

Putting Their Eggs in India's Basket: What Vertical Integration, Church's Chicken, and Globalization Mean to Increasing Chicken Consumption in India

SCOTT E. BASFORD

Advisor: Dr. Micheline van Riemsdijk

Department of Geography, University of Tennessee, Knoxville

India has the second largest population in the world and a rapidly growing economy, yet it lags far behind the world average in chicken meat consumption. Nonetheless, rates are increasing briskly and are expected to double within five years. Understanding the factors that contribute to this rise can provide broader insight into political, economic and social developments in Indian society. This paper reviews current and projected levels of chicken consumption across India through an investigation of current literatures which assert that a cultural dietary aversion to red meat, rising incomes, increased urbanization, lower consumer cost, and, most importantly, vertically integrated production systems have contributed to Indian growth in the chicken industry. These indicators are then synthesized with a case study of the expansion of Atlanta-based Church's Chicken into India, with special emphasis placed on those measures most central in both the literature and the company's business plans. I argue the strength of chicken consumption and Church's Chicken's expansion into the country is part of a larger process of globalization—a manifestation of the exportation of foreign technological and economic constructs to Indian society—and represents a forthright proxy measure of the rate of globalization taking hold in India.

Introduction

Fueled by a large, fast-growing population and an emerging economy, many industries in India are experiencing precipitous growth. The poultry industry is also growing rapidly. In 2001, the national average poultry meat consumption in India was 0.7 kilograms (kg) per person (Mehta 2002)—compared to 10.9kg worldwide (Mohanty and Rajendran 2003). These numbers indicate there is considerable room for expansion in India's broiler¹

<http://trace.tennessee.edu/pursuit>

industry, and recent literatures suggest that growth is occurring rapidly (Landes, Persaud, and Dyck 2004; Delgado, Narrod, and Tiongco 2003; Mehta et al., 2003). India is currently the fifth largest producer of poultry meat globally (Thaper 2010), and the poultry sector has been growing at an even faster rate than most other sectors of the Indian economy (Mohanty and Rajendran 2003). In tandem with these trends, rates of chicken consumption are also increasing briskly. Consumption is expected to double from 2010-2015, by which time the industry could be worth 650 billion INR²³ (Athale, Sujatha and Himatsingka 2010). This study purports that understanding the political, economic and cultural factors that are contributing to the rise in chicken consumption can provide broader insight into structural and social developments in Indian society. I will provide an analysis of current and projected levels of chicken consumption throughout India. Current literatures assert that rising incomes, increased urbanization, a dietary aversion to red meat, vertically integrated production systems,⁴ and lower consumer cost have all contributed to overall Indian growth in the broiler industry (Landes, Persaud, and Dyck 2004; Delgado, Narrod, and Tiongco 2003).

To date, foreign direct investment has only begun to affect the development of India's poultry sector. Nevertheless, since the liberalization of trade laws in the early 1990s, India has lessened restrictions on investment and opened up to foreign development of its economy (Sachs and Warner 1995; Krishna and Mitra 1998). Although the total flow of foreign direct investment into India remains relatively small, the rate of growth of foreign investment is significantly higher than average (Dunning 1998), and opportunities in the Indian market are abundant for transnational corporations willing to invest in and industrialize production processes (Ozawa 1992; Landes, Persaud, and Dyck 2003; Delgado, Narrod, and Tiongco 2003). I will use interviews with a company executive and industry reports to investigate the business motives of Atlanta-based Church's Chicken, considering the variables related to the increase in chicken consumption in India that may affect the location decisions of the company as it expands its operations into India.

Given the trajectory of the poultry industry and its success in other foreign markets, Church's Chicken seems to be an ideal candidate to profit from India's continued economic development. Despite this advantage, its first venture into the Indian market failed, forcing the company to rethink its business model as it prepares to move back into India in 2011 (personal interview, March 22, 2011). Considering what Church's Chicken initially did wrong, what it plans to do in the future, and what the literature suggests is most significantly propelling growth in chicken consumption, one indicator in particular stands out as being singularly important: vertically integrated systems of production. The proliferation of vertical integration in the South and West of India as a result of increased foreign investment and the influence of transnational corporations such as Church's Chicken markedly influences the spatial distribution of consumption (Landes, Persaud, and Dyck 2004; Thaper 2010; World Bank 2011; Dries and Swinnen 2004). Meanwhile, the positive relationship between vertically integrated systems of production and inflow of foreign direct investment represents a manifestation of globalization (Dunning 1998; Dries and Swinnen 2004).

Globalization—referring to the integration of economic activities across national boundaries (Dicken, Peck and Tickell 1997; Dicken 1998)—occurs as time-space compression fundamentally transforms the geographical limitations on human interaction, making it easier than ever to distribute money, people, services, goods and ideas throughout the world (Harvey 1990). This produces wide-ranging impacts on cultural, political and economic life where it takes hold (Harvey 1990; Massey 1994). With foreign direct

Indian Growth in Chicken Consumption by Decade

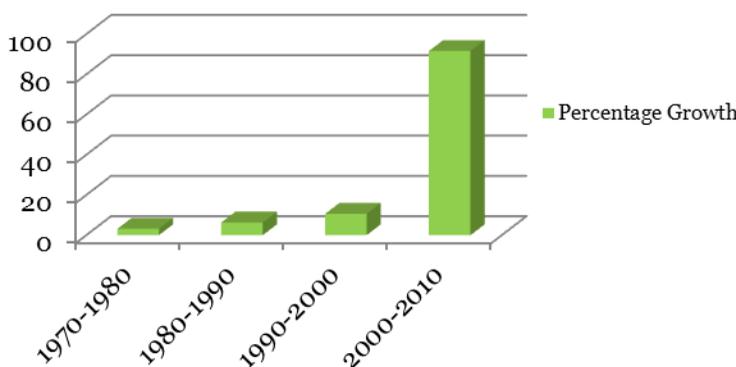


Figure 1: In each decade since the 1970s, the rate of growth of chicken consumption has grown, from 3.2 in the 1970s and 6.3% in the 1980s to 10.6% in the 1990s and an exponential 91.6% in the 2000s. Sources: USDA FAS, FAO.

investment and the import of vertical production as its agents, I suggest the rate of growth in chicken consumption in India can be viewed as a proxy measure for the rate of growth of globalization in India over the same time period.

