

## **Converting university spending to greenhouse gas emissions: A supply chain carbon footprint analysis of UC Berkeley**

Kelley Doyle

### **ABSTRACT**

This study calculates a supply chain carbon footprint for UC Berkeley based on procurement expenses in fiscal year (FY) 2009. I present recommendations to reduce supply chain greenhouse gas (GHG) emissions, identify opportunities for future study, and develop a reproducible tool for UC Berkeley to facilitate annual GHG emissions reporting. I conducted a hybrid top-down life cycle assessment (LCA) to determine the total magnitude and composition of UC Berkeley's supply chain carbon footprint by reviewing over \$500 million of procurement expenses. I calculated that 128,590 metric ton CO<sub>2</sub>e of GHG emissions were released as a result of UC Berkeley's procurement in FY 2009, representing 39% of the university's total carbon footprint. The top five emitting categories of procured goods and services were construction, scientific equipment, office products, IT & telecommunications, and food; all together contributing to 80% of procurement emissions. In order to reduce these emissions, I recommend that UC Berkeley expand reuse initiatives to reduce consumption of goods, investigate food procurement and continue seeking alternatives for carbon intense food products, develop a "green" supplier score card, and survey campus buyers to understand current barriers and opportunities for reducing emissions from procurement. This analysis can be repeated in future years by the Cal Climate Action Partnership (Cal CAP) and/or student researchers.

### **KEYWORDS**

Carbon footprint, climate change mitigation, emission factors, hybrid methodology, life cycle assessment, location adjustment, scope 3 emissions, university procurement

## INTRODUCTION

Concern about climate change has increased significantly over the past few decades and as a result, many organizations and individuals are actively trying to quantify their impact and reduce greenhouse gas (GHG) emissions (IPCC 2007, Jones and Kammen 2011). It is essential that organizations and individuals understand how their purchasing decisions result in GHG emissions, how these emissions affect future climate change scenarios, and what can be done to proactively reduce these emissions. The quantity of GHG emissions produced over a specific time period is defined as a “carbon footprint” and is commonly used to evaluate progress towards climate mitigation goals (WRI and WBCSD 2004).

GHG emissions are produced from a variety of sources and it is useful to distinguish between three common scopes of emission sources during carbon footprint calculations. Scope 1 includes all direct GHG emissions from operations and company-owned facilities, scope 2 includes indirect GHG emissions from purchased energy, and scope 3 represents all other indirect sources including GHG emissions embedded in the supply chains of purchased goods and services (WRI and WBCSD 2004). For example, an individual who purchases a manufactured product is indirectly responsible for all of the emissions released during the product's manufacturing, assembly, transportation, usage, and disposal phases of its life cycle (Huang et al. 2009, Jones 2011). The most commonly used carbon footprint reporting standards require scope 1 and 2 emissions because there is a standardized and widely accepted approach to quantify these emissions with The Greenhouse Gas Protocol (WRI and WBCSD 2004). These standards rarely include scope 3 emissions because supply chains are complicated, unique to individual companies, and subsequently difficult to analyze with standardized approaches (Busch 2010, Matthews et al. 2008, WRI and WBCSD 2004). However, scope 3 emissions can represent 75% of an entity's total emissions and should not be overlooked (Huang et al. 2009). Although scope 3 emissions are tedious to estimate, organizations and individuals must consider supply chain emissions in order to understand their holistic carbon footprint and seek abatement options. Currently, there are a variety of methods to calculate a carbon footprint but the most thorough methods are based on life cycle assessments.

Life cycle assessments (LCA) analyze the environmental impact of a product, good, or service throughout its lifetime and provide approaches for the quantification of these impacts in terms of energy intensity, water consumption, pollutant production, and GHG emissions (Curran

2006, Haes et al. 2004, Hendrickson et al. 2006). Environmental impacts are aggregated throughout the life time of a product, good, or service, starting with raw materials extraction and ending with disposal. LCA can be performed from a “bottom-up”, “top-down”, or hybrid perspective (Curran 2006). A bottom-up approach attempts to quantify all impacts resulting from processes linked to the production of a single product – which is extremely tedious, time-consuming, and data intensive but is beneficial because it is product specific (Joshi 1999). Conversely, the top-down approach utilizes industry-wide environmental impact data for various economic sectors to make assumptions about the impacts of goods and services produced within those sectors (Lave et al. 1995, Hendrickson et al. 2006). The top-down approach relies upon emission factors that are in terms of environmental impact produced per dollar spent in a specific economic sector (Curran 2006). In terms of GHG emissions, Economic Input-Output Life Cycle Assessment (EIO-LCA) is an online database of nationally averaged emission factors and the Comprehensive Environmental Data Archive (CEDA) database expands upon EIO-LCA by specifying scope 1, 2 and 3 emissions within each emission factor (Carnegie Mellon University Green Design Institute 2008, Suh 2005). Although the top-down approach is less time consuming, it overlooks differences between production processes within the same economic sector (Joshi 1999). Hybrid approaches are useful because they incorporate beneficial aspects of both top-down and bottom-up approaches. Specifically, hybrid top-down approaches are relevant to carbon footprint calculations because they rely heavily upon the top-down approach to calculate a general footprint then use a bottom-up approach to better understand specific high-emitting activities (Jones 2011).

There is a demand for industry-specific supply chain carbon footprint calculation methods. Many universities, including UC Berkeley, are committed to annually report and aggressively reduce carbon emissions through the American College and University Presidents Climate Commitment (Ahmed 2007). A standard calculation approach for university supply chain carbon footprints does not currently exist. However, such a methodology would complement existing reporting standards and help campus administration identify procurement habits that result in excessive carbon emissions. A hybrid top-down LCA that differentiates between emission scopes and considers vendor location would improve overall accuracy of supply chain carbon footprint estimates.

The primary objective of my study is to calculate a supply chain carbon footprint for UC Berkeley. My study will present recommendations for procurement changes to reduce supply chain scope 3 GHG emissions and develop a reproducible tool for UC Berkeley to facilitate annual GHG emissions reporting. To accomplish these objectives, I will conduct a hybrid top-down LCA to determine the total magnitude and composition of UC Berkeley's supply chain carbon footprint by reviewing procurement and construction expenses in fiscal year 2009.

## **Background**

The first supply chain carbon footprint for UC Berkeley campus was calculated in 2007 as an appendix to the Cal Climate Action Partnership (CalCAP) Feasibility Study (Ahmed 2007, Jones 2007). CalCAP commits UC Berkeley to reduce its GHG emissions to 1990 levels by 2014 and requires annual emissions inventory reports to monitor progress towards this ambitious goal (Ahmed 2007). The footprint calculation in the 2007 report went beyond direct emissions from the campus vehicle fleet and steam co-generation power plant to estimate indirect emissions from procurement and construction expenses (Jones 2007). However, this pilot calculation did not distinguish between emission scopes or apply different emission factors based on the location of vendors.

A recent collaboration between UC Berkeley researchers, California utility Pacific Gas & Electric (PG&E), and carbon accounting software company Climate Earth calculated a supply chain carbon footprint for PG&E (Herrera 2010, Jones et. al 2012). This study focused on scope 3 emissions from procurement and provided specific recommendations to PG&E management to reduce supply chain emissions. CEDA emission factors from Climate Earth were applied to line item expenses after mapping each expense to a specific economic sector to identify which areas of spending produce the largest amount of GHG emissions by emission scope (Lave et al. 1995, Suh 2005, Jones et. al 2012). Based on whether or not PG&E vendors were local to California, which is known to have a less carbon-intense electricity generation energy portfolio, national emission factors were adjusted for California vendors (U.S. EPA 2007, EIA 2011). These methods are applicable to the UC Berkeley campus and are particularly of interest because they provide solutions to the aforementioned errors in the first UC Berkeley carbon footprint calculation in 2007. The methods from this PG&E study will be applied to this study to improve the accuracy of UC Berkeley's supply chain carbon footprint.

## METHODS

### **Subject and overall study design**

To calculate a supply chain carbon footprint for UC Berkeley, I conducted a top-down hybrid life cycle assessment using the Comprehensive Environmental Data Archive (CEDA) emission factor database, annual procurement reports, and vendor location data. The subject of this study is the University of California, Berkeley, which I define to include all owned property and procured goods and services for campus buildings, dining commons, athletic teams, research facilities, and residential halls (Taylor 2012). My analysis focused on campus' scope 3 emissions, since scope 1 and 2 emissions are already calculated by campus administrative staff and documented in the Cal Climate Action Partnership (CalCAP) annual emission reports.

### **Year selection**

I considered time constraints and availability of data in order to select an appropriate time period for this analysis. I limited my study to analyze only one year of data due to time constraints and the current annual cycle of both campus procurement and emission reports. Researchers from the Renewable and Appropriate Energy Lab (RAEL) completed a similar supply chain carbon footprint analysis in 2008 and annual data prior to 2008 is inconsistent, so I could have selected 2009 or 2010 data to analyze for this project (Jones 2011). Both procurement and construction data was readily available for 2009 so I limited my study to fiscal year 2009.

### **Emission factor adjustments**

All provided CEDA emission factors are per dollar of sector output, in which the product or service "lifecycle" ends when it leaves the manufacturer or service provider. However, there is a significant mark-up in price between producers, wholesale distributors, and retailers due to transit, distribution and retail building maintenance costs (Jones et al. 2008). This inflation in value will decrease the carbon intensity of CEDA emission factors. To adjust for this error, I calculated CEDA emission factors in terms of wholesale distributor and retailer dollars using the following equations:

$$\begin{aligned}
E_{Ci,Wholesale} &= \frac{PV_i}{CV_i} * E_{Pi} + \frac{PV_{Air}}{CV_i} * E_{P_{air}} + \frac{PV_{Truck}}{CV_i} * E_{P_{truck}} + \frac{PV_{Rail}}{CV_i} * E_{P_{Rail}} + \frac{PV_{Water}}{CV_i} * E_{P_{Water}} \\
&+ \frac{PV_{Wholesale}}{CV_i} * E_{P_{Wholesale}} \\
E_{Ci,Retail} &= \frac{PV_i}{CV_i} * E_{Pi} + \frac{PV_{Air}}{CV_i} * E_{P_{air}} + \frac{PV_{Truck}}{CV_i} * E_{P_{truck}} + \frac{PV_{Rail}}{CV_i} * E_{P_{Rail}} + \frac{PV_{Water}}{CV_i} * E_{P_{Water}} \\
&+ \frac{PV_{Wholesale}}{CV_i} * E_{P_{Wholesale}} + \frac{PV_{Retail}}{CV_i} * E_{P_{Retail}}
\end{aligned}$$

In the above equations, E is the CEDA emission factor in producer (p) or consumer (c) dollars for a given economic sector (i). Producer value in that sector ( $PV_i$ ) is separated out for various subcategories (air, truck, rail, water, retail, wholesale) and total consumer value of expenditures in that sector is represented by  $CV_i$  (Jones et al. 2008). I obtained all producer and consumer values for economic sectors from the Bureau of Economic Analysis' Benchmark Input-Output 2002 Bridge Table for Personal Consumption Expenditure (BEA 2011). All emission factors are disclosed in Appendix E.

### **Preliminary economic sector mapping and emission calculations**

I received campus' 2009 procurement reports from UC Berkeley's Procurement Services and applied CEDA emission factors to calculate a preliminary footprint estimate. These reports list all campus expenditures in a line item format, which includes the vendor and amount paid for the good or service. I converted all expenditures to 2002 values using the Producer Price Index (PPI) because the emission factors from the CEDA database are based on 2002 US\$ (BLS 2010). See Appendix F for all PPI conversions.

I summed line item expenses based on the accounts they were paid to then I mapped each account to a specific category, subcategory, and economic sector based on the account description. I used the same category and subcategory titles from the Cal CAP Feasibility Study (Jones 2007). For example, computer equipment was mapped the "Information Technology & Telecommunications" category, "IT Distributors" subcategory, and "Electronic Computer Manufacturing" economic sector. If an economic sector name changed since 2007, I searched the online EIO-LCA database and selected the most similar up-to-date economic sector (Carnegie Mellon University Green Design Institute 2008). If an account could not be mapped to an economic sector because there was no applicable sector or because of a vague description, I

highlighted the expense and discussed it with procurement staff during the review phase. Based on feedback from the reviewer, I either omitted the expense or mapped it to an appropriate economic sector (Taylor 2012). Category, subcategory, and economic sector mapping decisions for all analyzed accounts are disclosed in Appendix D. Additionally, I categorized each account as purchased from a “producer”, “wholesaler”, or “retailer”. I made these decisions based on whether I thought the goods and services procured within that account were mostly purchased directly from manufacturers or service providers, wholesale distributors, or retailers.

Construction expenses are paid through Capital Projects, not Procurement Services, so I consulted with Capital Projects to assess their FY 2009 project budget. Capital Projects staff categorized each vendor as “General Contracting”, “Construction Management”, “Architecture”, “Engineering”, “Interior Design”, “Industrial Equipment”, or “Demolition” (Chess 2012). All subcategories were mapped to a specific economic sector based on the Cal CAP Feasibility Study (Jones 2007). I summed expenses within each category and applied emission factors for the mapped economic sectors.

Each economic sector has an emission factor from the CEDA database in terms of kilograms of CO<sub>2</sub> equivalent emitted per dollar spent in that sector. If an expense could be mapped to more than one economic sector, I used the averaged emission factor between all applicable economic sectors. I calculated indirect emissions produced per account by multiplying the money spent by the corresponding CEDA emission factor for the economic sector mapped to that account (Huang et. al 2009, Jones 2011). All line item emissions were summed to quantify emissions resulting from construction and procurement.

### **Review of mapping decisions**

I met with representatives from Procurement Services and Capital Projects to review my preliminary data after mapping all expenditures to specific economic sectors. Some of my mapping decisions were not accurately matched because the description of the purchased goods and services in each account can be vague (Jones 2011). To account for this, I identified line items that I was unsure of during the initial mapping phase and discussed the nature of these expenses with staff in order to decide on a more appropriate economic sector designation. Following this meeting, I adjusted my initial mapping decisions to improve accuracy of my calculations.

## Location adjustments

To account for the potential inflation in emissions from using nationally averaged emission factors during my calculations, I adjusted CEDA scope 2 emission factors based on the location of vendor facilities (Jones 2011). Since UC Berkeley's Capital Projects department has a separate, more detailed budget for all campus construction projects, I designated all construction vendors as "California-based" or "Not California-based" (Chess 2012). For all other procurement accounts within the Procurement Services budget, I compiled location data for vendors in top emitting procurement accounts by searching for vendor websites and designated each vendor within the top 10 emitting accounts as "California-based" or "Not California-based". Based on my findings, I assumed that 75% of vendors for services and food expenses were California based whereas 30% of vendors for manufactured goods were California based. I applied these assumptions to scope 2 emissions ( $S2$ ) in all procurement accounts (except construction) using the following equations:

$$S2_{Not\ adjusted} = S2_0$$

$$S2_{Adjusted, Food\ and\ services} = (.75 * .527 * S2_0) + (.25 * S2_0)$$

$$S2_{Adjusted, Manufactured\ goods} = (.3 * .527 * S2_0) + (.7 * S2_0)$$

I reduced scope 2 CEDA emission factor by 52.7% if the vendor was located in California because California's energy portfolio is less carbon intense than the national energy portfolio (Jones 2011, EIA 2011). This adjustment is based on a comparison between California and national CO<sub>2</sub> emission rates per MWh (U.S. EPA 2007).

## Magnitude and composition of supply chain carbon footprint, omitted accounts

To calculate the magnitude of UC Berkeley's supply chain carbon footprint, I summed all indirect emissions resulting from construction and procurement. To analyze the composition of UC Berkeley's supply chain carbon footprint, I compared both the scopes of emissions and the percentages of emissions from common categories of procured goods and services to the total sum of procurement emissions. I ranked the top 10 emitting procurement accounts and specified scope 1, 2, and 3 emissions within each account's total carbon footprint to compare vendor control of supply chain emissions between categories of goods and services. By breaking up



these emissions into scope 1, 2, and 3, I was able to identify opportunities for Procurement Services and Capital Projects to reduce supply chain emissions in procurement and construction.

I did not include all procurement accounts in this analysis. I selectively omitted the following accounts: benefit and salary payments; government payments; utility services including electricity, natural gas, water and sewage, and waste management; transportation for students, staff, and faculty; depreciation and other negative sum accounts; interest, fines/penalties, and royalties; and research (Jones 2007). I explain these decisions in further detail in the Discussion section.

## **RESULTS**

I calculated UC Berkeley's supply chain carbon footprint in fiscal year 2009 to be 128,590 metric tons CO<sub>2</sub>e. I added this to reported emissions and calculated UC Berkeley's total carbon footprint to be 319,064 metric tons CO<sub>2</sub>e in 2009. Indirect emissions from procurement represent 39% of UC Berkeley's total direct and indirect emissions.

### **Composition of carbon footprint**

I analyzed 94,851 procurement transactions within 453 accounts and calculated that 80% of indirect emissions resulted from the top 5 emitting categories of goods and services. These categories include construction, scientific equipment, office products, IT & telecommunications, and food. The expenses within these 5 categories represent 67% of the procurement budget (omitting salaries, benefits, interest, donations, etc.). See Appendices B and C for detailed summaries of emissions by category and subcategory.

Construction expenses produced 30,345 metrics tons CO<sub>2</sub>e, representing 37% of procurement expenses, 24% of campus' procurement footprint, and 9.5% of the total footprint in 2009. The average carbon intensity of construction expenses was 0.16 kg CO<sub>2</sub>e/\$, which is low relative to average construction emission factors because most vendors in 2009 provided management and miscellaneous services (Chess 2012). Construction expenses can be broken down into the following subcategories: construction management (36%), mixed construction management and general contracting (31%), general contracting (20%), industrial equipment (7%), architecture (2%), electricity (2%), electrical services (1%), and HVAC/mechanical services (1%).

Scientific equipment expenses produced 25,725 metrics tons CO<sub>2</sub>e, representing 7.7% of procurement expenses, 20% of campus' procurement footprint, and 8.1% of the total footprint in 2009. The average carbon intensity of scientific equipment expenses was 0.66 kg CO<sub>2</sub>e/\$. Scientific equipment expenses can be broken down into the following subcategories: gases (52%), laboratory equipment and supplies (47%), and animal care (1%).

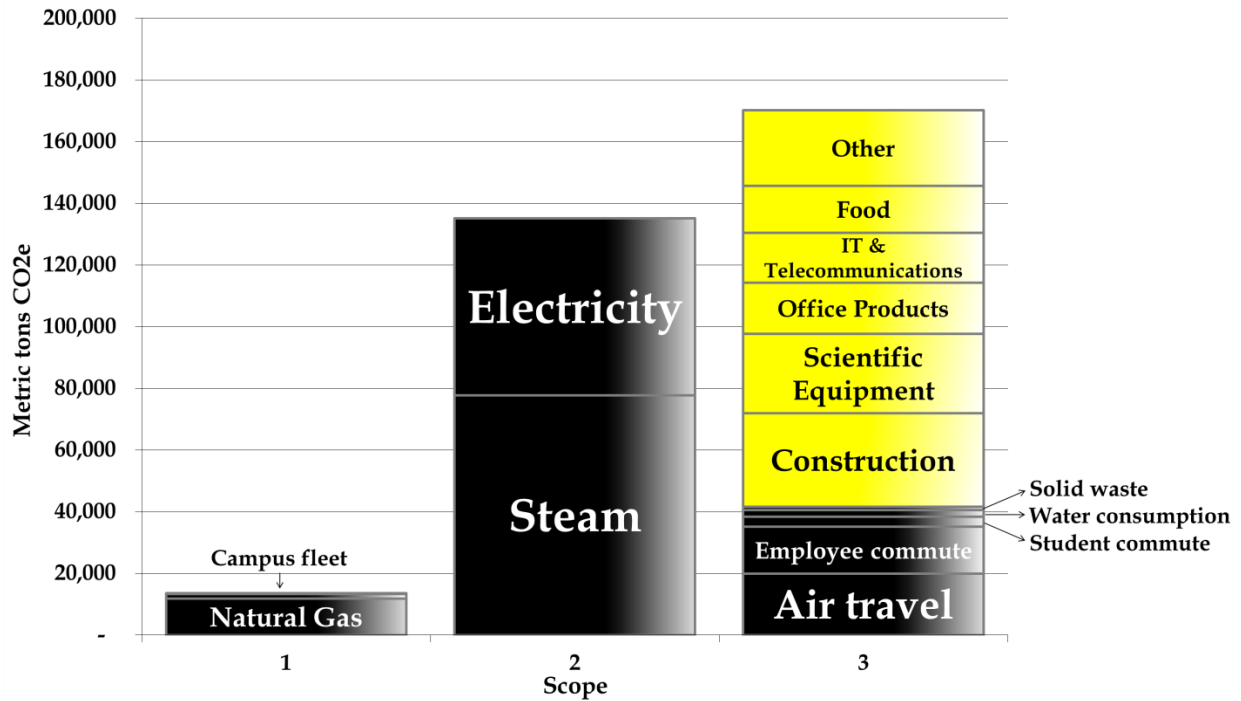
Office product expenses produced 16,566 metrics tons CO<sub>2</sub>e, representing 7.0% of procurement expenses, 13% of campus' procurement footprint, and 5.2% of the total footprint in 2009. The average carbon intensity of office product expenses was 0.47 kg CO<sub>2</sub>e/\$. Office product expenses can be broken down into the following subcategories: non-paper supplies (97%) and paper supplies (3%). More specific product-level data for the types of office supplies (i.e. pens, staplers, paperclips, printer ink) was not disclosed in the dataset provided by Procurement Services.

IT & telecommunications expenses produced 16,173 metrics tons CO<sub>2</sub>e, representing 12% of procurement expenses, 13% of campus' procurement footprint, and 5.0% of the total footprint in 2009. The average carbon intensity of IT & telecommunications expenses was 0.28 kg CO<sub>2</sub>e/\$. IT & telecommunications expenses can be broken down into the following subcategories: IT goods (49%), equipment and installation (41%), and IT services (10%).

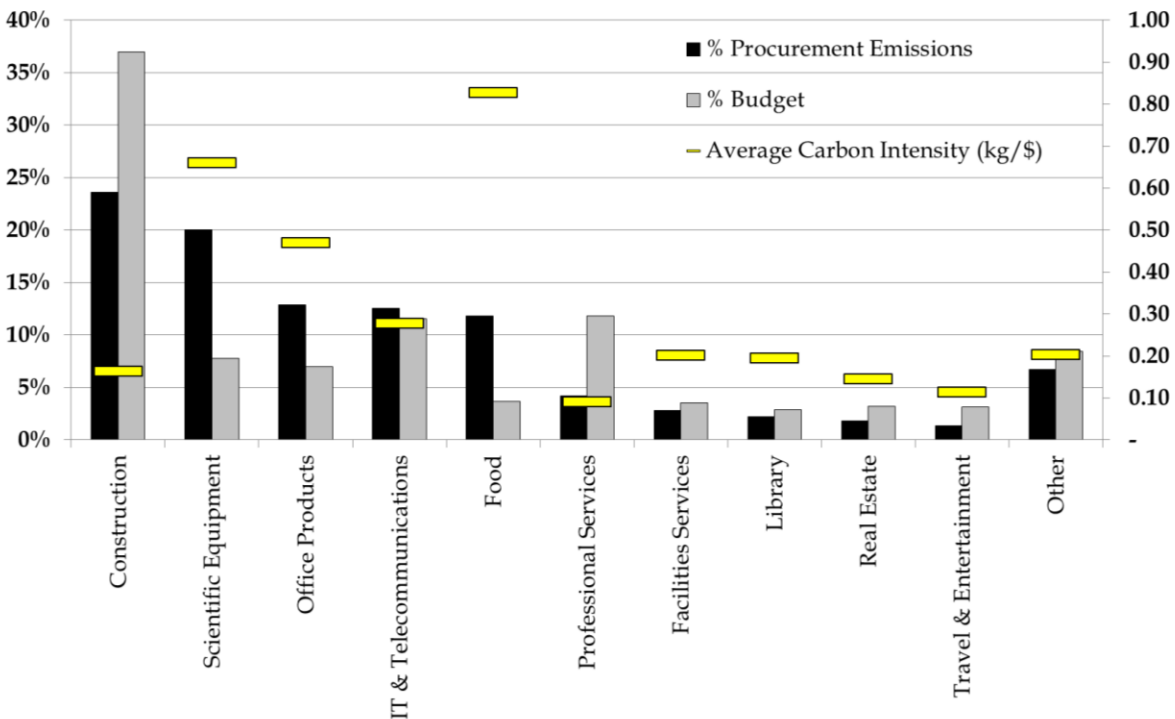
Food expenses produced 15,230 metrics tons CO<sub>2</sub>e, representing 3.3% of procurement expenses, 12% of campus' procurement footprint, and 4.7% of the total footprint in 2009. The average carbon intensity of office product expenses was 0.83 kg CO<sub>2</sub>e/\$. It is difficult to produce an accurate estimate of emissions from food production, since different food types produce significantly different quantities of emissions (Jones et al. 2008). Additionally, more specific product-level data for food (i.e. meat, seafood, dairy, produce, baked goods) was not disclosed in the dataset provided by Procurement Services so I did not break up this category into subcategories.

