

**MAKING REVISIONS TO PROVISIONAL DATA; CORRECTING  
ERROR AND COMMUNICATING THEM; DEALING WITH THE MISUSE  
AND MIS-INTERPRETATION OF DATA BY OUTSIDE PARTIES.**

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## **I. Introduction**

BPS—Statistics Indonesia (henceforth, BPS) performs the role of national statistics administration in Indonesia, in accordance with Law No. 16/1997 on Statistics, Government Regulation No. 51/1999 on Statistics Administration, and Presidential Regulation No. 86/2007 on BPS. The BPS is headquartered in Jakarta and has offices in each of the 33 provinces which coordinate the activities of the 450 district-level offices and more than 4,000 sub-district officers (i.e., one staff out-posted in the sub-district level local government office). Overall, the BPS has some 13,000 staff and management positions (excluding temporary contract workers), of which some 1,500 are assigned to the Headquarters. In addition to activities directed by the BPS Headquarters, provincial and district level offices also perform activities at the request of the corresponding local governments (e.g., extended survey samples, specially targeted surveys, compilation of region-specific statistics). Through these resources BPS collects many statistical data via three types of collection. The first is the data collected by census; the second through sample surveys; and third, through administrative or secondary data from outside sources. Afterward, these data are processed and disseminated to various stockholders and users within and outside of BPS.

As part of BPS's primary function, BPS produces a wide variety of statistical data designed for development planning and evaluation as well as for personal usage. In line with that obligation, BPS also opens communications regarding the data with data users. At the national level, BPS engages with users through the Statistical Community Forum (FMS), comprising of representatives from government bodies, academia, the private sector and the media. The Forum provides a channel for evaluation and feedback from the users of BPS statistics. The most common feedback of the nature of the statistical data came mostly through the media, particularly many of the Indonesian daily newspapers circulated at national level and regional level, such as the Kompas, Media Indonesia, Surabaya Post, etc.

The problem that arises by having the statistical data used by outside parties is that the data used maybe misused or misinterpreted. It is also common knowledge in Indonesia that the Indonesian public is not yet statistical-minded to use the data accordingly. Thus, many data users are not aware of the nature of statistics, which are subject to sampling and non-sampling errors. In addition, even though BPS has taken measures to ensure that the public are fully aware of the data, it may not be fully

equipped in communicating these issues to the public. Lack of funding in socialization as well as skills in the art of communication maybe cited as the inherent weaknesses of BPS in educating the public about its data. As a consequence of these inadequacies, it is not inconceivable that there will be misinterpretations and mis-use of statistical data by the public. This paper explores these issues, particularly on how BPS conducts revisions on statistical error and communicating these to the public, as well as dealing with the misuse and mis-interpretation of its data by the public.

## **II. The nature of Statistical Data Produced by BPS**

It is common knowledge within the statistical community that statistical data are subject to certain errors. There are two types of general statistical errors, the errors caused by conducting a sample survey, as well as non-sampling errors which occurred when collecting data in the field and during processing. Sampling errors are easier to overcome by revising the sampling methodology, although the methodology can only be altered so much that sampling errors can only be minimized but not completely deleted. On the other hand, perhaps the most difficult errors occurring in the data are the errors occurring when the data is being collected and processed. For example, errors occurred in the field when enumerators fill out the wrong answers on the questionnaire by misinterpreting the answers of a respondent or tick the wrong answer. Mistakes can also occur in the data processing stage when a data entry operator punches in the wrong code or values.

All of BPS data are subject to errors, but BPS has taken measures to minimize these errors using both conventional and unconventional methods. There are several types of data which are under public scrutiny and should be mentioned in this paper even though all BPS data are subject to error. BPS data consists of data collected from sample surveys, censuses and secondary sources. For the purpose of this paper, data from samples surveys are the most watched data in the public spotlight. Data from census are rare because censuses are being conducted every ten years in Indonesia and its publication are usually smooth and without much complications outside of BPS. In addition, only one type of administrative data collected by BPS that is the most commonly mentioned in the local media; the export and import data. Arguably the most important data from BPS surveys are data from : The National Socio-Economic Survey ( henceforth SUSENAS), The National Labor Force Survey (SAKENAS), Large and Medium Manufacturing Survey, Cost of Living Survey, Agricultural surveys, Hotel and Accommodation surveys.

