

The Annual Economic and Fiscal Impact of Brown-Forman's Operations in Louisville
Jobs, Payroll, Suppliers, Taxes

by
Paul Coomes, Ph.D.
Consulting Economist

July 18, 2007

This report provides estimates of the annual economic and fiscal impacts of Brown-Forman's operations in Louisville. I make estimates here for the most tangible and easily quantifiable impacts, using standard regional economics tools. The company has distillery operations and its corporate headquarters in Louisville, where it manages its production, distribution, and marketing activities worldwide. Its annual revenues are over \$2.1 billion, making Brown-Forman one of only eight Kentucky-based companies among the *Fortune 1000* this year. And Brown-Forman ranks eighth nationally in terms of revenues by companies classified in the beverage industry.

Among the most interesting and important findings in this report are:

1. Brown-Forman is the 10th largest private employer in the Louisville area, when measured against other companies that could feasibly locate in another market.
2. I estimate that its Louisville-area operations have the following annual direct and spin-off impacts: 4,253 jobs in the Louisville Metropolitan Statistical Area (MSA); \$203 million in wages and salaries in the MSA; and \$25 million in tax revenues to state and local government jurisdictions.
3. The company's operations make it an important part of Louisville's travel and hospitality business. In managing its worldwide operations, Brown-Forman employees, customers, and vendors travel in and out of Louisville for meetings, thereby boosting local air traffic, rental car business, restaurant sales and other entertainment and retail revenues. The company directly books over 5,000 room-nights annually at downtown hotels, and is responsible for at least 11,000 flights at the Louisville airport.

The company's annual impacts are greater than those detailed in this report, and other impacts may be identified through further research. For example, there are a number of other tax streams associated with company activities, including corporate income taxes, property taxes paid by its employees, fuel taxes, and motor vehicle sales taxes. Moreover, this analysis focuses on the annual impact of corporate jobs and payrolls, not the impact of the wealth that is captured in Louisville due to the headquarters site. Roughly one-half of the corporation is owned by family members and corporate employees. The top employees and many prominent family members reside in the Louisville area. As shareholders, they receive quarterly dividends and these dollars are partly spent and invested in the local economy. Last year Brown-Forman paid \$128 million in dividends. Finally, company owners and employees are among the largest donors and key leaders for area nonprofit organizations, including the arts, education, history, and human services. Clearly, Louisville would be a significantly poorer place without this important corporation, its owners and employees.

Company activities in Louisville and Kentucky

Brown-Forman's headquarters is located near the intersection of Broadway and Dixie Highway just southwest of downtown Louisville. Next to the headquarters are large distilling and warehousing operations, longtime home of its venerable Old Forester whiskey. The company's Early Times distillery is in Shively, a few miles south on Dixie Highway. Its Blue Grass Cooperage Company makes white oak whiskey and wine barrels at a plant on MacLean Avenue adjacent to the Louisville airport, and also at an Albany, Kentucky site. The company makes its Woodford Reserve at a distillery in Versailles, Kentucky. Overall, the company employs approximately 1,400 people in the state.

Kentucky Corporate Headquarters, 2006 Revenues and Profits

		Revenues				
State rank by revenues	Company	Rank nationally	(millions)	State rank by profits	Profits (millions)	City
1	Humana	110	\$21,416.5	2	\$487.4	Louisville
2	Ashland	248	\$10,007.0	3	\$407.0	Covington
3	Yum Brands	262	\$9,561.0	1	\$824.0	Louisville
4	Omnicare	353	\$6,493.0	6	\$183.6	Covington
5	Lexmark International	442	\$5,108.1	4	\$338.4	Lexington
6	Kindred Healthcare	497	\$4,355.9	8	\$78.7	Louisville
7	General Cable	561	\$3,665.1	7	\$135.3	Highland Heights
8	Brown-Forman	828	\$2,110.0	5	\$320.0	Louisville

From the April 30th, 2007 issue *Fortune* magazine, and *Fortune 1000* website (http://money.cnn.com/magazines/fortune/fortune500/2007/full_list/index.html).

One can see from the latest *Fortune 1000* list of largest corporations (based on revenues) that Brown-Forman is one of but eight Kentucky-based firms to qualify, and one of four such headquarters in Louisville. Moreover, the company ranks fifth highest in the state in terms of profits.

