Producer Price Index (PPI) - Maldives

Index references = December 2018 (Education), January 2019 (Info-Comm)

October-December 2021 TIME OF RELEASE: Monday, 28th February 2022

KEY FIGURES 2021, Q4— PPI EDUCATION; INFO & COMM

Tab1:Monthly PPI–Education and Information and Communication

Month	PPI-Education	PPI–Information and Communication
Apr-20	102.13	84.12
May-20	98.23	87.92
Jun-20	99.39	84.03
Jul-20	98.39	85.90
Aug-20	98.69	83.47
Sep-20	98.30	82.26
Oct-20	98.40	82.79
Nov-20	97.76	81.50
Dec-20	97.54	83.21
Jan-21	103.01	83.77
Feb-21	103.35	81.48
Mar-21	103.34	79.39
Apr-21	103.35	83.08
May-21	103.36	75.66
Jun-21	103.43	78.69
Jul-21	102.62	80.63
Aug-21	106.45	78.38
Sep-21	106.45	75.34
Oct-21	106.45	74.25
Nov-21	106.45	74.88
Dec-21	106.45	73.45

In quarter 4 (Q4) of 2021, the Producer Price Index for Education sector remained stable at the 2021 Q3 level of 106.45 across all months.

The communication sector PPI is 73.45 in December 2021. It has mainly followed a downward trend with a slight rise in November 2021 (Figure 1, Tab1).

LONG TERM TREND IN PPI

Figure 1 below illustrates the monthly changes in the Education as well as Information and Communication PPIs over the past two years. The two sectors follow different trends.

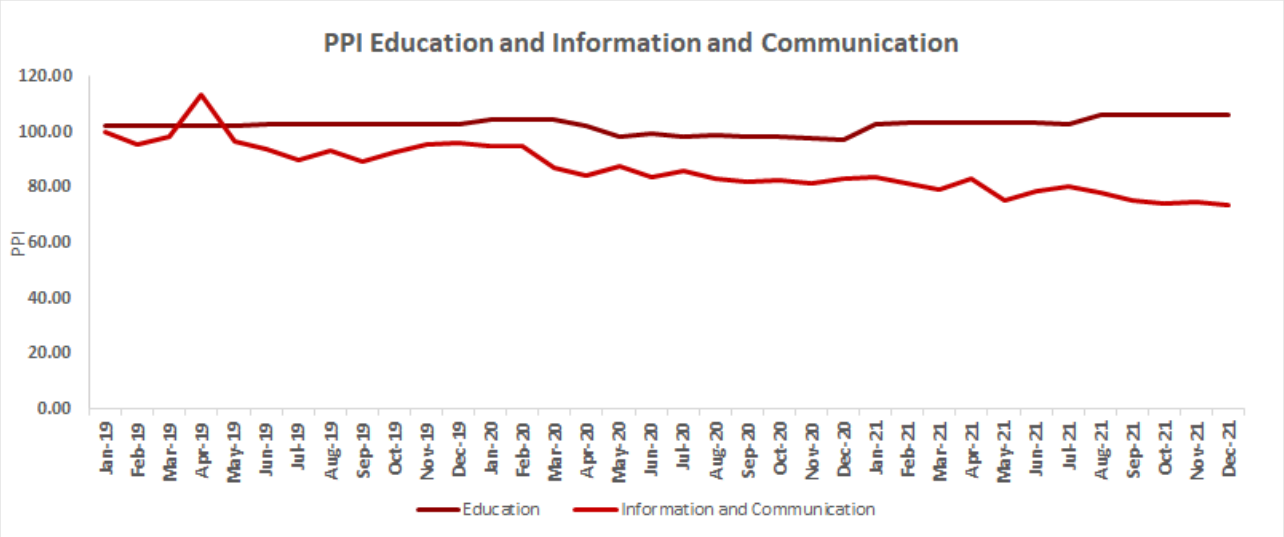
However, as a result of Covid-19 pandemic, both sectors experienced falling prices. Yet, after a year , education sector prices have reached the pre-pandemic level and it continues to increase gradually.

The Information and Communication prices continue to follow a downward trend even though Maldives has overcome the Covid-19 situation. This is due to government policies introduced in mid-2021, aimed at reducing prices to make internet more accessible to the people.

The sector-wise trends are explained in the following pages.