The SUSENAS is particularly important because its data are being used to compile poverty, human development index, consumption as well as other secondary data use such as, employment,

housing and education. It is perhaps the most widely used and the most criticized source of BPS data. Other important data compiled by BPS and often discussed in the local media are, among others : Inflation, Gross Domestic Products (GDP), Export and Import, Employment, Hotels and accommodation, and Tourism.

Most of the data mentioned above are the ones usually most exposed and widely disseminated to the public. Some of the statistical information shown to the public has often been criticized by data users from many different aspects; the methodology, the figure itself, and also the credibility of BPS for conducting the survey that collects the data. The poverty data, as mentioned above, are the data that has been continuously criticized by all levels of society; the academics, politicians and even ordinary Indonesians. Most of the criticism centered on the poverty figure itself. However, the criticism stems, not from the perceived errors emanated from the data, but rather the lack of understanding on how the data is collected. For instance, not many in the public know that BPS is using the standard poverty line as suggested by the United Nations in which BPS calculates the number of poor in the country. Critics of the data often cited their own version of what poverty should be. That kind of criticism also extends to other BPS data such as, the GDP, although with less prominence. Nonetheless, in line with the BPS vision of becoming a quality statistics provider, BPS has been trying to improve its data to satisfy the needs of data users.

### **III. Making Revisions to Provisional Data**

In order for BPS to improve the quality of its data BPS has implemented many endeavors to ensure that the data that they disclose to the public are those of high quality data in terms of accuracy, reliability, relevance, coherence, as well as timeliness. BPS conducts revisions during the planning stage, field enumeration stage and during data processing. As a standard statistical measure, BPS has continuously improved its sampling method to minimize error. By using sampling BPS can revise the level of sampling error, depending on the size of the sample. In particular, BPS has expanded its data availability by increasing its small area statistics, such as at district level and even sub-district level. BPS is also finding other ways to improve the sampling method by taking into account samples located in remote areas of Indonesia. However, the most difficult error is the error that occurred from field enumeration. BPS has taken many conventional measures to minimize non-sampling error by conducting field supervision, post enumeration survey and changing the format of the enumeration itself. Lastly, BPS conducts revisions before, during and after the data processing stage. One of the

measures BPS take is to estimate data to obtain national or regional level data. Using proven statistical estimation method, BPS is able to produce preliminary data to be published as temporary figures.

**a. Field Supervision**

BPS has take great lengths to ensure that the data collected from the field have as clean as possible before being processed into information. During the planning stages, field enumerators, who are currently mostly outsourced workers, are being trained to conduct field operations by qualified BPS staffs. In addition to training enumerators, BPS also trains BPS staffs from the regional offices as field supervisors with the task of editing the questionnaires and correcting any mistakes that may occur. There were also steps taken innovative BPS regional officers who took matters into their own hand by conducting their own editing and supervising to ensure errorless questionnaires collected from the field.

**b. Post Enumeration Survey (PES)**

BPS conducts post enumeration survey after a census has been conducted to evaluate the result of the census. The main purpose of PES is to determine the quality of the measurement of the census and to provide such information to the users of the data. However, whether the PES is helpful or not cannot be used to adjust the census results. One reason could be that an adjustment based on PES data will introduce serious limitations in the use of census results as correction factors will be subjected to large sampling errors.

**c. Enumeration by team**

BPS has also changed the enumeration format to minimize non-sampling error occurring during the enumeration period by sending out a two-person team for household-based survey, particularly for SUSENAS and SAKERNAS. It is hoped that by conducting an interview together mistakes in filling out the questionnaire can be minimized further. One enumerator can support the other if there were problems interpreting respondent's answer. He or she can also reprimand the other from making false statements in the questionnaire or being negligent in conducting field enumeration.

**d. Estimation of Data**

There are three types of estimation commonly used by BPS. The first estimation is based on a statistical estimation from a sampling point of view. Normally, to arrive at a national or regional figure for such surveys like the SUSENAS, BPS would have to estimate the survey data by using the sampling

fraction. In the absence of field data, BPS also conducts estimation using statistical models to obtain certain national or regional figures. Data such as the GDP use statistical models to obtain preliminary figures that is being published regularly. GDP data from various BPS subject matter units often arrive too late for publication. Thus, BPS is forced to use statistical modeling to estimate these data until such time the real data coming from the field are ready. The third type of estimation is used to revise non-existent data in many of the enterprise surveys conducted by BPS. Usually there are targeted firms that did not return questionnaires on time for data processing due to various reasons. BPS must try to estimate the data from these firms did not respond to the questionnaires and produce aggregate level data. Currently, production index from the previous figures is used as one of the methods for conducting this type of estimation, particularly for establishment type surveys, such as the Large and Medium Manufacturing Survey.