Room for Expansion

Poultry meat, mainly chicken, is the fastest growing component of global meat demand (Clarke 2011), and India—fueled by a large, fast-growing population and an emerging economy—is experiencing rapid growth in its poultry sector (Figure 1) (Landes, Persaud, and Dyck 2004). Specifically, per capita chicken consumption in India was only 146 grams in 1970 when organized poultry production began, and Indians regarded poultry meat as “a luxury food enjoyed by the western world” (CLFMA of India 2005). Chicken consumption advanced incrementally to 1.4 kg per person by 2003 (USDA FAS 2006) and has increased from 1.8 to 2.3 kg per person between 2006 and 2010 (USDA FAS 2010). Remarkably, this progress has occurred in a society where at least 20% of the population is strictly vegetarian (Singh 1994), indicating that per capita consumption for non-vegetarians is even higher. Still, growth in chicken production and consumption is occurring in both developed and emerging economies worldwide, with countries as diverse as Brazil, China and the United States all forecasting increased production to meet demand (USDA FAS 2011). Furthermore, examining a geographically expansive collection of countries and regions reveals that the United States (44.5 kg), Brazil (47.3 kg), Saudi Arabia (43.8 kg) and Hong Kong (47 kg) all have per capita consumption rates that are over twenty times that of India (USDA FAS 2011). Given India’s very low position vis-à-vis the countries with the highest rates of consumption, then there is considerable room for expansion in India’s broiler industry. Recent literatures suggest that growth in India is indeed occurring rapidly (Landes, Persaud, and Dyck 2004; Delgado, Narrod, and Tiongco 2003), with industry sources indicating chicken consumption will double by the mid-2010s (Zootechnica 2010).

In order to sustain this, the industry will have to expand by 12-15% annually, necessitating significant investment in production facilities (Zootechnica 2010). This economic growth, in turn, contributes to improved nutrition⁵ among the Indian population and helps to alleviate widespread poverty across the subcontinent (Pica-Ciamarra and Otte 2009).

Potential Obstacles

Initial growth in Indian chicken consumption has occurred notwithstanding the absence of important structural support for industrial development and cultural traditions of meat consumption. Specifically, religious beliefs and related vegetarianism (Thaper 2010; CLFMA of India 2005), traditional preference for “fresh market” birds (CLFMA of India 2005; Mehta and Nambiar 2007), the potential for disease to disrupt an incipiently blooming industry (G. and Subramani 2010), prior lack of government support for foreign investment (Thaper 2010; Landes, Persaud, and Dyck 2004), often inadequate access to electricity, poor infrastructure development, and a lack of cold chain for transportation of agricultural products (World Bank 2007) have all worked against the expansion of chicken consumption rates in India in the past.

In a comprehensive study of the cultural characteristics of the nation, the Anthropological Survey of India in 1994 found that 20% of the Indian population is vegetarian in the strictest sense of the word. More recently, a poll conducted jointly between *The Hindu* newspaper and the Indian news media network CNN-IBN found that 60% of Indians are non-vegetarian, with significant differences among gender, age, caste and religion—men, the young, lower castes and non-Hindus are all more likely to be meat eaters (Yadav and Kumar 2006). Additionally, other studies show that only 26% of urban households are vegetarian (Landes, Persaud, and Dyck 2004), and inhabitants of some states, particularly Gujarat and Haryana in the North, are more likely to abstain from meat eating, possibly for religious or economic reasons (CLFMA of India 2005). Nonetheless, reported rates of vegetarianism range from a low of 20% established by the Anthropological Survey of India (Singh 1994) to a high of 42% based on National Sample Survey results (Delgado, Narrod, and Tiongco 2003), while another report shows vegetarians to represent anywhere between 20% and 30% of the total population (Landes 2004).

Furthermore, there is an extensive cultural legacy of purchasing poultry for consumption informally through live markets, where birds can be “dressed” in person as the buyer sees fit (CLFMA of India 2005). The market for processed poultry meat is currently limited, principally relegated to institutional rather than personal sales, restricting the potential hinterland of poultry integrators⁶ to urban areas (USDA FAS GAIN Report 2006). The abatement of live market purchases and the eventual transition of the production into a more commodified, machine-processed system—especially in rural areas—may be critical to future growth in the industry (Landes 2004; CLFMA of India 2005).

Also potentially mitigating growth in chicken consumption is the spread of avian influenza, which has negatively impacted the industry in India in the past. In 2006, the industry faced severe losses with the detection of bird flu in Western India (BBC 2006). As troubling as the actual discovery of the disease is the fear of bird flu, which limited consumption in 2006 even in places not affected by the disease due to negative publicity (Times of India 2011; Ramdurg *et. al* 2010). However, poultry experts expect that future outbreaks will not shut down the poultry industry. Both the Indian government and the industry itself have established procedures for curtailing the spread of infection by means of



Figure 2: This auto-rickshaw driver carrying ice is stuck in traffic in Bangalore, exemplifying some of the infrastructural issues India faces as it grows. Photo taken by Kevin Durand.

routine farm inspection, training farmers on proper bio-security tactics, providing support in the implementation of those tactics, and isolating contaminated stock when prevention fails (G. and Subramani 2010; Soundarajan 2008; Times of India 2011).

