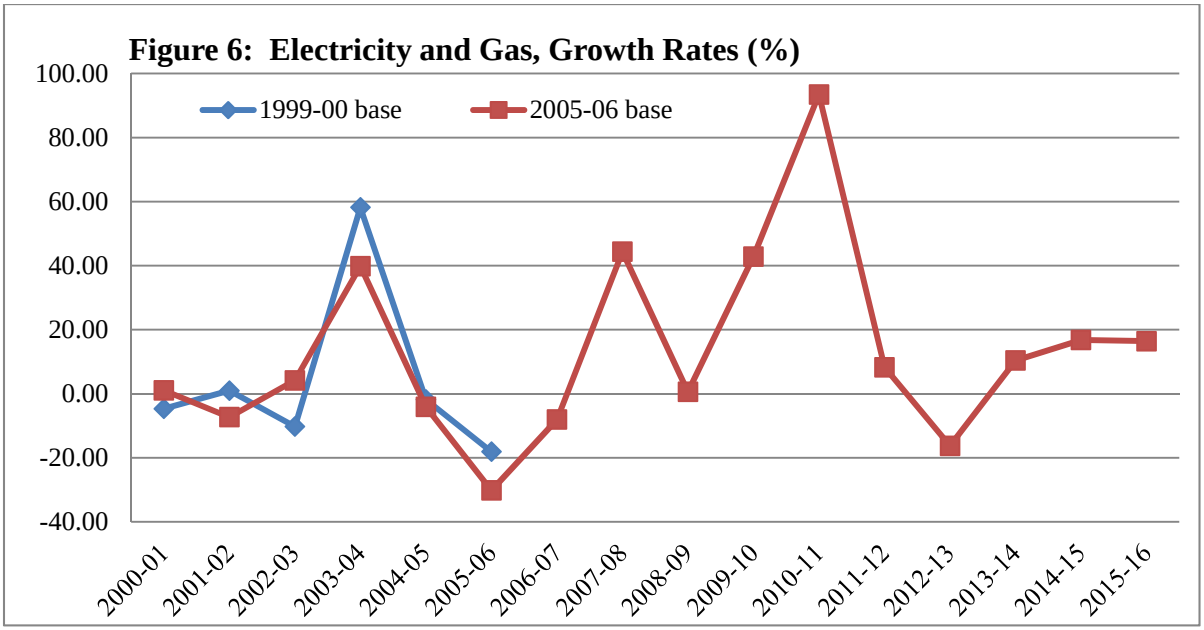
iii. Growth rates of restructured series, after excluding CNG, LPG, OGDCL, PPL and exploration part of Mari Gas, were calculated.

c) Electricity generation and distribution and gas distribution

GVAs at current prices for Electricity generation & distribution and gas distribution were then added up to obtain overall GVA at current prices for electricity and gas sector. Comparison of value added of the above mentioned industry is presented in table 9 and figure 6. A fluctuating growth of electricity generation and distribution e.g. 41.2% in 2003-04, -8.2% in 2004-05 and -37.3% in 2005-06, has also resulted in fluctuations in the overall growth rates of the industry despite having positive and double digit growth from the gas distribution sub-sector from 2001-02 onwards.

Table 9: Comparison of GVA of Electricity Generation & Distribution and Gas Distribution for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Current GVA 1999-2000 base		Current GVA 2005-2006 base					
	Electricity and Gas & Water Supply	G R	Electricity Generation & Distribution	G R	Gas Distribution	G R	Electricity Gen. & Dist. and Gas Dist.	G R
1999-00	139626		119999		7975		127974	
2000-01	133091	-4.68	123090	2.58	6199	-22.27	129289	1.03
2001-02	134350	0.95	110974	-9.84	8847	42.72	119821	-7.32
2002-03	120556	-10.27	114900	3.54	9897	11.87	124797	4.15
2003-04	190713	58.19	162274	41.23	12243	23.70	174517	39.84
2004-05	187267	-1.81	148979	-8.19	18378	50.11	167357	-4.10
2005-06	153338	-18.12	93406	-37.30	23414	27.40	116820	-30.20



B-IV: Construction

In the annual regular estimates on 2005-06 base, GVA of construction is primarily compiled at current prices based on construction expenditures incurred in various industries and

obtained from the GFCF estimates which are then converted into constant prices by applying the WPI building material. The backward series of GVA of construction at current prices has been compiled by applying the current growth rates of same industry for the respective years to GVA of 2005-06 i.e. the base year. The comparison of GVA of construction at current prices on 1999-2000 base and 2005-06 base is presented in the table 10.

Table 10: Comparison of GVA of Construction for 1999-2000 base & 2005-06 base (Rs. Mill)

Year	Current GVA 1999-2000 base		Construction GVA 2005-2006 base			
	Construction	G R	Constant	G R	Current	G R
1999-00	87386		136943		92274	
2000-01	94670	8.34	144129	5.25	99965	8.34
2001-02	95197	0.56	143355	-0.54	100521	0.56
2002-03	100880	5.97	149255	4.12	106522	5.97
2003-04	115497	14.49	139024	-6.86	121957	14.49
2004-05	153333	32.76	162348	16.78	161909	32.76
2005-06	179885	17.32	189946	17.00	189946	17.32

C: SERVICES SECTORS

C-I: Wholesale and Retail Trade (WRT)

WRT is the combination of several distinct groups which have been extrapolated backward separately as described below:-

1) Crops

Crops group in WRT is comprised of 19 items including wheat, maize, rice, cotton, sugarcane, grams, barley, jowar, bajra, pulses, potatoes, vegetables & fruits etc. and crop-wise value of output in 2005-06 has been used to derive the trade value added (TVA) by applying their respective marketable proportions and trade margins. The current backward series of TVA of crops has been compiled by using the crop-wise output at current prices for the aforementioned components and their respective marketable supply and trade margins.

