Implementation of Marketplace Data in the Production of Consumer Price Index in Indonesia

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1.	1	However, although the research has merits it lacks novelty and significant contribution. This is apparent also from the relevant literature part where previous efforts are described and it is not clear what is the significant difference of this study. I am guessing that the position of the study is that the analysis is on the city level.	Based on these relevant literatures, this study propose marketplace data approach over online retail to provide the lack of location variable from online retail data and make the CPI result more precisely, that is in the level of CPI cities. For the collection data stage, we use web-scraping methods with the consideration of ease and low cost.	Related Work	3	Paragraph 4
2.	1	I cannot see how the research proves that the constructed CPI is more accurate or at least with the same accuracy as the BPS-statistics CPI. We cannot see a statistically significant difference in the results and most importantly we cannot understand which index is most accurate.	This study aims to implement e-commerce data with a case study of one of the largest online marketplaces in Indonesia in calculating the CPI at the city level. In order to obtain the data, a web scraper need to be developed. From the data obtained, it is possible to compare the consumption value with the marketplace data sales value approach and the BPS-Statistics consumption value. Furthermore, this study also aims to see the patterns of CPI obtained by marketplace and BPS data approaches,	Introduction	2	Last paragraph

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			whether they have similar patterns or not so that the stakeholders can consider the best decision-making policies.			
3.	1	Regarding Table 3 it will be beneficial to clarify what you mean with the term final coverage.	Table 3 shows the number of commodities covered by BPS-Statistics and the number of commodities covered by marketplace, which are used in this study to calculate the consumption values and the CPI. There is a significant difference in the amount of coverage compared to the coverage by BPS-Statistics. It depends on the conditions of each CPI city whether the city has a high or low level of technology adoption. Commodities with greater coverage are indicated by larger, more developed urban areas, and the rapid use of technology in each area. Furthermore, it is hoped that we can see the pattern of the CPI value from the marketplace and the BPS approach. However, it should be noted that the results obtained will not replace the CPI produced by BPS because further research is needed. Which is why this study is more	Results and Discussion	11	Table 3 and all those paragraphs after that table.

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			concerned with the movement pattern with the aim of providing initial insight to stakeholders. In addition, Purwokerto in this study will be not analyzed because there is no commodity package covered. Moreover, DKI Jakarta has the highest coverage. This is in line with our expectation because DKI Jakarta is the capital of Indonesia.			
4.	2	The conclusion in the paper needs to be strengthened. A more critical reflection on the research limitations and future work is needed	1. The construction of a web scraper in one of the marketplaces in Indonesia to obtain marketplace data has been successfully built. The web scraper created can extract data directly into CSV format after receiving a response from the marketplace website. However, the data that this study obtained is limited, because we do not have full access to the existing database. 2. The consumption value using the marketplace data sales value approach tends to be lower than the BPS-Statistics consumption value. However, the patterns of consumption value movement	Conclusion and Future Works	18	Conclusion point 1 and 2, future work ,point 3

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			in general are similar. This shows that the marketplace data obtained in this study are aggregated below BPS-Statistics data, so the total consumption value obtained from the marketplace approach is generally lower. 3. The CPI with a marketplace data approach at the city level tends to have a higher index value than the BPS-Statistics CPI. This indicates a difference in relative prices for BPS-Statistics commodities and marketplace data. At the expenditure group level, the BPS-Statistics CPI and the marketplace in general have quite a small difference, meaning that the CPI calculation with marketplace data is quite good. These are some suggestions for **future works** to continue this research: 1. Commodities produced in this study do not include all commodity items listed in the 2018 SBH commodity basket. This is due to the classification of commodities using text string			

