

TWO DECADES OF TWENTY 1ST CENTURY: POPULATION AND WHEAT GROWTH OF PAKISTAN

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Dear Editor

Pakistan is divine with natural as well as human resources. Pakistan's economy already had an impulsive growth pattern during the last 20 years, with consistent flourishing and life cycle facing tasks in achieving durable and comprehensive growth. Vulnerable economic growth was triggered by unaddressed long-lasting essential issues for example; unprofitable State-Owned Enterprises (SOEs), a pathetic external situation due to inadequate export volume and poorly developed energy segment, and little reserves and stock.

Even before the COVID-19 pandemic hit Pakistan's economy, the government of Pakistan started implementing decisive and far-reaching reforms in every (agriculture) sector of the economy. The FY2021 began during most severe global health crisis experienced in modern history. Pakistan's economy, like rest of the world, has struggled to combat the economic consequences of COVID-19 shock through prompt measures for supporting the economy and saving lives and livelihoods. Wheat is the main staple crop of the country. For achieving the target of food

security in Pakistan sustainable production of wheat according to the population growth is essential. Self-reliance on wheat has been a core objective of every government. The human resource of a country plays a significant part not only in the economic progress but also in social well-being of the country. However huge population mass and deficiency of appropriate management of human resources may lead to social distress and decrease economic show. For growing population growth, Pakistan is facing trouble with ideal social spending i.e. health care, education, housing and unemployment etc. In this situation, the start and increase of COVID-19 has additionally provoked the condition. The Pakistani government has taken numerous steps to overhaul the poor structure of the economy and to gadget curative actions particularly for human capital development. Pakistan, being the 5th most populous country and having 9th largest labor force in the world, adds a large number to its labor force every year.

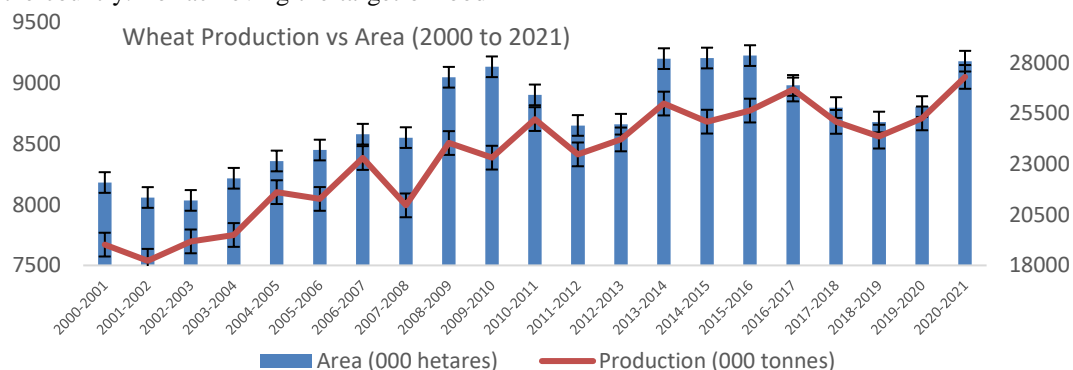


Figure 1. Year wise comparison between wheat production and area from (2000-21)

The results from Figure 1 showed that the area and production of wheat were found variable throughout the studied years from 2000 to 2021. It was found that the area and production was observed higher during 2000-2001 as compared with next two years performance. The highest area and production were set up for the years 2008 to 2010, 2013 to 2016 and year 2021. The higher production indicated that the

performance of wheat varieties and germplasm was with higher potential. The production and area were lower for 2017-2020 which indicated that there may be less availability of resources inputs and climatic factors especially high rainfall near to maturity of wheat. The production and area were lower during the year 2020 was may be due to COVID-19 which caused reduction in productions.

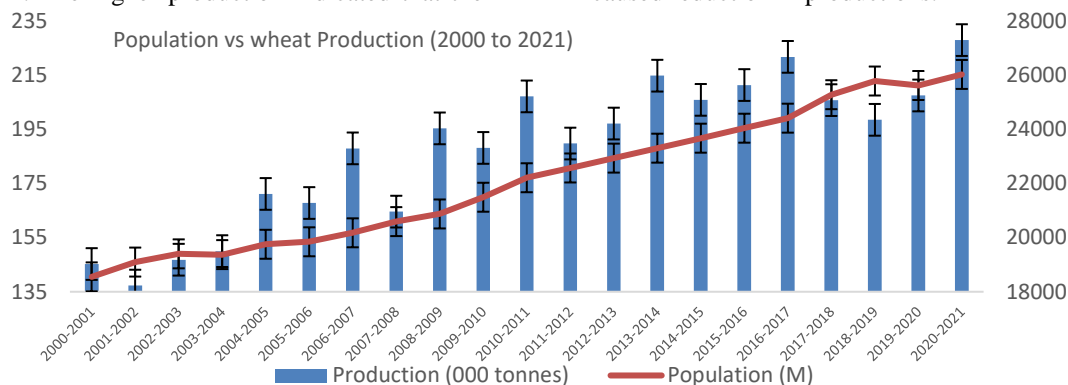


Figure 2. Association between Population and wheat production from (2000-21)

The finding from Figure 2 illustrated that the population and wheat production of Pakistan are closely related and were found to be variable throughout the studied years from 2000 to 2021. The increasing-population trend was observed as linear as shown in Figure 2 from 2000 to 2021. Wheat production was found non-linear, especially in the year 2001-2003 and 2018-2020 as expressed in Figure 2. A linear and highest production trend in wheat

production was shown in 2004-05, 2008-09, 2013-14, 2016-17 and 2020-21 as compared to population growth. An increasing trend in production was due to the availability of timely inputs, in addition to sufficient rainfall.

