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Evolving U.S. Demographics Give Chicken a New Leg to Stand On

By Will Sawyer
Lead Economist

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Key Points:

- Evolving U.S. demographics are shifting consumer preferences from white chicken meat to dark meat.
- Advances in mechanical deboning technology have allowed U.S. chicken producers to capture the emerging U.S. demand for dark meat while addressing the ever-present labor shortage.
- The U.S. chicken leg crush spread shows greater profit potential from funneling more chicken legs to the domestic market instead of to the traditional export channel.
- As the popularity of dark chicken meat grows in the U.S., dark meat prices will garner a higher price, affecting U.S. chicken's competitiveness on the global stage.

History of U.S. Preference for White Meat

Traditionally, restaurants that focused on chicken, namely fried chicken, charged customers a couple of dollars extra for the more popular all-white-meat option of breast and wings. Consumer tastes have changed, and restaurants have taken notice. Not only have white and dark meat prices drifted toward parity on menus, but some restaurants also now focus entirely on dark meat. In fact, one of the largest chains in the chicken fast food space features an "all-white-meat" option on its fixed, low-price menu.

The history of Americans' preference for white meat is many decades old. The chicken industry gained market share from beef by promoting white chicken meat's lower calorie, fat, and cholesterol attributes.[1] And while dark chicken meat also has an attractive nutritional profile,[2] chicken breast has been championed by the chicken industry as the healthy option. The health benefit appeal was so powerful that McDonald's even reformulated the McNugget 15 years ago from 30% dark meat to an all-white-meat nugget.[3]

It's no surprise that as a result, the highest price cut on a chicken has been the chicken breast. Twenty years ago, two-thirds of the value of a chicken was the chicken breast *(Exhibit 1)*, which motivated chicken producers to optimize breast yields in production and processing. Selective breeding has boosted chicken live weights from 5 pounds to 6.26 pounds,[4] which means more meat on the market and a higher yield of breast meat.

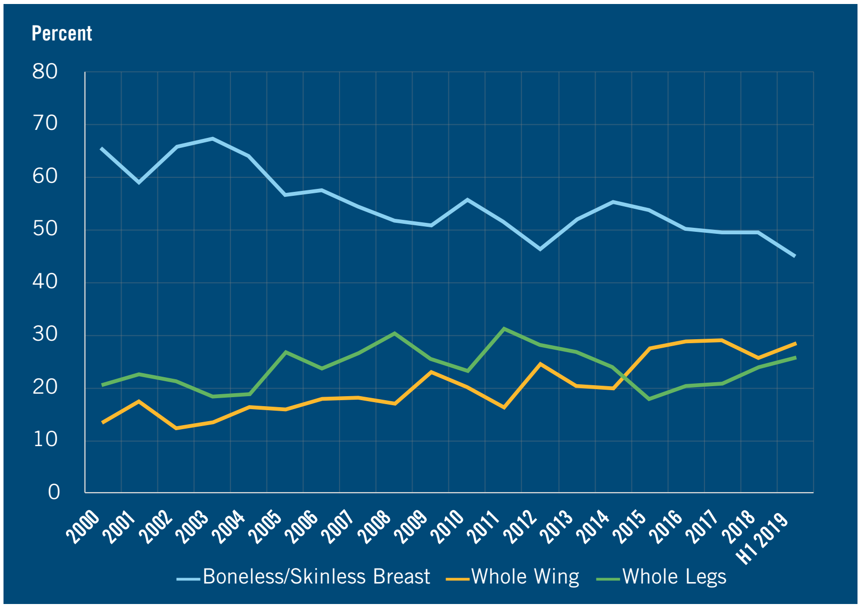
Changing Demographics and Demand for Poultry

Two key and changing demographic drivers are behind the slow but steady shift in U.S. demand from white chicken meat to dark meat: age and ethnicity. Millennials are projected to surpass Baby Boomers in 2019 as the largest living adult generation in the U.S. The population of Millennials (ages 23 to 38) is now estimated at 73 million compared with 72 million Baby Boomers (ages 55 to 73).[5] Health-conscious Baby Boomers' demand for white chicken meat helped drive chicken consumption from under 40 pounds per capita in the 1960s, when chicken was the third-most consumed protein in the U.S., to 70 pounds in the early 1990s, when chicken beat out beef to claim its current title as the most-consumed protein.[6]

As Baby Boomers age, their consumption of meat – including white chicken meat – is declining. Taking their place are Millennials, who are hitting their stride in income, spending power, and meat consumption. This generation grew up with international dining options Baby Boomers never had. Restaurants with cuisines from Latin America and Asia have led restaurant industry growth for years[7] and often feature dark meat as the chicken ingredient of choice.