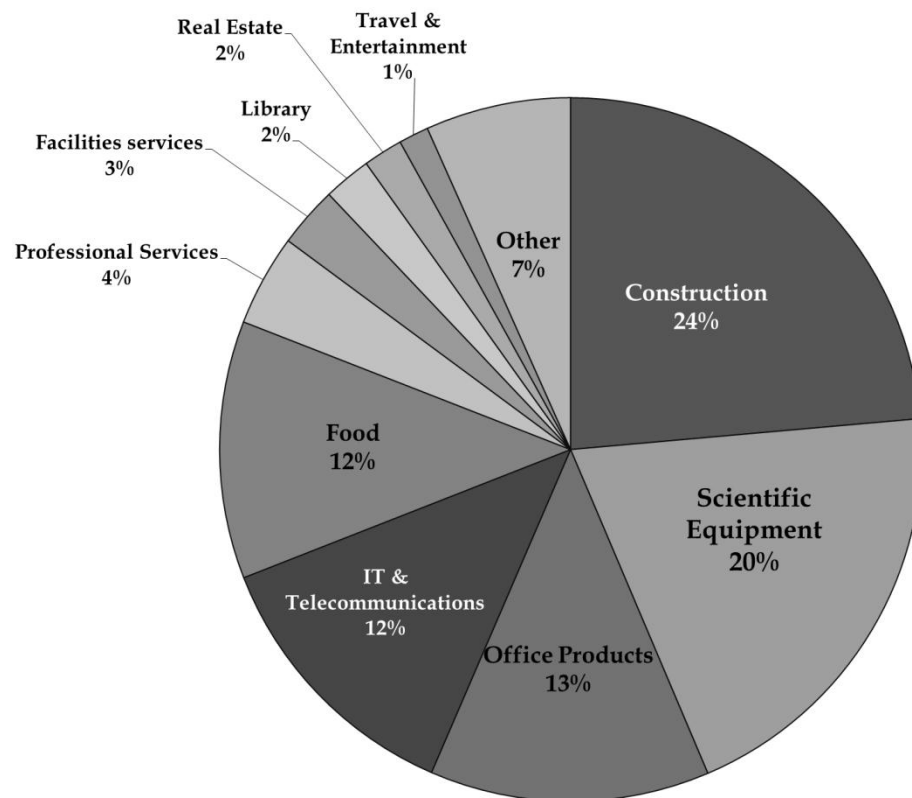
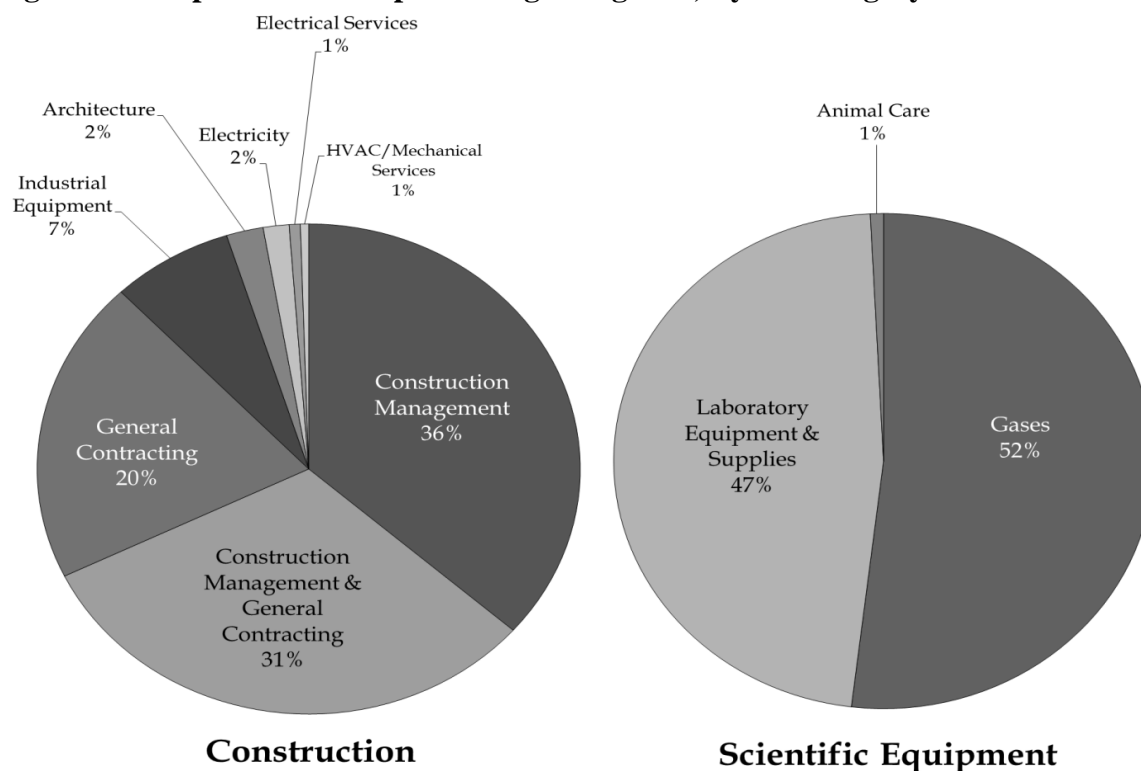
Other miscellaneous expenses produced 24,549 metrics tons CO<sub>2</sub>e, representing 33% of procurement expenses, 18% of campus' procurement footprint, and 7.7% of the total footprint in 2009. Most of these expenses were for miscellaneous services (professional, real estate, administrative, medical, facilities maintenance, mail, and insurance.) or categories of manufactured goods with small budgets (library books, materials for facility maintenance and repair, printed materials, apparel, and medical supplies).

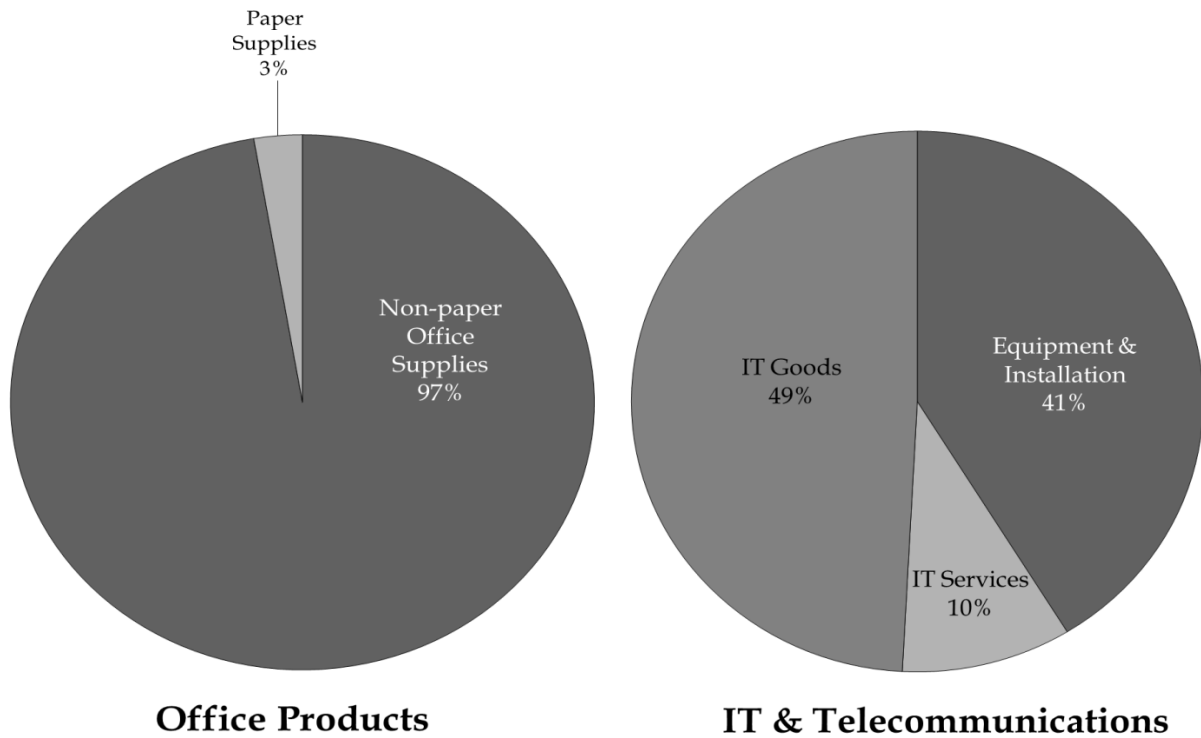
**Figure 1. UC Berkeley's 2009 Total Carbon Footprint, by Scope.** Emission sources reported in UC Berkeley's 2009 emissions inventory report are shown in black and unreported sources are shown in yellow (Stoll 2012b). UC Berkeley's procurement in 2009 produced 128,590 metric tons CO<sub>2</sub>e. UC Berkeley's total carbon footprint in 2009 was 319,064 metric tons CO<sub>2</sub>e.



**Figure 2. Comparison of category emissions and expenses relative to total procurement emissions and budget.**

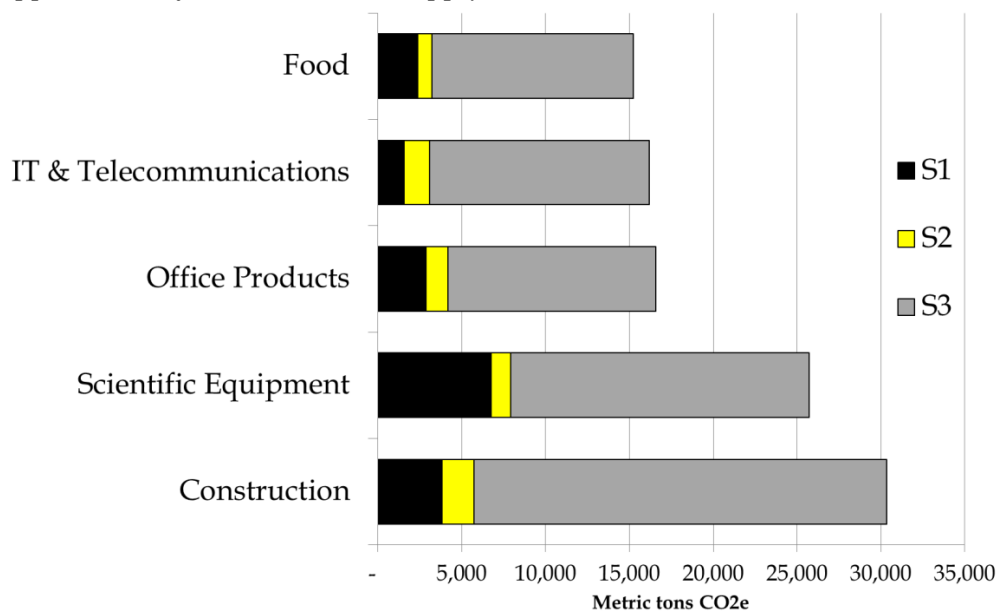


**Figure 3. Composition of UC Berkeley's 2009 Procurement Carbon Footprint****Figure 4. Compositions of Top Emitting Categories, By Subcategory.**



From the vendor perspective, 15% of all procurement emissions were scope 1, 10% were scope 2, and 75% were scope 3. This is important to consider when altering procurement practices to reduce supply chain emissions and I reflect upon this in the Discussion section.

**Figure 5. UC Berkeley's 2009 Top 5 GHG Emitting Categories, by Vendor Scope.** *Emission scopes 1, 2, and 3 shown below are from the perspective of UC Berkeley vendors to highlight opportunities for reductions in supply chain emissions.*



## DISCUSSION

### Overview

This study is an example for how to convert procurement data into GHG emissions. I interpreted the results of my study in terms of sources and quantities of indirect GHG emissions relative to reported UC Berkeley emissions in 2009 and similar studies. Based on my calculations and analysis, I developed recommendations for the UC Berkeley procurement strategy. I conclude by explaining the limitations of my study, opportunities for future research, and broader implications of my study beyond the UC Berkeley campus.

### Magnitude of carbon footprint

When added to campus' reported direct and indirect emissions, supply chain emissions from procurement represent 39% of total emissions in FY2009. Huang et. al claimed that on average an entity's scope 3 emissions represent 75% of total emissions (2009). UC Berkeley's scope 3 emissions (including procurement, commute, water, and solid waste removal) represent about 50% of total emissions but there are other scope 3 emissions that are not accounted for in annual emissions inventories or this study including life cycle emissions of purchased electricity thus I cannot conclude that campus' scope 3 emissions are less than average. A similar study recently conducted in the United Kingdom at De Montfort University (DMU) estimated that procurement emissions represented 38% of total university emissions, which is proportionally similar to UC Berkeley's emissions even though DMU's total footprint was 6 times smaller (Ozawa-Meida et. al. 2011). These proportions could potentially be a trend within university procurement emissions, however due to a lack of additional studies I cannot conclude any significant trends.

### Composition of carbon footprint

Although UC Berkeley's procurement emissions could be divided into 21 categories, the top 5 categories (construction, scientific equipment, office products, IT & telecommunications, and food) represented 80% of these emissions. Certain categories produced a large quantity of emissions because they had a large budget or they were mapped to a carbon-intense economic sector. Within the top 5 categories, construction and information technology produced emissions that were proportional to their share of the procurement budget (see Figure 3). Scientific supplies

& equipment, office related products, and food related products & services categories produced emissions that were not proportional to their budgets because these goods are associated with a more carbon-intense emission factor.

UC Berkeley is a research university that has many scientific laboratories on campus which require scientific equipment, chemical supplies, and computer equipment to conduct experiments. Additionally, all libraries and offices on campus require computer and/or telecommunications equipment to be useful for students and staff. This explains why most of the top-emitting accounts are related to scientific research and technology. These goods have complicated supply chains and source carbon-intense materials such as plastics and metals.

The majority of UC Berkeley's procurement emissions were scope 3 emissions relative to its vendors, meaning that the emissions are produced further up in the supply chain and thus will be difficult for UC Berkeley to reduce. Generally, if a vendor has mostly scope 1 and 2 emissions, they can reduce emissions by improving efficiency and altering production processes. However when vendor emissions occur further up in the supply chain, it becomes more complicated because vendors have to negotiate with their vendors and so on.

The composition of UC Berkeley's supply chain emissions differed slightly from emissions at other universities. Although construction was also the largest emitting category with 56% of procurement emissions, DMU's other high emitting categories were services, manufactured products, and information and communication technologies (Ozawa-Meida et. al 2011). UC Berkeley spent 11% of its procurement budget on professional services but these emissions represent only 5% of procurement emissions because services produce fewer emissions than manufactured goods. These universities will not have identical emission sources because they have different priorities with their procurement practices; as stated before UC Berkeley is a research university and must dedicate a significant portion of its money towards supporting its research efforts across campus. However, construction represented the largest emissions and spend category for both UC Berkeley and DMU which could indicate a trend in procurement emissions at universities. More universities should conduct similar assessments to determine if these results are common or not.

#### **Methods evaluation: Omitted expenses, hybrid approach, and location adjustments**

I omitted certain categories of expenses when conducting my analysis to avoid double counting emissions that are already included in annual emission inventory reports. In particular, I omitted utility services and transportation for students, staff, and faculty because their emissions are already quantified and reported (Stoll 2012b). Some categories of expenses do not have supply chains thus they do not produce emissions that are relevant to my study. These categories include charitable donations, government payments, interest payments, and fines. I also omitted all benefit and salary payments, since their expenses represent a significant portion of UC Berkeley's procurement. Although campus employees inevitably produce emissions or utilize goods and services that produced emissions within their supply chains, I thought it would inflate the overall supply chain carbon footprint by applying an emission factor to their benefit and salary packages.

The most important component of this hybrid LCA methodology was the review phase with campus employees; the validity and accuracy of my study would have been significantly diminished without their feedback and support. The "top-down" LCA component was not time intensive and proved to be very effective for the "hot-spot" analysis. The "bottom-up" LCA component of this methodology would be improved if more specific procurement data was available. This dataset only provided account, vendor, and total spend data, but did not explain what goods and services were being purchased from vendors. Transactions are commonly routed through accounts that don't accurately reflect what is being purchased, such as office supplies within one of the food accounts. To correct for these errors, I initially hoped to re-map individual expenses within the top emitting accounts. Unfortunately vendor names were not sufficient to complete the "bottom-up" LCA, and I did not adjust mapping decisions again after ranking top-emitting accounts.

Since UC Berkeley is located in California where the energy portfolio is 52.7% less carbon intense than the national energy portfolio, I adjusted scope 2 emission factors for California vendors within the top 10 emitting accounts to improve accuracy (U.S. EPA 2007). This adjustment proved to be very time intensive without significant results since scope 2 emissions represented only a small portion of total emissions for most procured categories. For example, I researched 266 vendors for construction projects and location adjustments only reduced total emissions by 5%. In principle, it is important to incorporate location adjustments in order to provide an accurate estimate. These adjustments should be considered when making



claims about the quantity of emissions however they are not as important when conducting a “hot-spot” analysis because location adjustments will not change the composition of emission sources. Future studies for carbon footprint calculations should critically evaluate their objectives before incorporating location adjustments into their methodology. If time and resources are limited, future assessments could make assumptions about vendor location based on a few accounts and apply those assumptions to adjust for vendor location in all procurement accounts.

## **Recommendations**

This assessment presents a new perspective on campus’ procurement habits. Although campus should try to reduce its supply chain emissions, it still needs to purchase goods and services to ensure that all university functions are being performed. UC Berkeley cannot simply cut certain expenses because they are too carbon intensive – but we can search for less carbon intense alternatives or negotiate with vendors to reduce environmental impacts within their production processes. See Appendix A for an executive summary of recommendations to Cal CAP’s Steering Committee.

1. *Expand reuse initiatives to reduce consumption & do not focus efforts on services.*

In order to reduce consumption of goods, particularly office supplies, departments and research entities should expand existing reuse initiatives to allocate supplies more efficiently between campus office spaces. The ReUse campaign and the Office of Sustainability’s Green Department Certification program provide strong foundations for this type of initiative (McNeilly 2012, Stoll 2012a). If successfully executed, inter-departmental sharing will result in reduced supply chain emissions and reduced costs due to decrease consumption of office products. These efforts should be focused on non-paper office supplies since they represent 97% of emissions within that category. Although professional services represent 11% of the procurement budget, they do not produce a significant amount of emissions per dollar spent. The Operational Excellence initiative should be expected to cut inefficiencies (and subsequently expenses) which also reduce emissions (McNeilly 2012, Stoll 2012a).

2. *Investigate food procurement with Cal Dining and campus departments.*

My estimates for supply chain emissions of food expenses are generalized and based on

average food emission factors due to a lack of product-level procurement data. Emissions throughout food production are highly dependent upon the type of food being produced and in order to improve accuracy of this estimate, future studies should conduct a more in-depth assessment of food procurement with Cal Dining and campus departments who frequently provide catered meals to students, faculty, and staff. Food procurement should be broken down into subcategories such as meat, seafood, produce, grain, dairy products, beverages, and processed food to enable more accurate account-to-sector mapping, resulting in more accurate emission calculations. There are many potential substitutions for food products which can result in reduced supply chain emissions (Jones 2011, Rodale Institute 2011). Cal Dining oversees a student sustainability team that could conduct this type of assessment in future years (Stoll 2012a).

3. *Survey campus buyers to understand buyer behavior, particularly opportunities and barriers to including an environmental metric in campus' e-procurement system.*

UC Berkeley is in the process of transitioning to the improved e-procurement system BearBuy through the Operational Excellence initiative. There are multiple opportunities to improve environmentally-preferable purchasing options with this new system (Stoll 2012a, McNeilly 2012, Taylor 2012). For example, BearBuy could return search queries that prioritize environmentally responsible products from environmentally preferable vendors and/or distinguish these products and vendors from other options with a unique logo. However, in order to make this system the most effective, campus should understand procurement habits from the perspective of campus buyers who initiate and oversee procurement for departments and research entities (Jones 2011). Identifying opportunities and barriers to behavior change is an essential step when developing a new program or initiating change within an existing process (McKenzie-Mohr 2011). Campus should develop and deploy a survey to campus buyers so Procurement Services, the Office of Sustainability, and the Cal CAP Steering Committee will understand opportunities and barriers to changes in procurement habits (Jones 2011). Campus is in direct contact with buyers because Operational Excellence is already training them in BearBuy procedures, implying that it is possible to deploy this survey to all buyers. Ideally, this survey should answer the following

questions:

- What factors affect a buyer's decision to purchase a good or service?
- Do buyers care about the environmental impacts of the goods and service they purchase?
- If so, how can BearBuy effectively distinguish environmentally responsible products from other products?
- If not, what are other feasible strategies to reduce supply chain emissions through procurement?

4. *Include GHG emissions in "green" procurement strategic sourcing plans and develop a "green" vendor scorecard to incentivize environmentally responsible suppliers.*

The Office of Sustainability is currently collaborating with Procurement Services' strategic sourcing team and Operational Excellence to evaluate the environmental sustainability of various products and services available for purchase in the e-procurement system (McNeilly 2012, Stoll 2012a). The definition of "environmental sustainability" should consider the carbon-intensity of products and vendor commitment to climate mitigation. Both of these are challenging to quantify but ultimately should be considered to expand our commitment to holistic environmental sustainability. Current initiatives are focused on specific products but to continue improving UC Berkeley's supply chain sustainability, campus should consider developing and implementing a "green" vendor scorecard. Large corporations such as Walmart and Procter & Gamble use similar systems that are publicly available and thus could be used as a starting template for UC Berkeley's scorecard. These scorecards evaluate vendors in terms of various environmental metrics, including GHG emissions, efficiency in water and energy use, waste disposal and recycling rates, use of low-toxic and organic materials, and transparency in sustainability reports (Walmart 2012, P&G 2012). This system should be structured to incentivize environmentally responsible suppliers. Some possible incentives include priority in results of e-procurement search queries and/or during procurement contract bidding (Jones 2011).

5. *Standardize the process for estimating procurement emissions and include in CalCAP's annual emissions inventory.*

This study provides a straightforward methodology that can be replicated in subsequent

years. UC Berkeley already reports some scope 3 emissions so disclosing procurement emissions will improve transparency and provide a more accurate assessment of campus' indirect emissions. I have created an Excel spreadsheet tool to facilitate future calculations and have shared it with relevant Office of Sustainability staff. In future assessments, staff can input new procurement data by account but should adjust PPI for the new fiscal year and re-evaluate my initial account-to-sector mapping decisions. If staff resources are limited, hire undergraduate students to conduct this assessment.

The following ideas and recommendations are intended to reduce emissions or further investigate categories that were identified as high-emitting in this assessment:

### Construction

1. *Understand what types of services are provided by contracted vendors and be able to distinguish between carbon-intensive practices (i.e. use of industrial equipment) vs. less carbon-intensive practices (i.e. management or architectural services). This will inform future calculations for supply chain emissions resulting from construction expenses.*
2. *Estimate on-site emissions from construction equipment by requiring contracted vendors to disclose fuel consumption (Jones 2011).*
3. *Conduct pilot life cycle assessment of a specific construction project on campus with student researchers (Chess 2012, Jones 2011).*

### Scientific Equipment

1. *Collaborate with Berkeley Center for Green Chemistry to evaluate less carbon intense alternatives for chemical reagents and other laboratory supplies.*
2. *If possible, prioritize buying equipment and supplies from California vendors to reduce supply chain emissions.*
3. *Ensure that used chemicals and supplies are disposed of properly with EH&S to avoid release of climate forcing gases and mitigate risk of pollution (Stoll 2012a).*

### Office Products

1. *Reduce consumption by encouraging reuse and exchange of office supplies between departments.*
2. *Evaluate carbon intensity of office supply products when assessing “environmentally-preferable” office supplies in Office Max strategic sourcing contract (Stoll 2012a, McNeilly 2012).*

### Food

1. *Work with Cal Dining and department event planning employees to conduct more detailed assessment of food purchasing habits with product-level data (Stoll 2012a).*
2. *Buy less meat and dairy products and replace with less carbon intensive alternative such as organic produce (Jones 2011, Rodale Institute 2011).*
3. *Prioritize organic (no pesticide or fertilizer inputs) food options (Rodale Institute 2011).*

### **Limitations**

Potential sources of error in my study are subjective bias during the mapping phase and uncertainty in location adjustments. I linked each category to an economic sector based on my interpretation of the expense description, leading to an inevitable subjective bias imbedded in my methods. However, I tried to overcome this by bias maintaining a systematic approach through the EIO-LCA online database and by reviewing my decisions with my research mentor and employees in Procurement Services and Capital Projects. My mentor is very familiar with the methodology of this study and the campus employees supervised the budgets that I was analyzing so they all were extremely qualified to answer my questions and critically review my mapping decisions. Location adjustments were based on the address displayed on the vendor's website, which could have been a headquarters, office space, distribution center, or manufacturing facility. While this is not the most accurate assessment of a vendor's location, it was the most time-efficient method. If locations listed on the website were not consistent with locations where good/services procured by UC Berkeley were produced, then emission estimates could be inflated or deflated depending on the true location and what was adjusted for. For example, if a company's corporate headquarters are located in California but their manufacturing facilities are located out of state, then my decision to reduce the scope 2 emission factor by 52.7% would unnecessarily deflate the emissions produced by that vendor throughout its supply

chain because their out-of-state manufacturing facilities are more carbon intensive than their headquarter offices.