PRICE MOVEMENTS-EDUCATION; INFO & COMM-(Jan 2019– Dec 2021)

Figure 1: Monthly PPI (January 2019-December 2021)



Producer Price Index (PPI) Education Sector - Maldives

Price reference =2018 | Index reference = Dec 2018

October-December 2021 TIME OF RELEASE: Monday, 28the February 2022

KEY FIGURES 2021 , Q4 —- PPI FOR EDUCATION

Tab2: Monthly & Month on month change

Month	PPI -Education		% Change
	2021	2020	2020-2021
Oct	106.45	98.40	8.18
Nov	106.45	97.76	8.89
Dec	106.45	97.54	9.14

Tab 3:Monthly PPI and Percentage

Month	PPI-Education	% Change over previous month	% Change - month on month
Oct-20	98.40	0.10	-4.25
Nov-20	97.76	-0.65	-4.88
Dec-20	97.54	-0.22	-5.09
Jan-21	103.01	5.61	-1.31
Feb-21	103.35	0.32	-0.99
Mar-21	103.34	-0.01	-1.00
Apr-21	103.35	0.01	1.19
May-21	103.36	0.01	5.22
Jun-21	103.43	0.07	4.07
Jul-21	102.62	-0.78	4.31
Aug-21	106.45	3.73	7.86
Sep-21	106.45	0.00	8.28
Oct-21	106.45	0.00	8.18
Nov-21	106.45	0.00	8.89
Dec-21	106.45	0.00	9.14

In quarter 4 (Q4) of 2021, the Producer Price Index for Education sector remained stable at the 2021 Q3 level. In December the index is at 106.45. Compared with 2020 Q4, the prices show positive growth in all three months, with December peaking at 9.14%.

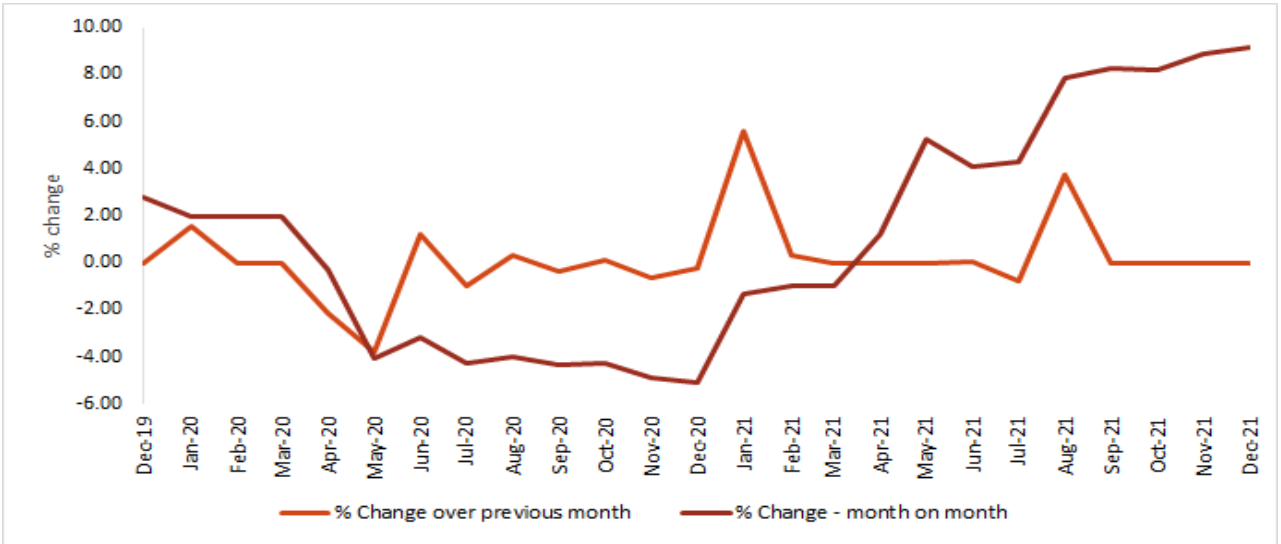
LONG TERM TREND IN PPI

Figure 2 below illustrates the monthly and month-on-month changes in PPI over the past two years. The monthly indices remained constant at 106.45 in October to December 2021 (Tab3, Figure 3). The prices have remained unchanged since August 2021. Hence, percentage change in price is zero for all three months of 2021 Q4.

The month-on-month prices increased consistently from 8.18% to 8.89% and 9.14% in October, Novermber, and December 2021 respectively. These increases indicate the country's recovery from the impact of Covid-19 pandemic. Since December 2020, education sector prices show a positive trend in alignment with the overall improvement in the economy.

PRICE MOVEMENT IN EDUCATION SECTOR-(December 2019-2021)

Figure 2: PPI Education-Monthly & Month-on-month Percentage Change (December 2019-2021)



Education Level

Tab 4: PPI -Education Levels, and Month on month percentage change

Education levels	Dec-20	Dec-21	% Change 2020-2021
Education	97.54	106.45	9.14
Pre-primary and primary education	91.40	111.99	22.53
General Secondary Education	102.78	107.49	4.59
Higher Education	101.33	101.33	0.00

As illustrated in Table 4, except for Higher education, all other education levels show price increases over the twelve months from December 2020 to December 2021. The Pre-primary and Primary education had the most significant increase of 22.53%. This is due to changes in fee structures implemented by some of the educational institutions. The General Secondary education had a relatively low growth at 4.59% during the period.