The basic lack of infrastructural development in terms of cold chain, transportation networks and product storage is further likely to disrupt the expansion of chicken production (Thaper 2010). Many literatures cite the lack of sufficient cold chain facilities as a major impediment to increased industry development (World Bank 2007; Landes, Persaud, and Dyck 2004; USDA FAS GAIN Report 2006; CLFMA of India 2005), while the poor road network in particular contributes to a lack of rural consumption, as it is difficult for producers to transport their product from urban production centers to remote districts (CLFMA of India 2005). Intermittent access to electricity at an affordable cost further restricts Indian businesses in all sectors of the economy (World Bank 2007).

Drivers of Growth

Amidst this abundance of obstacles, the poultry industry is nevertheless advancing expeditiously. Currently the sector grows 10-15% per year—ranking among the fastest growing poultry sectors in the world (Landes 2004). Chicken consumption is also growing rapidly, especially in the South (Mehta and Nambiar 2007). In tandem with government efforts to improve logistical obstacles (World Bank 2007), other frequently cited drivers of growth (Figure 2) include: skyrocketing production of broiler meat (G. and Subramani 2010), declining vegetarianism (CLFMA of India 2005), cultural aversion to red meat consumption

Indicator	1970	2009
Under 20 Population (%)	52	41
Urban Population (%)	20	30
Per Capita Income, Annual (Constant 2000 US\$)	214	757
FDI* Net Inflows (% GDP)	0	3
Per Capita Chicken Consumption, Annual (kg)	0.15	2.3

Figure 3: Primary indicators of growth in chicken consumption in India have all grown or remained substantial between 1970 and 2009. *FDI stands for “foreign direct investment.” Sources: World Bank, USDA FAS and CLFMA of India (2005).

(Delgado, Narrod, and Tiangco 2003), rising incomes (USDA International Agricultural Trade Report 2010), increasing urbanization (Landes, Persaud, and Dyck 2004), lower producer and consumer costs compared to other meats, and, perhaps most importantly, a rise in vertically integrated production systems (Thaper 2010).

Poultry meat production in India has soared in recent years. Production has been supported by the sustained trajectory of strong growth in domestic demand due to a number of factors including affordable prices, increasing incomes, exacerbation of integrated poultry operations and the improved bird efficiency (size and yield) that organized farming provides (USDA FAS GAIN Report 2006). India is the world’s fifth largest and the second *cheapest* producer of broiler meat in the world, after Brazil⁷, at 60 cents per kg (CLFMA of India 2005). As well, almost no poultry is exported from India. Consumption in India is projected to be 2,699,000 metric tons in October 2011 and production an almost identical 2,700,000 metric tons (USDA FAS 2010). Government legislation from the 1960s and 1970s—when industrial chicken production in India started—promoted food self-sufficiency (USDA International Agricultural Trade Report 2010). The precipitous rise in domestic demand for chicken has stymied the potential for exports, although some producers in South India have started exploring the possibility of exporting poultry to the Middle East and Southeast Asia (USDA FAS GAIN Report 2006). These gains in poultry production are in part due to efforts of the government, which has allocated money to improve infrastructural obstacles (World Bank 2007).

Converse to the rise in poultry production, rates of vegetarianism, *ad interim*, are indisputably declining (Yadav and Kumar 2006; CLFMA of India 2005; Stocks 2011; Landes, Persaud, and Dyck 2004). India’s large young population has played a significant role in the decreasing rate of vegetarianism, as youth are much less likely to adopt vegetarian diets than their elders. This was evident in a 2006 *Hindu*-CNN-IBN poll and one large-scale poultry producer explained this as follows, “younger generations are adopting a Western lifestyle and are eating more meat, meaning there is huge potential for growth in poultry meat” (Stocks 2011). With 30% of its population between the ages of 10 and 24 in 2000—and this figure likely to be even higher in the most recent census—vegetarianism is only expected to decline further in the future (Landes, Persaud, and Dyck 2004). At the same time, the very institutions that have made vegetarianism so strong in India—religion and related aspects of culture—also make poultry a more viable alternative to a population that is averse to consuming red meat (Delgado, Narrod, and Tiangco 2003; Thaper 2010).

Indeed, the lower costs of poultry vis-à-vis other meats in India can be partly attributed to a lack of institutional will to reduce production costs of other meats, because the cultural structures traditionally in place in India do not malign consumption of poultry (Thaper 2010).

Meanwhile, those lower costs contribute considerably to the observed growth in chicken consumption in India. Even other meats that are traditionally more popular—such as goat and sheep—have fallen behind chicken as the primary choice of meat in India most directly due to its increasing affordability (Thaper 2010; Ramdurg *et. al* 2010). It can be argued that it may have been price rather than religion or other aspects of culture that kept many Indians from eating meat in larger numbers historically, at least in the South. Tamil Nadu, the southernmost state of mainland India, has both the highest per capita consumption of chicken (Thaper 2010) and the highest total production of broilers in the country (Indian Ministry of Agriculture 2010). It is also a very religious state (CLFMA of India 2005). During the frequent holiday seasons when practicing Hindus must fast, consumption of chicken drastically decreases (CLFMA of India 2005). This indicates that the population may be responding to religious calls not to eat chicken during particular times of the year, even though it consumes it in large amounts overall, supporting the idea that consumption is as tied to affordability as to religion in this particular state and perhaps elsewhere (CLFMA of India 2005). Regardless of the cause, lower costs make this meat accessible to a wider range of the population (Ramdurg *et. al* 2010).

