Females 50-64 Likely to Care for Aging Population: Young Working-Age Cohorts Could Play Essential Role in Revitalizing Indiana County

A REVIEW OF THE AGING POPULATION OF INDIANA COUNTY, PENNSYLVANIA IN 2021

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In the past decades, parts of the United States known as the industrial rustbelt have experienced a population decline and high unemployment rates (see PEW research titled "What's Driving Population Declines in More States"). In this report, we visit the demographic characteristics of Indiana County, Pennsylvania, to measure its population trajectory. Through cross-tabulations, evidence shows an aging and shrinking population for this county. For instance, in 2015, about 86,970 people lived in Indiana County; in comparison, the estimated population for 2019 was about 85,032 (US Census 2015 and 2019), an estimated decline of about 1,934 people.

The shrinkage of a population is an essential factor in determining the structural stability (such as social and economic, etc.) of an area. Yet population decline is only part of the picture, vetting of age-sex specific cohorts is paramount to draw an accurate conclusion regarding the reallocation of resources (see, e.g., Poston and Bouvier 2017). In addition, such demographic measurements can aid in community revitalization efforts.

This document is structured as follows: first, we visit the population pyramids to visualize the age-sex specific cohorts in Indiana County (years 2015 and 2019); here, we note the potential of the area's revitalization because of the college-age affiliates in the county, which is not afforded to other rural areas. Then, we examine the dependency ratio (percentage of the population dependent on cohorts 15 to 64). Here, we compare the specific age-cohorts to two different periods to assess the area's ability to reasonably provide structural support (such as public services). Specifically, we are interested in children (ages 14 and below) and the elderly (ages 65 and above) to factor in the dependency ratio for Indiana County. Following this conversation, we discuss the age-sex-specific cohort most likely to experience the strains of an aging population in Indiana County. Finally, the document concludes by exploring possible factors that might assist revitalization efforts.

In Figure 1, the *unimodal* (pronounced peak in one cohort) pyramid shows that males and females between the ages of 20 to 24 accounted for about 8% of the total population; this bracket consisted of about 10,480 people in 2015. We approach these findings with reservations because Indiana University of Pennsylvania (IUP) might skew the county's narrative—college students have a high probability of relocating after graduation. So, we need to assess the total
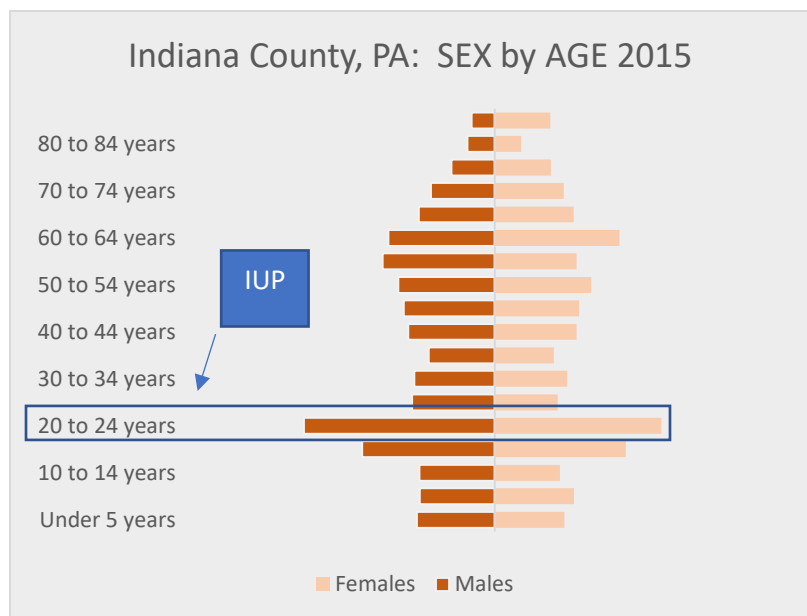

Figure 1: 2015 Indiana County

working-age population in the area. As such, about 58,800 Indiana County residents were between the ages of 15 to 64; this entails that working-aged people made-up about 54% of the total population. However, it was until 2019 population estimates that this had become a significant concern that needs to be discussed.