Figure 3: PPI – Education Sector PPI (December 2019-2021)

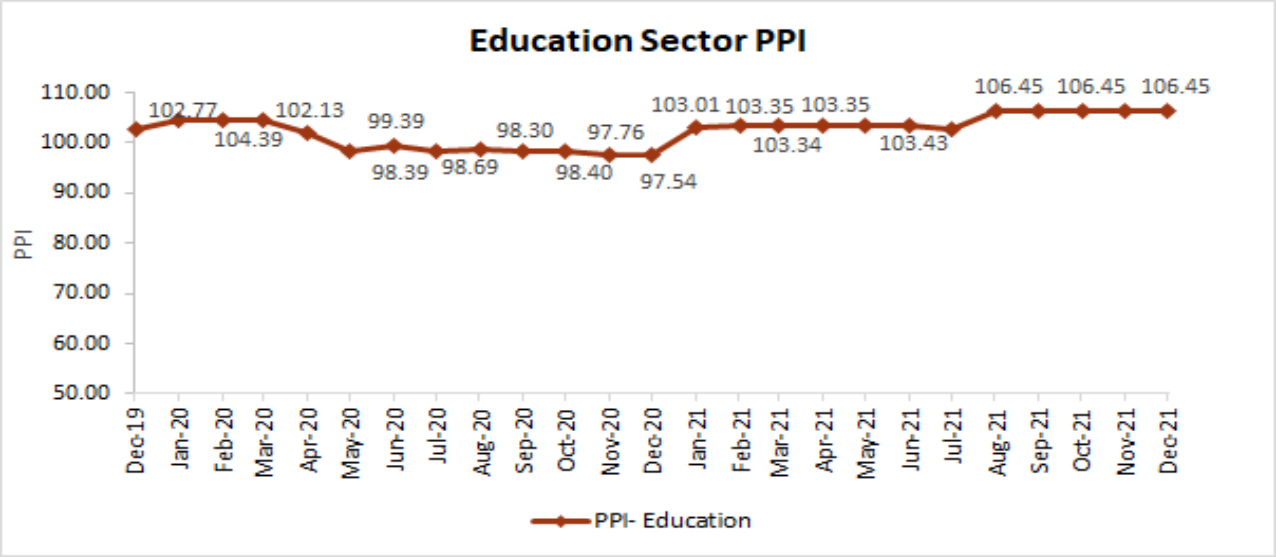


Figure 4: PPI – Preprimary and Primary Education Index (December 2019-December 2021)

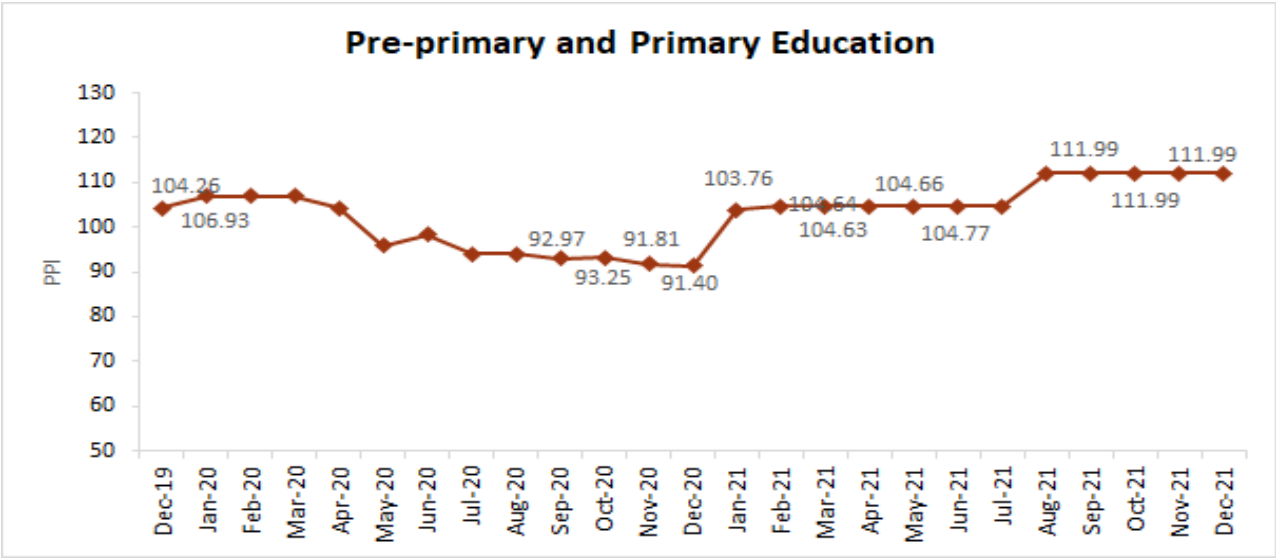


Figure 4, shows that the price of pre-primary and primary education stabilized since August 2021. Prices remained unchanged in 2021 Q4. Compared to December 2020, the twelve month growth rate is 22.53%, making this the largest upward contributor to the overall education sector PPI in 2021 Q4 compared to 2020 Q4.