The declining cost of poultry confirms the “economies of scale” theory of economic development that posits larger-scale production systems will contribute to lower costs, both for producers and consumers (Stigler 1958). Increased efficiency results in the streamlined control of the multiple facets of production (Stigler 1958). The implications of this theory are manifest in the dramatic increase of vertically integrated systems of production in contemporary India and are connected to a slow but steady rise in foreign direct investment in India since the 1990s (Landes, Persaud, and Dyck 2004; Thaper 2010; World Bank 2011; Dries and Swinnen 2004). As its influence has grown, foreign direct investment has bred economic development and spread Western industrial standards through “increasingly transnationalized learning and technological accumulation” (Ozawa 1992, pg. 27; Borensztein De Gregorio and Lee 1998).

As a by-product of foreign direct investment, vertical integrators have begun to establish a presence in India, helping transform the poultry industry from a backyard pastiche of disparate farms to an organized system of operation (Mitra and Bose 2005; Thaper 2010; Mehta and Nambiar 2007). Vertically integrated systems entail single ownership of the different aspects of production (Arrow 1975; Harrigan 1984; Baumol 1997). Tasks are specialized, with various elements of the supply chain spread among constituent operations working separately to produce a common good (Arrow 1975; Harrigan 1984; Baumol 1997). In terms of the broiler industry in India, they establish production facilities for everything from feed and hatcheries to chicks and parent stocks, and the most ambitious even process the meat, purchase their own retail establishments and market their products (Mehta and Nambiar 2007; Thaper 2010).

While integrators take a progressively larger share of production—especially in the South and West of India—the primary concern now is to establish contract agreements between growers and buyers, in cases where integrators do not market their own product

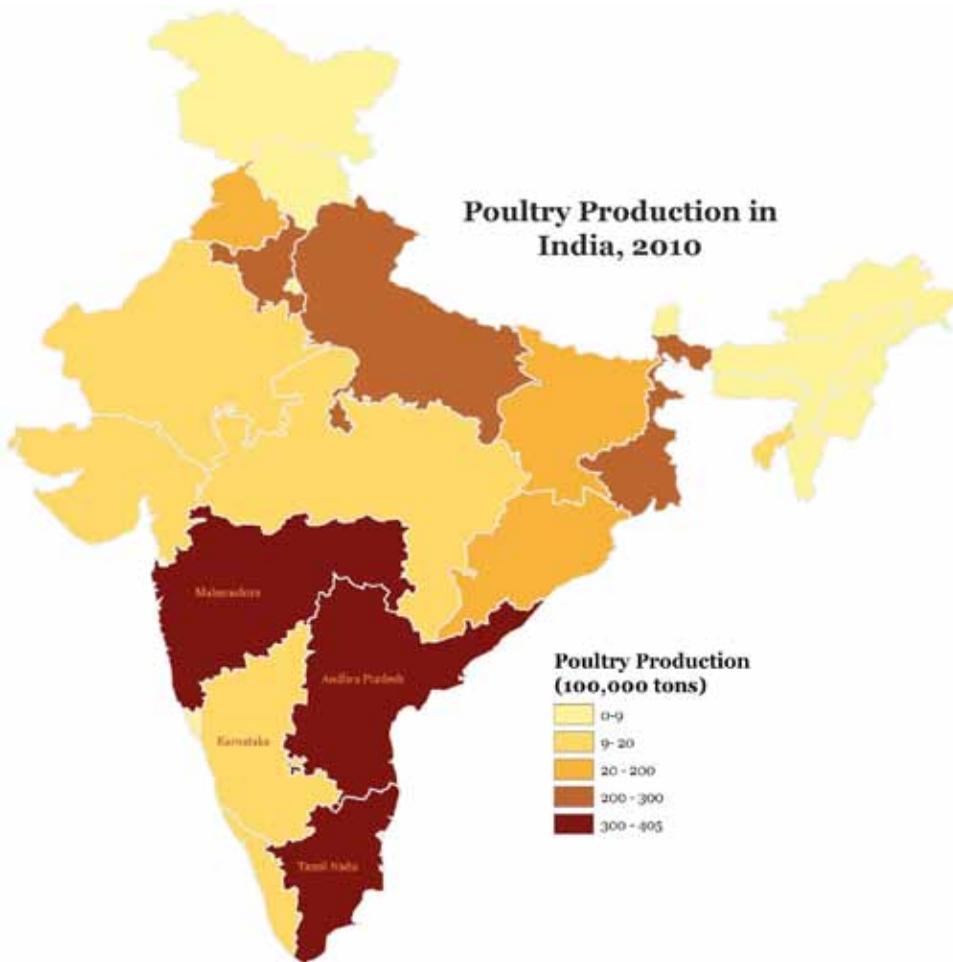


Figure 4: The three states that produced the most poultry in 2010—Tamil Nadu, Maharashtra and Andhra Pradesh—are also among the only four that produced the majority of poultry under contract farming. The other state, Karnataka, is also located in the South. Sources: Indian Ministry of Agriculture (2010), Kornel (2008).

(Thaper 2010). The three states that produce the most poultry annually—Tamil Nadu, Andhra Pradesh and Maharashtra—are three of the four states in India that currently produce the majority of their poultry through contract farming (Figure 3) (Indian Ministry of Agriculture 2010; Kornel 2008). The fourth state, Karnataka, is also located in the South. Production costs for contract farmers in these parts of southern and western India are lower (Landes 2004), and consumers are responding by purchasing more poultry than elsewhere in India. In Tamil Nadu, consumption is four times the national average (Landes, Persaud, and Dyck 2004), in part because the proliferation of integrators has made chicken more affordable (Soundarajan 2008). They are more efficient in the reduction of middlemen and increased meat yield per bird (Landes 2004; USDA FAS GAIN Report 2006).