2) Livestock

The output of livestock group in WRT in 2005-06 is comprised of live animals sold for slaughtering, milk, dung & urine and wool & hair whereas in 1999-2000 base component of live animals sold for slaughtering was not included. To extract backward series of livestock TVA, output at current prices has been used for components mentioned above and their respective marketable supply and trade margins have been applied in order to obtain component-wise TVA which has subsequently added-up get over all TVA of the group.

3) Forestry

Constant series of TVA of forestry was prepared by applying growth rates of same industry in 1999-2000 base. The TVA of forestry at current prices has been derived by applying the growth rates of TVA of forestry at current prices for the respective years.

4) Fishing

Constant series of TVA of fishing was prepared by applying growth rates of same industry in 1999-2000 base. The TVA of fishing at current prices has been derived by applying the growth rates of TVA of fishing at current prices for the respective years.

5) Large scale manufacturing (LSM)

The backward series of TVA of LSM products at constant prices was obtained by applying the growth rate of QIM. The constant values have been converted into current prices by applying the specifically compiled WPI deflators comprising of 83 items, having total weight of 58.7217. The detail has been given in the manufacturing section.

6) Small scale manufacturing

The TVA of small scale products was extrapolated from 2005-06 to 1999-00 by using the fixed growth of 7.51%, as was in 1999-2000 base series, which has been converted into current prices by applying the specifically compiled WPI comprising of 25 items. The detail has been given in the manufacturing section.

7) Slaughtering

The output of slaughtering at constant prices has been converted into current prices by applying the combined WPI inflator comprising of chicken and meat with 2005-06 as base. Then proportion of market share and trade margins being used in the 2005-06 base have been applied to obtain the TVA of slaughtering.

8) Imports

Imports are comprised of three distinct groups i.e. consumer goods, capital goods and intermediate goods. The data of imports for the year 1999-00 to 2005-06 at current prices was available in the National Accounts. Respective marketable supply and trade margins ratios were applied to obtain TVA at current prices.

9) CNG (special stores)

This component was not the part of 1999-00 base series. In order to obtain the GVA of CNG from 2004-05 to 1999-2000, the production data was taken from the Pakistan Energy book. These figures were then converted into TVA by applying trade margins at constant prices and same has been inflated by applying WPI Natural Gas in order to get current TVA of CNG.

10) Maintenance and repair of vehicles

The output of maintenance & repair of vehicles at constant prices has been extrapolated backward by applying the growth rate of mechanized road transport. Then trade margin was applied to obtain the TVA at constant prices which has been converted into current prices by applying the WPI machinery.

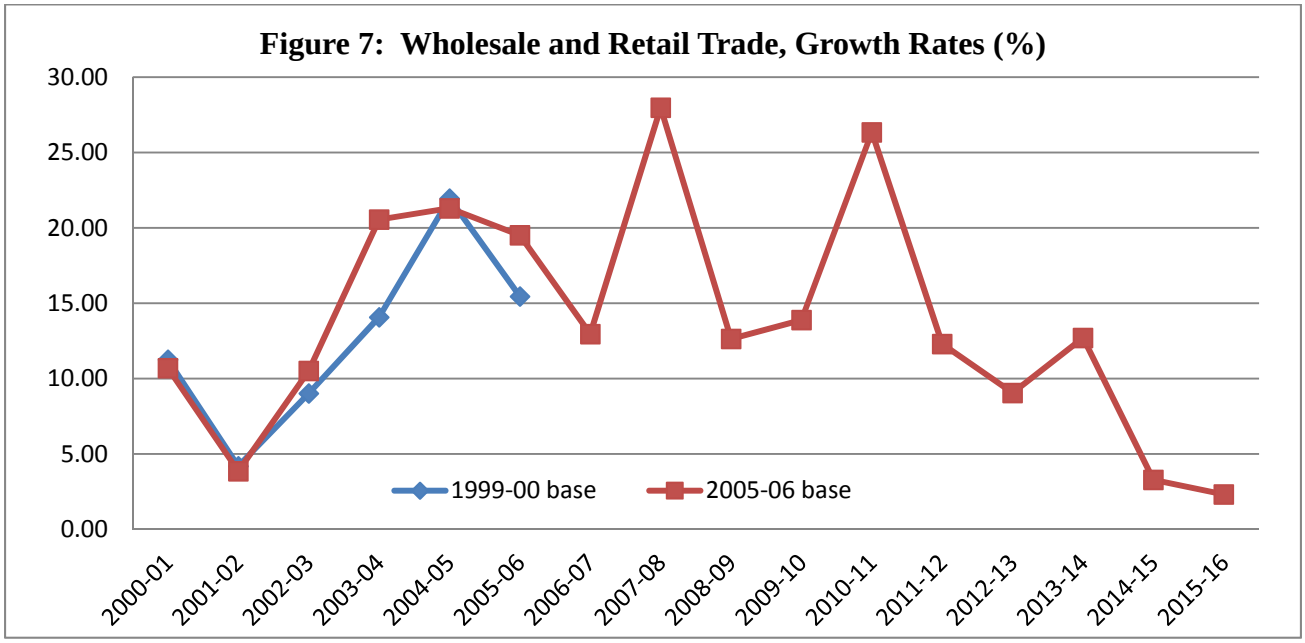
11) Hotels & Restaurants

Backward series of GVA of Hotels & Restaurants at constant prices was extrapolated backward from 2005-06 to 1999-00 by a fixed growth rate of 10% and the same has been converted into current prices by applying food deflator.

All these components are then added up to make a backward series of WRT value added at current prices which is presented in table 11 along with value added figures on 1999-2000 base. Value added in WRT has registered a growth of 20.6%, 21.3% and 19.5% in 2003-04, 2004-05 and 2005-06 respectively due to high growth of LSM (45% in 2003-04, 26% in 2004-05 and 19% in 2005-06) and imported products (24% in 2003-04, 37% in 2004-05 and 40% in 2005-06).