Figure 5: PPI – General Secondary Education Index (December 2019-December 2021)

(includes Lower and Higher secondary education)

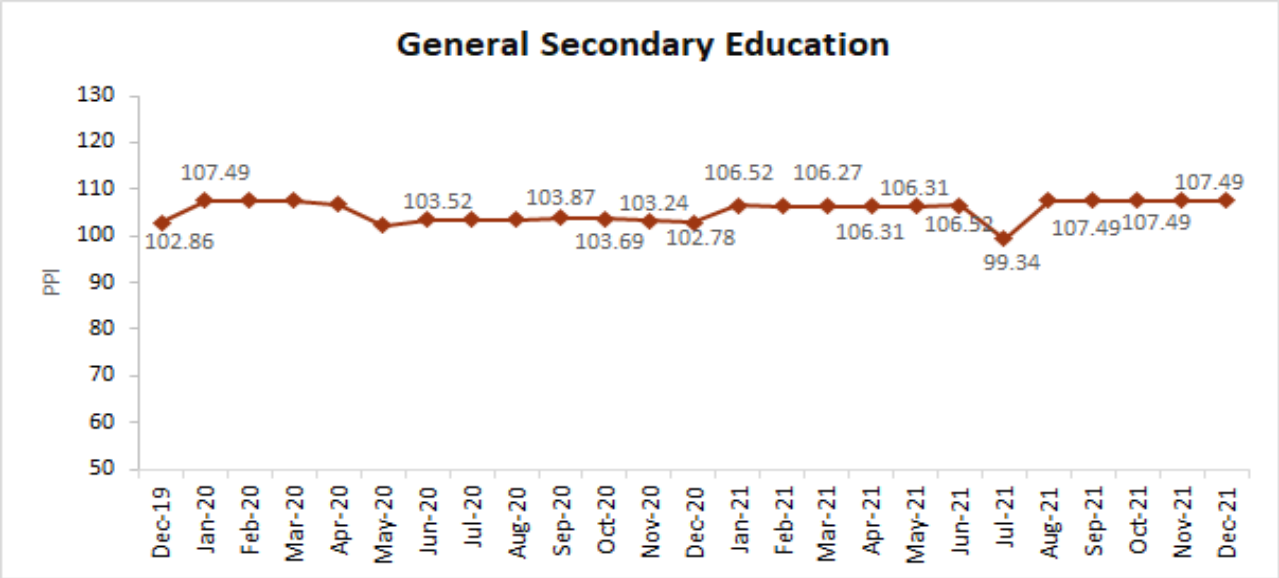


Figure 5, illustrates that prices for general secondary education remained stable since August through 2021 Q4. The month-on-month prices have had a positive growth of 4.59% in December 2021. The secondary education has been more stable compared to pre-primary and primary education sector.

Figure 6: PPI – Higher Education Index (December 2019-December 2021)

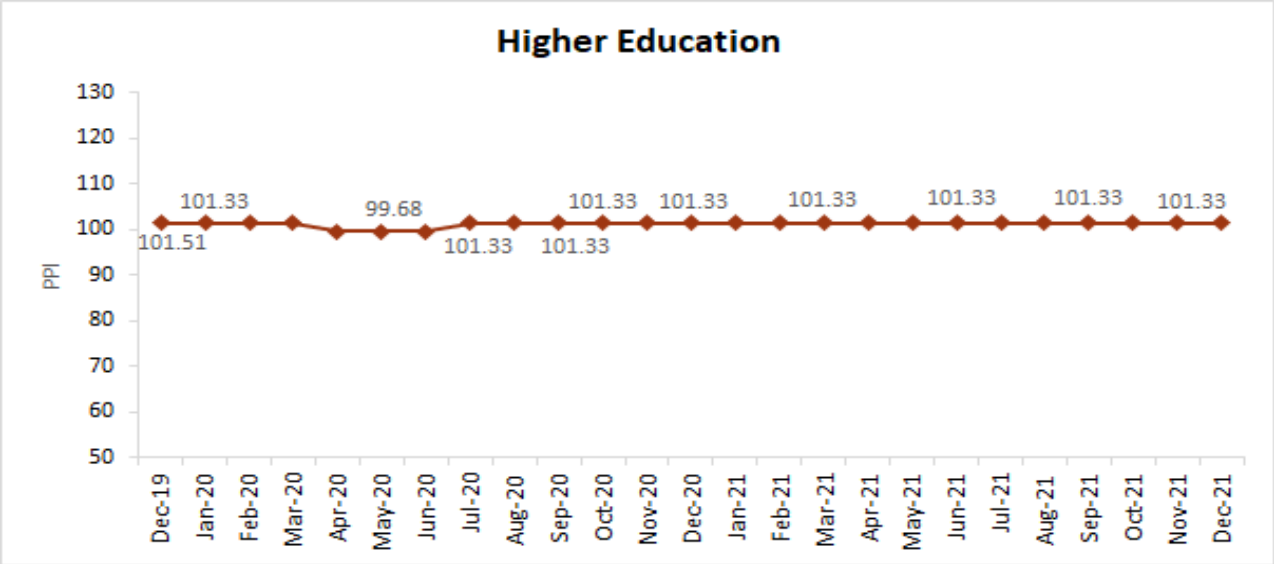


Figure 6 illustrates prices of higher education. There is no change in the higher education prices in 2021 Q4, when compared with 2021 Q3.