Texas Chicken and the Spatial Distribution of Consumption

In India, the poultry sector employs three million people and contributes 260 billion INR⁸ to the national income (USDA FAS GAIN Report 2006). As has been noted, though, the industry is more robust in the South and West than in the rest of India. While the proliferation of integrators is advancing steadily through all parts of India (USDA FAS GAIN Report 2006), integrated systems of production and contract farming arrangements are more widespread in the South and West than anywhere else in the country—producing more efficient yields, with lower consumer costs and a greater consumer demand for chicken (CLFMA of India 2005; Landes, Persaud, and Dyck 2004; Mehta and Nambiar 2007). Coupled with other known indicators of growth, such as higher incomes and rates of urbanization, the South has nearly twice the consumption rate of the rest of India—roughly 4 kg per person (Kornel 2008).

In an effort to capitalize on a nascently prospering industry, Atlanta-based Church's Chicken made its first foray into the Indian market in 2008. The company opened three outlets in the southern city of Hyderabad, Andhra Pradesh under the name Texas Chicken. The operational climate appeared ideal for the company, with more Indians than ever eating-out and increased production of processed meats. These factors contributed to a predicted doubling of Indian chicken consumption within five years, and other quick-service restaurant chains are sprouting rapidly (Zootechnica 2010; G. and Subramani 2010; USDA International Agricultural Trade Report 2010). This profound change in the consumption patterns of Indians is likely to continue given, foremost, a burgeoning middle class, quickly developing retail operations and, interestingly, a generally positive opinion of American products (USDA International Agricultural Trade Report 2010; Dash 2005).

In concordance with the support for U.S. products from Indian consumers, Church's Chicken made little effort to tailor its menu to the Indian market, with only slight exceptions (The Franchising World 2009). In an interview with an industry news outlet,



Figure 5: A young man poses beside a poster promoting an eating challenge he would soon participate in at a Hyderabad Texas Chicken, one example of how Church's Chicken Americanizes its Indian stores. *Photo taken by Joe Abello.*

then-CEO Harsha Agadi dismissed the notion of “diluting” the standard menu, believing in the virtue of the company’s All-American brand (The Franchising World 2009). This strategy is not employed by all American restaurants operating in India, however. McDonald’s franchises, for example, have gone to great lengths to localize their menu (Dash 2005). That Church’s Chicken serves poultry as its primary dish—while McDonald’s traditionally offers meats more culturally offensive to Indians—possibly creates less incentive for the company to adapt its menu to the local market, given the relative lack of stigma against the consumption of chicken in India. Somewhat ironically, though, Church’s does alter the imprint under which it markets in most of its foreign operations, including India. The company eschews the name “Church’s Chicken” in these foreign markets—for fear of potential religious reprisals—in favor of the sobriquet “Texas Chicken” (DeSorbo 2011). Even with the change, the name still conforms to an unabashedly American aesthetic.

Church’s Chicken’s Plans

Despite a confluence of supportive indicators, Church’s Chicken failed in its initial Indian endeavor; all stores that were opened in 2008 have since closed. Even with its first Indian venture folding shortly after it began, the company is keenly motivated to return to India soon. Ken Cutshaw, Executive Vice President, General Counsel and Chief Compliance Officer for Church’s Chicken, stated that the company is in serious negotiations with several potential franchisees to operate stores, and he hopes that they will open several stores in India before the end of 2011 (personal interview, March 22, 2011).

Reflecting on the negative outcome of Church’s Chicken’s previous Indian experience, Mr. Cutshaw made several changes in the management plan that reflect findings in the literature on chicken production and consumption in India. For instance, in its first effort, Church’s advertised itself as a family-oriented establishment (personal interview, March 22, 2011). The company ultimately realized that this campaign was unsuccessful because the segment of the Indian population supporting quick serve restaurants like Church’s Chicken is principally young, wealthy, and urban (personal interview, March 22, 2011). It is this same population that also most fervently embraces American culture (Dash 2005), and as it seeks a better outcome for its new operations, the company is now intent to focus on young, urban communities (personal interview, March 22, 2011). Beyond marketing to a more “hip” consumer base, Church’s remains steadfastly determined to find a well-integrated franchisee to market and control production processes in India (personal interview, March 22, 2011).

When its first stores opened in 2008, the company felt confident that its Hyderabad franchisee had the experience and competence to produce a prosperous enterprise. This assumption soon proved misguided and the franchises failed, which the company believes was more a result of their franchisee being unable to market their products successfully than there not being a place in India for Church’s Chicken (personal interview, March 22, 2011). In this manner Church’s realized it to be of paramount importance to identify an appropriate franchisee on which to base its Indian engagement. Two of their current candidate franchisees have prior experience bringing American brands to India—something the company sees as crucially important—and Mr. Cutshaw believes it to be “just a matter of time before we’re able to move forward” with new stores in India (personal interview, March 22, 2011). These stores could be located anywhere in the country depending on who the company decides to contract with—even in parts of northern or eastern India (personal interview, March 22, 2011).