Table 11: Comparison of GVA of Wholesale and Retail Trade (WRT) for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Current GVA 1999-2000 base		Current GVA 2005-2006 base	
	WRT	Growth Rate	WRT	Growth Rate
1999-00	621842		694367	
2000-01	691854	11.26	768588	10.69
2001-02	720812	4.19	798166	3.85
2002-03	785776	9.01	882046	10.51
2003-04	896357	14.07	1063340	20.55
2004-05	1093114	21.95	1289862	21.30
2005-06	1262001	15.45	1541563	19.51



C-II: Transport, Storage and Communication

Transport, Storage and Communication are three distinct activities and have been covered separately in 1999-2000 and 2005-06 bases. For the estimates of backward series of Pakistan Railways, actual current data has been used. Pakistan Railway Advisory & Consultancy Services Limited (PRACS) and Railways Franchised Booking Agents are new activities in 2005-06 base whose GVA at current prices has been derived by using the growth rates of Pakistan Railways at current prices for respective years.

The estimates of backward series of all the activities included in water transport subsector for the years from 2005-06 to 1999-2000 have been derived by using their specific individual current growth rates for respective years in 1999-2000 base which were applied to the GVA of 2005-06 base of each activity. Only for Port Qasim Authority actual current data were used. The backward estimates of GVA of new activity i.e. International Freight Forwarders has been derived by using growth rates of Shipping, Goods Forwarding & Custom Clearing Agents for the respective years.

The estimates of backward series of activities included in air transport subsector i.e. Pakistan International Airlines (PIA), Foreign Airlines, Civil Aviation Authority (CAA), Private Domestic Airlines & Travel Agents have been derived by applying their respective current growth rates in 1999-2000 base to the GVA of 2005-06 base. Although, composition of aforementioned subsector is same in 1999-2000 base and 2005-06 base but slight methodological changes have been made in the compilation of output and intermediate consumption (IC). In the PIA data, other operating income (operational) has been included in the output and insurance premium has been excluded from IC in 2005-06 base estimates. In the compilation of GVA of CAA in 2005-06 base, some components of non-aeronautical revenue given on sale of fixed assets etc. have been excluded from the output whereas insurance, interest charges on long-term loans etc. have been excluded from the IC. Estimates of GVA of travel agents in backward series have been compiled by applying the combined growth rate of PIA, foreign airlines and domestic airlines for respective years. The estimates of backward series of activities included in pipelines subsector has been compiled by applying their current growth rates in 1999-2000 base to the GVA of 2005-06 base. There was no change in the components of the sub-sector.

The estimates of backward series of output at current prices of all the activities included in road transport subsector for the year 2005-06 to 1999-2000 have been derived by applying the CPI (mechanized and non-mechanized) deflators to the output at constant prices of the backward series for the respective years. Similarly, IC at current prices has been derived by applying the WPI (Diesel) deflator to the constant IC. Consequently, current GVA for all the components of the road transport subsector has been derived as the residual of current output and current IC.

The estimates of backward series of storage sub-sector have been derived by using growth rates of same subsector of respective years in 1999-00 base which was applied to the GVA of 2005-06 base.

The estimates of backward series of all the activities included in communication subsector for the year 2005-06 to 1999-2000 have been derived by using their specific individual

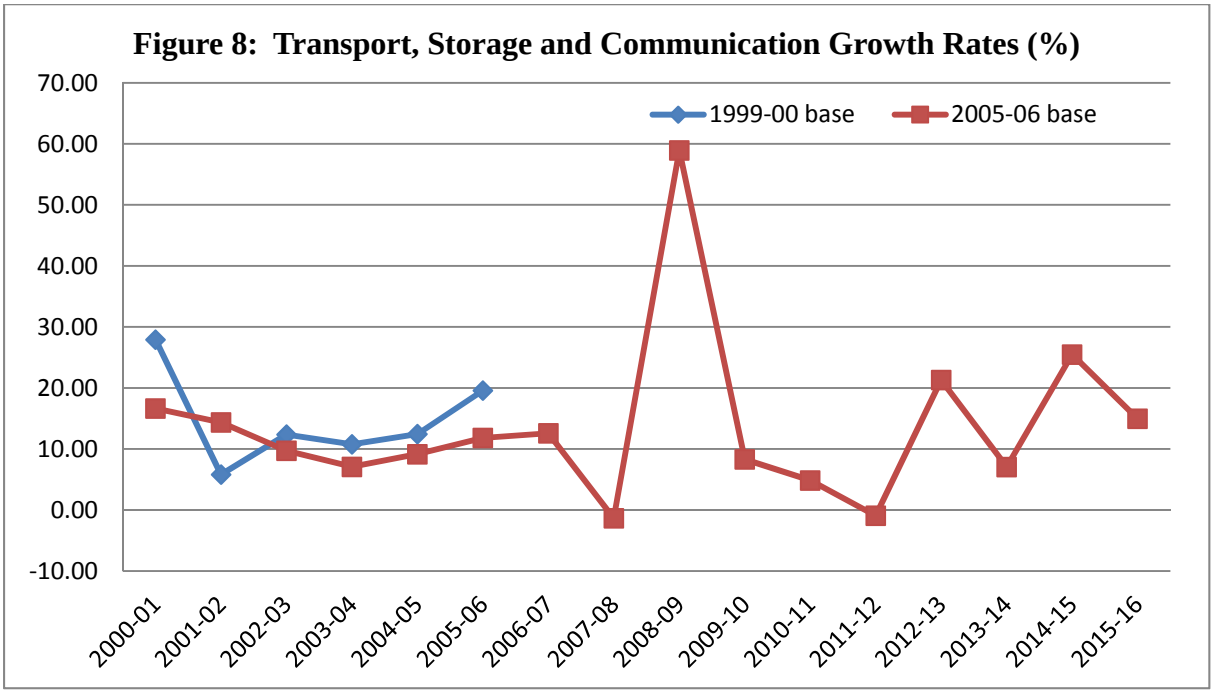
growth rates of respective years in 1999-2000 base. Only for Mobile phone actual current data has been used. Franchised post offices are new activity in Communication subsector in 2005-06 base and its GVA estimates in backward series has been derived by using growth rates of post office activity for respective years.