How important is Brown-Forman to Louisville relative to other major companies? One indicator is employment by company. Brown-Forman ranks 10th highest among private employers who could move to other markets, based on an analysis of the latest employment ranking by *Business First*. See table. I have excluded private employers like hospitals, banks, and retail stores, as they primarily serve the local population and hence are not mobile.

Brown-Forman's true economic footprint ranks higher than 10th, though it is difficult to document this using publicly available data. Because Brown-Forman is a *Fortune 1000* company, its headquarters employees are very educated relative to the community at large,

**Top Private-Sector Employers in Louisville MSA
among companies that could relocate**

	Local Employment
UPS	18,398
Ford	8,745
Humana	7,458
GE	5,000
Kindred Healthcare	2,349
Yum Brands Inc	2,123
Publishers Printing	1,702
SHPS	1,315
Citigroup	1,312
Brown-Forman	1,264
Swift & Co.	1,250
Jeffboat	1,009
Papa John's	983
Beach Mold & Tool	625
Hitachi Cable	600
Discount Labels	576
ThyssenKrupp Budd	560
Mercer Human Resource Consulting	535
Fire King Security	526
Cardinal Aluminum	520

Source: *Business First*, August 4, 2006. Excluded are primarily banks, hospitals, and retail companies - those that rely on sales to local residents.

shows the top vendor purchases for a ‘typical’ corporate headquarters. This is a partial view of the national input-output table, which is used as the backbone of regional impact modeling systems. The entries reflect national averages across firms of different sizes producing different types of services, but the estimates seem plausible for Brown-Forman’s office operations¹. Corporate headquarters are perhaps the most important clients for advertising firms, with every \$1 million in sales by the headquartered company generating \$88,029 in business for advertising firms. Real estate refers primarily to leasing of buildings. Legal and telecommunications services are the third and fourth largest vendors, as would be expected of an operation making decisions affecting worldwide sales.

The amount of these national vendor purchases captured by local companies is not known, since there is no database of what a firm at location X purchases from a firm at location Y. Economists have developed methods to approximate the local supplier linkages, primarily based on whether the local economy has an above or below average concentration of employment in the vendor industries. For example, in a large city there will be sufficient depth and scope in advertising companies to provide services to a corporate headquarters, and hence on net these purchases are assumed to be made locally. In a small market, the advertising support would need to be imported. The degree of local capture of corporate purchasing is a key determinant of the estimated local impact of the corporate headquarters operation. Estimates of all these factors for all 500 possible industries are embedded in regional input-output models, which in turn are the basis for calculating economic multipliers, and ultimately for performing economic impact studies of industrial developments.

Estimates of local vendor purchases by a corporate headquarters are provided in the second column of data. The estimates were generated by the IMPLAN regional input-modeling system, and are specific to the 13-county Louisville MSA². Note that the ranking of purchases by industry is similar to that nationally, though the amounts purchased are generally smaller – reflecting the amount of imported goods and services. In one case, commercial printing, estimated local purchases are greater than the national average purchases. Upon investigation, I learned this was due to two factors. Nationally, there are significant purchases of printing materials from foreign vendors. That is, national demand for printing is greater than national supply. In Louisville, the opposite is true due a high concentration of printing operations; hence, the model predicts that a Louisville headquarters will purchase more printing services in the local market than a national headquarters will in the national market.

I do not know how well these predicted vendor purchases align with actual Brown-Forman vendor purchases, locally, nationally, or internationally. There are no comprehensive data,

¹ The measure of ‘output’ here refers to the value added activity by the headquarters, not the whole corporate revenues internationally. That is, Brown-Forman’s operations in other cities and countries have separate impacts in those places that are a function of the nature of the economic activity there, e.g., production and distribution. Headquarters account for a fraction of corporate net revenues, those related to central purchasing, marketing, advertising, accounting, management, legal, as well as corporate profits.

² IMPLAN was developed and is sold by the Minnesota IMPLAN Group (www.implan.com). IMPLAN is perhaps the most widely used regional input-output modeling system in use today, with over 1000 active clients. Estimates shown are from the latest version of the software and supporting data, purchased in March 2007.

available internally or publicly, on the actual amount of corporate spending with local suppliers. However, some internal corporate accounting information is available to enrichen this supplier linkage story. Brown-Forman generates a large volume of business travel-related spending for the Louisville economy. Employees from Louisville travel worldwide managing the brands and the business in general, thus creating demand for flights at the Louisville airport (as well as the Cincinnati airport). In turn, Brown-Forman employees from around the world, as well as customers and suppliers, travel to Louisville for meetings at the headquarters office and around town. They stay in Louisville's top hotels, and spend other dollars for meals, entertainment, rental cars, and shopping. Accounting data show that the company generates around 11,000 air passenger arrivals and departures at the Louisville airport. Similarly, the company directly books over 5,000 hotel room nights annually in downtown hotels, primarily at the Marriott, 21C Museum, Brown, Seelbach, and Hyatt hotels. At least \$2.6 million in direct corporate spending on hotels and meals can be traced to Brown-Forman travel activity annually.