Growth in Chicken Consumption as a Measure of Globalization

Though there are a number of factors that scholars, industry leaders, and agricultural analysts have identified as significant to the increased consumption of chicken in India, one of the most prominent factors is the proliferation of vertically integrated producers. Moreover, following its initial failure in the Indian market, the staid determination of Church's Chicken to align with an experienced, well-integrated producer to control operations illustrates the company's strong commitment to capitalizing on these integrators as it readies its next move into the Indian market. Hence, the vertically integrated system of production is revealed as perhaps the most influential indicator of growing chicken consumption in India. Vertical integration of a supply chain is a Western economic construct that can itself be linked to the rise in the flow of foreign direct investment into the country, which has surged from virtually nothing to three percent of India's Gross National Product (GNP) since 1970 (World Bank 2011). Establishing the connection between foreign investment and the proliferation of poultry integrators brings to the forefront the impact and propagation of globalization through Indian society. I propose this presents growth in chicken consumption as a proxy measure for the amount of globalization that has taken place in India since the 1970s, given the centrality of vertical integration to increased consumption.

As foreign direct investment rose from 0 to 3 percent of GNP between 1970 and 2009, the rate of growth in chicken consumption also grew dramatically. This follows the country's move from relative global economic isolation in the 1970s and 1980s—decades when chicken consumption grew by roughly 3 and 6 percent respectively (CLFMA of India 2005; USDA FAS 2010)—to integration in the world economy following the government reforms of the early 1990s. In that decade, the rate chicken consumption rose by 10.6 percent (USDA FAS 2010), continuing to grow faster than in the past. In the following decade, however, chicken consumption grew exponentially—by over 90 percent (USDA FAS 2010)—despite a temporary drop due to fears of avian influenza. It was also during the 2000s that foreign direct investment came to represent its largest share yet of the national economy (World Bank 2011).

Since globalization is a qualitative concept, it is useful to define—as a proxy—a method to quantify its presence. If foreign direct investment can be seen as a measure of globalization and, also, if growth in chicken consumption is being driven by a product of foreign direct investment, it follows that the rate of increase in chicken consumption in India also represents the rate of increase of globalization in India. If this is accurate, it shows that India is rapidly integrating with the forces of globalization and portends great societal change as India adapts to, and in some ways itself alters, the foreign influences converging upon it.

Conclusion

Chicken consumption is fast growing in India in response to a number of variables, one of the most important of which is the rise of vertical integration in the poultry industry. Poultry integrators themselves are connected to foreign direct investment, arriving in larger numbers with greater flows of foreign investment in the Indian economy from transnational corporations like Church's Chicken. It and similar companies exemplify the reach of globalization into Indian society. As a result of the connections between vertical integration, foreign direct investment, and globalization, the rate of growth in chicken consumption in India stands as a reliable proxy measure of the rate of growth of globalization in India over the same time.

I now present three streams for future research. First, as integrators begin to move into the North and East of India and Church's Chicken explores business ventures in these parts of the country, it is important to observe the spatial distribution of chicken consumption within India over time. This study will provide insights into whether the trends in the South and West will also take hold in the rest of India. Second, while confidence is high that the poultry industry will continue to expand rapidly both globally and within India, the rate of chicken consumption and its relationship to the main indicators of growth must be scrutinized over both the short and long term. This research will enable a more precise assertion of the strength of chicken consumption as an indicator itself of the reach of globalization in India. Third, it would be useful to examine the growth rate of chicken consumption in other emerging economies to ascertain whether globalization—including but not limited to the flow of foreign direct investment, Westernized production techniques, and the influence of transnational corporations—also tracks to an observed expansion in the pace of chicken consumption in those countries. Given its unique cultural traditions, it is conceivable that the trends in India are not applicable to other countries, but the potential of chicken consumption as a proxy measure for the reach of globalization should motivate future study.

Acknowledgements

I would like to thank Joe Abello, Kenneth Cutshaw, Kevin Durand, Micheline van Riemsdijk, and Chunhao Zhu for their assistance and support in this project.

Bibliography

- Arrow, K. 1975. Vertical Integration and Communication. *The Bell Journal of Economics* 6(1): 173-183.
- Athale, G., Sujatha, S., and Himatsingka, A. 2010. Consumption of Chicken Set to Double by 2014. *The Economic Times* June 2010. <http://economictimes.indiatimes.com/news/news-by-industry/cons-products/food/consumption-of-chicken-set-to-double-by-2014/articleshow/6021623.cms>. Accessed on {4 May 2011}.
- Baumol, W. 1997. Musings on Vertical Integration. *International Journal of Social Economics* 24(1): 16-27.
- BBC. 2006. Bird Flu Hits India Poultry Trade. *British Broadcasting Corporation*. http://news.bbc.co.uk/2/hi/south_asia/4734888.stm. Accessed on {30 May 2011}.
- Borensztein, E., De Gregorio, J., and Lee, J-W. 1998. How Does Foreign Direct Investment Affect Economic Growth? *Journal of International Economics* 45 (1): 115-135.
- Clarke, P. 2011. Poultry meat demand on an upward spiral. *World Poultry* 27 (1) 2011. <http://www.worldpoultry.net/background/poultry-meat-demand-on-an-upward-spiral-8574.html>. Accessed on {4 May 2011}.
- CLFMA of India. 2005. Livestock Industry Report 2005. *Compound Livestock Feed Manufacturers Association of India*. www.hansel.in/downloads/Poultry%20Report.pdf. Accessed on {4 May 2011}.
- Damerow, G. 1995. *A Guide to Raising Chickens*. Storey Books, New York.
- Dash, K. 2005. McDonald's in India. *Thunderbird Case Series #A07-05-0015*. <http://www.csumba.org/mba602/McDonald%27s%20in%20India.pdf>. Accessed on {24 May 2011}.
- Delgado, C., Narrod, C., and Tiongco, M. 2003. Policy, Technical, and Environmental Determinants and Implications of the Scaling-Up of Livestock Production in Four Fast-Growing Developing Countries: A Synthesis. *Food and Agriculture Organization of the United*