#### **e. Provisional Data**

In relation to conducting data estimation, BPS produces provisional data which are published openly and are also continuously updated until the final figure emerged. Arguably the two most important BPS data that are published in this manner are the GDP data and the rice production data. The GDP data publish three types of provisional data, the so-called very very preliminary figures, very preliminary figures, and preliminary figures. When the final field data have been compiled, then BPS will publish the final figure which cannot be revised anymore. Rice production figures also experience the same fate as the GDP data. There are the so-called ARAM 1 and ARAM 2 or initial preliminary estimates of rice production in Indonesia, which are published to limited outside parties such as the Ministry of Agriculture. After the second revisions, the data is then revised further to produce a preliminary figure which is openly disseminated to the public. The preliminary figure will be revised for the last time and become the final figure.

#### **f. Communicating error and revisions**

As a consequence of the numerous changes and revisions to the provisional data, BPS must also take measures to communicate these changes to the public. Perhaps the most important method of user engagement is to conduct regular monthly statistical press release of newly published statistical figures. Data such as inflation, export and import are regularly release to the media to inform the public at large about the conditions of the country through these indicators. Normally if data such the GDP are release to the press, BPS would show whether or not the data are preliminary figures or final figures by putting

one, two or even 3 asterisk superscripts next to the figure, denoting that the figure is not the final figure. The more the number of asterisks, the more preliminary or the less accurate the data are. If there is no asterisk, then data user should know that that figure is final and there would be no more revisions. Another method of informing outside parties is inviting known figures in their field to discuss the ready to be published figures. For instance, BPS invites officials from several ministries, such as the Ministry of Agriculture to the preliminary rice production figures. After agreeing to certain revisions, the data is then published openly. BPS also informs the so-called Indonesian Statistical Forum (FMS) about the problems associated with BPS data and planning some measures to overcome the situation. Other measures BPS take in communicating their data is to hold seminars on such important dates as the National Statistics Day which fell on the 26<sup>th</sup> of November. The purpose of the seminar is twofold; one is to conduct user engagement to promote upcoming major BPS activity such as the Population Census; the other is to reply to critics of BPS data, as will be explained later in this report. In relation to BPS annual budget allocation, BPS sometimes needs to explain their data or the purpose of collecting certain data during a parliamentary hearing. BPS must communicate, including when there are changes in the data, to the country's representatives in justifying certain budget estimates. However, a far more challenging task for BPS in terms of communicating to the public is dealing with the misuse and misinterpretation of data.

#### **IV. Dealing with misuse and misinterpretation of data by outside parties**

Lack of knowledge by outside parties of statistical data often resulted in the misuse or misinterpretation of data. As explained earlier in the report, the Indonesian public tend to be less statistically minded than those of developed countries such as Australia and The United States. Some data users, particularly stakeholders want to misuse BPS data to advance their own interests or agenda. Most often than not, the public, including the so-called experts in their field, misinterpret the data that BPS publishes openly. Misinterpreting BPS data, although it is occurring more frequently, can be forgiven and usually not as potentially destructive as the misuse of data.

##### **a. Misuse of Data**

BPS data such as the human development index (HDI) figure is a prime example of the misuse of data. Due to the process of greater regional autonomy, which is currently in full swing, the size of budget allocation for each region, i.e., district or city, would depend on certain regional indicators, including the HDI. The greater the HDI, as compared to last year or to other regions, could indicate that

there are some improvements in regional development, which means that the regional head was deemed successful in advancing their own region and could help with his or her re-election. The smaller the HDI means that regional development was not as successful and the region may need to have additional budget to improve. Regional officials who have this kind of agenda may attempt to influence BPS to change the figures in the respective regions, either to look more successful so that they can be re-elected or to be seen as inadequate so that the central government can allocate more funds for development. This type of misuse had, in the past, extended to other BPS data such as poverty, Gross Regional Domestic Product and rice production.

