PPR

PAKISTAN PROSPERITY REPORT

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PRIME
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Policy Research Institute of Market Economy (PRIME) is a public policy think tank striving for an open, free and prosperous Pakistan by creating and expanding a constituency for protective function of the state and freedom of the market. PRIME was established in Islamabad in 2013, and since then, it has published on a wide range of issues including trade, tax policy, business regulations, housing, public debt and energy crisis.

Pakistan Prosperity Report (PPR) is a monthly review of Pakistan's macro-economy based on the analysis of four periodic data sets- industrial production, trade volume, price levels, and private sector lending. The concept behind this report is intuitive- higher level of industrial output, increases in trade volumes, more lending to the private sector and an improvement in purchasing power of individuals are indicators of a strong economy, signaling prosperity of both firms and households.

Credits
The idea of PPR was developed by Ali Salman, Founder of PRIME. Special thanks to Dr. Ali Kemal for technical support in developing the indices and Mr. Sohaib Jamali for his valuable feedback on the methodology. The title page is based on a word cloud generated from the Business Recorder.

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Pakistan Prosperity Report

Indicators of prosperity exhibit improvement, face headwinds in the short term. Large-scale manufacturing and private sector investment improved, trade volume recovering, and purchasing power deteriorating.

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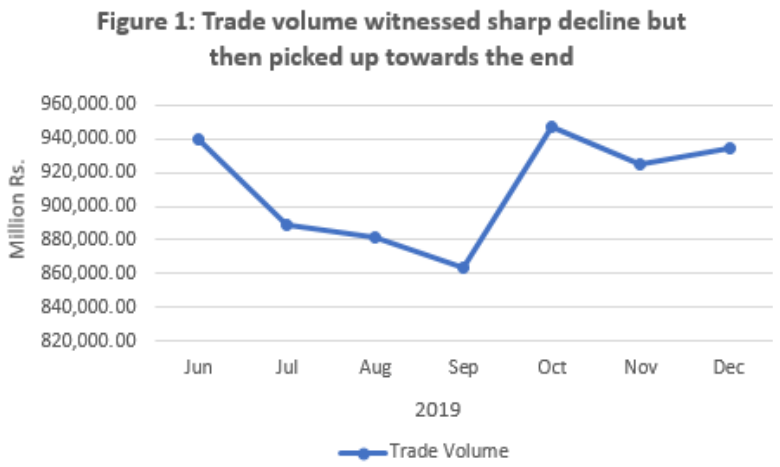
It is pertinent to mention that we consider increase in trade volume more important than a change in trade balance. Increase in trade volume contributes to prosperity by enhancing the production and variety of goods available for consumption and industrial activities thereby increasing the income and employment opportunities. On the other hand, higher rates of inflation reduce prosperity by eroding purchasing power and incomes of individuals. Increase in industrial output enhances prosperity by increasing employment prospects and income. In contrast, provision of finance for long-term investment increases prosperity by boosting industrial capacity resulting in an increased output, employment and income opportunities.

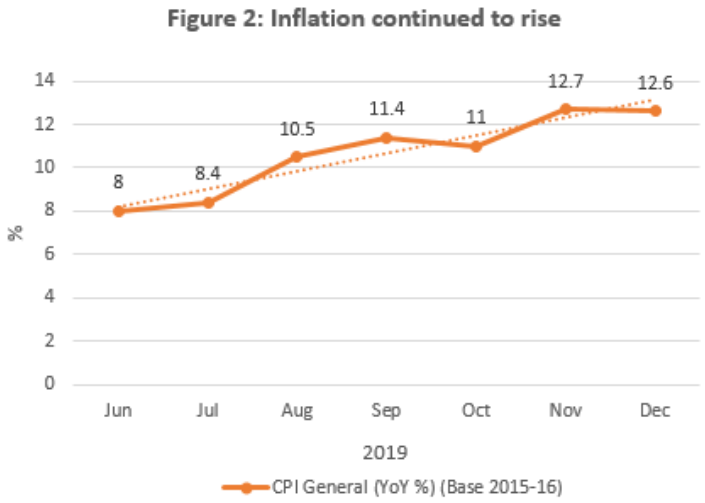
The analysis in PPR (March 2020) is based on the data for December 2019 and January 2020. For a long- term view, data for the period of June 2019-December 2019 is separately covered.