The higher education prices have remained somewhat steady for most of the period except from April to June 2020. The highest decline is seen in April 2020 due to discounts offered to students when the COVID-19 pandemic situation initially worsened in the country. However, in July 2020, higher education prices returned to the pre-COVID level and has remained the same till December 2021.

Producer Price Index (PPI) Information & Communication - Maldives

Price reference = January 2019 | Index reference = January 2019

October-December 2021 TIME OF RELEASE: Monday, 28th February 2022

KEY FIGURES 2021, Q4 —- PPI FOR INFO & COMM

Tab 5: Monthly & Month on month change

Month	PPI –Info & Comm 2021	2020	% Change 2020-2021
Oct	74.25	82.79	-10.32
Nov	74.88	81.50	-8.12
Dec	73.45	83.21	-11.73

Tab 6:Monthly PPI and Percentage

Month	PPI– Info & Comm	% Change over previous month	% Change - month on month
Oct-20	82.79	0.65	-10.81
Nov-20	81.50	-1.56	-14.60
Dec-20	83.21	2.10	-13.31
Jan-21	83.77	0.67	-12.06
Feb-21	81.48	-2.72	-14.20
Mar-21	79.39	-2.56	-9.15
Apr-21	83.08	4.65	-1.23
May-21	75.66	-8.93	-13.94
Jun-21	78.69	4.01	-6.35
Jul-21	80.63	2.46	-6.14
Aug-21	78.38	-2.79	-6.10
Sep-21	75.34	-3.87	-8.40
Oct-21	74.25	-1.46	-10.32
Nov-21	74.88	0.85	-8.12
Dec-21	73.45	-1.91	-11.73

In quarter 4 (Q4) of 2021, the PPI for Information and Communication had an overall declining trend. However, the prices rose slightly in November. Compared with 2020 Q4, the communication sector prices show negative growth in all three months, with December being the lowest at -11.73%.

LONG TERM TREND IN PPI

The quarter 4 prices of 2021 continued to decline as a result of the change in government policy in Q3 which lead to a significant fall in prices of mobile and internet data packages.

Table 6 illustrates the monthly and month-on-month changes in communication PPI during the past year. On average, the sector is experiencing a declining trend. This sector is highly prone to changes in consumer behaviour which causes most of the minor fluctuations throughout the period (Fig 7).

However, special offers and promotions also have an impact on the trend. In the early 2020s, prices fell due to offers and free data provided during the Covid-19 pandemic. In early 2021, the monthly prices increased a little when the Covid situation improved.

PRICE MOVEMENT IN INFO & COMM SECTOR-(December 2019-2021)

Figure 7: Monthly Information & Communication PPI (December 2019-December 2021)