#### **b. Dealing with the misuse of data**

There are two ways in which BPS deals with the misuse or rather, attempt to misuse the data. The first is a preventive measure where BPS would hold discussions internally as well externally to assess the HDI figures (or other BPS data), including the methodology used and the source of baseline data to calculate HDI. At this stage, there is still a possibility of revising the provisional HDI data depending on the outcome of the discussion. By using such discussions, it is hoped that the stakeholders may have more understanding of the way the data was compiled and may be less inclined to criticize them on a later time. The second measure tends to be more reactive by explaining to certain stakeholders of the data the reason why BPS could arrive at certain figures. Normally, an official would discreetly visit BPS and question BPS on the HDI that did not meet his or her expectation. A BPS official would then try to explain how he or she calculated the data, the factors influencing the data as well as trying to explain that the data is final and could not be revised.

#### **c. Misinterpretation of Data**

The main source of information on public criticism of BPS data can be found widely in the local media, whether they be printed or electronic. More often than not, these criticisms stem from the fact that the public, including the so-called experts misinterpret the use of BPS data. For instance, many people do not realize that BPS uses certain standardized methodology to calculate certain statistical figures, which is often different than the one used by outside parties. There are also differences in concept and definition as well as the time frame used by different data. As a consequence, differences in numbers or values can occur between the results of different calculations or methodologies.

## BPS Data Misinterpreted by Outside Parties

There are many BPS data that are exposed to the media. However, there are several types of BPS data that are especially targeted by the media. Examples of data commonly being subjected to public scrutiny are explained below:

TOPIC RAISED	DISPUTES AMONG OBSERVER
Poverty	<ol style="list-style-type: none"> <li>1. Some observers criticized BPS poverty data showing a decrease in the number and the percentage of poor people in Indonesia. They doubted the validity of the data because they think that it is contradictory to the logical impact resulting from the global financial crisis. According to them, the data should have shown an increase, instead of a decrease, in the number of poor people.</li> <li>2. They believed that the data was highly politicized for it was released one week before the Presidential Election in July 8, 2009.</li> <li>3. The data were highly criticized since before the survey was completed, the government had targeted a decrease in the number of poor people by the exactly the same number as the result of BPS survey. Therefore, BPS was deemed to have performed a “lipsync” on the government’s song.</li> <li>4. They presumed that BPS had manipulated the survey methodology in order to create such data and insisted that BPS recalculate the data based on the real economic condition of the society. In addition, BPS should have kept its neutrality as the data provider instead of manipulating data in order only to build a positive image of a particular regime.</li> <li>5. The standard of poverty line BPS established no longer relevant with the real condition at that time in which the price of fuel and the level of inflation were increasing. It was also too low under the international standard. According to a researcher from the Indonesian Institute of Sciences, the poverty line should be higher.</li> <li>6. Both the private and public institution, could not access the data on poverty from BPS since 2005 so that public cannot monitor government.</li> </ol>
Inflation	<p>In the beginning of each month, BPS released the most recent data on Inflation and Consumer Price Indices. Once BPS shows that the inflation is decreasing, the observers would have a dispute on it and expose it to their misguided opinion to the media. On the contrary, if the figure shows an increase in the inflation rate, they seem to keep quiet and show no response on the matter.</p>
Economic Growth	<p>Economic growth is another BPS strategic data, which always triggers controversy among the observers. It also gets the similar treatment like the inflation data does; it means that the observers will criticize it if the figure shows an increase, but they will not, if the condition is the other way round. This situation arises due to their perception which were not in line with the data produced by BPS.</p>
Unemployment	<p>Another important issue which should be concerned is data on the unemployment. Like the other strategic data, this data also has the potential in raising dispute among observers when it shows a tendency to decrease.</p>

*\*Sources: National Newspapers, such as: Republika, Indo Pos, Suara Pembaruan, Koran Jakarta, Suara Karya.*

## **Dealing with the Misinterpretation of the Data**

While in the previous sub-chapter we have presented examples of cases concerning misuse and misunderstanding of BPS data by outside parties, now in this sub-chapter we provide the information on ways BPS deals with the problems or cases aforementioned, including the following points : implementing counter right (Hak Jawab), conducting workshop for journalists (workshop wartawan), opinion sharing with professionals, article Written by BPS staffs related to the strategic data mentioned, utilizing television as a means of explaining data.

### **a. Implementing Counter Right (Hak Jawab)**

Newspaper as one of the information media possesses huge impact in constructing the public opinion about BPS image. Therefore, BPS established a sub-division, dubbed as the Sub-Division of Public Opinion which main function is to manage public opinion so that BPS will be able to monitor any news concerning BPS and its product emerging in the society. Any news having the possibility on bringing negative impacts upon BPS needs to be responded and countered by implementing the Counter Right so that the misguided opinions developed in the society can be corrected.