My study was also limited by the accuracy of emission factors and linked expenses to accounts. The CEDA emission factors that I used throughout my study were calculated by an external third party to my research so I did not have control over their methods (Carnegie Mellon University Green Design Institute 2008). I assume that all emission factors are accurate in magnitude and scope 1, 2, and 3 contributions. Professors, graduate students, and staff all self-report individual expenses less than \$5,000 through the e-procurement system, Berkeley Financial System (BFS) (Stoll 2012a, Taylor 2012). I assume that all of these expenses were routed correctly to the appropriate account such that all office supply expenses are represented in the "Office Supply" account, all athletic equipment expenses are represented in the "Sporting Goods/Equipment" account, etc.

As with most life cycle assessments, my study was constrained by time, availability of data, and external validation. I could not assess every single line item expense within the time frame of my study but this would have been the most thorough approach. The procurement reports I analyzed did not describe the good or service procured but instead only listed the account description and vendor. Ideally, these reports would have more detail to better inform my mapping decisions. Due to scheduling conflicts, it was difficult to have multiple campus employees review my data set. I was able to meet with Judy Chess (Assistant Director of Green Buildings Program in Capital Projects) and Rich Taylor (Director of Procurement Services) to answer questions and review my dataset, however I would have preferred to have more employees review my decisions to improve accuracy.

### **Future study**

Due to time limitations, I did not complete all of the planned components of my thesis project so these parts are opportunities for further study. In particular, future studies could sort procurement data by vendors and vendor-categories, conduct in depth case studies with large contract vendors, apply methods to Operational Excellence's new e-procurement system Bear Buy, assess construction emissions more thoroughly, and ultimately develop a more fool-proof method for incorporating supply chain emissions into the annual emissions inventory. These opportunities would identify new recommendations for campus procurement, improve the

accuracy of estimated emissions, and facilitate future supply chain emissions reporting at universities.

### **Broader implications**

My recommendations are unique to Berkeley's campus but the underlying concepts behind my approach are applicable to other campuses with similar electronic decentralized procurement systems. Hopefully other campuses will utilize this methodology to carry out pilot supply chain carbon footprint assessments. As reporting standards become more rigorous and transparent, supply chain emissions will need to be addressed. Thus, if campuses start piloting these studies now, they will be better prepared when new requirements are established.

Additionally, this research could be applied to corporations with large procurement budgets and existing emissions reporting processes. If corporations are serious about holistically reducing their emissions and working with vendors within the supply chain, they should calculate supply chain carbon footprints and make strategic changes to their spending habits.

The results of a supply chain carbon footprint are meant to inform responsible entities about the carbon implications of their spending decisions. It is unrealistic to believe that entities can reduce emissions drastically across their entire supply chain; however, it is possible to identify emission "hot spots" that can be prioritized. Climate change is the largest environmental problem of our generation thus we must consider all contributions if we plan to slow future climatic effects. Both direct and indirect emissions should be considered when aggregating environmental impacts and this methodology enables us to assess a variety of emission sources without spending valuable time or financial resources.

### **ACKNOWLEDGEMENTS**

Thank you to all of the people who supported and contributed to this senior thesis, including my research mentor, campus employees, instructors, and peers. My research mentor Chris Jones, staff researcher at UC Berkeley's Renewable and Appropriate Energy Laboratory (RAEL), gave me the opportunity to take on this project as my thesis and offered essential feedback throughout the course of my project. Kira Stoll and Lisa McNeilly from UC Berkeley's Office of Sustainability connected me with multiple employees on campus and provided valuable feedback when making final recommendations. Judy Chess from UC Berkeley's Capital Projects analyzed

the construction budget of this procurement dataset by explaining what goods and services were procured by all contracted construction vendors in 2009. Rich Taylor from UC Berkeley's Procurement Services explained the complexities of procurement and the campus budget. Many thanks to the Moffitt Computer Lab for providing a productive albeit stuffy environment for countless evenings of thesis "field" work and proofreading. I'd also like to acknowledge the Environmental Sciences program, including ES 196 instructors Patina Mendez, Kurt Spreyer, Melisa Eitzel, and Seth Shonkhoff and major advisor Susan Kishi. In particular, I'd like to thank Seth for all the grading, helpful feedback, and life lessons in office hours. A final thank you to Katherine He, Taylor Zhou, and Alexander Daniel for the peer feedback within our work group, especially Katherine: here's to our never ending life cycle assessments.

## REFERENCES

- Ahmed, F. 2007. Feasibility Study 2006-2007 Final Report. UC Berkeley Climate Action Partnership.  
<http://sustainability.berkeley.edu/calcap/docs/CalCAP%20Report%20FINAL%202007.pdf>.
- Bureau of Economic Analysis (BEA). 2011. Benchmark Input-Output 2002 Bridge Table for Personal Consumption Expenditure. [http://www.bea.gov/industry/io\\_benchmark.htm](http://www.bea.gov/industry/io_benchmark.htm)
- Bureau of Labor Statistics (BLS). 2010. Producer Price Indexes. Department of Labor.  
<http://www.bls.gov/ppi/>
- Busch, T. 2010. Corporate Carbon Performance Indicators Revisited. *Journal of Industrial Ecology* 14:374-377. doi: 10.1111/j.1530-9290.2010.00239.x.
- Carnegie Mellon University Green Design Institute. 2008. Economic Input-Output Life Cycle Assessment (EIO-LCA), US 1997 Industry Benchmark model. <http://www.eiolca.net>
- Chess, J. 2012. Personal interview.
- Curran, M.A. 2006 Life Cycle Assessment: Principles and Practice. US Environmental Protection Agency, and Scientific Applications International Corporation. EPA/600/R-06/060.
- Energy Information Administration (EIA). 2011. U.S. States – California. Department of Energy.  
<http://www.eia.gov/state/state-energy-profiles.cfm?sid=CA>
- Haes, H. A. U., R. Heijungs, S. Suh, and G. Huppes. 2004. Three Strategies to Overcome the Limitations of Life-Cycle Assessment. *Journal of Industrial Ecology* 8:19-32. doi: 10.1162/1088198042442351.



- Hendrickson, C. T., D. L. B. L. PhD, and H. S. Matthews. 2006. Environmental Life Cycle Assessment of Goods and Services: An Input-Output Approach. RFF Press.
- McKenzie-Mohr, D. 2011. *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing*. New Society Publishers.
- Herrera, T. 2010. PG&E Claims Industry First with Supply Chain Footprint Project. Climate Biz. <http://www.greenbiz.com/news/2010/06/30/pge-claims-industry-first-supply-chain-carbon-footprint-project>
- Huang, Y. A., C. L. Weber, and H. S. Matthews. 2009. Categorization of Scope 3 Emissions for Streamlined Enterprise Carbon Footprinting. *Environmental Science & Technology* 43:8509-8515. doi: 10.1021/es901643a.
- IPCC. 2007. Summary for policymakers. Pages 1–24 in B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer, editors. *Climate change 2007: Mitigation. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, New York, New York, USA.
- Jones, C.M. 2007. Appendix R: Lifecycle Analysis – UC Berkeley Climate Footprint. Berkeley Institute of the Environment. <http://sustainability.berkeley.edu/calcap/docs/CalCAP%20Report%20FINAL%202007.pdf>
- Jones, C.M. 2011. Personal interview.
- Jones, C. M., and D. M. Kammen. 2011. Quantifying Carbon Footprint Reduction Opportunities for U.S. Households and Communities. *Environmental Science & Technology* 45:4088-4095. doi: 10.1021/es102221h.
- Jones, C.M., D.M. Kammen, G. He, C. Reich-Weiser, and D. Lake. 2012. Greenhouse Gas Emissions and Reduction Opportunities in Pacific Gas & Electric Company's Products and Services Supply Chain. Unpublished report.
- Jones, C.M., D.M. Kammen, and D.T. McGrath. 2008. Consumer-oriented Life Cycle Assessment of Food, Goods, and Services. *Environmental Science and Technology*. <http://escholarship.org/uc/item/55b3r1qj>
- Joshi, S. 1999. Product Environmental Life-Cycle Assessment Using Input-Output Techniques. *Journal of Industrial Ecology* 3:95-120. doi: 10.1162/108819899569449.
- Lave, L. B., E. Cobas-Flores, C. T. Hendrickson, and F. C. McMichael. 1995a. Using input-output analysis to estimate economy-wide discharges. *Environmental Science & Technology* 29:420A-426A. doi: 10.1021/es00009a003

- Matthews, H. S., C. T. Hendrickson, and C. L. Weber. 2008. The Importance of Carbon Footprint Estimation Boundaries. *Environmental Science & Technology* 42:5839-5842. doi: 10.1021/es703112w.
- McNeilly, L. 2012. Personal interview.
- Ozawa-Meida, L., et. al. 2011. Measuring carbon performance in a UK University through a consumption-based carbon footprint: De Montfort University case study. *Journal of Cleaner Production*. doi:10.1016/j.jclepro.2011.09.028.
- Procter & Gamble (P&G). 2012. Supplier Engagement. [http://www.pg.com/en\\_US/sustainability/environmental\\_sustainability/operations\\_suppliers/supplier\\_engagement.shtml](http://www.pg.com/en_US/sustainability/environmental_sustainability/operations_suppliers/supplier_engagement.shtml)
- Rodale Institute. 2011. The Farming Systems Trial. <http://www.rodaleinstitute.org/files/FSTbookletFINAL.pdf>
- Stoll, K. 2012a. Personal interview.
- Stoll, K. 2012b. UC Berkeley 2010 Greenhouse Gas Emissions Inventory Report. [http://sustainability.berkeley.edu/calcap/pages/inventory/docs/UCBerkeley\\_2010\\_InventaryReport.pdf](http://sustainability.berkeley.edu/calcap/pages/inventory/docs/UCBerkeley_2010_InventaryReport.pdf)
- Suh, S. 2005. Developing a sectoral environmental database for input–output analysis: the comprehensive environmental data archive of the US - PB - Routledge. *Economic Systems Research* 17:449.
- Taylor, R. 2012. Personal interview.
- U.S. Environmental Protection Agency (EPA). 2007. eGRID2010 Version 1.1 Year 2007 GHG Annual Output Emission Rates. [http://www.epa.gov/cleanenergy/documents/egridzips/eGRID2010V1\\_1\\_year07\\_GHGOutputrates.pdf](http://www.epa.gov/cleanenergy/documents/egridzips/eGRID2010V1_1_year07_GHGOutputrates.pdf)
- Walmart. 2012. Sustainability Index. <http://www.walmartstores.com/sustainability/9292.aspx>
- World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). 2004. A Corporate Accounting and Reporting Standard: Revised Edition. <http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf>

## APPENDIX A: Executive Summary for Cal CAP

I calculated UC Berkeley's supply chain carbon footprint in fiscal year 2009 to be 128,590 metric tons CO<sub>2</sub>e. I added this to reported emissions and calculated UC Berkeley's total carbon footprint to be 319,064 metric tons CO<sub>2</sub>e in 2009. Indirect emissions from procurement represent 39% of UC Berkeley's total direct and indirect emissions. 80% of indirect emissions resulted from the top 5 emitting categories of goods and services. These categories include construction, scientific equipment, office products, IT & telecommunications, and food. The expenses within these 5 categories represent 67% of the procurement budget, omitting salaries, benefits, interest, and donations.

### What's different from the 2008 assessment?

In 2008, UC Berkeley researchers from the Renewable and Appropriate Energy Laboratory (RAEL) conducted a pilot study that calculated a supply chain carbon footprint based on campus procurement habits. This assessment improves accuracy of emissions estimates and builds upon the methodology used in the 2008 study by:

- Considering vendor location and adjusting scope 2 emissions for California vendors
- Conducting a more rigorous assessment of construction emissions with Capital Projects
- Specifying scope 1, 2, and 3 emissions from the vendor perspective

Due to differences in methodology, we cannot directly compare results from these assessments. Detailed methods yielded a smaller, more accurate carbon footprint estimate for procurement emissions.

Scope	Category	2008 Emissions	2009 Emissions	% Change
1	Natural Gas	11,818	11,820	+6.1%
1	Campus Fleet	1,523	1,546	+0.8%
1	De Minimis	-	283	N/A
1	Fugitive-Refrigeration	213	106	+0.1%
2	Steam	79,852	77,748	-2.6%
2	Electricity	66,374	57,385	-8.1%
3	Air Travel	21,062	19,908	-5.5%
3	Faculty & Staff Commute	17,310	15,229	-12.5%
3	Student Commute	3,172	3,224	+1.7%
3	Water	1,988	2,172	+1.0%
3	Solid Waste	1,006	1,066	+0.6%
3	Construction	80,000	30,345	-164%
3	All Other Procurement	169,000	98,245	-70%

### Summary of Recommendations and Opportunities for Future Study

*General, in order of priority given current campus resources:*

1. Expand reuse initiatives to reduce consumption & do not focus efforts on services.
2. Investigate food procurement with Cal Dining and campus departments.

3. Standardize the process for estimating procurement emissions and include in CalCAP's annual emissions inventory.
4. Survey campus buyers to understand buyer behavior, particularly opportunities and barriers to including an environmental metric in campus' e-procurement system.
5. Include GHG emissions in "green" procurement strategic sourcing plans and develop a "green" vendor scorecard to incentivize environmentally responsible suppliers.

*The following ideas and recommendations are intended to reduce emissions or further investigate categories that were identified as high-emitting in this assessment.*

#### *Construction*

1. Understand what types of services are provided by contracted vendors and be able to distinguish between carbon-intensive practices (i.e. use of industrial equipment) vs. less carbon-intensive practices (i.e. management or architectural services). This will inform future calculations for supply chain emissions resulting from construction expenses.
2. Estimate on-site emissions from construction equipment by requiring contracted vendors to disclose fuel consumption.
3. Conduct pilot life cycle assessment of a specific construction project on campus with student researchers.

#### *Scientific Equipment*

1. Collaborate with Berkeley Center for Green Chemistry to evaluate less carbon intense alternatives for chemical reagents and other laboratory supplies.
2. If possible, prioritize buying equipment and supplies from California vendors to reduce supply chain emissions.
3. Ensure that used chemicals and supplies are disposed of properly with EH&S to avoid release of climate forcing gases and mitigate risk of pollution.

#### *Office Products*

1. Reduce consumption by encouraging reuse and exchange of office supplies between departments.
2. Evaluate carbon intensity of office supply products when assessing "environmentally-preferable" office supplies in Office Max strategic sourcing contract.

#### *Food*

1. Work with Cal Dining and department event planning employees to conduct more detailed assessment of food purchasing habits with product-level data.

2. Buy less meat and dairy products and replace with less carbon intensive alternative such as organic produce.
3. Prioritize organic (no pesticide or fertilizer inputs) food options.

**APPENDIX B: Summary of Procurement Emissions, by Category***All reported emissions are in terms of metric tons CO<sub>2e</sub>.*

Rank	Category	2009 Expenses	Scope 1	Scope 2	Scope 3	Total Emissions	% Budget	% Procurement emissions	Average Carbon Intensity (kg/\$)
1	Construction	\$ 186,275,597.12	3,836.16	1,890.42	24,619.23	30,345.81	37%	24%	0.16
2	Scientific Equipment	\$ 39,015,388.27	6,753.74	1,177.78	17,793.20	25,724.71	8%	20%	0.14
3	Office Products	\$ 35,316,169.94	2,853.10	1,330.06	12,383.05	16,566.22	7%	13%	0.09
4	IT & Telecommunications	\$ 58,218,965.93	1,562.74	1,531.06	13,079.53	16,173.33	12%	13%	0.09
5	Food	\$ 18,419,685.81	2,364.22	861.10	12,005.21	15,230.54	4%	12%	0.08
6	Professional Services	\$ 59,490,478.94	685.78	10.30	4,309.96	5,406.04	12%	4%	0.03
7	Facilities Services	\$ 17,936,938.20	1,404.28	131.47	2,062.60	3,598.35	4%	3%	0.02
8	Library	\$ 14,507,364.05	402.92	309.89	2,113.34	2,826.15	3%	2%	0.02
9	Real Estate	\$ 16,238,025.94	233.91	1,051.72	1,054.96	2,340.58	3%	2%	0.01
10	Travel & Entertainment	\$ 15,784,035.56	181.12	256.22	1,338.90	1,776.23	3%	1%	0.01
11	Printed Materials & Publishing	\$ 8,983,506.06	175.81	97.73	1,296.51	1,570.05	2%	1%	0.01
12	Facilities Materials & Supplies	\$ 3,583,060.72	238.78	124.90	1,351.33	1,715.00	1%	1%	0.01
13	Linens & Apparel	\$ 2,728,756.43	178.02	93.32	964.27	1,235.61	1%	1%	0.01
14	Medical Supplies & Equipment	\$ 7,054,949.13	212.84	143.32	1,600.03	1,956.19	1%	2%	0.01
15	Freight, Shipping, & Mail	\$ 4,336,241.14	315.79	139.19	550.97	1,005.95	1%	1%	0.01
16	Medical Services	\$ 2,224,782.70	24.10	26.54	177.72	228.37	0%	0%	0.001
17	Insurance & Benefits	\$ 4,854,329.87	3.93	10.86	210.94	225.72	1%	0%	0.001

**APPENDIX C: Summary of Procurement Emissions, by Subcategory***All reported emissions are in terms of metric tons CO<sub>2</sub>e.*

Rank	Subcategory	2009 Expense	Scope 1	Scope 2	Scope 3	Total Emissions	% Budget	% Procurement emissions	Average Carbon Intensity (kg/\$)
1	Major Retail Office Supply Companies	\$ 34,990,067.05	2,714.85	1,289.68	12,118.77	16,123.30	6.9483%	12.5385%	0.46
2	Food Producers & Distributors	\$ 18,352,107.31	2,360.75	855.98	11,977.07	15,193.80	3.6444%	11.8157%	0.83
3	Gases	\$ 5,109,414.26	5,119.08	423.84	7,746.42	13,289.34	1.0146%	10.3347%	2.60
4	Laboratory Equipment & Supplies	\$ 32,593,432.76	1,586.60	731.94	9,794.56	12,113.09	6.4724%	9.4199%	0.37
5	Construction Management	\$ 134,602,989.85	1,428.78	659.71	8,967.08	11,055.57	26.7294%	8.5975%	0.08
6	Construction Management and General Contracting	\$ 31,339,564.56	1,015.02	518.25	7,986.73	9,520.00	6.2234%	7.4034%	0.30
7	IT Goods	\$ 9,115,018.00	678.47	314.04	6,958.99	7,951.50	1.8101%	6.1836%	0.87
8	Equipment & Installation	\$ 37,725,647.47	586.75	1,018.40	5,061.44	6,666.60	7.4915%	5.1844%	0.18
9	General Contracting	\$ 10,670,559.97	623.90	327.82	5,131.83	6,083.55	2.1190%	4.7310%	0.57
10	Consulting	\$ 54,040,202.30	573.62	322.60	3,600.09	4,496.31	10.7313%	3.4966%	0.08
11	Leasing/Rent	\$ 16,232,866.65	233.85	1,051.69	1,054.61	2,340.15	3.2235%	1.8199%	0.14
12	Industrial Equipment	\$ 3,742,058.54	218.79	168.64	1,814.00	2,201.44	0.7431%	1.7120%	0.59
13	Booksellers	\$ 8,728,321.84	233.06	120.92	1,600.70	1,954.68	1.7333%	1.5201%	0.22
14	Publishing Services	\$ 8,915,060.33	171.60	94.27	1,259.19	1,525.06	1.7703%	1.1860%	0.17
15	Furniture	\$ 2,570,509.47	196.16	95.88	1,016.27	1,308.31	0.5105%	1.0174%	0.51

16	Conference & Events	\$ 10,738,117.30	123.22	174.31	910.87	1,208.40	2.1324%	0.9397%	0.11
17	Waste Disposal	\$ 612,425.38	945.92	8.60	194.49	1,149.01	0.1216%	0.8935%	1.88
18	Facilities Management	\$ 13,266,406.33	140.82	79.20	883.79	1,103.81	2.6344%	0.8584%	0.08
19	Medical Supplies & Distribution	\$ 3,132,619.84	108.89	72.37	832.08	1,013.33	0.6221%	0.7880%	0.32
20	Apparel	\$ 2,211,495.80	143.87	77.45	756.06	977.38	0.4392%	0.7601%	0.44
21	Biopharmaceutical Distributors	\$ 3,922,329.29	103.95	70.95	767.95	942.85	0.7789%	0.7332%	0.24
22	Advertising & Marketing	\$ 5,450,276.64	112.15	87.70	709.87	909.72	1.0823%	0.7075%	0.17
23	Library Information Services	\$ 5,779,042.21	169.86	188.96	512.64	871.47	1.1476%	0.6777%	0.15
24	IT Services	\$ 5,851,017.19	193.10	74.98	580.83	848.91	1.1619%	0.6602%	0.15
25	HVAC/Mechanical Services	\$ 2,446,322.60	188.71	21.46	623.50	833.67	0.4858%	0.6483%	0.34
26	Architecture	\$ 3,750,895.71	52.48	178.55	437.30	668.33	0.7449%	0.5197%	0.18
27	Entertainment	\$ 5,045,918.26	57.90	81.91	428.03	567.83	1.0020%	0.4416%	0.11
28	Janitorial Products & Services	\$ 1,605,527.11	123.85	17.01	409.20	550.07	0.3188%	0.4278%	0.34
29	IT Contract Labor	\$ 4,194,260.32	65.23	90.48	360.02	515.73	0.8329%	0.4011%	0.12
30	Electricity	\$ 77,143.74	437.78	0.18	28.95	466.91	0.0153%	0.3631%	6.05
31	Paper Suppliers	\$ 326,102.89	138.25	40.38	264.28	442.92	0.0648%	0.3444%	1.36
32	Lumber & Carpenter Supplies	\$ 1,012,551.25	42.61	29.02	335.05	406.69	0.2011%	0.3163%	0.40
33	Freight	\$ 923,402.97	154.79	10.65	213.40	378.85	0.1834%	0.2946%	0.41
34	Mail Services	\$ 2,205,209.42	117.54	24.99	204.11	346.63	0.4379%	0.2696%	0.16
35	Legal Services	\$ 5,472,710.43	25.36	38.41	265.25	329.02	1.0868%	0.2559%	0.06
36	Moving & Storage	\$ 1,207,628.75	43.46	103.55	133.46	280.47	0.2398%	0.2181%	0.23
37	Sporting Equipment	\$ 517,260.63	34.14	15.87	208.21	258.23	0.1027%	0.2008%	0.50



38	Medical Contracted Services	\$ 2,224,782.70	24.10	26.54	177.72	228.37	0.4418%	0.1776%	0.10
39	Health Insurance	\$ 4,391,229.52	3.55	9.82	190.81	204.18	0.8720%	0.1588%	0.05
40	Animal Care	\$ 848,836.04	27.63	8.06	165.02	200.71	0.1686%	0.1561%	0.24
41	Electrical Services	\$ 1,656,148.01	25.76	32.38	142.16	200.29	0.3289%	0.1558%	0.12
42	Other Administrative Services	\$ 1,777,795.71	20.40	28.86	150.80	200.06	0.3530%	0.1556%	0.11
43	IT Professional Services	\$ 1,333,022.95	39.18	33.16	118.25	190.59	0.2647%	0.1482%	0.14
44	Security Services	\$ 1,327,775.88	16.76	15.51	102.39	134.65	0.2637%	0.1047%	0.10
45	Research Services	\$ 325,922.61	13.72	10.74	45.80	70.26	0.0647%	0.0546%	0.22
46	Parking	\$ 410,060.92	8.78	8.44	38.84	56.06	0.0814%	0.0436%	0.14
47	Landscaping	\$ 32,432.60	29.85	1.63	23.96	55.45	0.0064%	0.0431%	1.71
48	Laboratory Supplies Distribution	\$ 137,782.60	6.71	3.20	41.40	51.31	0.0274%	0.0399%	0.37
49	Bookbinding Machinery	\$ 68,445.73	4.21	3.46	37.33	44.99	0.0136%	0.0350%	0.66
50	Catering	\$ 67,578.50	3.47	5.13	28.14	36.74	0.0134%	0.0286%	0.54
51	Insurance Services	\$ 366,457.95	0.30	0.82	15.92	17.04	0.0728%	0.0133%	0.05
52	Other Benefits	\$ 96,642.40	0.08	0.22	4.20	4.49	0.0192%	0.0035%	0.05
53	Banks	\$ 28,118.70	0.06	0.03	1.18	1.28	0.0056%	0.0010%	0.05
54	Real Estate Brokerage Management	\$ 5,159.29	0.05	0.03	0.34	0.43	0.0010%	0.0003%	0.08
55	Medical Revenue Related	\$ 1,794.58	0.00	0.00	0.08	0.08	0.0004%	0.0001%	0.05