The IMPLAN system uses the national production recipe and measures of local economic activity by industry to model all the purchases between Louisville area industries. National measures of retail and other spending by households are used to also model changes in local activity due to changes in household incomes as industrial output changes. A regional economic impact model is developed from that matrix of estimated transactions and coefficients. The impact model can be used to predict the effect of industrial expansion or contraction on the local economy. Impacts can be stated in terms of sales revenues, value added, jobs or payrolls. The simplest expression of economic impact is the 'multiplier', which predicts a change in the local economy for a change in the industry. I have assembled economic multipliers for three industries in the Louisville MSA, and used them separately to estimate the spin-off of the various Brown-Forman operations.

Economic Multipliers for Louisville MSA

Industry Code (NAICS)	Industry	Output	Jobs	Total value added	Employee compensation only
312140	Distilleries	1.3894	4.7509	1.4097	2.4666
321920	Wood container and pallet manufacturing	1.6284	1.8827	1.6289	1.4055
551114	Management of companies and enterprises	1.6662	2.2890	1.6006	1.3982

Source: IMPLAN, April 21, 2006; multipliers are from Social Accounting Matrix version.

The multipliers summarize the total effect on the metro economy of a change in activity in the industries listed. They have a simple interpretation, best illustrated with an example. Assume a Louisville area distillery saw a \$1 million increase in sales (output). Then using the first entry in the table, the total impact on all businesses in the MSA, including the distillery, would be \$1,389,400 in new output. Similarly, the job, value-added and employee compensation multipliers are used to estimate the total metro economy-wide impact of a change in direct jobs, value-added or compensation in one of the industries listed. The output multiplier for the 'Management of companies and enterprises' industry refers to a headquarters' contribution to corporate output, not the total international net revenues of the company. All the multipliers reflect both the impacts on vendors, but also the effect of the rounds of spending and re-spending of new household income on local goods and services. Value-added includes not just employee compensation, but also proprietors' income, dividends, interest, rent and other income to households.

Alternative Economic Multipliers for Louisville MSA

Industry Code (NAICS)	Industry	Output	Jobs	Payroll
312140	Distilleries	1.5772	4.7335	2.5695
321920	Wood container and pallet manufacturing	1.8260	1.8794	2.0417
551114	Management of companies and enterprises	2.0707	2.3887	1.6350

Source: US Bureau of Economic Analysis, RIMS II system, 2006.

The reader may be interested in how economic multipliers may differ among modeling systems. The table above provides comparable multipliers for the three industries, as derived from the US Bureau of Economic Analysis’s RIMS II system. The RIMS system has the advantage of using confidential firm-level data available to the federal government; however, the multipliers appear to users as from a black box – the user has no control over the parameters in the model, whereas all the components of IMPLAN are transparent and manipulatable. RIMS does not break out value added, but their payroll multiplier is similar conceptually to the employee compensation multiplier of IMPLAN. Note that the estimated multipliers are fairly close, though IMPLAN’s are generally a bit lower. There is really no feasible alternative to using these modeled estimates of industrial impacts, so it is comforting that two independent systems generate similar results.

Brown-Forman Corporation
Estimated Annual Economic Impacts
 Louisville Metropolitan Statistical Area

	IMPLAN	RIMS II
Jobs, direct and spin-off	4,253	3,986
Payroll, direct and spin-off	\$203,349,957	\$235,303,082

Using internal company records on the number and pay of employees by industry classification, I have simulated the impact of the operations on the Louisville MSA economy. This is essentially a hypothetical exercise which asks how big a hit would the local economy take if the annual Brown-Forman activity went away. A summary of the major impacts is provided in the table, calculated using both modeling systems. Between 3,986 and 4,253 jobs, and between \$203 million and \$235 million in payroll are supported in the Louisville MSA economy due to Brown-Forman’s operations.