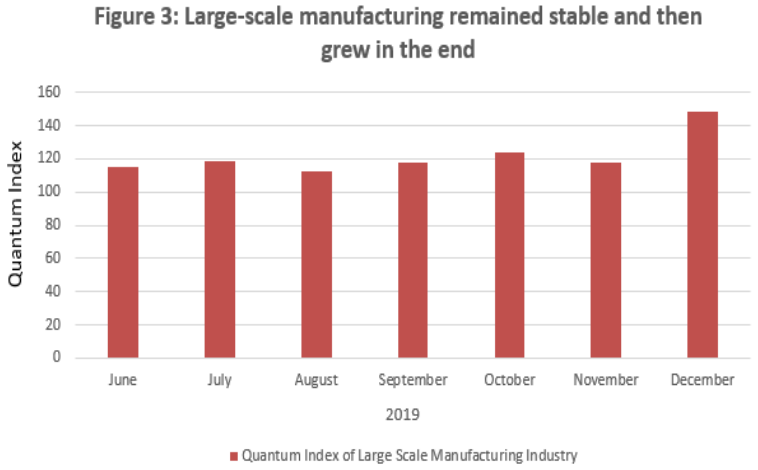
The report first provides a general overview of macro-economy and then provides a snapshot of its first month-to-month growth in the prosperity. The report concludes that over the second half of the FY 2019, Pakistan witnessed overall improvement in the prosperity based on an increase in both large scale manufacturing and investment in the private sector, though decreasing purchasing power and trade volumes resulted in headwinds. For the first month-to-month comparison, between December 2019 and January 2019, the report finds that Pakistan continued to exhibit improvement in prosperity indicators.

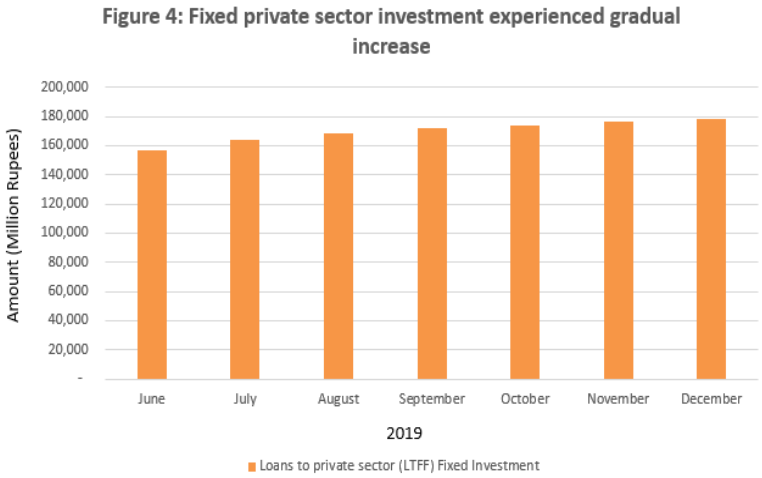
Future is less glossy. It is projected that amid the coronavirus pandemic, Pakistan's trade volume will further shrink as a result of the slowdown in global demand. The production of Large-Scale Manufacturing Industries will also be adversely affected due to lockdown. However, commercial banks' lending to private sector for long term fixed investment might increase with the hopes to stimulate export-oriented sectors. Meanwhile, inflation would remain high hovering around 13 percent due to decrease in domestic production and shortage of essential commodities. Low purchasing power, fear of losing jobs and low returns on investments upholds the bearish sentiments among the stakeholders of the economy in the coming months.