**APPENDIX D: Mapping Decisions, from Account to W/P/R to Category to Subcategory to EIOLCA Sector**  
(Jones 2007)

Acct #	Description	Producer / Wholesale / Retail	Category	Sub category	EIOLCA Sector	Sector Code
53900	Employee Support Programs	Producer	Administrative Services	Other Administrative Services	Business support services	561400
55043	Security Supplies	Producer	Administrative Services	Security Services	Investigation and security services	561600
56633	Police/Security Services	Producer	Administrative Services	Security Services	Investigation and security services	561600
56722	Sport's Officials Fees	Producer	Administrative Services	Other Administrative Services	Business support services	561400
57001	Employee Development Training	Producer	Administrative Services	Other Administrative Services	Business support services	561400
57007	Employee Morale-Building Activ	Producer	Administrative Services	Other Administrative Services	Business support services	561400
57303	Collectn/Litigation Exp-Loans	Producer	Administrative Services	Legal Services	Legal services	541100
57313	Medical Malpractice Insurance	Producer	Administrative Services	Medical Revenue Related	Insurance carriers	524100
57331	Damage/Grievance Awds/Stlmts	Producer	Administrative Services	Legal Services	Legal services	541100
57332	Cost Of Other Legal Proceeding	Producer	Administrative Services	Legal Services	Legal services	541100
54231	Fabricated Equipment => \$5K	Wholesale	Construction	Industrial Equipment	Other industrial machinery manufacturing	33329A
54232	Fabricated Equip =>\$5K (OH)	Wholesale	Construction	Industrial Equipment	Other industrial machinery manufacturing	33329A
55301	Non-inv Fabricated Costs<\$200	Wholesale	Construction	Industrial Equipment	Other industrial machinery manufacturing	33329A
55311	Fabricated Equip=>\$200<\$1,500	Wholesale	Construction	Industrial Equipment	Other industrial machinery manufacturing	33329A
55321	Fabricated Equip =>\$1,500 <\$5K	Wholesale	Construction	Industrial Equipment	Other industrial machinery manufacturing	33329A
54212	Office Furniture/Equip => \$5K	Wholesale	Facilities Materials & Supplies	Furniture	Institutional furniture manufacturing	337127
55302	Non-inv Ofc Furniture<\$200	Wholesale	Facilities Materials & Supplies	Furniture	Institutional furniture manufacturing	337127
55312	Office Furniture =>\$200<\$1,500	Wholesale	Facilities Materials & Supplies	Furniture	Institutional furniture manufacturing	337127
55322	Office Furniture =>\$1,500 <\$5K	Wholesale	Facilities Materials & Supplies	Furniture	Institutional furniture manufacturing	337127
54240	Facilities Renovations, Altera	Producer	Facilities Services	HVAC/Mechanical Services	Services to buildings and dwellings	561700
54241	Gen Improvemts-captlzed	Producer	Facilities Services	HVAC/Mechanical Services	Services to buildings and dwellings	561700
55018	Fertilizers & Pesticides	Wholesale	Facilities Services	Landscaping	Services to buildings and dwellings	561700
55046	Janitorial Supplies	Producer	Facilities Services	Janitorial Products & Services	Services to buildings and dwellings	561700

56210	Building Maintenance	Producer	Facilities Services	Facilities Management	Management, scientific, and technical consulting services	541610
56290	Other Repairs/Maintenance	Wholesale	Facilities Services	Facilities Management	Management, scientific, and technical consulting services	541610
56520	Parking	Producer	Facilities Services	Parking	Other personal services	812900
56622	Hazardous Waste Trsfr:Chemical	Producer	Facilities Services	Waste Disposal	Waste management and remediation services	562000
56623	Hazardous Waste Trsfr:Biohazar	Producer	Facilities Services	Waste Disposal	Waste management and remediation services	562000
56624	Hazardous Waste Trsfr:Radioact	Producer	Facilities Services	Waste Disposal	Waste management and remediation services	562000
56625	Hazardous Waste Labor: Chemica	Producer	Facilities Services	Waste Disposal	Waste management and remediation services	562000
56626	Hazardous Waste Labor: Biohaza	Producer	Facilities Services	Waste Disposal	Waste management and remediation services	562000
56629	Other Chemical Waste Treatment	Wholesale	Facilities Services	Waste Disposal	Waste management and remediation services	562000
56631	Laundry	Producer	Facilities Services	Janitorial Products & Services	Services to buildings and dwellings	561700
57323	Exp-Bank Fees	Producer	Financial Services	Banks	Monetary authorities and depository credit intermediation	52A000
55050	Food-Meat & Poultry	Wholesale	Food	Food Producers & Distributors	All other food manufacturing	311990
55051	Food-Dairy	Wholesale	Food	Food Producers & Distributors	All other food manufacturing	311990
55052	Food-Produce & Bakery	Wholesale	Food	Food Producers & Distributors	All other food manufacturing	311990
55053	Food-Dry Stores & Beverages	Wholesale	Food	Food Producers & Distributors	All other food manufacturing	311990
55054	Food-Frozen	Wholesale	Food	Food Producers & Distributors	All other food manufacturing	311990
55056	On-the-Job Meals	Wholesale	Food	Catering	Food services and drinking places	722000
55059	Food-Other	Wholesale	Food	Food Producers & Distributors	All other food manufacturing	311990
57002	Meals Provided to Students	Wholesale	Food	Food Producers & Distributors	All other food manufacturing	311990
56013	Tape Storage Services	Producer	Freight, Shipping, & Mail	Moving & Storage	Warehousing and storage	493000
56110	Mailing Services/Postage	Producer	Freight, Shipping, & Mail	Mail Services	Postal service	491000
56111	Express Delivery Services	Producer	Freight, Shipping, & Mail	Mail Services	Postal service	491000
56510	Freight	Producer	Freight, Shipping, & Mail	Freight	Truck transportation	484000
57232	Moving Costs	Producer	Freight, Shipping, & Mail	Moving & Storage	Warehousing and storage	493000
54110	Equip Computer =>\$5K	Wholesale	IT & Telecommunications	IT Distributors - Goods	Electronic computer manufacturing	334111
54210	Equipment-Other => \$5K	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
54220	Cap Lease Principal-Equipment	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200

54243	Software => \$5K <\$10M	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
55041	Photographic/Video Supplies	Producer	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
55101	Computer Supplies	Wholesale	IT & Telecommunications	IT Goods	Electronic computer manufacturing	334111
55201	Non-inv Equipment-Comp<\$200	Wholesale	IT & Telecommunications	IT Goods	Electronic computer manufacturing	334111
55211	Equip-Computer=>\$200<\$1,500	Wholesale	IT & Telecommunications	IT Goods	Electronic computer manufacturing	334111
55221	Equip-Computer =>\$1,500 < \$5K	Wholesale	IT & Telecommunications	IT Goods	Electronic computer manufacturing	334111
56010	Computer Hardware Maintenance	Producer	IT & Telecommunications	IT Services	Electronic and precision equipment repair and maintenance	811200
56011	Cmptng/DP Svcs-Recharge	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
56012	Cmptng/DP Svcs-Nonrecharge	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
56020	Software Licenses, Purchase	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
56021	Software Licenses, Maintenance	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
56022	Non-inv Software<\$200	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
56023	Software=>\$200<\$1,500	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
56024	Software => \$1,500 < \$5K	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
56120	Network Installation	Producer	IT & Telecommunications	IT Services	Electronic and precision equipment repair and maintenance	811200
56121	Network Utilization	Producer	IT & Telecommunications	IT Services	Electronic and precision equipment repair and maintenance	811200
56130	Telephone Services	Producer	IT & Telecommunications	IT Services	Telecommunications	517000
56230	Equipment Repair	Producer	IT & Telecommunications	IT Services	Electronic and precision equipment repair and maintenance	811200
56320	Rental of Computer Equipment	Wholesale	IT & Telecommunications	Equipment & Installation	Electronic and precision equipment repair and maintenance	811200
56430	Multimedia Service	Producer	IT & Telecommunications	IT Services	Other information services	519100
56630	Microfiche Services	Producer	IT & Telecommunications	IT Services	Other information services	519100
53300	Unemployment Insurance	Producer	Insurance & Benefits	Other Benefits	Insurance carriers	524100
53400	Core Medical	Producer	Insurance & Benefits	Health Insurance	Insurance carriers	524100
53413	PSBP-MEDICAL-HMO/PPO	Producer	Insurance & Benefits	Health Insurance	Insurance carriers	524100
53420	Dental Insurance	Producer	Insurance & Benefits	Health Insurance	Insurance carriers	524100
53431	PSBP-VISION	Producer	Insurance & Benefits	Health Insurance	Insurance carriers	524100
53601	PSBP-ST DISABILITY	Producer	Insurance & Benefits	Health Insurance	Insurance carriers	524100

	INSURANCE					
53910	Employee Bnft Trsfr Contra-Exp	Producer	Insurance & Benefits	Other Benefits	Insurance carriers	524100
53950	Benefit Expenses	Producer	Insurance & Benefits	Other Benefits	Insurance carriers	524100
53960	PSBP-Broker/Administrative Fee	Producer	Insurance & Benefits	Health Insurance	Insurance carriers	524100
56725	Deceased Empl Dpdnt Costs	Producer	Insurance & Benefits	Other Benefits	Insurance carriers	524100
57310	General & Empl Liability Insur	Producer	Insurance & Benefits	Other Benefits	Insurance carriers	524100
57311	Student Health Insurance	Producer	Insurance & Benefits	Health Insurance	Insurance carriers	524100
57312	Other Insurance	Producer	Insurance & Benefits	Insurance Services	Insurance carriers	524100
57314	Auto Liability Insurance Exp	Producer	Insurance & Benefits	Insurance Services	Insurance carriers	524100
57340	Medical Coverage Reimbursement	Producer	Insurance & Benefits	Health Insurance	Insurance carriers	524100
54211	Library Books/Mtls-Capitalizab	Wholesale	Library & Book	Booksellers	Book publishers	511130
54213	Lib Rare Bks/Rare Bk Coll-Capt	Wholesale	Library & Book	Booksellers	Book publishers	511130
54214	Special Coll (excl Lib) => \$5K	Wholesale	Library & Book	Booksellers	Book publishers	511130
54217	Lib Acquisition & Processing	Producer	Library & Book	Library Information Services	Other information services	519100
54218	Library Serials-Capitalizable	Wholesale	Library & Book	Booksellers	Book publishers	511130
55304	Non-inv Special Coll<\$200	Wholesale	Library & Book	Booksellers	Book publishers	511130
55314	Special Coll=>\$200<\$1,500	Wholesale	Library & Book	Booksellers	Book publishers	511130
55324	Special Coll =>\$1,500 <\$5K	Wholesale	Library & Book	Booksellers	Book publishers	511130
56420	Library Materials	Wholesale	Library & Book	Booksellers	Book publishers	511130
56422	Jrnls/Subscriptns: Fed Chgbl	Producer	Library & Book	Library Information Services	Other information services	519100
56423	Jrnls/Subscriptns: Fed Unchgbl	Producer	Library & Book	Library Information Services	Other information services	519100
54216	Sporting Goods/Equip => \$5K	Wholesale	Linens & Apparel	Sporting Equipment	Sporting and athletic goods manufacturing	339920
55044	Uniforms and Apparel	Wholesale	Linens & Apparel	Apparel	Other cut and sew apparel manufacturing	315290
55303	Non-inv Sporting Goods/Eq<\$200	Wholesale	Linens & Apparel	Sporting Equipment	Sporting and athletic goods manufacturing	339920
55313	SportingGoods/Equip=>200<1,500	Wholesale	Linens & Apparel	Sporting Equipment	Sporting and athletic goods manufacturing	339920
55323	Sport Goods/Equip=>\$1,500 <5K	Wholesale	Linens & Apparel	Sporting Equipment	Sporting and athletic goods manufacturing	339920
56632	Medical Services	Producer	Medical Services	Medical Contracted Services	Offices of physicians, dentists, and other health practitioners	621A00
55042	Small Tools & Miscellaneous Ha	Wholesale	MRO Supplies & Products	Lumber & Carpenter Supplies	Hardware manufacturing	332500

55030	General Office Supplies	Producer	Office Products	Major Retail Office Supply Companies	Office supplies (except paper) manufacturing	339940
55031	Paper General	Wholesale	Office Products	Paper Suppliers	Paper mills	322120
55032	Paper-Forms	Wholesale	Office Products	Paper Suppliers	Paper mills	322120
55040	General Supplies	Producer	Office Products	Major Retail Office Supply Companies	Office supplies (except paper) manufacturing	339940
56711	Participant Support-Other	Producer	Office Products	Major Retail Office Supply Companies	Office supplies (except paper) manufacturing	339940
56713	Participant Support-Materials	Producer	Office Products	Major Retail Office Supply Companies	Office supplies (except paper) manufacturing	339940
50010	Ladder-ranked & Equiv Titles		OMIT			
50015	Research Titles		OMIT			
50020	Graduate Student Researchers		OMIT			
50025	Clinical Professor Titles		OMIT			
50030	Ag Experiment Stn Titles		OMIT			
50035	Librarians		OMIT			
50040	Academic Administrators		OMIT			
50045	Acad Stipends & Summer Differ		OMIT			
50046	BUDSUM Acad Fed Funds Offset		OMIT			
50050	Supplemental Acad Compensation		OMIT			
50055	Other Academic Compensation		OMIT			
50056	Acad Cash Allowances		OMIT			
50100	BUDSUM Temporary Instruction		OMIT			
50110	Other Instructors		OMIT			
50120	Graduate Student Instructors		OMIT			
50130	Readers/Tutors		OMIT			
50199	Salary Intercampus Clearing		OMIT			
51010	Budgeted Career Staff		OMIT			
51015	Non-budgeted Career Staff		OMIT			
51020	Non-budgeted Contract Staff		OMIT			
51023	Budgeted Contract Staff		OMIT			
51025	Casual Staff-Restricted		OMIT			

51027	Casual Staff-Limited		OMIT			
51029	Casual Staff-Restr Work Study		OMIT			
51030	Incentive Award Program Pymt		OMIT			
51031	Salary Expenses		OMIT			
51032	Overtime		OMIT			
51033	Shift Differential		OMIT			
51036	Staff Cash Allowances		OMIT			
51037	SMG Cash Allowances		OMIT			
52000	BUDSUM Other Employee Compen		OMIT			
52010	Vacation Accrual		OMIT			
52011	Vacation Assessment		OMIT			
52012	Vacation Gross Reduction/Usag		OMIT			
52013	Vacation Benefit Reduction		OMIT			
52020	Compensatory Time		OMIT			
52030	Senior Mngmt Severance Pay Pla		OMIT			
52040	Sal & Wag-Contra-Capitalized		OMIT			
52050	Term Ben Sal/Wag-Voluntary		OMIT			
52051	Term Ben Sal/Wag-Involuntar		OMIT			
53000	BUDSUM Retirement & Benefits		OMIT			
53100	OASDI		OMIT			
53105	MediCare		OMIT			
53110	Foreign Employee SS Taxes		OMIT			
53200	Worker Compensation Insurance		OMIT			
53410	Graduate Student Health Insura		OMIT			
53411	Regents' Health Insurance		OMIT			
53412	Annuitant Health Insurance		OMIT			
53421	PSBP-DENTAL-HMO/PPO		OMIT			
53430	Vision Insurance		OMIT			
53500	Special Life Insurance		OMIT			
53501	Life Insurance Sec 89 (Core)		OMIT			

53502	PSBP-LIFE-AD&D		OMIT			
53600	Nonindustrial Disability Insur		OMIT			
53700	EMPLOYER UCRP CONTRIBUTION-UC		OMIT			
53701	PERS - Regents' Contribution		OMIT			
53702	UC 415(m) Restoration Plan Con		OMIT			
53703	UCRS-Regents' Contrib Summer S		OMIT			
53704	Emplyr UC Retiree Hlth Ben Con		OMIT			
53705	Senior Mgmt Supplement Benefit		OMIT			
53710	Term Ben Benefits-Voluntary		OMIT			
53711	Term Ben Benefits-Involuntary		OMIT			
53712	COBRA Stimulus Subsidy		OMIT			
53800	Graduate Full Fee Remission		OMIT			
53801	Graduate Partial Fee Remission		OMIT			
53802	Graduate Nonresident Tuition R		OMIT			
53803	U/G Partial Fee Remission		OMIT			
53920	IAP Benefits Contra-Exp		OMIT			
53921	IAP Contra Expense		OMIT			
53922	IAP Assessment		OMIT			
53930	Vacation Assessment		OMIT			
53931	Vacation Gross Reduction/Usage		OMIT			
53932	Vacation Benefit Reduction		OMIT			
53933	Accrued Ben-Comp Absences-UCRP		OMIT			
53934	Accrued Ben-Comp Absence-Other		OMIT			
53940	Ret & Ben-Contra-Capitalized		OMIT			
53941	Benefits Admin Assessment		OMIT			
53942	Benefits Admin Funding (Contra		OMIT			
53943	Benefits Admin Benefits Contra		OMIT			
53951	PSBP-Miscellaneous Benefits		OMIT			
53990	Chargebk Ineligible CB Benefit		OMIT			
53999	BenefitsIntercampus Clearing		OMIT			



54100	BUDSUM Computer Equip Inventor		OMIT			
54130	Computer Equipment-Depreciatio		OMIT			
54200	BUDSUM Equipment-Inventorial		OMIT			
54221	Trade-In Allowance		OMIT			
54230	Fabrication of Equipment		OMIT			
54242	Software prjs-captlzed >\$10M		OMIT			
54244	Infrastructure Assets-captlzed		OMIT			
54245	Intangible Assets-captlzed		OMIT			
54250	Other Equipment Depreciation		OMIT			
54251	Depreciation - Departmental		OMIT			
54252	Contra Depreciation-Department		OMIT			
54260	Equipment-Contra-Capitalized		OMIT			
55000	BUDSUM General Supplies		OMIT			
55100	BUDSUM Computing Supplies		OMIT			
55200	BUDSUM Comp Equip-Non Inventor		OMIT			
55300	BUDSUM Equip-Non Inventorial		OMIT			
56000	BUDSUM Comp Serv & Software		OMIT			
56030	Depreciation-Software >10M		OMIT			
56031	Depreciation-Software < 10M		OMIT			
56100	BUDSUM Communications		OMIT			
56200	BUDSUM Maint Contract & Serv		OMIT			
56220	Vehicle Repair		OMIT			
56240	Non-inven Cap Project Exp		OMIT			
56300	BUDSUM Rents & Utilities		OMIT			
56331	Rental of Equip - Recharge		OMIT			
56340	Electricity		OMIT			
56341	Water & Sewer		OMIT			
56342	Natural Gas		OMIT			
56349	Other Utility Services		OMIT			
56350	Depre-Buildings & Structures		OMIT			

56351	Depre-General Improvement		OMIT			
56352	Depreciation-Infrastructure		OMIT			
56398	Contra Rent & Utilities		OMIT			
56399	Other Utility Services		OMIT			
56400	BUDSUM Publications & Media		OMIT			
56413	Duplicating-Recharge		OMIT			
56440	Depre-Library Mtls & Collect		OMIT			
56500	BUDSUM Transportation		OMIT			
56530	Transportation		OMIT			
56600	BUDSUM Other Serv-Non Computer		OMIT			
56627	Hazardous Waste Labor: Radioac		OMIT			
56634	OP Common Fund Assessment		OMIT			
56635	Management Fee Assessment		OMIT			
56700	BUDSUM Non-Employee Payments		OMIT			
56710	Payments to Patients or Human		OMIT			
56712	Participant Support-Stipends		OMIT			
56714	Participant Support-Travel		OMIT			
56721	Non-Std/ Vstng Schlr Stipend		OMIT			
56724	Temporary Labor		OMIT			
56726	Honoraria		OMIT			
56727	Off-Campus Work Study Reimburs		OMIT			
56731	Post Doc Other Medical Reimbur		OMIT			
57000	BUDSUM Conf-Mtgs-Traing-Events		OMIT			
57210	BUDSUM Travel Domestic		OMIT			
57211	In State Travel-Air Fare		OMIT			
57212	Out-Of-State Travel-Air Fare		OMIT			
57213	In-State Travel-Non-Air Fare		OMIT			
57214	Out-Of-State Travel-Non-Air Fa		OMIT			
57215	Domestic Travel Fees		OMIT			
57216	Out-Of-State Travel Exception		OMIT			

57220	BUDSUM Travel Foreign		OMIT			
57221	Foreign Travel-Air Fare		OMIT			
57222	Foreign Travel-Non-Air Fare		OMIT			
57223	Foreign Travel Fees		OMIT			
57230	BUDSUM Travel Other		OMIT			
57231	Travel Fees		OMIT			
57233	Travel - Entertainment-Related		OMIT			
57239	Travel Direct Bill Clearing		OMIT			
57300	BUDSUM Miscellaneous Expenses		OMIT			
57301	Write-off of Notes as Uncollec		OMIT			
57302	Loans assigned to Fed Govt		OMIT			
57304	Canc of N/R due to Death		OMIT			
57305	Reserve for Bad Debts-Loans		OMIT			
57306	Federal Loans Disbursed		OMIT			
57307	Admin Expense-Loans		OMIT			
57320	Cap Lease Int-Computers		OMIT			
57321	Cap Lease Int-Other Equipment		OMIT			
57322	Interest on Installment Purcha		OMIT			
57324	Gain/Loss on Foreign Currency		OMIT			
57329	Other Interest		OMIT			
57330	Fines & Penalties		OMIT			
57333	Exp-Outside Serv-Legal(Fdn)		OMIT			
57341	Depreciation-Intangibles		OMIT			
57342	Misc Exp-Contra-Capitalized		OMIT			
57346	Bad Debt Expense-State Govt		OMIT			
57347	Bad Debt Expense-Federal Govt		OMIT			
57348	Bad Debt Expense-Auxiliary Ent		OMIT			
57349	Bad Debt Expense-Educ Activ		OMIT			
57350	Non-student Prizes		OMIT			
57351	Donations & Contributions		OMIT			

57352	Memberships:Fed Chrgbl		OMIT			
57353	Memberships: Federally Unchrg		OMIT			
57355	Royalties		OMIT			
57356	Bad Debt Expenditures-Other		OMIT			
57357	Revenue-Sharing Expenditures		OMIT			
57358	Fund Raising Contra Expense		OMIT			
57359	Miscellaneous Expenditures		OMIT			
57360	Agency Fund Cash Receipts		OMIT			
57361	Agency AFC Charges		OMIT			
57369	Agency Contra Expense		OMIT			
57370	Cost of Goods Sold		OMIT			
57375	Unrstr Gifts to Other Instit		OMIT			
57376	Post Doc Stipend with Overhead		OMIT			
57377	Post Doc Stipend Exempt of OH		OMIT			
57378	Pymt of Int-Tax Exempt CP		OMIT			
57379	Pymt of Int-Taxable CP		OMIT			
57380	Pymt of Int Cap Lease Aux/SE		OMIT			
57381	Pymt of Int Bank Loans Other		OMIT			
57382	Pymt of Int Cap Lease Other		OMIT			
57383	Pymt of Int State Cap Lease Ot		OMIT			
57384	Pymt of Int St Enrgy Eff Bonds		OMIT			
57385	Contra Interest Exp-SPWB Cap L		OMIT			
57386	Debt Extinguishment Cost		OMIT			
57387	Interest Exp-Contra-Capitalizd		OMIT			
57388	Amortization of Deferred Costs		OMIT			
57389	Amort of Premium-Revenue Bond		OMIT			
57390	Fiscal Close Clearing		OMIT			
57399	Expenditure Clearing Other		OMIT			
57400	BUDSUM Pymts Students/Stud Aid		OMIT			
57410	U/G Scholarships-Stipends		OMIT			

57411	U/G Grants-in-Aid-Stipends		OMIT			
57412	U/G Misc Payments-Stipends		OMIT			
57413	Grad Fellowships-Stipends		OMIT			
57414	Grad Grants-in-Aid-Stipends		OMIT			
57415	Grad Misc Payments-Stipends		OMIT			
57420	U/G Scholarships-Tuition/Fees		OMIT			
57421	U/G Grants-Tuition/Fees		OMIT			
57422	U/G Misc Payments-Tuition/Fees		OMIT			
57423	Grad Fellowships-Tuition/Fees		OMIT			
57424	Grad Grants-in-Aid-Tuition/Fee		OMIT			
57425	Grad Misc Payment-Tuition/Fees		OMIT			
57430	Grad Fellowships-Travel		OMIT			
57431	Grad Grants-in-Aid-Travel		OMIT			
57440	U/G Scholarships-General		OMIT			
57441	U/G Grants-General		OMIT			
57442	U/G Misc Payments-General		OMIT			
57443	Grad Fellowships-General		OMIT			
57444	Grad Grants-in-Aid-General		OMIT			
57445	Grad Misc Payments-General		OMIT			
57450	Student Prizes		OMIT			
57455	Research Training Awards		OMIT			
57456	Pymts to Indiv on Filing Fee		OMIT			
57490	Scholarship Allowance Contra		OMIT			
57510	Impr Orig Cost-Real Estate		OMIT			
57511	Impr Orig Cost-Bldg & Struct		OMIT			
57512	Impr Orig Cost-Fixed Equip		OMIT			
57513	Impr Orig Cost-Gen Imprvmts		OMIT			
57514	Impr Orig Cost-Software >10M		OMIT			
57515	Impr Orig Cost-Software< 10M		OMIT			
57516	Impr Orig Cost Equipment		OMIT			