- Nations July 2003. <http://www.fao.org/WAIRDOCS/LEAD/X6170E/X6170E00.HTM>. Accessed on {4 May 2011}.
- DeSorbo, M. 2011. Church's Chicken Enlists NAI Global for Expansion Plan. *QSR Magazine* February 2011. <http://www2.qsrmagazine.com/articles/exclusives/0708/churchs-1.phtml>. Accessed on {4 May 2011}.
- Dicken, P. 1998. *Global Shift: The Transformation of the World Economy*. Sage Publications, London.
- Dicken, P., Peck, J., and Tickell, A. 1997. Unpacking the Global. In *Geographies of Economies*. Edward Arnold Publishers, London. 158-166.
- Dries, L., and Swinnen, J. 2004. Foreign Direct Investment, Vertical Integration, and Local Suppliers: Evidence from the Polish Dairy Sector. *World Development* 32(9): 1525-1544.
- Dunning, J. 1998. Globalization and the New Geography of Foreign Direct Investment. *Oxford Development Studies* 26(1): 47-69.
- Gayathri G., and Subramani, M.R. 2010. Poultry Industry Puts Bad Days Behind. *Hindu Business Line* June 2010. <http://www.thehindubusinessline.in/2010/06/11/stories/2010061153761000.htm>. Accessed on {4 May 2011}.
- Harrigan, K. 1984. Formulating Vertical Integration Strategies. *The Academy of Management Review* 9(4): 638-652.
- Harvey, D. 1990. Between Space and Time: Reflections on the Geographical Imagination. *Annals of the Association of American Geographers* 80(3): 418-434.
- Indian Ministry of Agriculture, Department of Animal Husbandry, Dairying and Fisheries. 2010. Minutes of the Meeting of the Technical Committee of Direction for Improvement of Animal Husbandry and Dairying Statistics. [http://dahd.nic.in/Final_Minutes_of_meeting_TCD_2010_dated_26.10.2010\[1\].doc](http://dahd.nic.in/Final_Minutes_of_meeting_TCD_2010_dated_26.10.2010[1].doc). Accessed on {4 May 2011}.
- Iyengar, P. 2007. Chicken A La South. *Outlook India* Dec. 2007. <http://www.outlookindia.com/article.aspx?236231>. Accessed on {4 May 2011}.
- Kornel, D. 2008. Poultry Sector Country Review: India. *Food and Agriculture Organization of the United Nations* September 2008. <ftp://ftp.fao.org/docrep/fao/011/ak069e/ak069e00.pdf>. Accessed on {4 May 2011}.
- Krishna, P., and Mitra, D. 1998. Trade Liberalization, Market Discipline and Productivity Growth: New Evidence From India. *Journal of Development Economics* 56(2): 447-462.
- Landes, M. 2004. The Elephant is Jogging: New Pressures for Agricultural Reform in India. *Amber Waves* 2(1): 28-35.
- Landes, M., Persaud, S., and Dyck, J. 2004. India's Poultry Sector: Development and Prospects. *United States Department of Agriculture, Economic Research Service* Agriculture and Trade Report No. WRS04-03 February 2004.
- Massey, D. 1994. A Global Sense of Place. In *Space, Place and Gender*. Polity Press, Cambridge. 146-156.
- Mehta, R. 2002. WTO and Indian Poultry Sector: Lessons from State Support Measures in Select Countries. *Research and Information System for the Non-Aligned and Other Developing Countries* RIS Discussion Paper #31/2002.
- Mehta, R., and Nambiar, R. 2007. Poultry Industry in India. *Food and Agriculture Organization of the United Nations* November 2007. http://www.fao.org/ag/againfo/home/events/bangkok2007/docs/part1/1_5.pdf. Accessed on {4 May 2011}.
- Mitra, S., and Bose, D. 2005. Supply Chain Issues in the Indian Poultry-Meat Industry: The Case of a Vertically Integrated Farm. *Indian Institute of Management Calcutta, Working Paper Series* WPS No. 575/December 2005.
- Mohanty, S., and Rajendran, K. 2003. 2020 Vision for Indian Poultry Industry. *International Journal of Poultry Science* 2 (2): 139-143.
- Ozawa, T. 1992. Foreign Direct Investment and Economic Development. *Transnational Corporations* 1(1): 27-54.