Economic Outlook: June 2019-December 2019







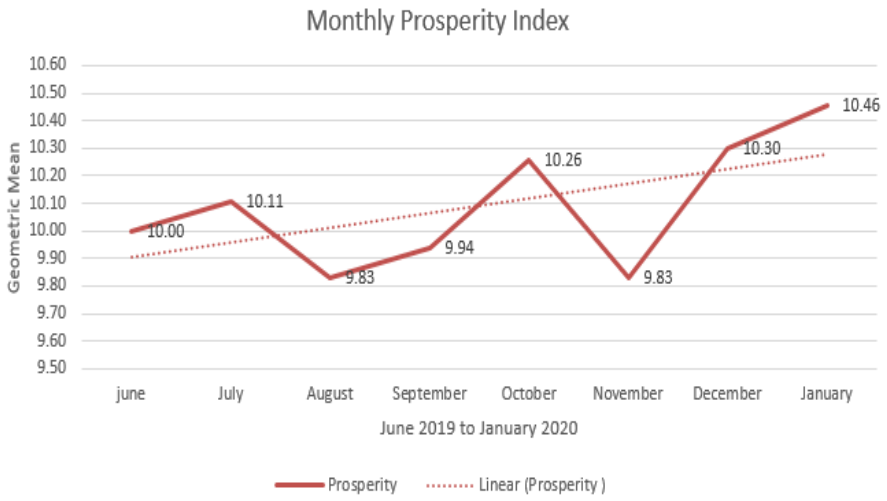


Source: Pakistan Bureau of Statistics (Figure 1, 2 and 3) and State Bank of Pakistan (Figure 4).

Prosperity Index

PPR estimates its own Prosperity Index based on these indices: 1/CPI denotes inverse of Consumer Price Index (CPI), QIM represents Quantum Index of Large- Scale Manufacturing Industries (QIM), TVI represents Trade Volume Index and LTFF represents Growth in Commercial Loans for Long-Term Financing Facility. Please refer to Annexure-A for details on methodology and calculations.

Monthly prosperity index has been calculated for June 2019 to January 2020. The results reveal an overall increase in prosperity between June 2019 and January 2020.

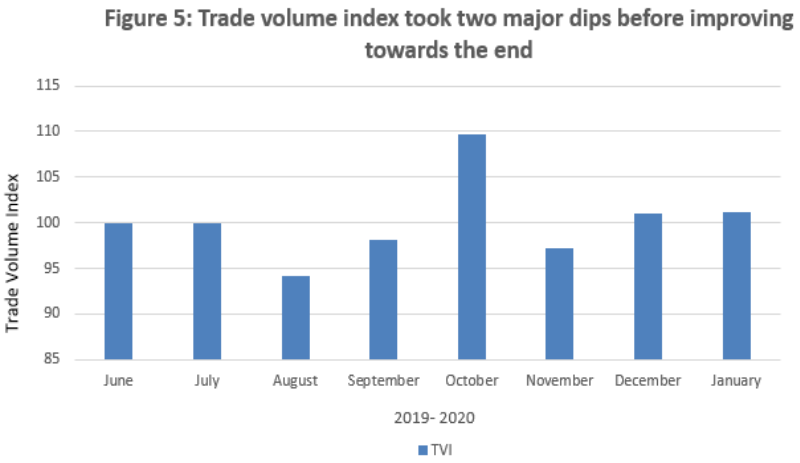


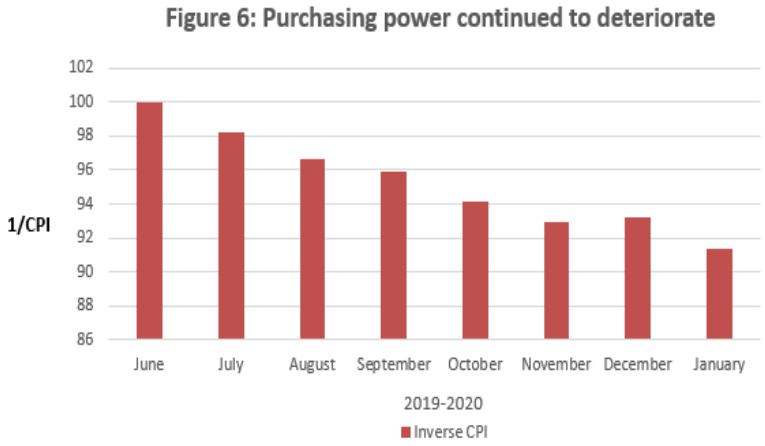
Source: Author's calculations based on PBS dataset.