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			matching and category mapping. For this reason, in further research, it can be studied the classification method in marketplace data to obtain maximum results. 2. The treatment of standardization of prices on commodities also still uses manual mapping, so it is necessary to study further how to detect the quantity of a unit so that the process and results of standardization are more precise. 3. In further research, a collaboration can be coordinated with the selected marketplace office so that direct access to the data can be obtained			
5.	3	the presentation of the general and some particular workflows (the "...Flow" diagrams as they are titled in the article) is clear, despite having some that do not provide a lot of information, like the ones in Figure 3 and 4.	*Figure 3 ,8, and 12 removed.* *Figure 4 → figure 3:* In general, before data can be analyzed, the first step is to obtain the data from the selected marketplace. The data is taken from the selected market place with a web scraper that has been built, then the data is extracted so that it can be processed further to calculate the consumer price index.	Methods	7	first paragraph

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			These steps are discussed in detail in the following sections.			
6.	3	The authors seem to undersell their results and work by presenting and structuring them in a way that seems lacking. If more explanations and interpretations would be given for certain figures, tables and the results presented there, also showing why they are important and what they show, that would improve the article a lot	*Figure of The Flow Network of Researched Marketplace, added explanation*	Methods	6	Second paragraph
			Figure of Research analysis flow, added explanation	Methods	7	First paragraph
			Figure of data extraction flow, added explanation		7-8	First paragraph of page 8
			Table 1: Differences in BPS-Statistics CPI Processing and Marketplace CPI, added explanation and minor revision for table content		10	Table 1
		the presence of some figures might not be necessary as they are now and they seem to be confusing or not have any added value as long as they are not put into context or have more explanations attached to them. e.g. Figure 2 and Figure 8	*Table of BPS-Statistics and this study commodities coverage finale, major revision for table content and added explanation*	Results and Discussion	11-12	Table 3
			Figure of Conditions of Consumption Values (CV) by BPS-Statistics and Marketplace: Change appearance, and added explanation	Results and Discussion	12-13	First paragraph after sub-section 3 and Figure 7
			Table of Summary of BPS-Statistics and Marketplace CPI in each city with the lowest BPS-Statistics CPI as base in May 2020: Table 4 shows that the BPS-Statistics CPI tends to be lower than the marketplace CPI. The	Results and Discussion	15	Sub-section Lowest BPS-Statistics CPI Value

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			CPI with the lowest value based on BPS data for the majority of cities is dominated by chilies, especially cayenne pepper, namely in the cities of Depok, Semarang, Tasikmalaya, and Yogyakarta. These cases can occur due to weather factors in this commodity. On the other hand, the cayenne pepper commodity shows an index value of below one hundred so that it has the potential to turn inflation into deflation as the harvest season enters. However, for cayenne pepper commodity, the CPI with the marketplace data approach in that city has a large enough gap, some even have a CPI value exceeding one hundred. This means that price changes in marketplace data for cayenne pepper are greater than price changes with traditional and modern market approaches for calculating the BPS-Statistics CPI. In addition, it can be concluded that there are indications of the entry of harvests that have the potential to make the CPI value deflation, not having much effect on the			

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			condition of commodity sales in the marketplace.			
			Figure of DKI Jakarta's BPS-Statistics and marketplace CPI at Expenditure Group Level: change appearance	Results and Discussion	16	Figure 9
7.	3	Some sentences lack a verb while the use of articles ("a/an" and "the") is completely missing in some sentences.	*Completed the uncomplete sentences.*			
8.	3	Figure 9 is confusing. You introduce the notion of "movement pattern" without explaining what this is and why it is important and the explanation of this figure seems to be lacking	The consumption values are used to see the movement pattern is at the level of the expenditure group. This also used to see how much people consume a commodity, so that it can see a picture of people's consumption patterns and becomes one of the auxiliary variables in calculating the consumer price index.	Results and Discussion	12-13	First paragraph after sub-section 3 and Figure 7
9.	3	the legend of Figures 10, 11 and 12 seems a bit "out of focus", meaning, it can be put somewhere more visible. Also, some inconsistencies are present in some figures, for example, why are the numbers from BPS-Statistics in blue, while the ones from the Marketplace CPI are in orange (the color of BPS-Statistics column)	*The legends are revised with larger sizes and put in a visible place*	Results and Discussion	13-14	Figure 7-8

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10.	3	some references need to be revised	*done*			