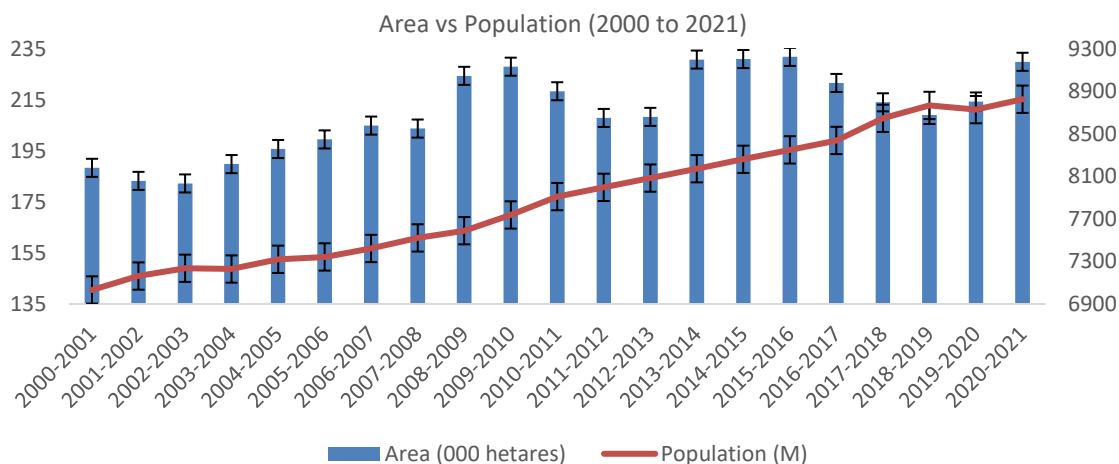


Figure 3. Year wise comparison between wheat area and Population from (2000-21)

Figure 3 revealed that the population and wheat area of Pakistan directly linked and altered right through the considered years from 2000 to 2021. The population increasing trend in Pakistan was viewed as linear from 2000 to 2021. The wheat cultivated area was examined non-skewed and maximum especially from the year 2008 to 2010, 2013-2016 and 2020-21. Minimum wheat area and 2018-2020 as expressed in

Figure 3. A linear and highest production trend in wheat production was not in relation to population was found in 200-2003 as shown in fig 3. The decrease in area reduction of wheat was due to Government policies and farmers preference for the cultivation of wheat.

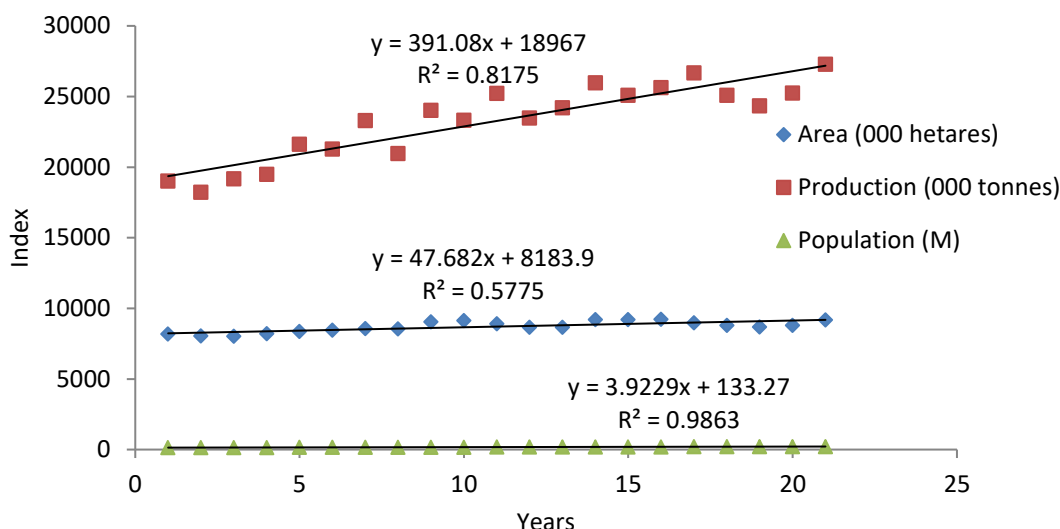


Figure 4. Regression analysis for area, production and population

The results from Figure 4 indicated that overall linear association was found in wheat area, production, and population. Regression values showed that the population increased gradually from 2000 to 2021 and also a similar situation was noted in area cultivation of wheat in straight line with little increase in comparison to populations. Variations in wheat production were changed (increased or decreased) due to area changes and other planting inputs factors, government policies, timely rainfall, contribution of rain-fed area and timely crushing of sugarcane, subsidized fertilizer rate, preference of farmer towards crop cultivations.

Reference

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Declarations

Author Contribution statement

All authors contributed equally.

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate

Not applicable

Consent for publication

Not applicable

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Not applicable

Conflict of Interest

Regarding conflicts of interest, the authors state that their review was carried out independently without any affiliations or financial ties that could raise concerns about biases.



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