57517	Impr Orig Cost-Intangible Asse		OMIT			
57518	Impr Orig Cost-Infrastructure		OMIT			
57519	Impr Orig Cst-Spc Cllet-ExcLib		OMIT			
57520	Impr Orig Cst-Lib Mtrls & Clle		OMIT			
57521	Impr Orig Cst-Lib Rare Books		OMIT			
57530	Impr Accum Depn- Bldg & Struct		OMIT			
57531	Impr Accum Depn-Gen Imprvmts		OMIT			
57532	Impr Accum Depn-Software >10M		OMIT			
57533	Impr Accum Depn-Software <10M		OMIT			
57534	Impr Accum Depn - Equipment		OMIT			
57535	Impr Accum Depn-Intngbl Assets		OMIT			
57536	Impr Accum Depn-Infrastructure		OMIT			
57550	Opr Imp Loss to Sp/Ex Imp Loss		OMIT			
57560	Other Losses, Non-capital Asst		OMIT			
57561	Insur Recov, CY Non-cap Assets		OMIT			
57570	Pollution Remediation Cost		OMIT			
57571	Pollution Remedi Rcvry-CY Cost		OMIT			
57580	Special Pollution Remedi Cost		OMIT			
57581	Extraord Pollution Remedi Cost		OMIT			
57582	Spcl Pollution Reme Rcvry-CY C		OMIT			
57583	Extra Pollution Reme Rcvry-CYC		OMIT			
57710	Clear Deficits-Rchg, Oth Curre		OMIT			
57720	Deficit Clearing - C & G		OMIT			
57800	BUDSUM C&G Sub Awards		OMIT			
57810	Cum Exp>\$25k per Subaward		OMIT			
57811	Cum Exp<\$25k Per Subaward		OMIT			
57820	C&G Intercampus Exp-UCSF		OMIT			
57821	C&G Intercampus Cont-Exp-UCSF		OMIT			
57830	C&G Intercampus Exp-UCD		OMIT			
57831	C&G Intercampus Cont-Exp UCD		OMIT			

57840	C&G Intercampus Exp-UCLA		OMIT			
57841	C&G Intercampus Cont-Exp-UCLA		OMIT			
57850	C&G Intercampus Exp-UCR		OMIT			
57851	C&G Intercampus Cont-Exp-UCR		OMIT			
57860	C&G Intercampus Exp-UCSD		OMIT			
57861	C&G Intercampus Cont-Exp-UCSD		OMIT			
57870	C&G Intercampus Exp-UCSC		OMIT			
57871	C&G Intercampus Cont-Exp-UCSC		OMIT			
57880	C&G Intercampus Exp-UCSB		OMIT			
57881	C&G Intercampus Cont-Exp-UCSB		OMIT			
57890	C&G Intercampus Exp-UCI		OMIT			
57891	C&G Intercampus Cont-Exp-UCI		OMIT			
57895	C&G Intercampus Exp-UCMerced		OMIT			
57896	C&G Intercampus Cont-Exp-UCMer		OMIT			
57900	BUDSUM Indirect Cost Recovery		OMIT			
57910	Indirect Cost Recovery-Federal		OMIT			
57920	Indirect Cost Recv-Fed Contrac		OMIT			
57940	Indirect Cost Recovery-State		OMIT			
57950	Indirect Cost Recovery-Local		OMIT			
57960	Indirect Cost Recovery-Private		OMIT			
57998	Indirect Cost Recovery-Contra		OMIT			
57999	Indirect Cost Recovery-Prior Y		OMIT			
58000	BUDSUM Unallocated		OMIT			
58100	BUDSUM Reappropriated Balances		OMIT			
58200	BUDSUM Fund Advance Unalloc		OMIT			
59000	Recharge Income		OMIT			
59810	Disb Uc (Income)		OMIT			
59811	Disb - Gift Fee (Income)		OMIT			
59812	Disb - Uc (Principal)		OMIT			
59813	Matured Trusts		OMIT			

59814	Disb - Other ( Principal )		OMIT			
59815	Credit Card Exp. - (Principal)		OMIT			
59816	Gift Fee -Principal		OMIT			
59990	Staff Merit Provision		OMIT			
59991	Staff Range Provision		OMIT			
59992	Staff Up/Downgrading Provision		OMIT			
59993	Staff Reclass Provision		OMIT			
59994	Staff Equity Provision		OMIT			
59998	Provision-Staff Recog Award		OMIT			
55020	Controlled Pharmaceutical Drug	Producer	Pharmaceuticals	Biopharmaceutical Distributor	Pharmaceutical preparation manufacturing	325412
55021	Other Pharmaceutical Drugs	Wholesale	Pharmaceuticals	Biopharmaceutical Distributor	Pharmaceutical preparation manufacturing	325412
55045	Course Materials	Wholesale	Printed Materials & Publishing	Publishing Services	Book publishers	511130
56410	Printing	Producer	Printed Materials & Publishing	Publishing Services	Book publishers	511130
56411	Photocopy	Producer	Printed Materials & Publishing	Publishing Services	Book publishers	511130
56421	Library Book Binding	Producer	Printed Materials & Publishing	Bookbinding Machinery	Other industrial machinery manufacturing	33329A
56190	Misc Communication Svcs	Producer	Professional Services	Advertising & Marketing	Advertising and related services	541800
56610	Advertising: Fed Chargeable	Producer	Professional Services	Advertising & Marketing	Advertising and related services	541800
56611	Advertising - Fed Unchargeable	Producer	Professional Services	Advertising & Marketing	Advertising and related services	541800
56639	Miscellaneous Services	Producer	Professional Services	Consulting	Management, scientific, and technical consulting services	541610
56720	Consultant Fees	Producer	Professional Services	Consulting	Management, scientific, and technical consulting services	541610
54120	Principal of Capital Leases-Co	Producer	Real Estate	Leasing/Rent	Real estate	531000
54121	Principal of Capital Leases-So	Producer	Real Estate	Leasing/Rent	Real estate	531000
56310	Facility Rental-Recharge	Producer	Real Estate	Leasing/Rent	Real estate	531000
56312	Non-Conf/Facility Rental	Producer	Real Estate	Leasing/Rent	Real estate	531000
56313	Internal Rent-Fed Unallowable	Producer	Real Estate	Leasing/Rent	Real estate	531000
56636	Property Mgmt Service Fees	Producer	Real Estate	Real Estate Brokerage Management	Management, scientific, and technical consulting services	541610
56723	Student Accomodations	Producer	Real Estate	Leasing/Rent	Real estate	531000
54215	Fixed Equipment-Capitalized	Wholesale	Scientific Equipment	Laboratory Equipment & Supplies	Laboratory apparatus and furniture manufacturing	339111



55010	Inorganic Chemicals	Wholesale	Scientific Equipment	Gases	Other basic organic chemical manufacturing	325190
55011	Organic Chemicals	Wholesale	Scientific Equipment	Gases	Other basic organic chemical manufacturing	325190
55012	Radioactive Chemicals	Producer	Scientific Equipment	Gases	Other basic organic chemical manufacturing	325190
55013	Restriction Enzymes	Wholesale	Scientific Equipment	Laboratory Supplies Distribution	Laboratory apparatus and furniture manufacturing	339111
55014	Dry Ice	Wholesale	Scientific Equipment	Laboratory Supplies Distribution	Laboratory apparatus and furniture manufacturing	339111
55015	Lab Glass/Ceramics/Plastics	Wholesale	Scientific Equipment	Laboratory Equipment & Supplies	Laboratory apparatus and furniture manufacturing	339111
55016	Lab Instruments and Supplies	Wholesale	Scientific Equipment	Laboratory Equipment & Supplies	Laboratory apparatus and furniture manufacturing	339111
55017	Lab Animals/Feed	Wholesale	Scientific Equipment	Animal Care	Veterinary services	541940
55309	Non-inv Equip-Oth Non-Com<\$200	Wholesale	Scientific Equipment	Laboratory Equipment & Supplies	Laboratory apparatus and furniture manufacturing	339111
55319	Equip-Oth Non-Com=>\$200<\$1,500	Wholesale	Scientific Equipment	Laboratory Equipment & Supplies	Laboratory apparatus and furniture manufacturing	339111
55329	Equip-Other => \$1,500 < \$5K	Wholesale	Scientific Equipment	Laboratory Equipment & Supplies	Laboratory apparatus and furniture manufacturing	339111
55399	Non-inventorial Equipment- Oth	Wholesale	Scientific Equipment	Laboratory Equipment & Supplies	Laboratory apparatus and furniture manufacturing	339111
56330	Rental of Equipment	Wholesale	Scientific Equipment	Laboratory Equipment & Supplies	Laboratory apparatus and furniture manufacturing	339111
56620	Sample Analysis: Chemical	Producer	Scientific Equipment	Research Services	Scientific research and development services	541700
56621	Sample Analysis: Radioactive	Producer	Scientific Equipment	Research Services	Scientific research and development services	541700
55022	Medical Supplies	Producer	Medical Supplies	Medical Supplies & Distribution	Surgical appliance and supplies manufacturing	339113
55047	Entertainment and Other Event	Producer	Travel & Entertainment	Conference & Events	Business support services	561400
56311	Conf/Event Facil Rent-Off-Camp	Producer	Travel & Entertainment	Conference & Events	Business support services	561400
57003	Conference/Event Registration\	Producer	Travel & Entertainment	Conference & Events	Business support services	561400
57004	Business Meeting -Technical	Producer	Travel & Entertainment	Conference & Events	Business support services	561400
57005	Business Meeting-Non-Technical	Producer	Travel & Entertainment	Conference & Events	Business support services	561400
57006	Social Activities & Entertainm	Producer	Travel & Entertainment	Entertainment	Business support services	561400
57354	Tournament Registration/Entry	Producer	Travel & Entertainment	Conference & Events	Business support services	561400

**APPENDIX E: CEDA Emission Factors, By Producer/Wholesale/Retail \$ and Scope**

*All emission factors are in terms of kg CO<sub>2</sub>e per 2002 U.S. dollar of sector output (BEA 2011, Suh 2005, Jones et al. 2008)*

BEA Description	Sector Code	Commodity Description	Producer EF	S1	S2	S3	Whole sale EF	S1	S2	S3	Retail EF	S1	S2	S3
Accessories and parts	S00401	Scrap	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Accessories and parts	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	o	N/A	N/A	N/A
Accessories and parts	331200	Steel product manufacturing from purchased steel	2.4949	1.2159	0.1537	1.1253	2.2458	1.0885	0.1393	1.0180	1.3653	0.6247	0.1169	0.6237
Accessories and parts	332600	Spring and wire product manufacturing	1.0806	0.1117	0.0791	0.8898	0.9971	0.1091	0.0739	0.8140	0.6742	0.0780	0.0803	0.5159
Accessories and parts	335911	Storage battery manufacturing	0.8812	0.0959	0.1606	0.6248	0.7646	0.0969	0.1340	0.5338	0.6772	0.0867	0.1263	0.4642
Accessories and parts	326220	Rubber and plastics hoses and belting manufacturing	0.9470	0.1015	0.0948	0.7507	0.8970	0.1012	0.0899	0.7059	0.6120	0.0730	0.0893	0.4497
Accessories and parts	336300	Motor vehicle parts manufacturing	0.8523	0.0640	0.0530	0.7353	0.8033	0.0668	0.0509	0.6856	0.5595	0.0537	0.0675	0.4383
Accessories and parts	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Accessories and parts	325610	Soap and cleaning compound manufacturing	0.7937	0.1650	0.0476	0.5811	0.6869	0.1549	0.0438	0.4882	0.5826	0.1268	0.0545	0.4013
Accessories and parts	332500	Hardware manufacturing	0.7262	0.0595	0.0517	0.6150	0.6854	0.0624	0.0496	0.5734	0.4910	0.0512	0.0670	0.3728
Accessories and parts	327215	Glass product manufacturing made of purchased glass	0.8947	0.2184	0.1306	0.5458	0.8508	0.2124	0.1223	0.5161	0.5855	0.1350	0.1074	0.3430
Accessories and parts	339991	Gasket, packing, and sealing device manufacturing	0.7451	0.0898	0.0992	0.5561	0.6542	0.0931	0.0841	0.4769	0.4760	0.0685	0.0861	0.3215
Accessories and parts	333319	Other commercial and service industry machinery manufacturing	0.6158	0.0896	0.0348	0.4914	0.5258	0.0765	0.0341	0.4152	0.4032	0.0591	0.0583	0.2859
Accessories and parts	335110	Electric lamp bulb and part manufacturing	0.4949	0.0690	0.0880	0.3378	0.4151	0.0611	0.0732	0.2808	0.3424	0.0506	0.0800	0.2118
Accessories and parts	334220	Broadcast and wireless communications equipment	0.3276	0.0211	0.0272	0.2794	0.3202	0.0219	0.0282	0.2702	0.2887	0.0287	0.0553	0.2047
Accounting and other business	541400	Specialized design services	0.1428	0.0105	0.0247	0.1076	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

services														
Accounting and other business services	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Accounting and other business services	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783
Accounting and other business services	541800	Advertising and related services	0.2318	0.0271	0.0329	0.1718	0.2318	0.0271	0.0329	0.1718	0.2318	0.0271	0.0329	0.1718
Accounting and other business services	4A0000	Retail trade	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242
Accounting and other business services	561400	Business support services	0.1602	0.0151	0.0332	0.1119	0.1602	0.0151	0.0332	0.1119	0.1602	0.0151	0.0332	0.1119
Accounting and other business services	561600	Investigation and security services	0.1422	0.0166	0.0239	0.1017	0.1422	0.0166	0.0239	0.1017	0.1422	0.0166	0.0239	0.1017
Accounting and other business services	541200	Accounting, tax preparation, bookkeeping, and payroll services	0.1017	0.0090	0.0236	0.0690	0.1017	0.0090	0.0236	0.0690	0.1017	0.0090	0.0236	0.0690
Accounting and other business services	561300	Employment services	0.0736	0.0050	0.0208	0.0479	0.0736	0.0050	0.0208	0.0479	0.0736	0.0050	0.0208	0.0479
Air transportation	481000	Air transportation	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441
Alcohol in purchased meals	481000	Air transportation	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441
Alcohol in purchased meals	722000	Food services and drinking places	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261
Alcohol in purchased meals	482000	Rail transportation	1.2915	1.0294	0.0066	0.2555	1.2915	1.0294	0.0066	0.2555	1.2915	1.0294	0.0066	0.2555
Alcohol in purchased meals	711A00	Promoters of performing arts and sports and agents for public figures	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201
Alcohol in purchased meals	512100	Motion picture and video industries	0.1335	0.0148	0.0388	0.0799	0.1335	0.0148	0.0388	0.0799	0.1569	0.0193	0.0488	0.0888
Alcohol in purchased meals	711200	Spectator sports	0.1386	0.0156	0.0407	0.0823	0.1386	0.0156	0.0407	0.0823	0.1386	0.0156	0.0407	0.0823
Alcohol in purchased meals	711100	Performing arts companies	0.1540	0.0506	0.0264	0.0770	0.1540	0.0506	0.0264	0.0770	0.1540	0.0506	0.0264	0.0770

All other professional medical services - HH	621B00	Medical and diagnostic labs and outpatient and other ambulatory care services	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543
All other professional medical services - HH	532A00	General and consumer goods rental except video tapes and discs	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330
All other similar organizations, excluding condo. and homeowners associations - NPISH	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Amusement parks, campgrounds, and related recreational services	114200	Hunting and trapping	0.7048	0.3278	0.0159	0.3611	0.7038	0.3272	0.0159	0.3607	0.7038	0.3272	0.0159	0.3607
Amusement parks, campgrounds, and related recreational services	721A00	Other accommodations	0.5117	0.0982	0.1762	0.2373	0.5117	0.0982	0.1762	0.2373	0.5117	0.0982	0.1762	0.2373
Amusement parks, campgrounds, and related recreational services	713B00	Other amusement and recreation industries	0.5423	0.1977	0.1403	0.2042	0.5423	0.1977	0.1403	0.2042	0.5423	0.1977	0.1403	0.2042
Amusement parks, campgrounds, and related recreational services	611100	Elementary and secondary schools	0.3839	0.1440	0.0581	0.1818	0.3839	0.1440	0.0581	0.1818	0.3839	0.1440	0.0581	0.1818
Amusement parks, campgrounds, and related recreational services	713940	Fitness and recreational sports centers	0.4740	0.0951	0.2181	0.1609	0.4740	0.0951	0.2181	0.1609	0.4740	0.0951	0.2181	0.1609
Amusement parks, campgrounds, and related recreational services	532400	Commercial and industrial machinery and equipment rental and leasing	0.2404	0.0758	0.0254	0.1391	0.2404	0.0758	0.0254	0.1391	0.2404	0.0758	0.0254	0.1391
Amusement parks, campgrounds, and related recreational services	712000	Museums, historical sites, zoos, and parks	0.3950	0.0914	0.1698	0.1338	0.3950	0.0914	0.1698	0.1338	0.3950	0.0914	0.1698	0.1338

Amusement parks, campgrounds, and related recreational services	532A00	General and consumer goods rental except video tapes and discs	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330
Amusement parks, campgrounds, and related recreational services	713A00	Amusement parks, arcades, and gambling industries	0.3385	0.1040	0.1028	0.1317	0.3385	0.1040	0.1028	0.1317	0.3385	0.1040	0.1028	0.1317
Amusement parks, campgrounds, and related recreational services	7211A0	Hotels and motels, including casino hotels	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255
Amusement parks, campgrounds, and related recreational services	611B00	Other educational services	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241
Amusement parks, campgrounds, and related recreational services	711A00	Promoters of performing arts and sports and agents for public figures	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201
Amusement parks, campgrounds, and related recreational services	811200	Electronic and precision equipment repair and maintenance	0.1778	0.0205	0.0441	0.1132	0.1778	0.0205	0.0441	0.1132	0.1778	0.0205	0.0441	0.1132
Audio equipment	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Audio equipment	334300	Audio and video equipment manufacturing	0.6007	0.0487	0.0373	0.5147	0.5531	0.0503	0.0364	0.4664	0.4707	0.0467	0.0506	0.3734
Audio equipment	335912	Primary battery manufacturing	0.6126	0.0383	0.0471	0.5271	0.5580	0.0407	0.0449	0.4724	0.4657	0.0397	0.0579	0.3681
Audio equipment	334419	Other electronic component manufacturing	0.4700	0.0364	0.0744	0.3592	0.4163	0.0382	0.0658	0.3123	0.3663	0.0379	0.0726	0.2558
Audio equipment	335999	All other miscellaneous electrical equipment and component manufacturing	0.3874	0.0295	0.0440	0.3139	0.3619	0.0310	0.0421	0.2887	0.3278	0.0329	0.0563	0.2386
Audio equipment	334290	Other communications equipment manufacturing	0.3587	0.0376	0.0432	0.2780	0.3445	0.0423	0.0416	0.2606	0.3162	0.0408	0.0557	0.2198
Audio equipment	334220	Broadcast and wireless communications equipment	0.3276	0.0211	0.0272	0.2794	0.3202	0.0219	0.0282	0.2702	0.2887	0.0287	0.0553	0.2047

Auto leasing	532100	Automotive equipment rental and leasing	0.1190	0.0070	0.0197	0.0923	0.1190	0.0070	0.0197	0.0923	0.1190	0.0070	0.0197	0.0923
Bakery products	311820	Cookie, cracker and pasta manufacturing	1.10	0.13	0.08	0.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bakery products	311810	Bread and bakery product manufacturing	0.9543	0.2006	0.1256	0.6282	0.8393	0.1760	0.1113	0.5520	0.6803	0.1385	0.1052	0.4366
Beef and veal	31161A	Animal (except poultry) slaughtering, rendering, and processing	3.2007	0.1779	0.0707	2.9521	2.8263	0.1667	0.0654	2.5943	2.1314	0.1318	0.0716	1.9280
Beer	312120	Breweries	0.9517	0.1481	0.0637	0.7400	0.6838	0.1138	0.0517	0.5182	0.5898	0.0972	0.0597	0.4329
Bicycles and accessories	336991	Motorcycle, bicycle, and parts manufacturing	0.8734	0.0516	0.0296	0.7921	0.7600	0.0495	0.0298	0.6807	0.5947	0.0455	0.0488	0.5004
Books	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Books	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783
Books	5111A0	Directory, mailing list, and other publishers	0.2248	0.0165	0.0208	0.1875	0.2388	0.0307	0.0216	0.1864	0.2424	0.0328	0.0433	0.1663
Books	511130	Book publishers	0.1960	0.0208	0.0182	0.1570	0.2094	0.0324	0.0196	0.1574	0.2226	0.0340	0.0419	0.1467
Books	4A0000	Retail trade	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242
Cable and satellite television and radio services	517000	Telecommunications	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309
Calculators, typewriters, and other information processing equipment	339940	Office supplies (except paper) manufacturing	0.6137	0.1019	0.0569	0.4549	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Calculators, typewriters, and other information processing equipment	33331A	Vending, commercial, industrial, and office machinery manufacturing	0.7926	0.2027	0.0292	0.5607	0.6494	0.1644	0.0295	0.4555	0.3782	0.0780	0.0696	0.2306
Carpets and other floor coverings	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carpets and other floor coverings	314110	Carpet and rug mills	1.1703	0.1605	0.0575	0.9523	1.0810	0.1583	0.0541	0.8685	0.7012	0.1030	0.0699	0.5283
Carpets and other floor coverings	326150	Urethane and other foam product (except polystyrene) manufacturing	1.3126	0.1965	0.0706	1.0454	1.1015	0.1667	0.0631	0.8717	0.7072	0.1068	0.0749	0.5256
Carpets and other floor coverings	326140	Polystyrene foam product manufacturing	1.2952	0.2173	0.1463	0.9316	1.1375	0.1982	0.1273	0.8120	0.7371	0.1256	0.1098	0.5017

Carpets and other floor coverings	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Carpets and other floor coverings	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Carpets and other floor coverings	32619A	Other plastics product manufacturing	0.9325	0.0925	0.1291	0.7109	0.6716	0.0712	0.0951	0.5053	0.4844	0.0561	0.0922	0.3361
Cellular telephone services	517000	Telecommunications	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309
Cereals	311820	Cookie, cracker and pasta manufacturing	1.1027	0.1254	0.0808	0.8965	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cereals	311210	Flour milling and malt manufacturing	2.4435	0.2422	0.2137	1.9876	2.1394	0.2524	0.1840	1.7030	1.6300	0.1944	0.1582	1.2774
Cereals	31122A	Soybean and other oilseed processing	1.9980	0.3161	0.0781	1.6038	1.8333	0.3281	0.0712	1.4341	1.4079	0.2499	0.0758	1.0821
Cereals	1111B0	Grain farming	4.7150	3.5628	0.0921	1.0601	3.4367	2.5660	0.0722	0.7985	3.4367	2.5660	0.0722	0.7985
Cereals	311990	All other food manufacturing	1.2168	0.1844	0.1143	0.9181	1.0638	0.1664	0.1012	0.7962	0.8443	0.1316	0.0978	0.6149
Cereals	311830	Tortilla manufacturing	1.2412	0.2337	0.1439	0.8637	1.1324	0.2159	0.1314	0.7851	0.8943	0.1677	0.1198	0.6068
Cereals	311420	Fruit and vegetable canning, pickling, and drying	1.1368	0.2469	0.0757	0.8141	1.0483	0.2304	0.0712	0.7467	0.8328	0.1782	0.0759	0.5787
Cereals	311230	Breakfast cereal manufacturing	0.9894	0.1483	0.0774	0.7637	0.8909	0.1370	0.0712	0.6827	0.7182	0.1101	0.0759	0.5322
Child care - HH	624400	Child day care services	0.2825	0.0304	0.0713	0.1807	0.2825	0.0304	0.0713	0.1807	0.2825	0.0304	0.0713	0.1807
Child care - NPISH	624400	Child day care services	0.2825	0.0304	0.0713	0.1807	0.2825	0.0304	0.0713	0.1807	0.2825	0.0304	0.0713	0.1807
Children's and infant's clothing	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Children's and infant's clothing	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Children's and infant's clothing	322291	Sanitary paper product manufacturing	0.9881	0.3101	0.1303	0.5478	0.9544	0.3016	0.1240	0.5287	0.6148	0.1742	0.1069	0.3337
Children's and infant's clothing	315900	Apparel accessories and other apparel manufacturing	1.0773	0.4758	0.0496	0.5519	0.7743	0.3270	0.0430	0.4044	0.5671	0.2124	0.0610	0.2936
Children's and infant's clothing	315230	Women's and girls' cut and sew apparel manufacturing	0.6375	0.1455	0.0313	0.4607	0.5603	0.1292	0.0311	0.4001	0.4150	0.0861	0.0580	0.2709
Children's and infant's clothing	315290	Other cut and sew apparel manufacturing	0.5391	0.0803	0.0497	0.4091	0.4415	0.0703	0.0441	0.3271	0.3692	0.0578	0.0609	0.2506

Children's and infant's clothing	4A0000	Retail trade	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242
Civic and social organizations - NPISH	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clocks, lamps, lighting fixtures, and other household decorative items	33451A	Other Measuring and Controlling Device Manufacturing	0.3813	0.0252	0.0472	0.3089	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clocks, lamps, lighting fixtures, and other household decorative items	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clocks, lamps, lighting fixtures, and other household decorative items	332430	Metal can, box, and other metal container (light gauge) manufacturing	1.4006	0.1083	0.0951	1.1972	1.4006	0.1083	0.0951	1.1972	0.9504	0.0805	0.0925	0.7773
Clocks, lamps, lighting fixtures, and other household decorative items	332310	Plate work and fabricated structural product manufacturing	1.1423	0.0705	0.0504	1.0214	1.1289	0.0714	0.0500	1.0075	0.7920	0.0583	0.0648	0.6689
Clocks, lamps, lighting fixtures, and other household decorative items	331200	Steel product manufacturing from purchased steel	2.4949	1.2159	0.1537	1.1253	2.2458	1.0885	0.1393	1.0180	1.3653	0.6247	0.1169	0.6237
Clocks, lamps, lighting fixtures, and other household decorative items	327390	Other concrete product manufacturing	1.2637	0.1191	0.0541	1.0905	1.1180	0.1171	0.0500	0.9508	0.7494	0.0832	0.0664	0.5999
Clocks, lamps, lighting fixtures, and other household decorative items	3274A0	Lime and gypsum product manufacturing	7.4072	6.3291	0.2614	0.8167	5.9214	5.0287	0.2118	0.6808	3.5105	2.9068	0.1594	0.4442
Clocks, lamps, lighting fixtures, and other household decorative items	33299C	Other fabricated metal manufacturing	0.9606	0.1298	0.1006	0.7301	0.7793	0.1102	0.0837	0.5854	0.5862	0.0836	0.0855	0.4172