### **b. Conducting Workshop for Journalists (Workshop Wartawan)**

This workshop aims at giving statistical education to the journalists and building an informative and transparent cooperation with the media. It is held every August, after the President of the Republic of Indonesia delivers his speech in the House of Representatives' plenary session. It lasts for three days and is located in BPS-Statistics Indonesia. The participants of this workshop consist of journalists from various media, both printed and electronic, representatives from directorates or bureaus in BPS, and also BPS staffs interested in joining it.

In this August from 18-20, BPS has conducted the fifth Workshop for Journalists, taking "BPS Strategic Data" as its theme. The material given included economic growth, unemployment, poverty, inflation, foreign trade (export-import), rice production, farmer's terms of trade, etc. In addition, BPS also gives information on the concepts, definitions, and methodology implemented in the process of data collection and data providing before being disseminated in form of news. In addition, BPS also made that good opportunity to provide information and socialization on the biggest event BPS will conduct next year, the 2010 Population Census.

Through this workshop, BPS expects that the journalists and thus the media would be able to build a positive public awareness of BPS and data it produce. Therefore, misuse and misunderstanding on BPS data could be prevented, reduced, or even eliminated.

**c. Opinion Sharing with Professionals**

For several times, BPS invites observers who criticize and/or misunderstand BPS data. This program is conducted in form of seminar, describing the topics raised by the observers. Once the material has been presented, the observers are given opportunity to ask questions, stating comments, or even criticisms related to the topic explained previously, and BPS will try to give reply, explain overtly and transparently, and clarify any negative opinions. By this means, it is expected that the observers would get a correct understanding on the matter. One such seminar is, as explained earlier, the seminar normally being held on the National Statistics Day on the 26<sup>th</sup> of September. In this seminar BPS would invite prominent users of BPS data to give a talk about BPS data. In many cases, the seminars focus mainly on the use of BPS data and how these data can be improved in the future. On several occasions, BPS also invited prominent critics of BPS data. The purpose is not to confront these critics, but to wisely discuss the strengths and weaknesses of the data, as well as find a balanced compromise on how the data should be interpreted.

**d. Article Written by BPS Staffs Related to the Strategic Data Mentioned**

In addition to implementing the Counter Right, BPS also actively write articles for several national leading newspaper explaining BPS recent statistics especially in relation to the quality of the data and the concept/definition used behind the figures. It is very important because the media have the power to build or destroy BPS image among the society, both public and private. Therefore, quality data and great article is like two sides of a coin that cannot be separated.

**e. Utilizing Television as a Means of Explaining BPS Data**

BPS Chief Statistician takes this option quiet often on the consideration that building and maintaining a positive and constructive relationship with the media, including television, are one of the best ways to achieve things as follows:

1. Explaining or even clarifying some negative opinions and misunderstanding on BPS data,
2. Establishing BPS' image as an independent, objective, and professional statistical data provider.

## V. Conclusion

BPS, as the premier provider of quality data in Indonesia cannot escape from the seemingly endless stream of criticisms directed at its data. These criticisms mainly stem from the lack of understanding of how BPS data are being compiled. This inadequacy led to misinterpretation of BPS data by data users, as well as attempts by outside parties of influencing BPS provisional as well as final statistical figures, such as poverty and HDI data. To avoid such problems which are potentially damaging to individual BPS officials and BPS reputation as an institution, BPS has taken numerous steps to avoid them by implementing a series of anticipatory measures, mainly :

1. Conduct workshops for the media
2. Hold discussions with external sources
3. Hold monthly official BPS press release in all of BPS offices,
4. Conduct daily newspaper clippings, and
5. Seminars and campaigns about BPS activities and data.

In addition to these steps, BPS also applied several countermeasures to respond to any criticism attacks by data users. These steps include:

1. Send counter-articles or counter right in response to criticism from potentially damaging articles, and
2. Opinion sharing, such as seminars where, sometimes, high profile critics are invited for friendly and balanced discussions.

BPS would of course make every attempt to avoid dragging these problems deeper, such as the court case relating to BPS' poverty data. It is in the interest of BPS to focus mainly on anticipative measures rather than simply responding to these criticisms. Thus, BPS has allocated a large portion of its budget to conduct statistical campaigns to promote major BPS activities and politically-sensitive data produced by BPS. Criticism of any BPS data cannot be entirely prevented, but it is hoped that these measures could minimize the incidence of data misuse and misinterpretation.