The overall GVA of Transport, Storage and Communication at current prices has been has been compiled by summing up all the aforementioned activities which is presented in table 12 and figure 8 along with GVA in 1999-2000 base. An extraordinary increase in growth rate of GVA during 2008-09 in the estimates at current prices has been noticed during 2008-09 (Figure 8) which is due to PIA (202.2%), mechanized road transport (82.0%) and non-mechanized road transport (35.9%).

Table 12: Comparison of GVA of Transport, Storage and Communication for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Current GVA 1999-2000 base		Current GVA 2005-2006 base	
	Transport, Storage and Communication	Growth Rate	Transport, Storage and Communication	Growth Rate
1999-00	400983		507131	
2000-01	512997	27.93	591492	16.63
2001-02	542828	5.82	676463	14.37
2002-03	609929	12.36	742209	9.72
2003-04	675623	10.77	794747	7.08
2004-05	759711	12.45	867552	9.16
2005-06	908409	19.57	970028	11.81

Figure 8: Transport, Storage and Communication Growth Rates (%)



C-III: Finance & Insurance Sector

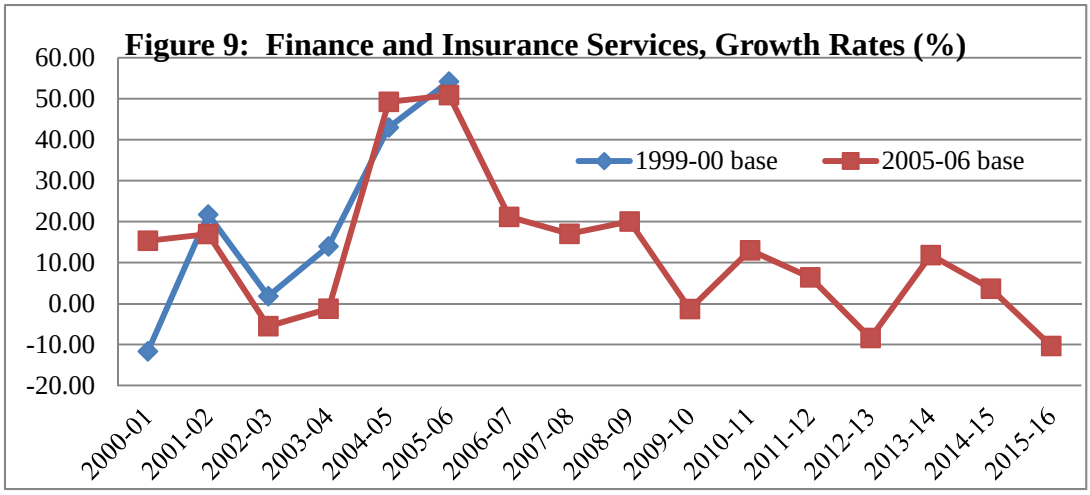
For compilation of the backward series, actual data has been used from 1999-00 to 2005-06 for every activity in Finance and Insurance. There is major change in methodology of GVA compilation in 2005-06 base as compared to the methodology in 1999-00 base. The backward current series is compiled in accordance with the methodology of 2005-06 base. The major difference is the incorporation of concept of FISIM.

There is also a change in the compilation of estimates for Central Banking and Insurance Industry. Moreover, GVA estimates for Stock Brokers and Stock Exchanges have also been added in the new base ie.2005-06.

The estimates from 1999-00 to 2005-06 at current prices have been compiled by using actual data and under 2005-06 base methodology. The comparison of value added in 1999-2000 base and 2005-06 is presented in the table 13. Due to major changes in compilation methodology, the estimates compiled are not directly comparable. The high growth rate in current GVA during 2004-05 and 2005-06 is due to increase in FISIM on deposits from Rs.20.8 billion in 2003-04 to Rs.100.5 billion in 2004-05 and Rs.183.5 billion in 2005-06. This is due to increase in spread on deposits (difference between KIBOR rate and rate of return) which has increased from 1.09 in 2003-04 to 4.34 in 2004-05 and 6.76 in 2005-06.

Table 13: Comparison of GVA of Finance and Insurance for 1999-2000 base and 2005-06 base (Rs. Million)

Year	Current GVA 1999-2000 base		Current GVA 2005-2006 base	
	Finance and Insurance	G R	Finance and Insurance	G R
1999-00	132454		99972	
2000-01	116997	-11.67	115282	15.31
2001-02	142424	21.73	134820	16.95
2002-03	144989	1.80	127340	-5.55
2003-04	165230	13.96	125690	-1.30
2004-05	236254	42.98	187549	49.22
2005-06	364320	54.21	282920	50.85



C-IV: Housing Services

In the 2005-06 base estimates, the GVA of housing services is primarily compiled at constant prices which are then converted into current prices by applying the CPI rent in contrast to 1999-2000 base where CPI (General) was used. In the compilation of backward series of GVA of housing services, the specifically compiled CPI (Rent) with 2005-06 as the base year, has been used. The comparison of GVA of housing services at current prices on 1999-2000 base and 2005-06 base is presented in the table 14.