Clocks, lamps, lighting fixtures, and other household decorative items	332500	Hardware manufacturing	0.7262	0.0595	0.0517	0.6150	0.6854	0.0624	0.0496	0.5734	0.4910	0.0512	0.0670	0.3728
Clocks, lamps, lighting fixtures, and other household decorative items	327215	Glass product manufacturing made of purchased glass	0.8947	0.2184	0.1306	0.5458	0.8508	0.2124	0.1223	0.5161	0.5855	0.1350	0.1074	0.3430
Clocks, lamps, lighting fixtures, and other household decorative items	316900	Other leather and allied product manufacturing	0.7726	0.1084	0.0400	0.6242	0.6214	0.0921	0.0374	0.4919	0.4649	0.0690	0.0590	0.3369
Clocks, lamps, lighting fixtures, and other household decorative items	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Clocks, lamps, lighting fixtures, and other household decorative items	335120	Lighting fixture manufacturing	0.6175	0.0585	0.0429	0.5161	0.5500	0.0608	0.0405	0.4486	0.4306	0.0514	0.0596	0.3196
Clocks, lamps, lighting fixtures, and other household decorative items	321920	Wood container and pallet manufacturing	0.6772	0.1477	0.0731	0.4564	0.6686	0.1503	0.0708	0.4475	0.4903	0.1021	0.0784	0.3098
Clocks, lamps, lighting fixtures, and other household decorative items	32711A	Pottery, ceramics, and plumbing fixture manufacturing	0.9900	0.3678	0.1435	0.4787	0.8467	0.3100	0.1225	0.4142	0.5988	0.1966	0.1084	0.2937
Clocks, lamps, lighting fixtures, and other household decorative items	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783
Clocks, lamps, lighting fixtures, and other household decorative items	321999	All other miscellaneous wood product manufacturing	0.6618	0.1355	0.1001	0.4262	0.5779	0.1298	0.0843	0.3638	0.4404	0.0910	0.0861	0.2633

Clocks, lamps, lighting fixtures, and other household decorative items	4A0000	Retail trade	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242
Clothing materials	313210	Broad woven fabric mills	1.1961	0.1448	0.2176	0.8338	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clothing materials	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clothing materials	313100	Fiber, yarn, and thread mills	1.5824	0.0979	0.2587	1.2258	1.3679	0.0982	0.2197	1.0500	0.7896	0.0667	0.1519	0.5711
Clothing materials	313240	Knit fabric mills	1.1560	0.2468	0.1358	0.7734	1.1371	0.2460	0.1323	0.7588	0.6801	0.1384	0.1098	0.4319
Clothing materials	313310	Textile and fabric finishing mills	1.1036	0.2574	0.1253	0.7209	0.9757	0.2290	0.1109	0.6358	0.6190	0.1347	0.0999	0.3843
Clothing materials	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Clothing materials	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Clothing materials	313220	Narrow fabric mills and schiffli machine embroidery	0.8670	0.1277	0.1171	0.6222	0.7415	0.1148	0.0998	0.5269	0.4870	0.0746	0.0940	0.3184
Clothing materials	5111A0	Directory, mailing list, and other publishers	0.2248	0.0165	0.0208	0.1875	0.2388	0.0307	0.0216	0.1864	0.2424	0.0328	0.0433	0.1663
Clothing repair, rental and alterations	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880
Clothing repair, rental and alterations	532A00	General and consumer goods rental except video tapes and discs	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330
Coffee, tea and other beverage materials	S00401	Scrap	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Coffee, tea and other beverage materials	311940	Seasoning and dressing manufacturing	1.1246	0.1159	0.0562	0.9524	1.0317	0.1123	0.0533	0.8660	0.8247	0.0925	0.0627	0.6696
Coffee, tea and other beverage materials	312110	Soft drink and ice manufacturing	1.0315	0.0966	0.0666	0.8684	0.9081	0.0909	0.0610	0.7563	0.7320	0.0765	0.0684	0.5871
Coffee, tea and other beverage materials	311920	Coffee and tea manufacturing	1.0604	0.1815	0.0546	0.8243	0.8171	0.1434	0.0478	0.6259	0.6642	0.1148	0.0588	0.4906
Coffee, tea and other beverage materials	311930	Flavoring syrup and concentrate manufacturing	0.4463	0.0557	0.0271	0.3635	0.4428	0.0584	0.0271	0.3573	0.3907	0.0526	0.0437	0.2944

Commercial and vocational schools - HH	611A00	Junior colleges, colleges, universities, and professional schools	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707
Commercial and vocational schools - HH	611B00	Other educational services	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241
Community food and housing/emergency/other relief services - NPISH	624200	Community food, housing, and other relief services, including rehabilitation services	0.2975	0.0367	0.0732	0.1877	0.2975	0.0367	0.0732	0.1877	0.2975	0.0367	0.0732	0.1877
Computer software and accessories	511200	Software publishers	0.0990	0.0030	0.0126	0.0833	0.1049	0.0068	0.0133	0.0848	0.1405	0.0143	0.0317	0.0945
Corrective eyeglasses and contact lenses	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Corrective eyeglasses and contact lenses	339115	Ophthalmic goods manufacturing	0.3348	0.0388	0.0627	0.2332	0.3075	0.0415	0.0560	0.2099	0.2795	0.0394	0.0719	0.1682
Corrective eyeglasses and contact lenses	621A00	Offices of physicians, dentists, and other health practitioners	0.1440	0.0143	0.0244	0.1054	0.1440	0.0143	0.0244	0.1054	0.1440	0.0143	0.0244	0.1054
Cosmetics/perfumes/bath/nail preparations and implements	325610	Soap and cleaning compound manufacturing	0.7937	0.1650	0.0476	0.5811	0.6869	0.1549	0.0438	0.4882	0.5826	0.1268	0.0545	0.4013
Cosmetics/perfumes/bath/nail preparations and implements	33221A	Cutlery, utensil, pot, and pan manufacturing	0.7650	0.0864	0.0532	0.6253	0.6281	0.0772	0.0476	0.5033	0.4453	0.0579	0.0674	0.3201
Cosmetics/perfumes/bath/nail preparations and implements	325620	Toilet preparation manufacturing	0.5327	0.0784	0.0218	0.4325	0.5040	0.0910	0.0228	0.3901	0.4298	0.0753	0.0420	0.3125
Day care and nursery schools - HH	624400	Child day care services	0.2825	0.0304	0.0713	0.1807	0.2825	0.0304	0.0713	0.1807	0.2825	0.0304	0.0713	0.1807
Dental services	621A00	Offices of physicians, dentists, and other health practitioners	0.1440	0.0143	0.0244	0.1054	0.1440	0.0143	0.0244	0.1054	0.1440	0.0143	0.0244	0.1054
Direct commissions, exchange-listed equities	523000	Securities, commodity contracts, investments, and related activities	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661

Direct commissions, other equity securities	523000	Securities, commodity contracts, investments, and related activities	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661
Dishes and flatware	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dishes and flatware	33299C	Other fabricated metal manufacturing	0.9606	0.1298	0.1006	0.7301	0.7793	0.1102	0.0837	0.5854	0.5862	0.0836	0.0855	0.4172
Dishes and flatware	327215	Glass product manufacturing made of purchased glass	0.8947	0.2184	0.1306	0.5458	0.8508	0.2124	0.1223	0.5161	0.5855	0.1350	0.1074	0.3430
Dishes and flatware	32619A	Other plastics product manufacturing	0.9325	0.0925	0.1291	0.7109	0.6716	0.0712	0.0951	0.5053	0.4844	0.0561	0.0922	0.3361
Dishes and flatware	327213	Glass container manufacturing	1.6296	0.7510	0.3128	0.5658	1.5132	0.6956	0.2827	0.5348	0.8977	0.3748	0.1881	0.3348
Dishes and flatware	33221A	Cutlery, utensil, pot, and pan manufacturing	0.7650	0.0864	0.0532	0.6253	0.6281	0.0772	0.0476	0.5033	0.4453	0.0579	0.0674	0.3201
Dishes and flatware	327212	Other pressed and blown glass and glassware manufacturing	1.0665	0.3407	0.1921	0.5337	0.9287	0.2952	0.1656	0.4679	0.6347	0.1835	0.1322	0.3190
Dishes and flatware	32711A	Pottery, ceramics, and plumbing fixture manufacturing	0.9900	0.3678	0.1435	0.4787	0.8467	0.3100	0.1225	0.4142	0.5988	0.1966	0.1084	0.2937
Dishes and flatware	339910	Jewelry and silverware manufacturing	0.6186	0.1270	0.0403	0.4513	0.5318	0.1267	0.0362	0.3690	0.3999	0.0848	0.0607	0.2544
Dishes and flatware	4A0000	Retail trade	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242
Domestic services	814000	Private households	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Domestic services	561700	Services to buildings and dwellings	0.4547	0.1017	0.0169	0.3361	0.4547	0.1017	0.0169	0.3361	0.4547	0.1017	0.0169	0.3361
Eggs	112300	Poultry and egg production	2.4388	0.5849	0.1252	1.7287	2.2859	0.5542	0.1175	1.6142	1.7375	0.4150	0.1097	1.2129
Eggs	311990	All other food manufacturing	1.2168	0.1844	0.1143	0.9181	1.0638	0.1664	0.1012	0.7962	0.8443	0.1316	0.0978	0.6149
Electric appliances for personal care	335210	Small electrical appliance manufacturing	0.6154	0.0553	0.0414	0.5187	0.5713	0.0587	0.0400	0.4725	0.4800	0.0526	0.0538	0.3736
Electric appliances for personal care	33221A	Cutlery, utensil, pot, and pan manufacturing	0.7650	0.0864	0.0532	0.6253	0.6281	0.0772	0.0476	0.5033	0.4453	0.0579	0.0674	0.3201
Electricity	221100	Electric power generation, transmission, and distribution	7.5986	7.1220	0.0057	0.4709	7.5986	7.1220	0.0057	0.4709	7.5986	7.1220	0.0057	0.4709
Elementary and second school lunch	722000	Food services and drinking places	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261

Elementary and secondary schools - NPISH	611100	Elementary and secondary schools	0.3839	0.1440	0.0581	0.1818	0.3839	0.1440	0.0581	0.1818	0.3839	0.1440	0.0581	0.1818
Elementary and secondary schools -HH	611100	Elementary and secondary schools	0.3839	0.1440	0.0581	0.1818	0.3839	0.1440	0.0581	0.1818	0.3839	0.1440	0.0581	0.1818
Fats and oils	31161A	Animal (except poultry) slaughtering, rendering, and processing	3.2007	0.1779	0.0707	2.9521	2.8263	0.1667	0.0654	2.5943	2.1314	0.1318	0.0716	1.9280
Fats and oils	311221	Wet corn milling	4.2145	1.8245	0.2880	2.1021	3.7875	1.6613	0.2553	1.8708	2.8308	1.2221	0.2102	1.3985
Fats and oils	31151A	Fluid milk and butter manufacturing	2.2584	0.1829	0.0959	1.9796	2.1168	0.1754	0.0912	1.8502	1.6137	0.1381	0.0905	1.3850
Fats and oils	31122A	Soybean and other oilseed processing	1.9980	0.3161	0.0781	1.6038	1.8333	0.3281	0.0712	1.4341	1.4079	0.2499	0.0758	1.0821
Fats and oils	311225	Fats and oils refining and blending	1.8796	0.2705	0.0789	1.5302	1.7604	0.2573	0.0752	1.4279	1.3504	0.1975	0.0788	1.0740
Fats and oils	311940	Seasoning and dressing manufacturing	1.1246	0.1159	0.0562	0.9524	1.0317	0.1123	0.0533	0.8660	0.8247	0.0925	0.0627	0.6696
Fats and oils	311910	Snack food manufacturing	1.1408	0.1957	0.0580	0.8870	1.0789	0.1902	0.0558	0.8329	0.8555	0.1490	0.0646	0.6419
Film and photographic supplies	3259A0	All other chemical product and preparation manufacturing	1.0886	0.1335	0.0738	0.8813	1.0170	0.1470	0.0685	0.8015	0.6803	0.0988	0.0773	0.5042
Film and photographic supplies	335311	Power, distribution, and specialty transformer manufacturing	0.9175	0.0600	0.0525	0.8051	0.7898	0.0598	0.0482	0.6818	0.6112	0.0523	0.0616	0.4973
Film and photographic supplies	335110	Electric lamp bulb and part manufacturing	0.4949	0.0690	0.0880	0.3378	0.4151	0.0611	0.0732	0.2808	0.3424	0.0506	0.0800	0.2118
Financial services' charges and fees	517000	Telecommunications	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309
Financial services' charges and fees	491000	Postal service	0.2155	0.0703	0.0232	0.1221	0.2155	0.0703	0.0232	0.1221	0.2155	0.0703	0.0232	0.1221
Financial services' charges and fees	522A00	Nondepository credit intermediation and related activities	0.0933	0.0058	0.0178	0.0698	0.0933	0.0058	0.0178	0.0698	0.0933	0.0058	0.0178	0.0698
Financial services' charges and fees	52A000	Monetary authorities and depository credit intermediation	0.0608	0.0030	0.0022	0.0555	0.0608	0.0030	0.0022	0.0555	0.0608	0.0030	0.0022	0.0555
Financial services indirectly measured, commercial banks	52A000	Monetary authorities and depository credit intermediation	0.0608	0.0030	0.0022	0.0555	0.0608	0.0030	0.0022	0.0555	0.0608	0.0030	0.0022	0.0555

Financial services indirectly measured, other financial institutions	525000	Funds, trusts, and other financial vehicles	0.0861	0.0002	0.0070	0.0789	0.0861	0.0002	0.0070	0.0789	0.0861	0.0002	0.0070	0.0789
Financial services indirectly measured, other financial institutions	52A000	Monetary authorities and depository credit intermediation	0.0608	0.0030	0.0022	0.0555	0.0608	0.0030	0.0022	0.0555	0.0608	0.0030	0.0022	0.0555
First class postal services (by USPS)	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
First class postal services (by USPS)	491000	Postal service	0.2155	0.0703	0.0232	0.1221	0.2155	0.0703	0.0232	0.1221	0.2155	0.0703	0.0232	0.1221
Fish and seafood	112A00	Animal production, except cattle and poultry and eggs	2.8694	1.7765	0.1343	0.9586	2.8138	1.7399	0.1316	0.9423	2.1237	1.2816	0.1200	0.7221
Fish and seafood	311700	Seafood product preparation and packaging	1.0563	0.2031	0.1063	0.7469	0.9161	0.1794	0.0934	0.6433	0.7373	0.1412	0.0921	0.5040
Fish and seafood	114100	Fishing	0.7952	0.4272	0.0000	0.3679	0.7259	0.3822	0.0039	0.3399	0.5975	0.2891	0.0267	0.2817
Flowers, seeds, and potted plants	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flowers, seeds, and potted plants	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Flowers, seeds, and potted plants	111400	Greenhouse, nursery, and floriculture production	1.3812	0.8633	0.0903	0.4276	1.1672	0.7147	0.0781	0.3744	0.9192	0.5315	0.0809	0.3067
Food furnished to employees (including military)	311340	Non-chocolate confectionery manufacturing	1.0791	0.1220	0.0760	0.8811	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Food furnished to employees (including military)	311820	Cookie, cracker and pasta manufacturing	1.1027	0.1254	0.0808	0.8965	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Food furnished to employees (including military)	31161A	Animal (except poultry) slaughtering, rendering, and processing	3.2007	0.1779	0.0707	2.9521	2.8263	0.1667	0.0654	2.5943	2.1314	0.1318	0.0716	1.9280
Food furnished to employees (including military)	311513	Cheese manufacturing	2.5139	0.1959	0.0713	2.2468	2.2596	0.1819	0.0666	2.0110	1.7217	0.1432	0.0725	1.5060

Food furnished to employees (including military)	311221	Wet corn milling	4.2145	1.8245	0.2880	2.1021	3.7875	1.6613	0.2553	1.8708	2.8308	1.2221	0.2102	1.3985
Food furnished to employees (including military)	31151A	Fluid milk and butter manufacturing	2.2584	0.1829	0.0959	1.9796	2.1168	0.1754	0.0912	1.8502	1.6137	0.1381	0.0905	1.3850
Food furnished to employees (including military)	311210	Flour milling and malt manufacturing	2.4435	0.2422	0.2137	1.9876	2.1394	0.2524	0.1840	1.7030	1.6300	0.1944	0.1582	1.2774
Food furnished to employees (including military)	112300	Poultry and egg production	2.4388	0.5849	0.1252	1.7287	2.2859	0.5542	0.1175	1.6142	1.7375	0.4150	0.1097	1.2129
Food furnished to employees (including military)	311514	Dry, condensed, and evaporated dairy product manufacturing	2.1385	0.2167	0.0774	1.8443	1.7138	0.1790	0.0672	1.4676	1.3188	0.1408	0.0730	1.1051
Food furnished to employees (including military)	311225	Fats and oils refining and blending	1.8796	0.2705	0.0789	1.5302	1.7604	0.2573	0.0752	1.4279	1.3504	0.1975	0.0788	1.0740
Food furnished to employees (including military)	31131A	Sugar cane mills and refining	2.2884	0.6722	0.0968	1.5194	2.0207	0.5945	0.0880	1.3382	1.5403	0.4433	0.0881	1.0089
Food furnished to employees (including military)	311615	Poultry processing	1.5398	0.1494	0.0907	1.2998	1.4582	0.1461	0.0867	1.2254	1.1329	0.1168	0.0872	0.9289
Food furnished to employees (including military)	1111B0	Grain farming	4.7150	3.5628	0.0921	1.0601	3.4367	2.5660	0.0722	0.7985	3.4367	2.5660	0.0722	0.7985
Food furnished to employees (including military)	311410	Frozen food manufacturing	1.4578	0.2128	0.1228	1.1222	1.3269	0.2073	0.1115	1.0081	1.0369	0.1615	0.1053	0.7701
Food furnished to employees (including military)	311320	Chocolate and confectionery manufacturing from cacao beans	1.2412	0.1163	0.0818	1.0430	1.1042	0.1088	0.0748	0.9206	0.8738	0.0895	0.0785	0.7058
Food furnished to employees (including military)	311520	Ice cream and frozen dessert manufacturing	1.2754	0.0909	0.1078	1.0767	1.0629	0.0815	0.0925	0.8888	0.8435	0.0696	0.0915	0.6825

Food furnished to employees (including military)	311940	Seasoning and dressing manufacturing	1.1246	0.1159	0.0562	0.9524	1.0317	0.1123	0.0533	0.8660	0.8247	0.0925	0.0627	0.6696
Food furnished to employees (including military)	311910	Snack food manufacturing	1.1408	0.1957	0.0580	0.8870	1.0789	0.1902	0.0558	0.8329	0.8555	0.1490	0.0646	0.6419
Food furnished to employees (including military)	311990	All other food manufacturing	1.2168	0.1844	0.1143	0.9181	1.0638	0.1664	0.1012	0.7962	0.8443	0.1316	0.0978	0.6149
Food furnished to employees (including military)	311830	Tortilla manufacturing	1.2412	0.2337	0.1439	0.8637	1.1324	0.2159	0.1314	0.7851	0.8943	0.1677	0.1198	0.6068
Food furnished to employees (including military)	312110	Soft drink and ice manufacturing	1.0315	0.0966	0.0666	0.8684	0.9081	0.0909	0.0610	0.7563	0.7320	0.0765	0.0684	0.5871
Food furnished to employees (including military)	311420	Fruit and vegetable canning, pickling, and drying	1.1368	0.2469	0.0757	0.8141	1.0483	0.2304	0.0712	0.7467	0.8328	0.1782	0.0759	0.5787
Food furnished to employees (including military)	311330	Confectionery manufacturing from purchased chocolate	0.9907	0.1045	0.0792	0.8069	0.9013	0.0998	0.0734	0.7282	0.7279	0.0831	0.0774	0.5673
Food furnished to employees (including military)	311230	Breakfast cereal manufacturing	0.9894	0.1483	0.0774	0.7637	0.8909	0.1370	0.0712	0.6827	0.7182	0.1101	0.0759	0.5322
Food furnished to employees (including military)	311700	Seafood product preparation and packaging	1.0563	0.2031	0.1063	0.7469	0.9161	0.1794	0.0934	0.6433	0.7373	0.1412	0.0921	0.5040
Food furnished to employees (including military)	311920	Coffee and tea manufacturing	1.0604	0.1815	0.0546	0.8243	0.8171	0.1434	0.0478	0.6259	0.6642	0.1148	0.0588	0.4906
Food furnished to employees (including military)	311810	Bread and bakery product manufacturing	0.9543	0.2006	0.1256	0.6282	0.8393	0.1760	0.1113	0.5520	0.6803	0.1385	0.1052	0.4366
Food furnished to employees (including military)	111200	Vegetable and melon farming	1.7561	1.0742	0.2136	0.4682	1.2325	0.7239	0.1451	0.3634	0.9671	0.5385	0.1299	0.2988



Food furnished to employees (including military)	311930	Flavoring syrup and concentrate manufacturing	0.4463	0.0557	0.0271	0.3635	0.4428	0.0584	0.0271	0.3573	0.3907	0.0526	0.0437	0.2944
Food furnished to employees (including military)	1113A0	Fruit farming	1.5642	0.8936	0.2261	0.4444	1.1631	0.6436	0.1638	0.3556	0.9170	0.4802	0.1436	0.2933
Food furnished to employees (including military)	114100	Fishing	0.7952	0.4272	0.0000	0.3679	0.7259	0.3822	0.0039	0.3399	0.5975	0.2891	0.0267	0.2817
Food produced and consumed on farms	1121A0	Cattle ranching and farming	5.6102	2.7515	0.0875	2.7712	5.6102	2.7515	0.0875	2.7712	5.6102	2.7515	0.0875	2.7712
Food produced and consumed on farms	112300	Poultry and egg production	2.4388	0.5849	0.1252	1.7287	2.2859	0.5542	0.1175	1.6142	1.7375	0.4150	0.1097	1.2129
Food produced and consumed on farms	112A00	Animal production, except cattle and poultry and eggs	2.8694	1.7765	0.1343	0.9586	2.8138	1.7399	0.1316	0.9423	2.1237	1.2816	0.1200	0.7221
Food produced and consumed on farms	111335	Tree nut farming	1.5075	0.8365	0.2389	0.4322	1.3657	0.7537	0.2093	0.4026	1.0652	0.5608	0.1768	0.3276
Food produced and consumed on farms	111200	Vegetable and melon farming	1.7561	1.0742	0.2136	0.4682	1.2325	0.7239	0.1451	0.3634	0.9671	0.5385	0.1299	0.2988
Food produced and consumed on farms	1113A0	Fruit farming	1.5642	0.8936	0.2261	0.4444	1.1631	0.6436	0.1638	0.3556	0.9170	0.4802	0.1436	0.2933
Food, n.e.c.	311514	Dry, condensed, and evaporated dairy product manufacturing	2.1385	0.2167	0.0774	1.8443	1.7138	0.1790	0.0672	1.4676	1.3188	0.1408	0.0730	1.1051
Food, n.e.c.	325190	Other basic organic chemical manufacturing	3.2037	1.6212	0.1598	1.4227	2.9828	1.5112	0.1490	1.3226	2.3045	1.1453	0.1340	1.0251
Food, n.e.c.	311410	Frozen food manufacturing	1.4578	0.2128	0.1228	1.1222	1.3269	0.2073	0.1115	1.0081	1.0369	0.1615	0.1053	0.7701
Food, n.e.c.	311940	Seasoning and dressing manufacturing	1.1246	0.1159	0.0562	0.9524	1.0317	0.1123	0.0533	0.8660	0.8247	0.0925	0.0627	0.6696
Food, n.e.c.	311910	Snack food manufacturing	1.1408	0.1957	0.0580	0.8870	1.0789	0.1902	0.0558	0.8329	0.8555	0.1490	0.0646	0.6419
Food, n.e.c.	311990	All other food manufacturing	1.2168	0.1844	0.1143	0.9181	1.0638	0.1664	0.1012	0.7962	0.8443	0.1316	0.0978	0.6149
Food, n.e.c.	311420	Fruit and vegetable canning, pickling, and drying	1.1368	0.2469	0.0757	0.8141	1.0483	0.2304	0.0712	0.7467	0.8328	0.1782	0.0759	0.5787
Food, n.e.c.	1119B0	All other crop farming	2.9291	1.8265	0.2872	0.8154	2.5846	1.6058	0.2489	0.7299	1.9529	1.1813	0.2055	0.5660