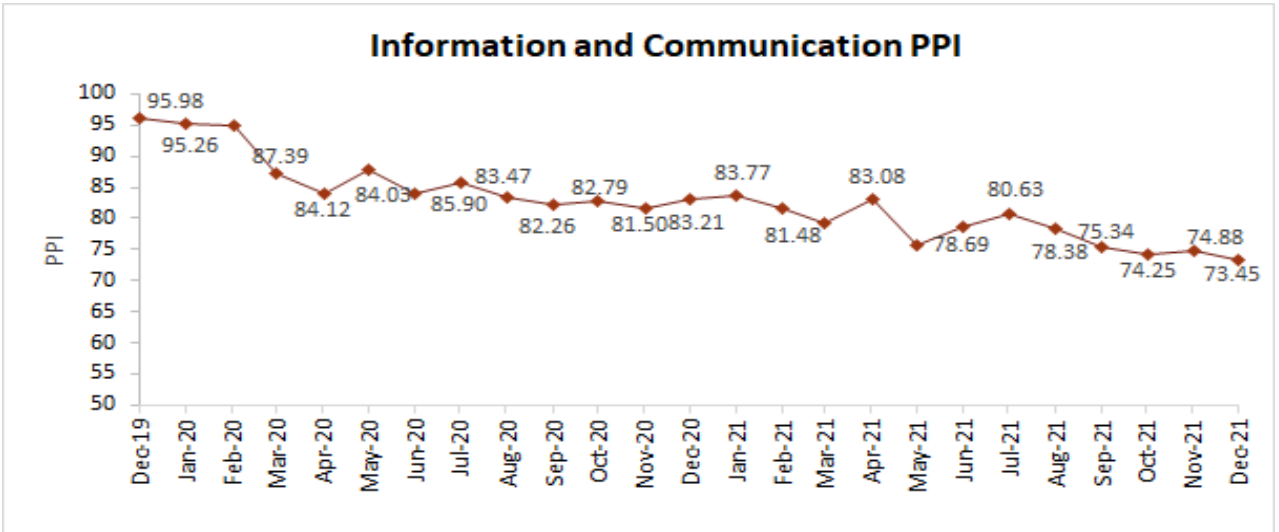
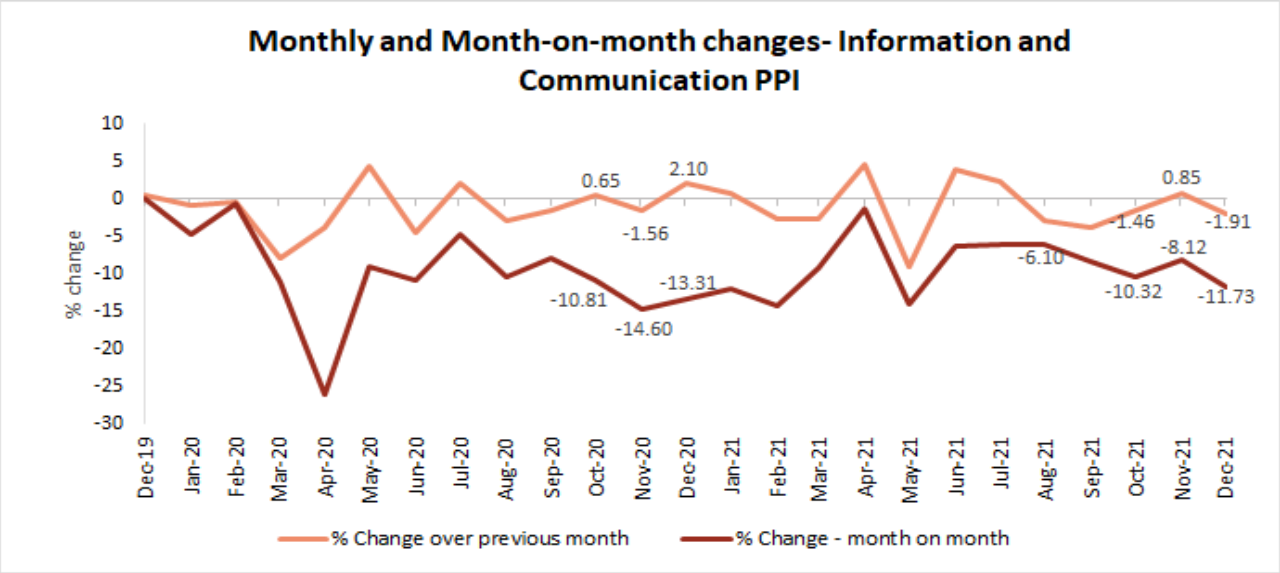


Figure 8: PPI – Information & Communication Sector PPI (December 2019-December 2021)



The Figure 8 and Table 6 show monthly and month-on-month changes in prices of Information and Communication sector during the past two years.

The monthly changes compare prices of each month with that of the previous month, whereas the month-on-month values compare prices of each month with that of the same month in the previous year.

In October, prices fell by –1.46% compared to September . However, compared with the corresponding quarter of 2020, the prices fell by –10.32%. The monthly November prices rose by 0.85% due to lower usage of data by consumers, while month-on-month price had a more significant fall of –8.12. This is because the prices in 2020 were relatively higher prior to the introduction of the government policy. The monthly and month-on-month prices fell in December by –1.91% and –11.73% respectively.

The communication sector prices are expected to vary over time. However, the significant decrease in month-on-month prices between March and April 2020 reflects the impact of Covid-19 pandemic-related free data offers provided by the telecommunication sector. The month-on-month prices in April 2021 rose due to removal of special offers, as the Covid pandemic situation improved over the year. April to May 2021 prices also coincide with changes in consumer behaviour and telecommunication usage during Ramadan.

Future plan for Information and Communication PPI

The Information and Communication PPI would be expended in the future, providing data users with information at more disaggregated levels, while maintaining the confidentiality of data providers. The Maldives Bureau of Statistics aims at publishing the index at programming and broadcasting, and telecommunication levels once sufficient data is available.

PPI weights and Price collection

The PPI for Education is introduced with a price reference of 2018. The index for Education is compiled based on 110 transections from a sample of 17 establishments. The PPI for Information and Communication is introduced with a price reference of January 2019. The Communication sector index is compiled based on 55 transections from a sample of 6 establishments.

Future plan for PPI

PPI initiation works on Water, Sewerage and Waste Management; Electricity; Construction; as well as Tourism sectors are ongoing.

What is Producer Price Index

The Producer Price Index (PPI) measures the average change over time in the prices received by domestic producers of goods and services.