For 2019 figure 2 affirms that the college-age cohort (20 to 24) has influenced Indiana County's total population. For example, this cohort accounted for about 11% of the total population while only being made of 9,600 people. Thus, while having fewer people in this age cohort, its impact on the total population has
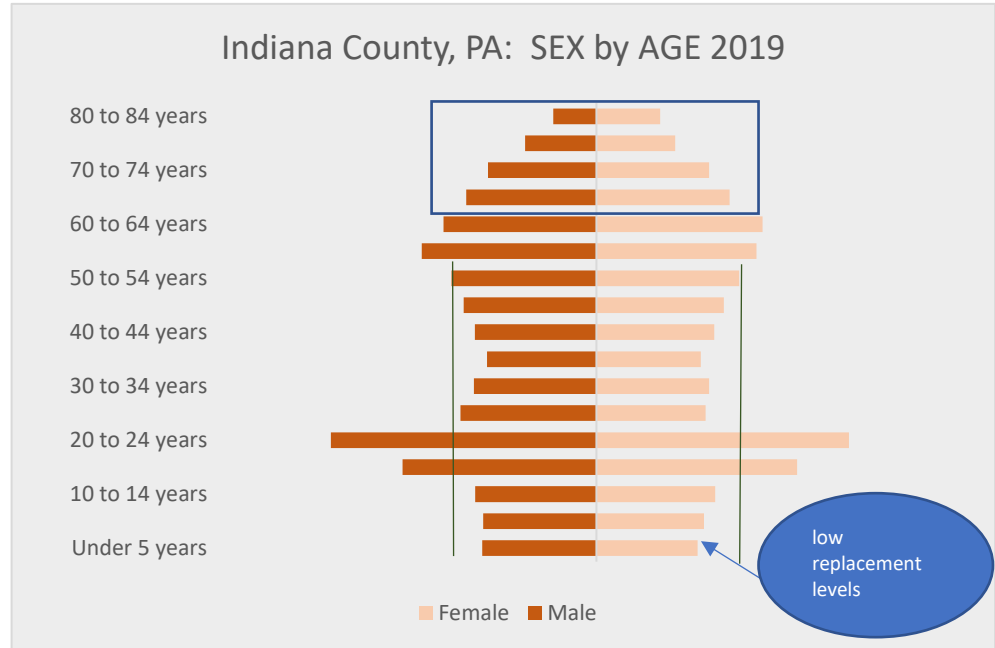

Figure 2: 2019 Indiana County

increased from previous estimates. Furthermore, 20 to 24 is the only working-age bracket with a substantial percentage increase in this pyramid. The figure shows that the working-age cohorts (15 to 64) for the county accounted for about 50% of the total population (much less than 2015). In addition, we see an increase in cohorts at the top end of the population pyramid—indicating an aging population, also known as the "graying" of a community, which tends to be female dominated (see Olson 1988).

It is essential to examine where precisely these changes are occurring—in the rate of dependence—is it heavier at the base of the population pyramid or the top? Most functionalists would conclude that a high percentage of dependency is good in the long term because it implies growth in an area's reserve labor pool. This is true when dealing with youth who will eventually be entering the workforce. However, Indiana County is experiencing a fertility decline, fewer children. To illustrate these demographic components, we rely on three types of matrixes to explore the area: *dependency ratio*, *ageing index*, and *caretaker ratio*.