Food, n.e.c.	311230	Breakfast cereal manufacturing	0.9894	0.1483	0.0774	0.7637	0.8909	0.1370	0.0712	0.6827	0.7182	0.1101	0.0759	0.5322
Food, n.e.c.	3259A0	All other chemical product and preparation manufacturing	1.0886	0.1335	0.0738	0.8813	1.0170	0.1470	0.0685	0.8015	0.6803	0.0988	0.0773	0.5042
Food, n.e.c.	111335	Tree nut farming	1.5075	0.8365	0.2389	0.4322	1.3657	0.7537	0.2093	0.4026	1.0652	0.5608	0.1768	0.3276
Food, n.e.c.	212390	Other nonmetallic mineral mining and quarrying	1.5662	0.7242	0.4475	0.3945	1.0301	0.5151	0.1835	0.3315	0.8223	0.3878	0.1582	0.2763
Food, n.e.c.	4A0000	Retail trade	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242
Foundations and grant making and giving services - HH	813A00	Grant making, giving, and social advocacy organizations	0.21	0.02	0.02	0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fresh milk	31151A	Fluid milk and butter manufacturing	2.2584	0.1829	0.0959	1.9796	2.1168	0.1754	0.0912	1.8502	1.6137	0.1381	0.0905	1.3850
Fruit (fresh)	1113A0	Fruit farming	1.5642	0.8936	0.2261	0.4444	1.1631	0.6436	0.1638	0.3556	0.9170	0.4802	0.1436	0.2933
Fuel oil	324110	Petroleum refineries	2.1592	1.4343	0.0625	0.6625	1.0955	0.6831	0.0451	0.3674	0.9161	0.5461	0.0543	0.3158
Funeral and burial services	33299C	Other fabricated metal manufacturing	0.9606	0.1298	0.1006	0.7301	0.7793	0.1102	0.0837	0.5854	0.5862	0.0836	0.0855	0.4172
Funeral and burial services	481000	Air transportation	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441
Funeral and burial services	327991	Cut stone and stone product manufacturing	0.6710	0.2174	0.0860	0.3677	0.6542	0.2122	0.0830	0.3589	0.5471	0.1659	0.0845	0.2967
Funeral and burial services	812200	Death care services	0.4538	0.0976	0.0867	0.2695	0.4538	0.0976	0.0867	0.2695	0.4538	0.0976	0.0867	0.2695
Furniture	337122	Non-upholstered wood household furniture manufacturing	0.5205	0.0784	0.0802	0.3618	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Furniture	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Furniture	337215	Showcase, partition, shelving, and locker manufacturing	1.0209	0.0997	0.0739	0.8473	0.9764	0.1133	0.0690	0.7941	0.6834	0.0826	0.0769	0.5239
Furniture	33712A	Metal and other household furniture (except wood) manufacturing	0.8796	0.0803	0.0657	0.7335	0.8043	0.0930	0.0592	0.6521	0.5868	0.0711	0.0707	0.4450
Furniture	337910	Mattress manufacturing	0.5917	0.0607	0.0256	0.5054	0.5766	0.0792	0.0255	0.4719	0.4450	0.0623	0.0509	0.3318
Furniture	337121	Upholstered household furniture manufacturing	0.6301	0.0687	0.0373	0.5241	0.5804	0.0781	0.0355	0.4668	0.4472	0.0616	0.0569	0.3287

Furniture	337127	Institutional furniture manufacturing	0.7250	0.0911	0.0584	0.5755	0.5912	0.0875	0.0499	0.4539	0.4534	0.0672	0.0655	0.3207
Furniture	337212	Office furniture and custom architectural woodwork and millwork manufacturing	0.6045	0.0693	0.0489	0.4863	0.4980	0.0739	0.0423	0.3818	0.3980	0.0591	0.0610	0.2779
Furniture	33721A	Wood television, radio, and sewing machine cabinet manufacturing	0.4963	0.0710	0.0618	0.3635	0.4864	0.0822	0.0570	0.3471	0.3912	0.0641	0.0697	0.2574
Furniture	339111	Laboratory apparatus and furniture manufacturing	0.4197	0.0366	0.0316	0.3516	0.4041	0.0554	0.0308	0.3180	0.3419	0.0481	0.0541	0.2398
Furniture	532A00	General and consumer goods rental except video tapes and discs	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330
Gambling	S00203	Other state and local government enterprises	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gambling	713A00	Amusement parks, arcades, and gambling industries	0.3385	0.1040	0.1028	0.1317	0.3385	0.1040	0.1028	0.1317	0.3385	0.1040	0.1028	0.1317
Gambling	711200	Spectator sports	0.1386	0.0156	0.0407	0.0823	0.1386	0.0156	0.0407	0.0823	0.1386	0.0156	0.0407	0.0823
Games, toys and hobbies	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Games, toys and hobbies	322299	All other converted paper product manufacturing	0.9763	0.2006	0.0975	0.6782	0.8388	0.1788	0.0843	0.5758	0.6953	0.1443	0.0853	0.4657
Games, toys and hobbies	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Games, toys and hobbies	339930	Doll, toy, and game manufacturing	0.6160	0.0568	0.0466	0.5126	0.5195	0.0690	0.0414	0.4090	0.4120	0.0563	0.0602	0.2954
Games, toys and hobbies	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783
Games, toys and hobbies	811200	Electronic and precision equipment repair and maintenance	0.1778	0.0205	0.0441	0.1132	0.1778	0.0205	0.0441	0.1132	0.1778	0.0205	0.0441	0.1132
Garbage and trash collection	562000	Waste management and remediation services	2.4398	2.0370	0.0287	0.3741	2.4398	2.0370	0.0287	0.3741	2.4398	2.0370	0.0287	0.3741
Gasoline and other motor fuel	324110	Petroleum refineries	2.1592	1.4343	0.0625	0.6625	1.0955	0.6831	0.0451	0.3674	0.9161	0.5461	0.0543	0.3158
Government expenditures abroad	S00300	Non-comparable imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Government hospitals services	622000	Hospitals	0.3275	0.0603	0.0767	0.1904	0.3275	0.0603	0.0767	0.1904	0.3275	0.0603	0.0767	0.1904
Grant making and giving services - NPISH	813A00	Grant making, giving, and social advocacy organizations	0.21	0.02	0.02	0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Group housing	721A00	Other accommodations	0.5117	0.0982	0.1762	0.2373	0.5117	0.0982	0.1762	0.2373	0.5117	0.0982	0.1762	0.2373

Hair, dental, shaving, and misc. personal care products, excluding electrical products	335911	Storage battery manufacturing	0.8812	0.0959	0.1606	0.6248	0.7646	0.0969	0.1340	0.5338	0.6772	0.0867	0.1263	0.4642
Hair, dental, shaving, and misc. personal care products, excluding electrical products	322120	Paper mills	1.5141	0.6566	0.2218	0.6357	1.2043	0.5145	0.1751	0.5147	0.9835	0.4041	0.1551	0.4243
Hair, dental, shaving, and misc. personal care products, excluding electrical products	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Hair, dental, shaving, and misc. personal care products, excluding electrical products	325610	Soap and cleaning compound manufacturing	0.7937	0.1650	0.0476	0.5811	0.6869	0.1549	0.0438	0.4882	0.5826	0.1268	0.0545	0.4013
Hair, dental, shaving, and misc. personal care products, excluding electrical products	33399A	Other general purpose machinery manufacturing	0.6644	0.0702	0.0580	0.5361	0.6585	0.0747	0.0570	0.5268	0.5087	0.0610	0.0685	0.3792
Hair, dental, shaving, and misc. personal care products, excluding electrical products	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Hair, dental, shaving, and misc. personal care products, excluding electrical products	322291	Sanitary paper product manufacturing	0.9881	0.3101	0.1303	0.5478	0.9544	0.3016	0.1240	0.5287	0.6148	0.1742	0.1069	0.3337
Hair, dental, shaving, and misc. personal care products, excluding electrical products	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230

Hair, dental, shaving, and misc. personal care products, excluding electrical products	33221A	Cutlery, utensil, pot, and pan manufacturing	0.7650	0.0864	0.0532	0.6253	0.6281	0.0772	0.0476	0.5033	0.4453	0.0579	0.0674	0.3201
Hair, dental, shaving, and misc. personal care products, excluding electrical products	325620	Toilet preparation manufacturing	0.5327	0.0784	0.0218	0.4325	0.5040	0.0910	0.0228	0.3901	0.4298	0.0753	0.0420	0.3125
Hair, dental, shaving, and misc. personal care products, excluding electrical products	315900	Apparel accessories and other apparel manufacturing	1.0773	0.4758	0.0496	0.5519	0.7743	0.3270	0.0430	0.4044	0.5671	0.2124	0.0610	0.2936
Hair, dental, shaving, and misc. personal care products, excluding electrical products	333319	Other commercial and service industry machinery manufacturing	0.6158	0.0896	0.0348	0.4914	0.5258	0.0765	0.0341	0.4152	0.4032	0.0591	0.0583	0.2859
Hair, dental, shaving, and misc. personal care products, excluding electrical products	339994	Broom, brush, and mop manufacturing	0.8073	0.3507	0.0491	0.4074	0.6875	0.2943	0.0424	0.3507	0.5318	0.2029	0.0588	0.2702
Hair, dental, shaving, and misc. personal care products, excluding electrical products	339113	Surgical appliance and supplies manufacturing	0.4317	0.0458	0.0355	0.3503	0.4430	0.0687	0.0341	0.3403	0.3699	0.0567	0.0547	0.2584
Hairdressing salons and personal grooming establishments	7211A0	Hotels and motels, including casino hotels	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255
Hairdressing salons and personal grooming establishments	611B00	Other educational services	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241
Hairdressing salons and personal grooming establishments	812100	Personal care services	0.2460	0.0171	0.1125	0.1164	0.2460	0.0171	0.1125	0.1164	0.2460	0.0171	0.1125	0.1164

Higher education school lunch	722000	Food services and drinking places	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261
Home for the elderly - NPISH	623000	Nursing and residential care facilities	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669
Home health care - HH	621600	Home health care services	0.2265	0.0689	0.0288	0.1288	0.2265	0.0689	0.0288	0.1288	0.2265	0.0689	0.0288	0.1288
Home health care - NPISH	621600	Home health care services	0.2265	0.0689	0.0288	0.1288	0.2265	0.0689	0.0288	0.1288	0.2265	0.0689	0.0288	0.1288
Hospital services - NPISH	622000	Hospitals	0.3275	0.0603	0.0767	0.1904	0.3275	0.0603	0.0767	0.1904	0.3275	0.0603	0.0767	0.1904
Hotels and motels	721A00	Other accommodations	0.5117	0.0982	0.1762	0.2373	0.5117	0.0982	0.1762	0.2373	0.5117	0.0982	0.1762	0.2373
Hotels and motels	7211A0	Hotels and motels, including casino hotels	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255
Household cleaning products	113A00	Forest nurseries, forest products, and timber tracts	1.1815	0.4976	0.0772	0.6067	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Household cleaning products	325190	Other basic organic chemical manufacturing	3.2037	1.6212	0.1598	1.4227	2.9828	1.5112	0.1490	1.3226	2.3045	1.1453	0.1340	1.0251
Household cleaning products	325310	Fertilizer manufacturing	4.3102	2.6338	0.1808	1.4956	3.7505	2.2895	0.1583	1.3027	2.9126	1.7504	0.1416	1.0206
Household cleaning products	325320	Pesticide and other agricultural chemical manufacturing	1.0443	0.1557	0.0534	0.8352	0.8319	0.1386	0.0471	0.6463	0.6965	0.1150	0.0567	0.5248
Household cleaning products	325188	All other basic inorganic chemical manufacturing	2.9015	1.7001	0.5120	0.6893	2.6980	1.5817	0.4704	0.6459	2.1158	1.2144	0.3796	0.5218
Household cleaning products	3259A0	All other chemical product and preparation manufacturing	1.0886	0.1335	0.0738	0.8813	1.0170	0.1470	0.0685	0.8015	0.6803	0.0988	0.0773	0.5042
Household cleaning products	33299C	Other fabricated metal manufacturing	0.9606	0.1298	0.1006	0.7301	0.7793	0.1102	0.0837	0.5854	0.5862	0.0836	0.0855	0.4172
Household cleaning products	325181	Alkalies and chlorine manufacturing	3.4893	1.9578	0.7495	0.7820	2.1240	1.2253	0.4071	0.4916	1.6765	0.9416	0.3310	0.4039
Household cleaning products	325610	Soap and cleaning compound manufacturing	0.7937	0.1650	0.0476	0.5811	0.6869	0.1549	0.0438	0.4882	0.5826	0.1268	0.0545	0.4013
Household cleaning products	212390	Other nonmetallic mineral mining and quarrying	1.5662	0.7242	0.4475	0.3945	1.0301	0.5151	0.1835	0.3315	0.8223	0.3878	0.1582	0.2763
Household cleaning products	339994	Broom, brush, and mop manufacturing	0.8073	0.3507	0.0491	0.4074	0.6875	0.2943	0.0424	0.3507	0.5318	0.2029	0.0588	0.2702

Household cleaning products	339113	Surgical appliance and supplies manufacturing	0.4317	0.0458	0.0355	0.3503	0.4430	0.0687	0.0341	0.3403	0.3699	0.0567	0.0547	0.2584
Household linens	314120	Curtain and linen mills	0.7928	0.1077	0.0683	0.6168	0.7148	0.1059	0.0623	0.5466	0.5320	0.0789	0.0726	0.3805
Household linens	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Household linens	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Household linens	313220	Narrow fabric mills and schiffli machine embroidery	0.8670	0.1277	0.1171	0.6222	0.7415	0.1148	0.0998	0.5269	0.4870	0.0746	0.0940	0.3184
Household linens	314910	Textile bag and canvas mills	0.5768	0.0700	0.0325	0.4742	0.5658	0.0820	0.0320	0.4519	0.4340	0.0633	0.0556	0.3152
Household linens	315900	Apparel accessories and other apparel manufacturing	1.0773	0.4758	0.0496	0.5519	0.7743	0.3270	0.0430	0.4044	0.5671	0.2124	0.0610	0.2936
Household linens	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783
Household paper products	326110	Plastics packaging materials and unlaminated film and sheet manufacturing	1.3442	0.1462	0.1505	1.0474	1.2695	0.1419	0.1421	0.9855	1.0532	0.1197	0.1307	0.8027
Household paper products	313230	Nonwoven fabric mills	1.1780	0.1647	0.1728	0.8406	1.1780	0.1647	0.1728	0.8406	0.9596	0.1347	0.1529	0.6720
Household paper products	322210	Paperboard container manufacturing	1.1133	0.1629	0.0748	0.8757	1.0081	0.1659	0.0667	0.7755	0.8336	0.1362	0.0717	0.6256
Household paper products	32222B	All other paper bag and coated and treated paper manufacturing	1.0228	0.1134	0.0757	0.8337	0.9492	0.1440	0.0674	0.7378	0.7888	0.1195	0.0723	0.5970
Household paper products	32222A	Coated and laminated paper, packaging paper and plastics film manufacturing	0.9569	0.1521	0.0766	0.7282	0.8606	0.1447	0.0696	0.6463	0.7261	0.1210	0.0737	0.5313
Household paper products	326150	Urethane and other foam product (except polystyrene) manufacturing	1.3126	0.1965	0.0706	1.0454	1.1015	0.1667	0.0631	0.8717	0.7072	0.1068	0.0749	0.5256
Household paper products	326140	Polystyrene foam product manufacturing	1.2952	0.2173	0.1463	0.9316	1.1375	0.1982	0.1273	0.8120	0.7371	0.1256	0.1098	0.5017
Household paper products	322299	All other converted paper product manufacturing	0.9763	0.2006	0.0975	0.6782	0.8388	0.1788	0.0843	0.5758	0.6953	0.1443	0.0853	0.4657
Household paper products	322120	Paper mills	1.5141	0.6566	0.2218	0.6357	1.2043	0.5145	0.1751	0.5147	0.9835	0.4041	0.1551	0.4243
Household paper products	33299C	Other fabricated metal manufacturing	0.9606	0.1298	0.1006	0.7301	0.7793	0.1102	0.0837	0.5854	0.5862	0.0836	0.0855	0.4172
Household paper products	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Household paper	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783

products														
Household paper products	321999	All other miscellaneous wood product manufacturing	0.6618	0.1355	0.1001	0.4262	0.5779	0.1298	0.0843	0.3638	0.4404	0.0910	0.0861	0.2633
Housing at schools	721A00	Other accommodations	0.5117	0.0982	0.1762	0.2373	0.5117	0.0982	0.1762	0.2373	0.5117	0.0982	0.1762	0.2373
Imputed rental of owner occupied mobile home	S00800	Owner-occupied dwellings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Imputed rental of owner occupied stationary homes	S00800	Owner-occupied dwellings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indirect commissions, other equity securities	523000	Securities, commodity contracts, investments, and related activities	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661
Indirect commissions, over-the-counter equity securities	523000	Securities, commodity contracts, investments, and related activities	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661
Individual and family services - NPISH	624A00	Individual and family services	0.2365	0.0448	0.0231	0.1686	0.2365	0.0448	0.0231	0.1686	0.2365	0.0448	0.0231	0.1686
Intercity buses	485000	Transit and ground passenger transportation	0.6418	0.3302	0.0551	0.2565	0.6418	0.3302	0.0551	0.2565	0.6418	0.3302	0.0551	0.2565
Internet access	518100	Internet service providers and web search portals	0.1665	0.0238	0.0233	0.1194	0.1665	0.0238	0.0233	0.1194	0.1665	0.0238	0.0233	0.1194
Intra-city mass transit	485000	Transit and ground passenger transportation	0.6418	0.3302	0.0551	0.2565	0.6418	0.3302	0.0551	0.2565	0.6418	0.3302	0.0551	0.2565
Jewelry	S00401	Scrap	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jewelry	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jewelry	339910	Jewelry and silverware manufacturing	0.6186	0.1270	0.0403	0.4513	0.5318	0.1267	0.0362	0.3690	0.3999	0.0848	0.0607	0.2544
Labor organizations' services - HH	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Labor organizations' services - HH	S00300	Non-comparable imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Labor unions and political organizations - NPISH	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Land line, telephone services, local charges	532A00	General and consumer goods rental except video tapes and discs	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330
Land line, telephone services, local charges	517000	Telecommunications	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309
Land line, telephone services, local charges	7211A0	Hotels and motels, including casino hotels	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255
Land line, telephone services, local charges	561400	Business support services	0.1602	0.0151	0.0332	0.1119	0.1602	0.0151	0.0332	0.1119	0.1602	0.0151	0.0332	0.1119
Land line, telephone services, long-distance charges	517000	Telecommunications	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309	0.2006	0.0435	0.0262	0.1309
Laundry and dry-cleaning services	7211A0	Hotels and motels, including casino hotels	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255	0.3744	0.0831	0.1658	0.1255
Laundry and dry-cleaning services	812300	Dry-cleaning and laundry services	0.2877	0.0502	0.1317	0.1057	0.2877	0.0502	0.1317	0.1057	0.2877	0.0502	0.1317	0.1057
Legal services - HH	541100	Legal services	0.0844	0.0061	0.0144	0.0639	0.0844	0.0061	0.0144	0.0639	0.0844	0.0061	0.0144	0.0639
Legal services - NPISH	541100	Legal services	0.0844	0.0061	0.0144	0.0639	0.0844	0.0061	0.0144	0.0639	0.0844	0.0061	0.0144	0.0639
Less: Expenditures in the United States by nonresidents	S00900	Rest of the world adjustment	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Less: Personal remittances in kind to nonresidents	S00900	Rest of the world adjustment	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Life insurance services	524100	Insurance carriers	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573
Live entertainment, excluding sports	561500	Travel arrangement and reservation services	0.2147	0.0670	0.0180	0.1297	0.2147	0.0670	0.0180	0.1297	0.2147	0.0670	0.0180	0.1297
Live entertainment, excluding sports	711A00	Promoters of performing arts and sports and agents for public figures	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201
Live entertainment, excluding sports	711100	Performing arts companies	0.1540	0.0506	0.0264	0.0770	0.1540	0.0506	0.0264	0.0770	0.1540	0.0506	0.0264	0.0770
Live entertainment, excluding sports	711500	Independent artists, writers, and performers	0.0611	0.0054	0.0058	0.0500	0.0611	0.0054	0.0058	0.0500	0.0611	0.0054	0.0058	0.0500

Lubricants and fluids	324191	Petroleum lubricating oil and grease manufacturing	1.5145	0.4192	0.0405	1.0548	1.2870	0.3678	0.0381	0.8810	0.9927	0.2740	0.0524	0.6662
Lubricants and fluids	325610	Soap and cleaning compound manufacturing	0.7937	0.1650	0.0476	0.5811	0.6869	0.1549	0.0438	0.4882	0.5826	0.1268	0.0545	0.4013
Luggage and similar personal items	316900	Other leather and allied product manufacturing	0.7726	0.1084	0.0400	0.6242	0.6214	0.0921	0.0374	0.4919	0.4649	0.0690	0.0590	0.3369
Luggage and similar personal items	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Luggage and similar personal items	321920	Wood container and pallet manufacturing	0.6772	0.1477	0.0731	0.4564	0.6686	0.1503	0.0708	0.4475	0.4903	0.1021	0.0784	0.3098
Luggage and similar personal items	339930	Doll, toy, and game manufacturing	0.6160	0.0568	0.0466	0.5126	0.5195	0.0690	0.0414	0.4090	0.4120	0.0563	0.0602	0.2954
Maintenance and repair of recreational vehicles and sports equipment	334511	Search, detection, and navigation instruments manufacturing	0.3179	0.0347	0.0566	0.2265	0.3093	0.0403	0.0535	0.2155	0.2953	0.0396	0.0618	0.1939
Maintenance and repair of recreational vehicles and sports equipment	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880
Major household appliances	333414	Heating equipment, except warm air furnaces	0.7486	0.0783	0.0532	0.6171	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Major household appliances	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Major household appliances	335222	Household refrigerator and home freezer manufacturing	1.1824	0.3374	0.0381	0.8070	1.0699	0.3100	0.0369	0.7230	0.8208	0.2271	0.0526	0.5411
Major household appliances	335221	Household cooking appliance manufacturing	0.8772	0.0670	0.0334	0.7767	0.8129	0.0692	0.0330	0.7107	0.6458	0.0597	0.0495	0.5366
Major household appliances	326150	Urethane and other foam product (except polystyrene) manufacturing	1.3126	0.1965	0.0706	1.0454	1.1015	0.1667	0.0631	0.8717	0.7072	0.1068	0.0749	0.5256
Major household appliances	335224	Household laundry equipment manufacturing	0.8230	0.0792	0.0302	0.7136	0.7758	0.0818	0.0301	0.6639	0.6165	0.0683	0.0478	0.5004
Major household appliances	331490	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding and alloying	1.5190	0.6805	0.1286	0.7099	1.3678	0.6073	0.1173	0.6432	1.0517	0.4461	0.1092	0.4964

Major household appliances	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Major household appliances	33329A	Other industrial machinery manufacturing	0.7112	0.0656	0.0629	0.5826	0.6344	0.0625	0.0581	0.5138	0.5179	0.0548	0.0673	0.3958
Major household appliances	333415	Air conditioning, refrigeration, and warm air heating equipment manufacturing	1.0807	0.4363	0.0399	0.6045	0.9083	0.3602	0.0380	0.5101	0.7089	0.2624	0.0533	0.3932
Major household appliances	335228	Other major household appliance manufacturing	0.7339	0.0742	0.0358	0.6239	0.6144	0.0847	0.0336	0.4961	0.5037	0.0703	0.0503	0.3831
Major household appliances	335210	Small electrical appliance manufacturing	0.6154	0.0553	0.0414	0.5187	0.5713	0.0587	0.0400	0.4725	0.4800	0.0526	0.0538	0.3736
Major household appliances	335120	Lighting fixture manufacturing	0.6175	0.0585	0.0429	0.5161	0.5500	0.0608	0.0405	0.4486	0.4306	0.0514	0.0596	0.3196
Major household appliances	335999	All other miscellaneous electrical equipment and component manufacturing	0.3874	0.0295	0.0440	0.3139	0.3619	0.0310	0.0421	0.2887	0.3278	0.0329	0.0563	0.2386
Meals at drinking places	722000	Food services and drinking places	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261
Meals at hotels	722000	Food services and drinking places	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261
Meals at limited service eating places	722000	Food services and drinking places	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261
Meals at other retailers	722000	Food services and drinking places	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261
Meals at other retailers	482000	Rail transportation	1.2915	1.0294	0.0066	0.2555	1.2915	1.0294	0.0066	0.2555	1.2915	1.0294	0.0066	0.2555
Meals at other retailers	711A00	Promoters of performing arts and sports and agents for public figures	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201
Meals at other retailers	512100	Motion picture and video industries	0.1335	0.0148	0.0388	0.0799	0.1335	0.0148	0.0388	0.0799	0.1569	0.0193	0.0488	0.0888
Meals at other retailers	711200	Spectator sports	0.1386	0.0156	0.0407	0.0823	0.1386	0.0156	0.0407	0.0823	0.1386	0.0156	0.0407	0.0823
Meals at other retailers	711100	Performing arts companies	0.1540	0.0506	0.0264	0.0770	0.1540	0.0506	0.0264	0.0770	0.1540	0.0506	0.0264	0.0770
Meals at restaurants	722000	Food services and drinking places	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261	0.5491	0.0678	0.1552	0.3261