Table 14: Backward Series Housing Services (2005-06 base) (Rs. Million)

Year	Current GVA 1999-2000 base		Housing Services GVA 2005-06 base			
	Ownership of Dwellings	G R	Constant	G R	Current	G R
1999-00	110425		411458		302003	
2000-01	124359	12.62	426933	3.76	322554	6.80
2001-02	126454	1.68	441883	3.50	343197	6.40
2002-03	135139	6.87	456330	3.27	357865	4.27
2003-04	146264	8.23	472342	3.51	386125	7.90
2004-05	165441	13.11	488921	3.51	444816	15.20
2005-06	184812	11.71	506081	3.51	506081	13.77

C-V: General Government Services

The backward series of current GVA of general government services from 2005-06 to 1999-2000 has been compiled by following steps described below:

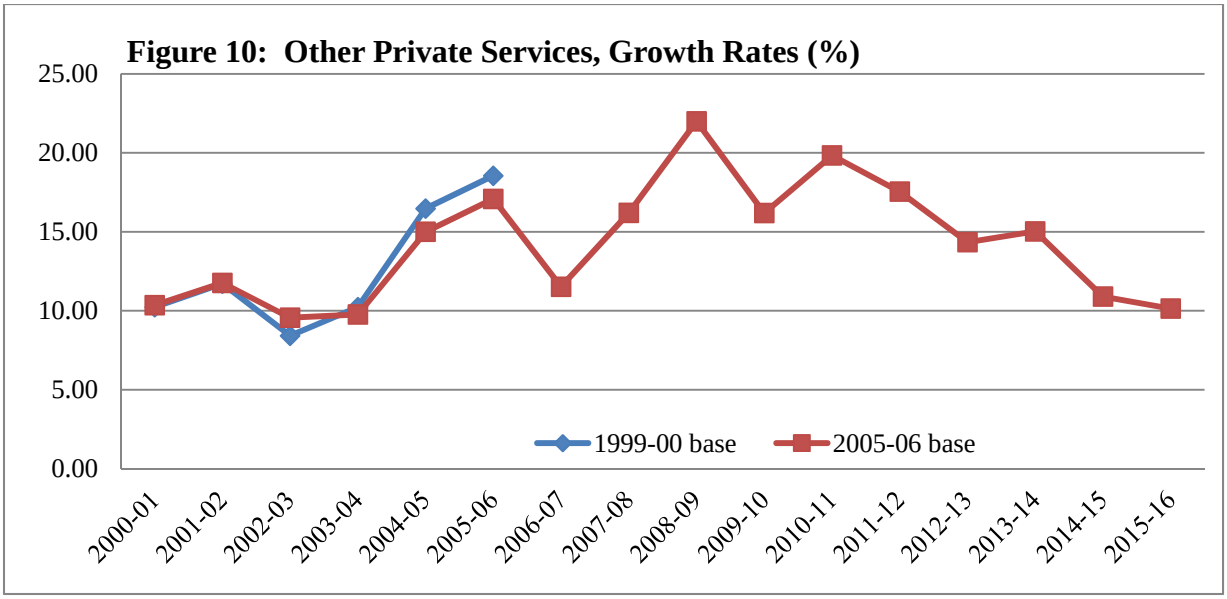
1. The backward series for wages and salaries of PA&D at current prices has been compiled by using the growth rates of wages and salaries of PA&D at current prices in 1999-2000 base.
2. The backward series for depreciation of PA&D at current prices has been derived by using the growth rates of depreciation of PA&D at current prices in 1999-2000 base.
3. For autonomous bodies actual data was available only for the year 2005-06. The backward series has been calculated by using the growth rates of wages and salaries of PA&D at current prices.
4. Depreciation for autonomous bodies was calculated by using the growth rates of depreciation of PA&D at current prices.
5. The figures for PA& D and autonomous bodies has been added-up to obtain the overall GVA for General Government Sector at current prices form 2004-05 to 1999-2000.

Table 15: Comparison of GVA of General Government Services for 1999-2000 base and 2005-06 base (Rs. Million)				
Year	Current GVA 1999-2000 base		Current GVA 2005-2006 base	
	Public Admn. & Defence	Growth Rate	General Government Services	Growth Rate
1999-00	220291		231842	
2000-01	235039	6.69	247372	6.70
2001-02	260042	10.64	273696	10.64
2002-03	285854	9.93	300837	9.92
2003-04	312105	9.18	328386	9.16
2004-05	343348	10.01	361217	10.00
2005-06	404628	17.85	425218	17.72

C-VI: Other Private Services

In the 1999-2000 base estimates, the current GVA of above mentioned industry were used to be compiled by applying the CPI (General) at aggregate level. However, in the 2005-06 base, the current GVA is compiled by applying the specific CPI deflator at more detailed level of the industry. Therefore, backward series of current GVA has been compiled by applying the specifically derived CPI deflators. The comparison of GVA of other private services at current prices on 1999-2000 base and 2005-06 base is presented in the table 16.

Table 16: Backward Series Other Private Services (2005-06 base) (Rs. Million)						
Year	Current GVA 1999-2000 base		Other Private Services GVA 2005-06 base			
	Social, Community & Personal Services	Growth Rate	Constant	Growth Rate	Current	Growth Rate
1999-00	321551		424886		322738	
2000-01	354434	10.23	447960	5.43	356147	10.35
2001-02	395967	11.72	483320	7.89	398051	11.77
2002-03	429301	8.42	514431	6.44	436095	9.56
2003-04	473211	10.23	543900	5.73	478673	9.76
2004-05	551181	16.48	584219	7.41	550475	15.00
2005-06	653437	18.55	644514	10.32	644514	17.08



Summary Results: Current GVA

Summary results of current GVA are presented in tables 17 through 21 and in figures 11 & 12.