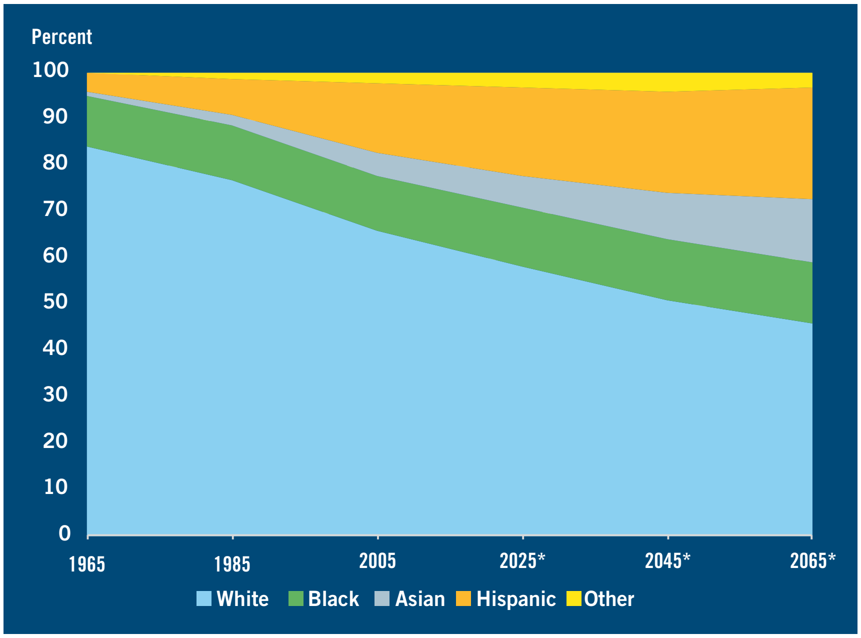
A second factor, and possibly more impactful long-term, is the changing face of America. Specifically, Latino and Asian populations are growing in number and proportion in the U.S. *(Exhibit 2)* And as noted above, dark chicken meat, rather than white meat, is more typically used in the cuisines of their cultures. Thirty-five years ago, Latino and Asian people in the U.S. made up 10% of the population, but that has grown to about 25% today. By 2065 these two groups are expected to account for nearly

EXHIBIT 1: U.S. Chicken Value Mix



Source: USDA ERS, EMI Analytics, CoBank Estimates

EXHIBIT 2: U.S. Population by Race, Percent of Total
Estimated and Projected*



Source: Pew Research Center estimates based on adjusted census data

40% of the U.S. population.[8] As these populations grow in the U.S., so will their impact on meat consumption and their preference for dark meat chicken.

Economic Impact

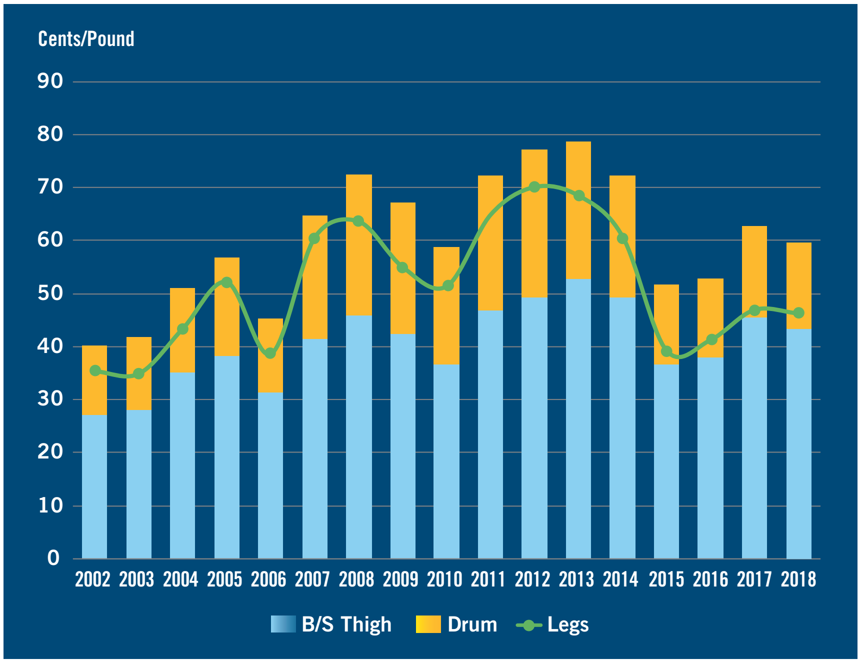
The shifting consumer demand is driving a corresponding increase in the value of dark meat and decline in white meat. Since 2000, chicken breast's share of the value of the bird has dropped from 66% to just 45%, while the value of chicken legs has increased dark meat's share from 12% to near 30%.[9] This has created an incentive for the U.S. chicken sector to separate and debone chicken legs rather than export them whole.

As more U.S. consumers seek out boneless, skinless thigh meat, the overall value of the chicken leg has climbed. We analyzed the value of the chicken leg against its components of the drumstick and boneless skinless thigh, thus calculating a chicken leg "crush." This reflects the spread between the value of the leg and its components similar to how the soybean crush is a calculation of the difference in value of the soybean to that of its products (meal and oil).