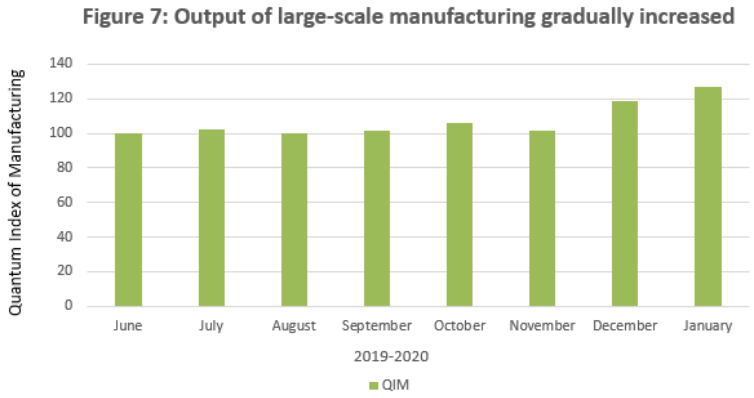
For January 2020, the month-on-month inflation rate increased by 2%, while the trade volume index, quantum index of LSMI and LTFF increased by 1.22%, 7.09% and 1.86% respectively.

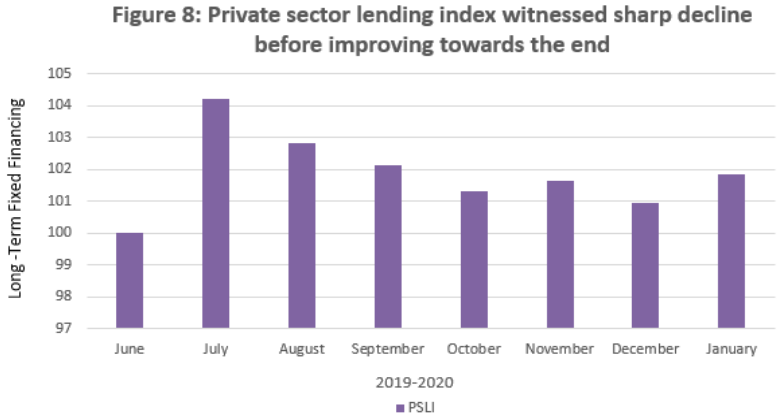
The prosperity index estimated by using the January 2020 data on four indicators is 104.52. In order to determine if economic prosperity has increased or decreased, a base period is required. For the purpose, prosperity index of December 2019 has been used as a baseline which is calculated to be 102.99.

The analysis reveals economy's prosperity has increased by 1.48 percent in January 2020 relative to December 2019. This increase in economic prosperity is largely attributable to an increase in long term financing facility, LSMI's output and trade volume between December 2019 and January 2020 (see Figures 5, 7 and 8 on next page). It is pertinent to note that the purchasing power has decreased (see Figure 6) implying that the increase in inflation surpasses monetary gains (income) from expansion in industrial output and trade volume.









Source: Pakistan Bureau of Statistics (Figure 5, 6 and 7) and State Bank of Pakistan (Figure 8).

Annexure-A

PPR Methodology and Indices Calculations

Variable Transformation

The Pakistan Prosperity Report utilizes data from Pakistan Bureau of Statistics (PBS), Pakistan Economic Survey and State Bank of Pakistan (SBP) on monthly basis. The analysis is contingent upon the growth rates of four macroeconomic indicators of prosperity i.e. Trade Volume, Consumer Price Index (CPI), Quantum Index of Large-Scale Manufacturing Industries (QIM) & Long-Term Financing Facility (LTFF).