Table 17 : Comparison of Overall Current GVA for 1999-2000 base and 2005-06 base (Rs. Million)

Base Year	Industry	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Current GVA 1999-2000 base	Agricultural Sector	923609	945301	968291	1059316	1164751	1314234	1457222
	Growth (%)		2.35	2.43	9.40	9.95	12.83	10.88
	Industrial Sector	830865	942263	989349	1083914	1416986	1659285	1923698
	Growth (%)		13.41	5.00	9.56	30.73	17.10	15.94
	Services Sectors	1807546	2035680	2188527	2390988	2668790	3149049	3777607
	Growth (%)		12.62	7.51	9.25	11.62	18.00	19.96
	Total (GDP)	**3562020**	**3923244**	**4146167**	**4534218**	**5250527**	**6122568**	**7158527**
	Growth (%)		**10.14**	**5.68**	**9.36**	**15.80**	**16.61**	**16.92**
Current GVA 2005-06 base	Agricultural Sector	1093339	1126242	1141334	1236023	1440456	1645874	1785768
	Growth (%)		3.01	1.34	8.30	16.54	14.26	8.50
	Industrial Sector	769680	859444	897854	997331	1255266	1465543	1665794
	Growth (%)		11.66	4.47	11.08	25.86	16.75	13.66
	Services Sectors	2158053	2401435	2624393	2846392	3176961	3701472	4370324
	Growth (%)		11.28	9.28	8.46	11.61	16.51	18.07
	Total (GVA)	**4021072**	**4387121**	**4663582**	**5079746**	**5872683**	**6812889**	**7821886**
	Growth (%)		**9.10**	**6.30**	**8.92**	**15.61**	**16.01**	**14.81**

Table 18: Backward Series of Gross Value Added (GVA) at Current Prices (2005-06 base) (Rs. Million)								
S. No	**Industry**	**1999-2000**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**
A.	**Agricultural Sector (1 to 4)**	**1093339**	**1126242**	**1141334**	**1236023**	**1440456**	**1645874**	**1785768**
	1. Crops (i+ii+iii)	555297	554758	537895	589253	693041	769983	770828
	Crop (i + ii)	512677	507792	494831	539783	630528	709333	710356
	i) Important Crops	325520	317657	299172	347134	424438	461032	452759
	ii) Other Crops	187157	190135	195659	192649	206090	248301	257597
	iii) Cotton Ginning	42620	46966	43064	49470	62513	60650	60472
	2. Livestock	469882	500121	533933	575845	671742	810811	936498
	3. Forestry	29947	33679	32612	37167	39966	29969	35279
	4. Fishing	38213	37684	36894	33758	35707	35111	43163
B.	**Industrial Sector (1 to 4)**	**769680**	**859444**	**897854**	**997331**	**1255266**	**1465543**	**1665794**
	1. Mining and Quarrying	101502	121887	138186	163642	205630	201738	258628
	2. Manufacturing (i+ii+iii)	447930	508303	539326	602370	753162	934539	1100400
	i) Large Scale	365258	419324	443951	496094	624184	785501	933139
	ii) Small Scale	48842	53687	58129	64137	76362	82459	91922
	iii) Slaughtering	33831	35292	37246	42139	52617	66580	75339
	3 Electricity generation & distribution and Gas distribution	127974	129289	119821	124797	174517	167357	116820
	4. Construction	92274	99965	100521	106522	121957	161909	189946
	Commodity Producing Sectors (A+B)	**1863019**	**1985686**	**2039188**	**2233354**	**2695722**	**3111417**	**3451562**
C.	**Services Sectors (1 to 6)**	**2158053**	**2401435**	**2624393**	**2846392**	**3176961**	**3701472**	**4370324**
	1. Wholesale & Retail trade	694367	768588	798166	882046	1063340	1289862	1541563
	2. Transport, Storage & Communication	507131	591492	676463	742209	794747	867552	970028
	3. Finance & Insurance	99972	115282	134820	127340	125690	187549	282920
	4. Housing Services (OD)	302003	322554	343197	357865	386125	444816	506081
	5. General Government Services	231842	247372	273696	300837	328386	361217	425218
	6. Other Private Services	322738	356147	398051	436095	478673	550475	644514
D.	**GDP {Total of GVA at bp (A+B+C)**	**4021072**	**4387121**	**4663582**	**5079746**	**5872683**	**6812889**	**7821886**

Table 19: Comparison of Growth Rates (Without FISIM) of GVA at **Current Prices** (1999-2000 base and 2005-06 base) (%)

S. No	Industry	1999-2000 base						2005-06 base					
		2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
A.	**Agricultural Sector (1 to 4)**	**2.35**	**2.43**	**9.40**	**9.95**	**12.83**	**10.88**	**3.01**	**1.34**	**8.30**	**16.54**	**14.26**	**8.50**
	1. Crops (i+ii+iii)							-0.10	-3.04	9.55	17.61	11.10	0.11
	Crop (i + ii)	-2.48	-1.37	11.24	7.52	21.10	-2.92	-0.95	-2.55	9.08	16.81	12.50	0.14
	i) Important Crops	-4.86	-2.68	16.81	11.27	20.81	-6.69	-2.42	-5.82	16.03	22.27	8.62	-1.79
	ii) Other Crops	3.98	1.88	-2.02	-3.13	22.03	9.24	1.59	2.91	-1.54	6.98	20.48	3.74
	iii) Cotton Ginning							10.20	-8.31	14.88	26.37	-2.98	-0.29
	2. Livestock	6.94	6.78	7.70	12.72	7.43	23.39	6.44	6.76	7.85	16.65	20.70	15.50
	3. Forestry	12.76	-3.13	13.81	8.40	-24.68	15.74	12.46	-3.17	13.97	7.53	-25.01	17.72
	4. Fishing	9.12	-1.02	1.51	0.62	4.56	74.34	-1.38	-2.10	-8.50	5.77	-1.67	22.93
B.	**Industrial Sector (1 to 4)**	**13.41**	**5.00**	**9.56**	**30.73**	**17.10**	**15.94**	**11.66**	**4.47**	**11.08**	**25.86**	**16.75**	**13.66**
	1. Mining and Quarrying	31.24	9.95	17.18	51.99	-12.60	20.67	20.08	13.37	18.42	25.66	-1.89	28.20
	2. Manufacturing (i+ii+iii)	16.32	5.71	12.85	24.41	25.94	20.60	13.48	6.10	11.69	25.03	24.08	17.75
	i) Large Scale	21.35	3.22	13.51	29.19	31.00	23.13	14.80	5.87	11.75	25.82	25.84	18.80
	ii) Small Scale	8.38	12.74	11.64	11.11	10.74	10.71	9.92	8.27	10.34	19.06	7.98	11.48
	iii) Slaughtering	3.78	6.02	11.35	25.92	24.81	22.01	4.32	5.54	13.14	24.87	26.54	13.16
	3 Electricity generation & distribution and Gas distribution	-4.68	0.95	-10.27	58.19	-1.81	-18.12	1.03	-7.32	4.15	39.84	-4.10	-30.20
	4. Construction	8.34	0.56	5.97	14.49	32.76	17.32	8.34	0.56	5.97	14.49	32.76	17.32
	Commodity Producing Sectors (A+B)	**7.59**	**3.71**	**9.48**	**20.46**	**15.18**	**13.70**	**6.58**	**2.69**	**9.52**	**20.70**	**15.42**	**10.93**
C.	**Services Sectors (1 to 6)**	**12.62**	**7.51**	**9.25**	**11.62**	**18.00**	**19.96**	**11.28**	**9.28**	**8.46**	**11.61**	**16.51**	**18.07**
	1. Wholesale & Retail trade	11.26	4.19	9.01	14.07	21.95	15.45	10.69	3.85	10.51	20.55	21.30	19.51
	2. Transport, Storage & Communication	27.93	5.82	12.36	10.77	12.45	19.57	16.63	14.37	9.72	7.08	9.16	11.81
	3. Finance & Insurance	-11.67	21.73	1.80	13.96	42.98	54.21	15.31	16.95	-5.55	-1.30	49.22	50.85
	4. Housing Services (OD)	12.62	1.68	6.87	8.23	13.11	11.71	6.80	6.40	4.27	7.90	15.20	13.77
	5. General Government Services	6.69	10.64	9.93	9.18	10.01	17.85	6.70	10.64	9.92	9.16	10.00	17.72
	6. Other Private Services	10.23	11.72	8.42	10.23	16.48	18.55	10.35	11.77	9.56	9.76	15.00	17.08
D.	**GDP {Total of GVA at bp (A+B+C)**	**10.14**	**5.68**	**9.36**	**15.80**	**16.61**	**16.92**	**9.10**	**6.30**	**8.92**	**15.61**	**16.01**	**14.81**