We found that the prices of chicken leg components have significantly outperformed the value of the chicken leg itself over the past 15 years. In other words, the sum of the parts is greater than the whole. Even though chicken leg prices are still below where they were prior to the outbreak of the U.S. High Path Avian Influenza in 2014 *(Exhibit 3)*, the values of boneless skinless thighs and drumsticks have held. In fact, the value of the boneless, skinless thigh was so high that in 2017 and 2018 the drumstick was almost included for free.

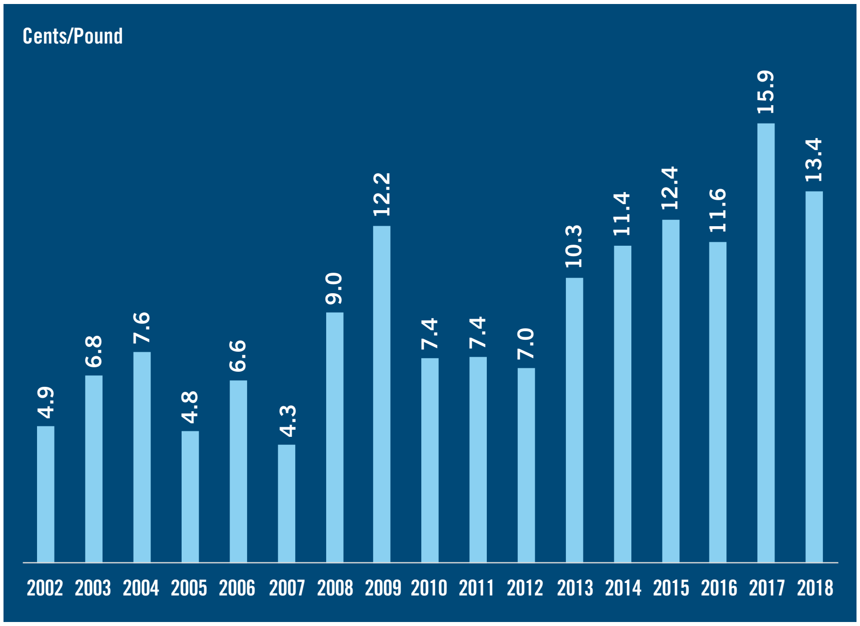
That has driven an expansion in the chicken leg crush from 7 cents per pound in 2012 to 13 cents per pound in 2018 *(Exhibit 4)*.

EXHIBIT 3: U.S. Chicken Leg and Leg Component Values



Source: USDA ERS, EMI Analytics, CoBank Estimates

EXHIBIT 4: U.S. Chicken Leg Crush



Source: USDA ERS, EMI Analytics, CoBank Estimates

Innovations in Poultry Deboning Technology

U.S. chicken producers are paying attention to this opportunity by deboning more chicken leg quarters rather than exporting them whole. Advances in whole leg deboning technology have made this possible. Chicken leg deboning machines have improved yields with half of the labor required of hand deboning. In the face of increasing labor costs and decreasing supply, mechanical alternatives are now financially viable. We estimate that chicken processing costs grew approximately 15% in the last decade and continue to grow, largely driven by labor costs that typically account for half the total processing cost. As a result, we expect the adoption of this technology to expand and the technology to improve.

Implications for Global Trade

Chicken is the U.S.' most exported protein totaling more than 3 million tons annually. Brazil, the No. 1 exporter of chicken globally, along with the U.S. account for more than 60% of the global chicken trade. U.S. chicken exports have been challenged in the last few years due to headwinds from a stronger U.S. dollar, and the loss of exports to Russia and China.

The changing demographics of the U.S. and growing demand for dark meat will likely mean more chicken legs remain in the U.S. Chicken legs will likely shift to being more prized by U.S. producers, and the dark meat chicken that is exported will be at higher prices. The U.S. has some of the most competitive chicken globally and will undoubtedly remain the No. 2 exporter for years to come. However, global export market share will continue to erode due to competitive pressures from South America and Asia.

Conclusion

Historically, U.S. chicken producers focused on optimizing the breast meat out of every bird and geared processing to minimize high-value breast meat left on the carcass.

Conversely, the back-half of the bird, or the chicken leg, was priced at such a discount that it was either sold as a whole leg or separated in to a drumstick and thigh for a targeted market overseas. That has been the model for decades, and it has positioned chicken to be the No. 1 produced (and consumed) protein in the U.S. for nearly three decades.

Driven by demographic changes, the U.S. consumer is letting go of the long-held preference for white meat. The boneless, skinless breast still accounts for nearly half of the bird's value,
but that figure is declining. Last fall, chicken breast prices in the USDA Northeast series fell to all-time lows of 83 cents per pound and is trending down to that level again this year.[10]

The ways chicken is processed is changing as well. Chicken leg deboning machines have improved yields with half of the labor required of hand deboning. In the face of increasing labor costs and decreasing supply, mechanical alternatives are now financially viable.

These trends are helping dark meat grow as an additional profit center for U.S. producers. A more diversified profit pool including both white and dark meat will help the U.S. chicken industry weather volatility in feed costs, consumer demand, and trade. ■

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