Finding Growth

Data for Month-on-Month growth of Consumer Price Index (CPI) and Large-Scale Manufacturing Industry is extracted from PBS, while the growth of Trade volume and Loans to Private Sector (LTFF) is calculated by applying the conventional growth formula i.e.

$$\text{Trade Volume/ LTFF Growth} = \frac{\textbf{Current} - \textbf{Previous}}{\textbf{Previous}} * 100$$

	Inflation	LSMI	Trade		Loans to Private Sector (LTFF) Fixed Investment	
Months	**CPI National MoM (%)**	**QIM (MoM Growth) (%)**	**Trade Volume**	**Trade Volume MoM Growth (%)**	**Amount (Million Rupees)**	**LTFF MOM Growth (%)**
Jul 2019	1.8	2.11	939,213	-0.09	163,700	4.2
Aug 2019	1.6	-2.37	884,289	-5.85	168,313	2.82
Sept 2019	0.8	1.92	867,387	-1.91	171,885	2.12
Oct 2019	1.8	4.01	950,980	9.64	174,138	1.31
Nov 2019	1.3	-3.78	924,643	-2.77	176,969	1.63
Dec 2019	-0.3	16.4	934,160	1.03	178,667	0.96
Jan 2020	2	7.09	945,558	1.22	181,996	1.86

Rescaling

As the report is based on secondary data, it is obvious that growth rate for each of the variable is measured on different scales. Moreover, if a month shows zero growth, it will invalidate the whole formula of prosperity index, which is based on Geometric Mean.

Since the Trade Volume and Long-Term fixed Financing were not available in the form of index, the variables are first converted into indices, and then all the four variables were rescaled to measure

their impact on economic prosperity in same units. To avoid this discrepancy, the variables are rescaled and converted into indices, by considering the value of June = 100 as a base month.

Creating Indices

Month	Purchasing Power	LSMI Statistics	Trade Statistics	Fixed Investment
	Inverse CPI	LSMI Index	Trade Volume Index	LTFF Index
Jun 2019	100	100	100	100
Jul 2019	98.2	102.11	99.90819891	104.2044623
Aug 2019	96.6288	99.689993	94.15212524	102.8179597
Sep 2019	95.8557696	101.6040409	98.08863392	102.1222365
Oct 2019	94.13036575	105.6783629	109.637336	101.3107601
Nov 2019	92.90667099	101.6837208	97.23054113	101.6257221
Dec 2019	93.18539101	118.359851	101.0292621	100.9594901
Jan 2020	91.32168319	126.7515644	101.2201336	101.8632428

Calculations for Prosperity Index

The Prosperity Index is calculated by using the geometric mean as employed by UNDP in calculating the Human Development Index. It is computed as follows:

$$\boldsymbol{Prosperity\ Index = \sqrt[4]{a * b * c * d}} \qquad \textbf{(1)}$$

Where; "a" denotes Consumer Price Index (CPI), "b" represents Quantum Index of Large Scale Manufacturing Industries (QIM), "c" represents Trade Volume Index (TVI) and "d" represents the Index of Bank's lending to Private sector i.e. Long-Term Financing Facility (LTFF Index).

Since the relationship between inflation and purchasing power is negative, inverse of CPI ($\frac{1}{CPI}$) is taken to depict that higher rate of inflation lowers purchasing power and hence prosperity. Trade volume is the sum of imports and exports, while LTFF offers business borrowings for long term projects particularly in Large Scale Manufacturing Industry (LSMI).

$$\boldsymbol{Prosperity\ Index = \sqrt[4]{\frac{1}{CPI} * QIM * TVI * LTFF}} \qquad \textbf{(2)}$$

Month	Inverse CPI	QIM	TVI	PSLI	Prosperity Index (Geometric Mean)
Jun 2019	100	100	100	100	100
Jul 2019	98.2	102.11	99.9082	104.2044	101.08
Aug 2019	96.6288	99.69	94.1521	102.8179	98.27
Sep 2019	95.85577	101.604	98.0886	102.1222	99.38
Oct 2019	94.130366	105.678	109.637	101.3107	102.53
Nov 2019	92.906671	101.684	97.2305	101.6257	98.29
Dec 2019	93.185391	118.36	101.029	100.9594	102.99
Jan 2020	91.321683	126.752	101.22	101.8632	104.52

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