The PPI provides a weighted average of price change in a group of products between one time period and another. The average price change over time cannot be directly observed and must be estimated by measuring actual prices at different points in time. Price index numbers are compiled from the collected price observations through time. PPI is an index designed to measure the average change in the price of goods and services either as they leave the place of production or as they enter the production process.

PPI with detailed industry data will serve as a leading indicator of price change in the economy. The PPI enables business owners to make a comparison of trends in their own business with those of the industry group. It can be used as an escalator to index long-term contracts for goods and services. In this case, the PPI can be used to adjust the value of the monetary amounts stipulated in the goods and services based on the increase or decrease in the level of a specific index. Additionally, PPI could be used as an important tool during the design and formulation of policies and analysis of inflation by the Maldives Monetary Authority and other governmental ministries

Price instability inherently introduces ambiguity into economic analysis and decision making, so the main use of PPI relate to efforts to reduce the uncertainty. PPI is used as a short-term indicator of inflationary trends in a wide spectrum of countries. It is also used in current cost accounting, indexation in legal contracts and as a national accounts deflator. Furthermore, it is used by researchers as well as the business community as an analytical tool to understand the situation of business.

The PPI does not represent prices at the consumer level - this is left to the Consumer Price Index (CPI). CPI is compiled on a monthly basis by Maldives Bureau of Statistics (MBS) and released every month.

Non-responding sample establishments are estimated by imputing the price changes at the establishment level or industry level. Revisions to the estimates are done upon receipts of actual reports from late respondents.

The current PPI produced by MBS is not without limitations. Those inbuilt in the system mainly arising from lack of adequate and clear information of the economic structure and players in the country, which determines the weight of the Index system and the sample frame. The limitations are stated in more detail in the methodology paper available on the website. To overcome these limitations, there is a need enhance the list of establishments in sample.

Producer' price indices are constructed from data collected through quarterly surveys of selected establishments. The establishment and product selection procedures and index calculation methods are available in the website www.statisticsmaldives.gov.mv.

Measurement of changes in the price index

Change over previous quarter (monthly) compares the index of the month with that of the preceding month. Such comparisons measure the change in the average prices between two consecutive months. They serve as useful short-term indicators of the price movements in the non-seasonal industries.

Change over previous quarter (Quarterly) compares the index of the quarter with that of the preceding quarter. Such comparisons measure the change in the average prices between two consecutive quarters. They serve as useful short-term indicators of the price movements.

Change over same month of previous year (month on month) compares the index of the month with same month of previous year. The measure gives how an industry is growing over 12 months. It reduces the seasonality effects in the indices.

Notes

FORTHCOMING ISSUES

Issue (monthly)	Release date
January - March 2022	31 May 2022

ROUNDING

Any discrepancies between totals and sum of components in this publication are due to rounding.

ABBREVIATIONS

MBS	Maldives Bureau of Statistics
PPI	Producer Price Index
IMF	International Monetary Fund
SUT	Supply and Use Table
CPI	Consumer Price Index

ACKNOWLEDGEMENT

The release of the new PPI was made possible through the generous support

of IMF South Asia Regional Training and Technical Assistance Centre (SARTTAC). Consultant from IMF, Mr Brian Graf guided in the formulation and compilation of the index.

The entire process of data validation, compilation and updating has been done in close collaboration with all the data providing establishments.

The quarterly Producer price Index is compiled by Ms. Sajida Ahmed and Ms. Lizama Faheem; Industry Weights were developed by Ms. Aishath Hassan and Ms. Mariyam Shadheena; Publication report was prepared by Ms. Lizama Faheem and methodology paper was reviewed by Mr. Brian Graf.

The PPI development process was carried out under overall technical support and guidance from Mr. Brian Graf and the supervision of senior management of statistics division Ms. Aishath Shahuda and Ms. Aisthath Hassan. All their valuable services are gratefully acknowledged.

The support rendered by all staff of 'Prices and Economics statistics Section' and National acounts Section' are appreciable.

Producer Price Index Education- Price reference = 2018

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Education	**102.77**	**102.77**	**102.77**	**102.77**	**102.77**	**102.77**	**104.39**	**104.39**	**104.39**	**102.13**	**98.23**	**99.39**	**98.39**	**98.69**	**98.30**	**98.40**	**97.76**	**97.54**	**103.01**	**103.35**	**103.34**	**103.35**	**103.36**	**103.43**	**102.62**	**106.45**	**106.45**	**106.45**	**106.45**	**106.45**
Pre-primary and primary education	104.26	104.26	104.26	104.26	104.26	104.26	106.93	106.93	106.93	104.26	95.91	98.40	93.99	94.05	92.97	93.25	91.81	91.40	103.76	104.65	104.63	104.64	104.66	104.77	104.68	111.99	111.99	111.99	111.99	111.99
General Secondary Education	102.86	102.86	102.86	102.86	102.86	102.86	107.49	107.49	107.49	106.80	102.18	103.52	103.55	103.36	103.87	103.69	103.24	102.78	106.52	106.25	106.27	106.31	106.31	106.52	99.34	107.49	107.49	107.49	107.49	107.49
Higher Education	101.51	101.51	101.51	101.51	101.51	101.51	101.33	101.33	101.33	99.68	99.68	99.68	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33	101.33

PPI Education- Percentage Change over previous month.