Table 20: Backward Series of GVA (FISIM Adjusted) at **Current Basic Prices**								
S. No	**Industry**	2005-06 base (Rs. Million)						
		1999-2000	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06 (Fisim Adj.)**
A.	**Agricultural Sector (1 to 4)**	**1087041**	**1119794**	**1134823**	**1228846**	**1432002**	**1636204**	**1775346**
	1. Crops (i+ii+iii)	552017	551533	534805	585777	688885	765390	766274
	Crop (i + ii)	**509397**	**504567**	**491741**	**536307**	**626372**	**704740**	**705802**
	i) Important Crops	322835	315037	296705	344271	420938	457230	449025
	ii) Other Crops	186561	189530	195036	192036	205434	247511	256777
	iii) Cotton Ginning	42620	46966	43064	49470	62513	60650	60472
	2. Livestock	467044	497101	530708	572367	667685	805914	930842
	3. Forestry	29767	33477	32416	36944	39726	29789	35067
	4. Fishing	38213	37684	36894	33758	35707	35111	43163
B.	**Industrial Sector (1 to 4)**	**744651**	**831934**	**869622**	**966270**	**1215556**	**1419763**	**1616157**
	1. Mining and Quarrying	99821	119868	135898	160932	202225	198397	254345
	2. Manufacturing (i+ii+iii)	433666	492116	522153	583187	729173	904754	1065323
	i) Large Scale	353587	405926	429766	480242	604239	760402	903323
	ii) Small Scale	47351	52048	56354	62179	74031	79942	89116
	iii) Slaughtering	32729	34142	36032	40766	50902	64410	72884
	3 Electricity generation & distribution and Gas distribution	120622	121862	112938	117628	164491	157743	110109
	4. Construction	90541	98088	98634	104522	119667	158869	186380
	Commodity Producing Sectors (A+B)	**1831692**	**1951728**	**2004445**	**2195115**	**2647559**	**3055968**	**3391503**
C.	**Services Sectors (1 to 6)**	**2135563**	**2376272**	**2596879**	**2816193**	**3142905**	**3662005**	**4324274**
	1. Wholesale & Retail trade	686036	759366	788589	871463	1050582	1274386	1523067
	2. Transport, Storage & Communication	501626	585072	669120	734153	786120	858135	959499
	3. Finance & Insurance	99972	115282	134820	127340	125690	187548	282919
	4. Housing Services (OD)	301205	321701	342289	356919	385104	443640	504743
	5. General Government Services	231842	247372	273696	300837	328386	361217	425218
	6. Other Private Services	314883	347479	388364	425482	467024	537078	628828
D.	**GDP {Total of GVA at bp (A+B+C)**	**3967255**	**4328001**	**4601324**	**5011308**	**5790464**	**6717972**	**7715777**