- Pica-Ciamarra, U., and Otte, J. 2009. Poultry, Food Security and Poverty in India: Looking Beyond the Farm Gate. *World Poultry Science Journal* 66 (2): 309-320.
- Ramdurg, A., Khan, H., Martur, M., and Mahajanshetty, S. 2010. Impact of Bird Flu on Poultry Industry. *Karnataka Journal of Agricultural Sciences* 23(4): 677-680.
- Sachs, J., and Warner, A. 1995. Economic Reform and the Process of Global Integration. *Brookings Papers on Economic Activity* 1: 1-113.
- Singh, K.S. 1994. People of India, National Series, Volume III, Scheduled Tribes. *Anthropological Survey of India*, Oxford University Press, Oxford.
- Soundarajan, B. 2008. Poultry Sector Overcomes Bird Flu. In interview with Mulani, H. *Food & Beverage News*. <http://www.fbnnews.com/article/detarchive.asp?articleid=24426§ionid=11>. Accessed on {30 May 2011}.
- Stigler, G. 1958. The Economies of Scale. *The Journal of Law and Economics* 1 (1958): 54-71.
- Stocks, C. 2011. Indian economic growth in 2011 improves poultry farmers' prospects. *Farmers Weekly Interactive* 4 January 2011. <http://www.fwi.co.uk/Articles/2011/01/04/124899/Indian-economic-growth-in-2011-improves-poultry-farmers39-prospects.htm>. Accessed on {4 May 2011}.
- Thaper, R. 2010. Poultry Consumption Growing Faster in India Compared to Other Meats. *FeedInfo News Service* March 2010. <http://www.vivindia.nl/en/Exposant/News/~media/032885F554E94F73B19D0A137ED5F8E8.ashx>. Accessed on {4 May 2011}.
- The Franchise World Bureau. 2009. Business Focus: Church's Chicken. *Franchise India* Vol. 10 (4). <http://www.franchiseindia.com/magazine/magazineArticlesView.php?magzid=50&artid=50-1-1&title=June+2009+Vol.+10+N4>. Accessed on {4 May 2011}.
- Times of India. 2011. Andhra Poultry Farmers on Bird Flu Alert. *Times of India*. http://articles.timesofindia.indiatimes.com/2011-02-21/hyderabad/28618819_1_bird-flu-poultry-farmers-avian-influenza. Accessed on {30 May 2011}.
- USDA FAS. 2006. Livestock and Poultry: World Markets and Trade. *United States Department of Agriculture, Foreign Agricultural Service* October 2006. <http://www.fas.usda.gov/dlp/circular/2006/2006%20Annual/Livestock&Poultry.pdf>. Accessed on {4 May 2011}.
- USDA FAS. 2010. Livestock and Poultry: World Markets and Trade. *United States Department of Agriculture, Foreign Agricultural Service* October 2010. http://www.fas.usda.gov/dlp/circular/2010/livestock_poultryfull101510.pdf. Accessed on {4 May 2011}.
- USDA FAS. 2011. Livestock and Poultry: World Markets and Trade. *United States Department of Agriculture, Foreign Agricultural Service* April 2011. http://www.fas.usda.gov/psdonline/circulars/livestock_poultry.pdf. Accessed on {4 May 2011}.
- USDA FAS GAIN Report. 2006. India Poultry and Products Annual 2006. *United States Department of Agriculture, Foreign Agriculture Service, Global Agriculture Information Network*. <http://www.fas.usda.gov/gainfiles/200609/146238962.pdf>. Accessed on {4 May 2011}.
- USDA International Agricultural Trade Report. 2010. India and China: Divergent Markets for US Exports. *United States Department of Agriculture, Foreign Agricultural Service* February 2010. http://www.fas.usda.gov/itp/china/India_Chinamarket022010.pdf. Accessed on {4 May 2011}.
- World Bank. 2007. Building Knowledge Economies: Advanced Strategies for Development. *World Bank Institute*, Washington, D.C.
- World Bank. 2011. World dataBank. <http://databank.worldbank.org/ddp/home.do>. Accessed on {4 May 2011}.
- Yadav, Y., and Kumar, S. 2006. The Food Habits of a Nation. *The Hindu* 14 August 2006, <http://www.hinduonnet.com/2006/08/14/stories/2006081403771200.htm>. Accessed on {4 May 2011}.
- Zootecnica. 2010. Chicken consumption to double in India. *Zootecnica* <http://www.zootecnicainternational.com/news/news/763-chicken-consumption-to-double-in-india.html>. Accessed on {4 May 2011}.

Endnotes

- 1 "Broiler" is a term that refers to a chicken bred solely for production of meat (Damerow 1995).
- 2 650 billion INR is equivalent to \$14.4 in 2011 USD.
- 3 The poultry industry was worth 162 billion INR as of 2005/2006 (Kornel 2008).
- 4 A vertically integrated system is one in which the multiple components in a supply chain are controlled by the same company. The various aspects of production are managed by a single owner and are combined to produce a common good (Arrow 1975; Harrigan 1984; Baumol 1997).
- 5 The growth of the chicken industry improves nutrition for many both by increasing access to animal proteins and by alleviating the widespread poverty that often contributes to malnutrition, as many of the rural poor are dependent on poultry farming for food and income (Pica-Ciamarra and Otte 2009).
- 6 An integrator is a company that operates a vertically integrated system. Poultry integrators are companies in the poultry industry operating vertically integrated systems.
- 7 The cost of a broiler in Brazil is 45 cents per kg as of 2005. By comparison, the same broiler costs 68 cents per kg in the United States and 99 cents per kg in France (CLFMA of India 2005).
- 8 260 billion INR represents \$5.7 billion in 2011 USD.

About the Author

Scott E. Basford is a recent graduate of the Department of Geography and is originally from the small town of Poydras, Louisiana, where he lived until Hurricane Katrina destroyed his childhood home and the rest of the surrounding community. He has been fascinated by place and space ever since he first laid eyes on a Rand McNally road atlas as a young boy riding in the backseat of his parents' car, and his interest in geography has never waned. As a student, he enjoys nothing more than contributing to a working understanding of the field, and he plans to continue his education as a graduate student in Fall 2012. In his time away from work, he enjoys hiking in the mountains, scouring the shelves of Knoxville's record stores, and, to this day, perusing road maps.

About the Advisor

Dr. Micheline van Riemsdijk studied in Norway and the Netherlands before coming to the United States, where she received her M.A. in Scandinavian Languages and Literatures in 1998 from the University of Minnesota and her Ph.D. in Human Geography in 2008 from the University of Colorado at Boulder. She is an assistant professor in the Department of Geography at the University of Tennessee, where she has worked since 2008. Her research interests are in international migration and the operation of global labor markets. In December of 2010, she received a grant to travel to Bangalore to interview Information Technology specialists and Human Resource managers at large IT firms.