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Education	**0.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.58**	**0.00**	**0.00**	**-2.16**	**-3.82**	**1.18**	**-1.01**	**0.31**	**-0.39**	**0.10**	**-0.65**	**-0.22**	**5.61**	**0.32**	**-0.01**	**0.01**	**0.01**	**0.07**	**-0.78**	**3.73**	**0.00**	**0.00**	**0.00**	**0.00**
Pre-primary and primary education	0.00	0.00	0.00	0.00	0.00	0.00	2.57	0.00	0.00	-2.50	-8.01	2.60	-4.48	0.06	-1.15	0.30	-1.54	-0.45	13.53	0.85	-0.02	0.01	0.02	0.11	-0.09	6.98	0.00	0.00	0.00	0.00
General Secondary Education	0.00	0.00	0.00	0.00	0.00	0.00	4.51	0.00	0.00	-0.64	-4.33	1.31	0.03	-0.18	0.50	-0.18	-0.43	-0.45	3.64	-0.26	0.02	0.03	0.01	0.20	-6.75	8.21	0.00	0.00	0.00	0.00
Higher Education	0.31	0.00	0.00	0.00	0.00	0.00	-0.17	0.00	0.00	-1.63	0.00	0.00	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PPI Education -Percentage Change-month on month

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Education	na	na	na	na	na	**2.77**	**1.94**	**1.94**	**1.94**	**-0.27**	**-4.08**	**-3.15**	**-4.26**	**-3.97**	**-4.34**	**-4.25**	**-4.88**	**-5.09**	**-1.31**	**-0.99**	**-1.00**	**1.20**	**5.22**	**4.07**	**4.31**	**7.86**	**8.28**	**8.18**	**8.89**	**9.14**
Pre-primary and primary education	na	na	na	na	na	4.26	2.57	2.57	2.57	0.00	-8.01	-5.62	-9.84	-9.79	-10.83	-10.56	-11.94	-12.34	-2.96	-2.14	-2.16	0.36	9.12	6.48	11.37	19.07	20.46	20.10	21.98	22.53
General Secondary Education	na	na	na	na	na	2.86	4.51	4.51	4.51	3.84	-0.66	0.65	0.67	0.49	0.99	0.81	0.37	-0.08	-0.91	-1.16	-1.14	-0.47	4.05	2.90	-4.07	4.00	3.49	3.67	4.12	4.59
Higher Education	na	na	na	na	na	1.51	0.57	0.57	0.57	-1.06	-1.06	-1.50	-0.17	-0.17	-0.17	-0.17	-0.17	-0.17	0.00	0.00	0.00	1.65	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00

na: Not available

Source: Maldives Bureau of Statistics, Ministry of National Planning, Housing and Infrastructure

Info & Comm PPI - Percentage changes over previous month and month-on-month

Index Reference = January 2019

Year	Month	Communication PPI	% change over previous month	Percent change-month-on-month
2019	Jan	100		
	Feb	95.43	-4.57	na
	Mar	98.17	2.87	na
	Apr	113.61	15.73	na
	May	96.60	-14.97	na
	Jun	94.13	-2.56	na
	Jul	90.02	-4.36	na
	Aug	93.19	3.52	na
	Sep	89.27	-4.21	na
	Oct	92.83	3.99	na
	Nov	95.44	2.81	na
	Dec	95.98	0.57	na
2020	Jan	95.26	-0.76	-4.74
	Feb	94.97	-0.30	-0.49
	Mar	87.39	-7.98	-10.98
	Apr	84.12	-3.74	-25.96
	May	87.92	4.52	-8.99
	Jun	84.03	-4.43	-10.73
	Jul	85.90	2.23	-4.58
	Aug	83.47	-2.83	-10.43
	Sep	82.26	-1.45	-7.85
	Oct	82.79	0.65	-10.81
	Nov	81.50	-1.56	-14.60
	Dec	83.21	2.10	-13.31
2021	Jan	83.77	0.67	-12.06
	Feb	81.48	-2.72	-14.20
	Mar	79.39	-2.56	-9.15
	Apr	83.08	4.65	-1.23
	May	75.66	-8.93	-13.94
	Jun	78.69	4.01	-6.35
	Jul	80.63	2.46	-6.14
	Aug	78.38	-2.79	-6.10
	Sep	75.34	-3.87	-8.40
	Oct	74.25	-1.46	-10.32
	Nov	74.88	0.85	-8.12
	Dec	73.45	-1.91	-11.73

Note: ***na: Not available***

Source: **Maldives Bureau of Statistics**

Ministry of National Planning, Housing and Infrastructure