Table 21: Comparison of Growth Rates (FISIM Adjusted) of GVA at **Current Prices** (1999-2000 base and 2005-06 base) (%)													
S. No	**Industry**	**1999-2000 base**						**2005-06 base**					
		2000-01	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**
A.	**Agricultural Sector (1 to 4)**	**2.35**	**2.43**	**9.40**	**9.95**	**12.83**	**10.88**	**3.01**	**1.34**	**8.29**	**16.53**	**14.26**	**8.50**
	1. Crops (i+ii+iii)							-0.09	-3.03	9.53	17.60	11.11	0.12
	Crop (i + ii)	-2.48	-1.37	11.24	7.52	21.10	-2.92	-0.95	-2.54	9.06	16.79	12.51	0.15
	i) Important Crops	-4.86	-2.68	16.81	11.27	20.81	-6.69	-2.42	-5.82	16.03	22.27	8.62	-1.79
	ii) Other Crops	3.98	1.88	-2.02	-3.13	22.03	9.24	1.59	2.91	-1.54	6.98	20.48	3.74
	iii) Cotton Ginning	0.00	0.00	0.00	0.00	0.00	0.00	10.20	-8.31	14.88	26.37	-2.98	-0.29
	2. Livestock	6.94	6.78	7.70	12.72	7.43	23.39	6.44	6.76	7.85	16.65	20.70	15.50
	3. Forestry	12.76	-3.13	13.81	8.40	-24.68	15.74	12.46	-3.17	13.97	7.53	-25.01	17.72
	4. Fishing	9.12	-1.02	1.51	0.62	4.56	74.34	-1.38	-2.10	-8.50	5.77	-1.67	22.93
B.	**Industrial Sector (1 to 4)**	**13.41**	**5.00**	**9.56**	**30.73**	**17.10**	**15.94**	**11.72**	**4.53**	**11.11**	**25.80**	**16.80**	**13.83**
	1. Mining and Quarrying	31.24	9.95	17.18	51.99	-12.60	20.67	20.08	13.37	18.42	25.66	-1.89	28.20
	2. Manufacturing (i+ii+iii)	16.32	5.71	12.85	24.41	25.94	20.60	13.48	6.10	11.69	25.03	24.08	17.75
	i) Large Scale	21.35	3.22	13.51	29.19	31.00	23.13	14.80	5.87	11.75	25.82	25.84	18.80
	ii) Small Scale	8.38	12.74	11.64	11.11	10.74	10.71	9.92	8.27	10.34	19.06	7.98	11.48
	iii) Slaughtering	3.78	6.02	11.35	25.92	24.81	22.01	4.32	5.54	13.14	24.87	26.54	13.16
	3 Electricity generation & dist. and Gas distribution	-4.68	0.95	-10.27	58.19	-1.81	-18.12	1.03	-7.32	4.15	39.84	-4.10	-30.20
	4. Construction	8.34	0.56	5.97	14.49	32.76	17.32	8.34	0.56	5.97	14.49	32.76	17.32
	Commodity Producing Sectors (A+B)	**7.59**	**3.71**	**9.48**	**20.46**	**15.18**	**13.70**	**6.55**	**2.70**	**9.51**	**20.61**	**15.43**	**10.98**
C.	**Services Sectors (1 to 6)**	**12.62**	**7.51**	**9.25**	**11.62**	**18.00**	**19.96**	**11.27**	**9.28**	**8.45**	**11.60**	**16.52**	**18.08**
	1. Wholesale & Retail trade	11.26	4.19	9.01	14.07	21.95	15.45	10.69	3.85	10.51	20.55	21.30	19.51
	2. Transport, Storage & Communication	27.93	5.82	12.36	10.77	12.45	19.57	16.63	14.37	9.72	7.08	9.16	11.81
	3. Finance & Insurance	-11.67	21.73	1.80	13.96	42.98	54.21	15.31	16.95	-5.55	-1.30	49.22	50.85
	4. Housing Services (OD)	12.62	1.68	6.87	8.23	13.11	11.71	6.80	6.40	4.27	7.90	15.20	13.77
	5. General Govt. Services	6.69	10.64	9.93	9.18	10.01	17.85	6.70	10.64	9.92	9.16	10.00	17.72
	6. Other Private Services	10.23	11.72	8.42	10.23	16.48	18.55	10.35	11.77	9.56	9.76	15.00	17.08
D.	**GDP {Total of GVA at bp (A+B+C)**	**10.14**	**5.68**	**9.36**	**15.80**	**16.61**	**16.92**	**9.09**	**6.32**	**8.91**	**15.55**	**16.02**	**14.85**

Figure 11: Gross Value Added (Current), Growth Rates (%)

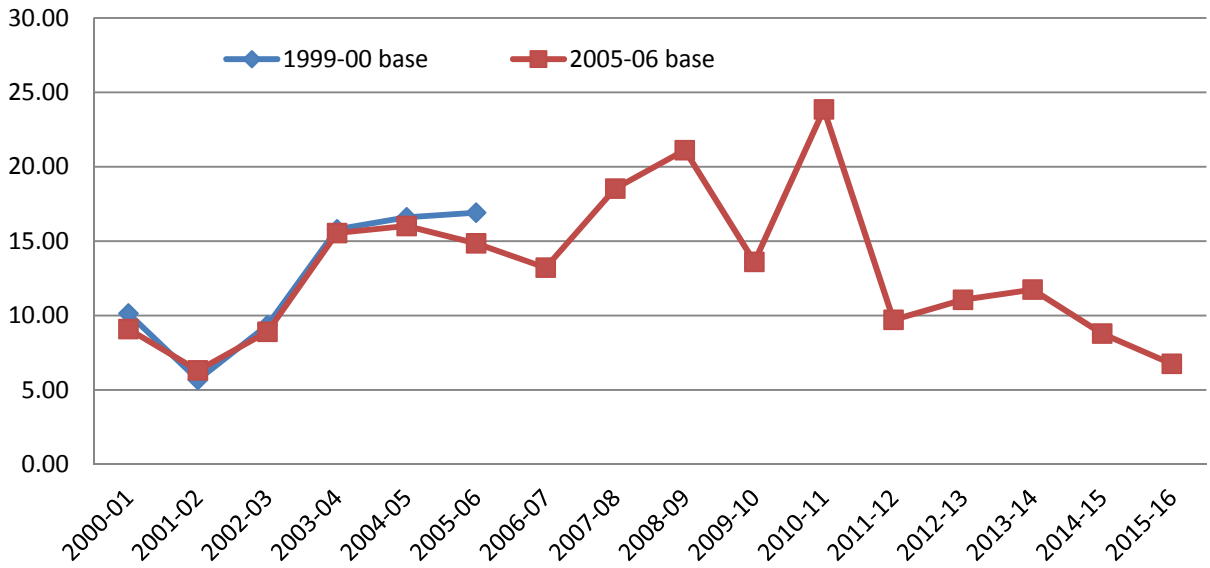


Figure 12: Current GVA (Trillion Rs.)