Tax revenue impacts – state and local governments

We know from corporate records that Brown-Forman directly pays well over \$10 million annually in taxes to state and local governments. These include individual income taxes to Kentucky and Indiana state governments, occupational taxes to local government jurisdictions, property taxes, hotel room taxes, insurance premiums taxes, unemployment insurance premiums, and restaurant sales taxes. However, the fiscal impacts of Brown-Forman operations are much larger, due particularly to the large income and sales tax payments made to state governments by both the employees of Brown-Forman suppliers and employees of retailers in the region. I estimate the total annual fiscal impact to state and local governments to be around \$25 million.

Estimated Annual Tax Payments attributable to Brown-Forman Operations

	Louisville MSA	other Kentucky	other Indiana	Total
Property taxes	\$789,785	\$61,217		\$851,002
Direct Occupational/individual income taxes	\$2,600,867	\$7,256,606		\$9,857,474
Spin-off Occupational/individual income taxes	\$1,865,822	\$3,064,596	\$222,235	\$4,930,419
Retail sales taxes on purchases, direct		\$468,000		\$468,000
Spin-off state sales taxes		\$7,989,689	\$144,490	\$7,989,689
Hotel taxes, direct	\$38,033	\$35,497		\$73,530
Restaurant sales taxes, direct		\$55,602		\$55,602
Insurance premiums tax, direct	\$22,468			\$22,468
Unemployment insurance, direct		\$310,616		\$310,616
Total	\$5,316,975	\$19,241,824	\$366,725	\$24,558,799

The spin-off tax revenue impacts are derived from historical relationships between local payroll and the various tax categories. For example, the primary sources of revenue to Kentucky state government are the individual income tax and the retail sales tax. These each have very stable relationships to wages and salaries earned in the area. I have applied the appropriate effective tax rates to the estimated total payroll impacts to predict how much Kentucky state government receives annually due to Brown-Forman operations in Louisville. The Indiana state government revenues are derived from the income and spending of many Brown-Forman employees, and the employees of vendors, who live in southern Indiana and therefore pay income taxes to that state. Moreover, a consistent share of retail activity in the Louisville market is captured in southern Indiana, thus generating sales tax revenues for Indiana state government. The occupational taxes shown reflect payments to Louisville City-County government, the Jefferson County Public School system, and payments to other city and county governments in the region. While not comprehensive in scope, these categories are considered to be the most important sources of tax revenues for state and local governments.

I have also made some estimates of the amount of tax revenues received by other smaller government jurisdictions around the Louisville MSA. Brown-Forman impacts government budgets even in jurisdictions where it has no direct business activity. This is because the company's supply chain ripples among companies throughout the region, and because employees' spending on retail goods, personal and business services, utilities and other consumption items affects jobs and payrolls in surrounding counties. Many cities and counties in Kentucky levy an occupational tax, and several counties in southern Indiana levy

an income tax. I have estimated the likely fiscal impacts by applying local tax rates to the share of total Brown-Forman payroll impact expected to be earned by employees in the respective jurisdictions.

**Estimate of Annual Economic and Fiscal Impacts Around
Louisville MSA**

	Jobs (by place of work)	Payroll in County	Local Government Payroll and Income Taxes
Bullitt County, KY	102	\$2,297,077	\$16,675
Clark County, IN	75	\$805,479	\$48,384
Floyd County, IN	45	\$578,837	\$31,373
Harrison County, IN	15	\$151,931	\$9,417
Henry County, KY	7	\$138,774	\$139
Jefferson County, KY	3,769	\$191,666,996	\$2,505,092
Meade County, KY	16	\$335,315	\$92
Nelson County, KY	19	\$476,015	\$393
Oldham County, KY	48	\$510,789	\$0
Shelby County, KY	20	\$221,871	\$2,219
Spencer County, KY	10	\$84,114	\$0
Trimble County, KY	2	\$14,820	\$0
Washington County, IN	4	\$35,727	\$1,150

As expected, most of the economic and fiscal impacts are captured in Jefferson County, where Brown-Forman’s operations are located, where most employees live, and most retail spending occurs. Nevertheless, it is interesting to see how the related jobs and dollars also get distributed around the region.

Finally, the Kentucky and Indiana state governments collect significant excise taxes on the company’s alcoholic beverage products sold to customers in the Louisville area and the two states. These are not considered here, since the consumption and taxes would occur whether Brown-Forman was headquartered in Louisville or not.