Earlier, we exposed the *dependency ratio*; the ratio compares the working-age cohort (16 to 64) against the other age groups. We factored what proportion out of 100 people between the ages of 16 to 64 would need to support those who cannot work (children and elderly). Ideally, we would like to see a *dependency ratio* of less than 40%. Unfortunately, our *dependency ratio* exceeds that marker. For example,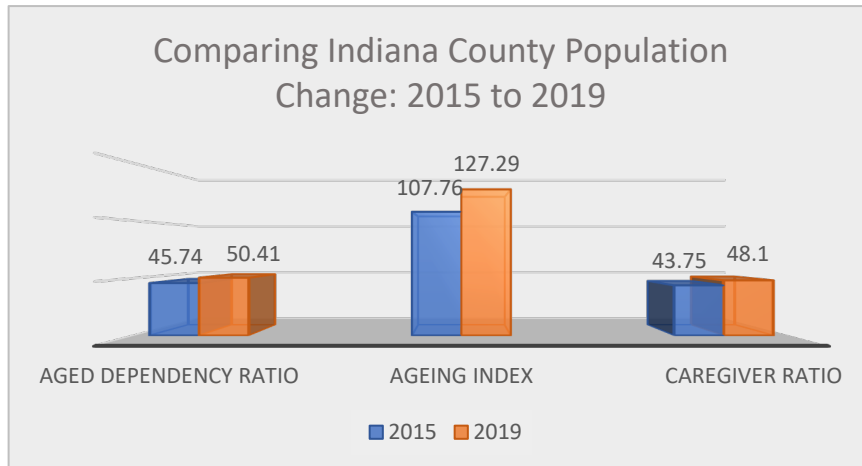 in Figure 3, we see a growth of non-working age cohorts in 2019 (about 28,500 people), increasing by about 1,600 individuals since 2015. Inasmuch, in 2015, only about 46% of the population was of non-working age and dependent on the working-age population, but that number increased to about 50% in 2019.

Figure 3: Comparing 2015 to 2019

But where exactly is the dependency ratio the heaviest? As stated earlier, it is acceptable to have a significant dependency population, pending that it is occurring at the children's cohort; unfortunately, in 2015, for every 100 children (ages 14 and below), there were about 108 people that were 65 and above, meaning there is a significantly lower reserve labor pool. This disparity further increased in 2019, as those aged 65 and above accounted for about 19% of the total population—about three percentage points higher from 2015. In Figure 3, for every 100 children here were about 127 individuals aged 65 and above in Indiana County. From a public service standpoint, an aging population will require a substantial shift of resources, meaning, "per capita public expenditure on the older dependants...is thought to be two or three times higher than on children" (Rowland, 2003: P.89).

In summary, the number of those aged 65 and above in Indiana County has been increasing since 2015. Adjacent to this growth, a question emerges: who is responsible for caring for this aging population? We assume that the responsibility would be equally distributed among all age groups, regardless of sex; evidence shows that is not the case. While there might be individuals (young or males) who might care for an elderly family or community member, females between the ages of 50 to 64 are most likely to care for an elderly member than any other group (see c.f., Hochschild and Machung 2012). As a result, the *caregiver ratio* factors females between 50 to 64 years old to the total number of those aged 80 and above. The calculations show that out of 100 females from this age cohort, about 43 of them were responsible for someone at or above 80 in 2015. In 2019, this number increased to account for about 48 of every 100 females between the ages of 50 to 64 who were responsible for an elderly family member.

In conclusion, Indiana County has experienced substantial growth in its elderly population. Since 2015, the rate of dependency for those of 65 and above has outpaced the child growth rate for

the county—meaning the rate of those entering the workforce is much less than those leaving the workforce which can have social-economic consequences (see Santacreu 2017). In addition, we explored how females are more likely to care for the elderly population. In a few years, more than half of the female population between the ages of 50 to 64 will be bearing the responsibility for the aging population, which could add to the strains associated with a "service" based economy. Being optimistic, while most rural areas face insurmountable challenges in revitalizing their communities, Indiana County has an advantage due to its proximity to IUP. Therefore, opportunities exist to expand its young skilled working-age population and ensuring a prosperous community.

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