Medical laboratories	621B00	Medical and diagnostic labs and outpatient and other ambulatory care services	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543
Membership clubs and participant sport centers - HH	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Membership clubs and participant sport centers - HH	713B00	Other amusement and recreation industries	0.5423	0.1977	0.1403	0.2042	0.5423	0.1977	0.1403	0.2042	0.5423	0.1977	0.1403	0.2042
Membership clubs and participant sport centers - HH	713950	Bowling centers	0.5845	0.0897	0.3296	0.1652	0.5845	0.0897	0.3296	0.1652	0.5845	0.0897	0.3296	0.1652
Membership clubs and participant sport centers - HH	713940	Fitness and recreational sports centers	0.4740	0.0951	0.2181	0.1609	0.4740	0.0951	0.2181	0.1609	0.4740	0.0951	0.2181	0.1609
Membership clubs and participant sport centers - HH	532400	Commercial and industrial machinery and equipment rental and leasing	0.2404	0.0758	0.0254	0.1391	0.2404	0.0758	0.0254	0.1391	0.2404	0.0758	0.0254	0.1391
Membership clubs and participant sport centers - HH	611B00	Other educational services	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241
Men's and boy's clothing	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Men's and boy's clothing	313320	Fabric coating mills	1.0436	0.1527	0.0889	0.8020	0.8817	0.1325	0.0774	0.6718	0.6424	0.0964	0.0816	0.4644
Men's and boy's clothing	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Men's and boy's clothing	339920	Sporting and athletic goods manufacturing	0.6793	0.0642	0.0430	0.5722	0.5500	0.0713	0.0386	0.4401	0.4348	0.0582	0.0578	0.3188
Men's and boy's clothing	315900	Apparel accessories and other apparel manufacturing	1.0773	0.4758	0.0496	0.5519	0.7743	0.3270	0.0430	0.4044	0.5671	0.2124	0.0610	0.2936
Men's and boy's clothing	315100	Apparel knitting mills	0.7548	0.1478	0.0930	0.5139	0.5524	0.1090	0.0705	0.3729	0.4357	0.0813	0.0775	0.2769
Men's and boy's clothing	315220	Men's and boys' cut and sew apparel manufacturing	0.5342	0.0867	0.0397	0.4077	0.4720	0.0803	0.0379	0.3539	0.3863	0.0637	0.0574	0.2653
Men's and boy's clothing	339113	Surgical appliance and supplies manufacturing	0.4317	0.0458	0.0355	0.3503	0.4430	0.0687	0.0341	0.3403	0.3699	0.0567	0.0547	0.2584
Men's and boy's clothing	315290	Other cut and sew apparel manufacturing	0.5391	0.0803	0.0497	0.4091	0.4415	0.0703	0.0441	0.3271	0.3692	0.0578	0.0609	0.2506
Mineral waters, soft drinks, fruit and vegetable juices	311410	Frozen food manufacturing	1.4578	0.2128	0.1228	1.1222	1.3269	0.2073	0.1115	1.0081	1.0369	0.1615	0.1053	0.7701

Mineral waters, soft drinks, fruit and vegetable juices	312110	Soft drink and ice manufacturing	1.0315	0.0966	0.0666	0.8684	0.9081	0.0909	0.0610	0.7563	0.7320	0.0765	0.0684	0.5871
Mineral waters, soft drinks, fruit and vegetable juices	311420	Fruit and vegetable canning, pickling, and drying	1.1368	0.2469	0.0757	0.8141	1.0483	0.2304	0.0712	0.7467	0.8328	0.1782	0.0759	0.5787
Miscellaneous household products	331110	Iron and steel mills and ferroalloy manufacturing	4.5375	2.9180	0.2581	1.3614	3.7865	2.4230	0.2171	1.1464	2.3888	1.4801	0.1663	0.7424
Miscellaneous household products	3259A0	All other chemical product and preparation manufacturing	1.0886	0.1335	0.0738	0.8813	1.0170	0.1470	0.0685	0.8015	0.6803	0.0988	0.0773	0.5042
Miscellaneous household products	335311	Power, distribution, and specialty transformer manufacturing	0.9175	0.0600	0.0525	0.8051	0.7898	0.0598	0.0482	0.6818	0.6112	0.0523	0.0616	0.4973
Miscellaneous household products	335912	Primary battery manufacturing	0.6126	0.0383	0.0471	0.5271	0.5580	0.0407	0.0449	0.4724	0.4657	0.0397	0.0579	0.3681
Miscellaneous household products	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Miscellaneous household products	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783
Miscellaneous household products	335313	Switchgear and switchboard apparatus manufacturing	0.4572	0.0377	0.0373	0.3821	0.4224	0.0416	0.0363	0.3446	0.3513	0.0398	0.0578	0.2537
Miscellaneous household products	335110	Electric lamp bulb and part manufacturing	0.4949	0.0690	0.0880	0.3378	0.4151	0.0611	0.0732	0.2808	0.3424	0.0506	0.0800	0.2118
Miscellaneous personal care services	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880
Miscellaneous personal care services	812900	Other personal services	0.1952	0.0283	0.0421	0.1249	0.1952	0.0283	0.0421	0.1249	0.1952	0.0283	0.0421	0.1249
Miscellaneous personal care services	812100	Personal care services	0.2460	0.0171	0.1125	0.1164	0.2460	0.0171	0.1125	0.1164	0.2460	0.0171	0.1125	0.1164
Motion picture theaters	481000	Air transportation	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441
Motion picture theaters	611A00	Junior colleges, colleges, universities, and professional schools	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707
Motion picture theaters	512100	Motion picture and video industries	0.1335	0.0148	0.0388	0.0799	0.1335	0.0148	0.0388	0.0799	0.1569	0.0193	0.0488	0.0888

Motor vehicle maintenance and repair	611A00	Junior colleges, colleges, universities, and professional schools	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707
Motor vehicle maintenance and repair	48A000	Scenic and sightseeing transportation and support activities for transportation	0.3759	0.1331	0.0351	0.2077	0.3759	0.1331	0.0351	0.2077	0.3759	0.1331	0.0351	0.2077
Motor vehicle maintenance and repair	811192	Car washes	0.5032	0.1192	0.1776	0.2063	0.5032	0.1192	0.1776	0.2063	0.5032	0.1192	0.1776	0.2063
Motor vehicle maintenance and repair	8111A0	Automotive repair and maintenance, except car washes	0.3194	0.0441	0.0912	0.1841	0.3194	0.0441	0.0912	0.1841	0.3194	0.0441	0.0912	0.1841
Motor vehicle rental	532100	Automotive equipment rental and leasing	0.1190	0.0070	0.0197	0.0923	0.1190	0.0070	0.0197	0.0923	0.1190	0.0070	0.0197	0.0923
Motorcycles	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Motorcycles	336991	Motorcycle, bicycle, and parts manufacturing	0.8734	0.0516	0.0296	0.7921	0.7600	0.0495	0.0298	0.6807	0.5947	0.0455	0.0488	0.5004
Motorcycles	326210	Tire manufacturing	1.1368	0.1344	0.1103	0.8921	1.0286	0.1266	0.1006	0.8014	0.5926	0.0766	0.0939	0.4222
Moving, storage and freight services	481000	Air transportation	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441
Moving, storage and freight services	484000	Truck transportation	0.5495	0.2211	0.0236	0.3048	0.5495	0.2211	0.0236	0.3048	0.5495	0.2211	0.0236	0.3048
Moving, storage and freight services	483000	Water transportation	1.4817	1.1763	0.0388	0.2665	1.4817	1.1763	0.0388	0.2665	1.4817	1.1763	0.0388	0.2665
Moving, storage and freight services	493000	Warehousing and storage	0.3685	0.0475	0.1753	0.1457	0.3685	0.0475	0.1753	0.1457	0.3685	0.0475	0.1753	0.1457
Moving, storage and freight services	531000	Real estate	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857
Museums and libraries - HH	712000	Museums, historical sites, zoos, and parks	0.3950	0.0914	0.1698	0.1338	0.3950	0.0914	0.1698	0.1338	0.3950	0.0914	0.1698	0.1338
Museums and libraries - HH	519100	Other information services	0.2066	0.0388	0.0509	0.1170	0.2066	0.0388	0.0509	0.1170	0.2066	0.0388	0.0509	0.1170
Musical instruments	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Musical instruments	316900	Other leather and allied product manufacturing	0.7726	0.1084	0.0400	0.6242	0.6214	0.0921	0.0374	0.4919	0.4649	0.0690	0.0590	0.3369

Musical instruments	339992	Musical instrument manufacturing	0.3348	0.0710	0.0545	0.2093	0.3212	0.0791	0.0468	0.1953	0.2915	0.0616	0.0642	0.1657
Mutual fund sales charges	523000	Securities, commodity contracts, investments, and related activities	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661
Natural gas	221200	Natural gas distribution	2.7059	2.1410	0.0052	0.5597	2.7059	2.1410	0.0052	0.5597	2.7059	2.1410	0.0052	0.5597
Natural gas	221300	Water, sewage and other systems	1.4578	1.1893	0.0381	0.2305	1.4578	1.1893	0.0381	0.2305	1.4578	1.1893	0.0381	0.2305
Net household insurance	524100	Insurance carriers	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573
Net income loss insurance	524100	Insurance carriers	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573
Net medical care and hospitalization insurance	524100	Insurance carriers	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573
Net motor vehicle and other transportation insurance	524100	Insurance carriers	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573
Net purchases of used autos	S00401	Scrap	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net purchases of used autos	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net purchases of used light trucks	S00401	Scrap	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net purchases of used light trucks	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net workers' compensation insurance	524100	Insurance carriers	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573	0.0629	0.0011	0.0046	0.0573
New domestic autos	336111	Automobile Manufacturing	0.6367	0.0512	0.0159	0.5697	0.5922	0.0626	0.0175	0.5121	0.5223	0.0574	0.0320	0.4329
New domestic autos	336211	Motor vehicle body manufacturing	0.6626	0.0583	0.0263	0.5781	0.6220	0.0615	0.0265	0.5339	0.4949	0.0532	0.0477	0.3939
New foreign autos	336111	Automobile Manufacturing	0.6367	0.0512	0.0159	0.5697	0.5922	0.0626	0.0175	0.5121	0.5223	0.0574	0.0320	0.4329
New light trucks	336112	Light truck and utility vehicle manufacturing	0.6813	0.0537	0.0160	0.6117	0.6740	0.0616	0.0163	0.5961	0.6158	0.0583	0.0262	0.5313
Newspapers and periodicals	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Newspapers and periodicals	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783

Newspapers and periodicals	511110	Newspaper publishers	0.3046	0.0279	0.0504	0.2262	0.3072	0.0355	0.0490	0.2226	0.3011	0.0357	0.0532	0.2122
Newspapers and periodicals	511120	Periodical publishers	0.2473	0.0183	0.0194	0.2097	0.2601	0.0310	0.0200	0.2091	0.2590	0.0317	0.0272	0.2001
Newspapers and periodicals	5111A0	Directory, mailing list, and other publishers	0.2248	0.0165	0.0208	0.1875	0.2388	0.0307	0.0216	0.1864	0.2424	0.0328	0.0433	0.1663
Newspapers and periodicals	512200	Sound recording industries	0.2126	0.0089	0.0299	0.1738	0.2056	0.0166	0.0301	0.1588	0.2194	0.0230	0.0483	0.1481
Non-electric cookware and tableware	33221B	Hand tool manufacturing	0.8855	0.0734	0.0811	0.7310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Non-electric cookware and tableware	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Non-electric cookware and tableware	332430	Metal can, box, and other metal container (light gauge) manufacturing	1.4006	0.1083	0.0951	1.1972	1.4006	0.1083	0.0951	1.1972	0.9504	0.0805	0.0925	0.7773
Non-electric cookware and tableware	331200	Steel product manufacturing from purchased steel	2.4949	1.2159	0.1537	1.1253	2.2458	1.0885	0.1393	1.0180	1.3653	0.6247	0.1169	0.6237
Non-electric cookware and tableware	326150	Urethane and other foam product (except polystyrene) manufacturing	1.3126	0.1965	0.0706	1.0454	1.1015	0.1667	0.0631	0.8717	0.7072	0.1068	0.0749	0.5256
Non-electric cookware and tableware	326140	Polystyrene foam product manufacturing	1.2952	0.2173	0.1463	0.9316	1.1375	0.1982	0.1273	0.8120	0.7371	0.1256	0.1098	0.5017
Non-electric cookware and tableware	33211B	Crown and closure manufacturing and metal stamping	1.1569	0.0742	0.0813	1.0014	1.1110	0.0778	0.0783	0.9550	0.6338	0.0553	0.0840	0.4946
Non-electric cookware and tableware	33299C	Other fabricated metal manufacturing	0.9606	0.1298	0.1006	0.7301	0.7793	0.1102	0.0837	0.5854	0.5862	0.0836	0.0855	0.4172
Non-electric cookware and tableware	32619A	Other plastics product manufacturing	0.9325	0.0925	0.1291	0.7109	0.6716	0.0712	0.0951	0.5053	0.4844	0.0561	0.0922	0.3361
Non-electric cookware and tableware	33221A	Cutlery, utensil, pot, and pan manufacturing	0.7650	0.0864	0.0532	0.6253	0.6281	0.0772	0.0476	0.5033	0.4453	0.0579	0.0674	0.3201
Non-electric cookware and tableware	331520	Nonferrous metal foundries	1.5519	0.6704	0.1545	0.7271	1.1223	0.4741	0.1071	0.5412	0.6400	0.2325	0.0968	0.3106



Non-electric cookware and tableware	321920	Wood container and pallet manufacturing	0.6772	0.1477	0.0731	0.4564	0.6686	0.1503	0.0708	0.4475	0.4903	0.1021	0.0784	0.3098
Non-electric cookware and tableware	321999	All other miscellaneous wood product manufacturing	0.6618	0.1355	0.1001	0.4262	0.5779	0.1298	0.0843	0.3638	0.4404	0.0910	0.0861	0.2633
Nonprofit hospitals services - HH	622000	Hospitals	0.3275	0.0603	0.0767	0.1904	0.3275	0.0603	0.0767	0.1904	0.3275	0.0603	0.0767	0.1904
Non-profit nursing homes' services - HH	623000	Nursing and residential care facilities	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669
Nonprofit private higher educational services - HH	611A00	Junior colleges, colleges, universities, and professional schools	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707
Nursery schools - NPISH	624400	Child day care services	0.2825	0.0304	0.0713	0.1807	0.2825	0.0304	0.0713	0.1807	0.2825	0.0304	0.0713	0.1807
Nursing homes - NPISH	623000	Nursing and residential care facilities	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669
Other delivery services (by non-U.S. postal facilities)	492000	Couriers and messengers	0.3726	0.0782	0.0357	0.2587	0.3726	0.0782	0.0357	0.2587	0.3726	0.0782	0.0357	0.2587
Other delivery services (by non-U.S. postal facilities)	561400	Business support services	0.1602	0.0151	0.0332	0.1119	0.1602	0.0151	0.0332	0.1119	0.1602	0.0151	0.0332	0.1119
Other education and research - NPISH	813A00	Grant making, giving, and social advocacy organizations	0.21	0.02	0.02	0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other education and research - NPISH	541700	Scientific research and development services	0.2915	0.0555	0.0506	0.1853	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other education and research - NPISH	611A00	Junior colleges, colleges, universities, and professional schools	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707
Other education and research - NPISH	611B00	Other educational services	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241
Other fuels	325190	Other basic organic chemical manufacturing	3.2037	1.6212	0.1598	1.4227	2.9828	1.5112	0.1490	1.3226	2.3045	1.1453	0.1340	1.0251
Other fuels	324199	All other petroleum and coal products manufacturing	1.6296	0.6665	0.0962	0.8670	1.2685	0.5844	0.0632	0.6209	0.8944	0.3834	0.0725	0.4385

Other fuels	212100	Coal mining	5.4058	4.6258	0.1584	0.6215	3.7929	3.2046	0.1035	0.4848	2.4908	2.0405	0.0980	0.3523
Other fuels	321999	All other miscellaneous wood product manufacturing	0.6618	0.1355	0.1001	0.4262	0.5779	0.1298	0.0843	0.3638	0.4404	0.0910	0.0861	0.2633
Other household services	561700	Services to buildings and dwellings	0.4547	0.1017	0.0169	0.3361	0.4547	0.1017	0.0169	0.3361	0.4547	0.1017	0.0169	0.3361
Other household services	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880
Other household services	561900	Other support services	0.2133	0.0225	0.0562	0.1347	0.2133	0.0225	0.0562	0.1347	0.2133	0.0225	0.0562	0.1347
Other household services	561600	Investigation and security services	0.1422	0.0166	0.0239	0.1017	0.1422	0.0166	0.0239	0.1017	0.1422	0.0166	0.0239	0.1017
Other meats	31161A	Animal (except poultry) slaughtering, rendering, and processing	3.2007	0.1779	0.0707	2.9521	2.8263	0.1667	0.0654	2.5943	2.1314	0.1318	0.0716	1.9280
Other meats	114200	Hunting and trapping	0.7048	0.3278	0.0159	0.3611	0.7038	0.3272	0.0159	0.3607	0.7038	0.3272	0.0159	0.3607
Other medical products	326150	Urethane and other foam product (except polystyrene) manufacturing	1.3126	0.1965	0.0706	1.0454	1.1015	0.1667	0.0631	0.8717	0.7072	0.1068	0.0749	0.5256
Other medical products	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Other medical products	339113	Surgical appliance and supplies manufacturing	0.4317	0.0458	0.0355	0.3503	0.4430	0.0687	0.0341	0.3403	0.3699	0.0567	0.0547	0.2584
Other medical products	339112	Surgical and medical instrument manufacturing	0.3353	0.0414	0.0383	0.2556	0.3403	0.0595	0.0359	0.2449	0.2906	0.0472	0.0648	0.1785
Other paramedical services - NPISH	621B00	Medical and diagnostic labs and outpatient and other ambulatory care services	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543
Other private services	S00300	Non-comparable imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other recreational vehicles	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other recreational vehicles	336214	Travel trailer and camper manufacturing	0.9503	0.1670	0.0253	0.7579	0.9108	0.1617	0.0256	0.7235	0.6830	0.1188	0.0473	0.5169
Other recreational vehicles	336213	Motor home manufacturing	0.7906	0.1673	0.0144	0.6089	0.7841	0.1680	0.0147	0.6015	0.6652	0.1389	0.0311	0.4953
Other recreational vehicles	336999	All other transportation equipment manufacturing	0.7253	0.0478	0.0203	0.6571	0.6895	0.0488	0.0210	0.6196	0.5372	0.0448	0.0444	0.4480

Other residential care facilities - NPISH	623000	Nursing and residential care facilities	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669
Other road transportation services	485000	Transit and ground passenger transportation	0.6418	0.3302	0.0551	0.2565	0.6418	0.3302	0.0551	0.2565	0.6418	0.3302	0.0551	0.2565
Other road transportation services	48A000	Scenic and sightseeing transportation and support activities for transportation	0.3759	0.1331	0.0351	0.2077	0.3759	0.1331	0.0351	0.2077	0.3759	0.1331	0.0351	0.2077
Other road transportation services	561500	Travel arrangement and reservation services	0.2147	0.0670	0.0180	0.1297	0.2147	0.0670	0.0180	0.1297	0.2147	0.0670	0.0180	0.1297
Other video equipment	334300	Audio and video equipment manufacturing	0.6007	0.0487	0.0373	0.5147	0.5531	0.0503	0.0364	0.4664	0.4707	0.0467	0.0506	0.3734
Other video equipment	335999	All other miscellaneous electrical equipment and component manufacturing	0.3874	0.0295	0.0440	0.3139	0.3619	0.0310	0.0421	0.2887	0.3278	0.0329	0.0563	0.2386
Outdoor equipment and supplies	33221B	Hand tool manufacturing	0.8855	0.0734	0.0811	0.7310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outdoor equipment and supplies	33451A	Other Measuring and Controlling Device Manufacturing	0.3813	0.0252	0.0472	0.3089	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outdoor equipment and supplies	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outdoor equipment and supplies	326220	Rubber and plastics hoses and belting manufacturing	0.9470	0.1015	0.0948	0.7507	0.8970	0.1012	0.0899	0.7059	0.6120	0.0730	0.0893	0.4497
Outdoor equipment and supplies	33299C	Other fabricated metal manufacturing	0.9606	0.1298	0.1006	0.7301	0.7793	0.1102	0.0837	0.5854	0.5862	0.0836	0.0855	0.4172
Outdoor equipment and supplies	333112	Lawn and garden equipment manufacturing	0.6954	0.0458	0.0306	0.6190	0.5224	0.0435	0.0306	0.4483	0.4292	0.0414	0.0504	0.3374
Outdoor equipment and supplies	33221A	Cutlery, utensil, pot, and pan manufacturing	0.7650	0.0864	0.0532	0.6253	0.6281	0.0772	0.0476	0.5033	0.4453	0.0579	0.0674	0.3201
Outdoor equipment and supplies	321999	All other miscellaneous wood product manufacturing	0.6618	0.1355	0.1001	0.4262	0.5779	0.1298	0.0843	0.3638	0.4404	0.0910	0.0861	0.2633
Package tours	561500	Travel arrangement and reservation services	0.2147	0.0670	0.0180	0.1297	0.2147	0.0670	0.0180	0.1297	0.2147	0.0670	0.0180	0.1297

Parking fees and tolls	S00203	Other state and local government enterprises	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parking fees and tolls	812900	Other personal services	0.1952	0.0283	0.0421	0.1249	0.1952	0.0283	0.0421	0.1249	0.1952	0.0283	0.0421	0.1249
Passenger fares for foreign travel	481000	Air transportation	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441	1.8640	1.5126	0.0074	0.3441
Passenger fares for foreign travel	483000	Water transportation	1.4817	1.1763	0.0388	0.2665	1.4817	1.1763	0.0388	0.2665	1.4817	1.1763	0.0388	0.2665
Pension services	525000	Funds, trusts, and other financial vehicles	0.0861	0.0002	0.0070	0.0789	0.0861	0.0002	0.0070	0.0789	0.0861	0.0002	0.0070	0.0789
Personal computers and peripheral equipment	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Personal computers and peripheral equipment	334418	Printed circuit assembly (electronic assembly) manufacturing	0.4082	0.0258	0.0418	0.3406	0.3862	0.0300	0.0405	0.3157	0.3506	0.0319	0.0530	0.2656
Personal computers and peripheral equipment	33411A	Computer terminals and other computer peripheral equipment manufacturing	0.3807	0.0439	0.0232	0.3136	0.3307	0.0422	0.0251	0.2634	0.3096	0.0409	0.0417	0.2270
Personal computers and peripheral equipment	334112	Computer storage device manufacturing	0.3562	0.0239	0.0618	0.2705	0.3232	0.0281	0.0554	0.2397	0.3040	0.0305	0.0641	0.2095
Personal computers and peripheral equipment	334111	Electronic computer manufacturing	0.2935	0.0226	0.0114	0.2595	0.2794	0.0265	0.0143	0.2386	0.2717	0.0293	0.0337	0.2087
Pets and related products	31161A	Animal (except poultry) slaughtering, rendering, and processing	3.2007	0.1779	0.0707	2.9521	2.8263	0.1667	0.0654	2.5943	2.1314	0.1318	0.0716	1.9280
Pets and related products	311210	Flour milling and malt manufacturing	2.4435	0.2422	0.2137	1.9876	2.1394	0.2524	0.1840	1.7030	1.6300	0.1944	0.1582	1.2774
Pets and related products	311119	Other animal food manufacturing	2.1977	0.2608	0.0936	1.8433	2.0788	0.2568	0.0891	1.7329	1.5410	0.1922	0.0890	1.2598
Pets and related products	1111B0	Grain farming	4.7150	3.5628	0.0921	1.0601	3.4367	2.5660	0.0722	0.7985	3.4367	2.5660	0.0722	0.7985
Pets and related products	311111	Dog and cat food manufacturing	1.5447	0.1878	0.0748	1.2821	1.2081	0.1522	0.0638	0.9921	0.9263	0.1184	0.0711	0.7369

Pets and related products	112A00	Animal production, except cattle and poultry and eggs	2.8694	1.7765	0.1343	0.9586	2.8138	1.7399	0.1316	0.9423	2.1237	1.2816	0.1200	0.7221
Pets and related products	1119B0	All other crop farming	2.9291	1.8265	0.2872	0.8154	2.5846	1.6058	0.2489	0.7299	1.9529	1.1813	0.2055	0.5660
Pets and related products	326150	Urethane and other foam product (except polystyrene) manufacturing	1.3126	0.1965	0.0706	1.0454	1.1015	0.1667	0.0631	0.8717	0.7072	0.1068	0.0749	0.5256
Pets and related products	3259A0	All other chemical product and preparation manufacturing	1.0886	0.1335	0.0738	0.8813	1.0170	0.1470	0.0685	0.8015	0.6803	0.0988	0.0773	0.5042
Pets and related products	314120	Curtain and linen mills	0.7928	0.1077	0.0683	0.6168	0.7148	0.1059	0.0623	0.5466	0.5320	0.0789	0.0726	0.3805
Pets and related products	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Pets and related products	316900	Other leather and allied product manufacturing	0.7726	0.1084	0.0400	0.6242	0.6214	0.0921	0.0374	0.4919	0.4649	0.0690	0.0590	0.3369
Pets and related products	32619A	Other plastics product manufacturing	0.9325	0.0925	0.1291	0.7109	0.6716	0.0712	0.0951	0.5053	0.4844	0.0561	0.0922	0.3361
Pets and related products	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Pets and related products	212320	Sand, gravel, clay, and ceramic and refractory minerals mining and quarrying	1.3401	0.6008	0.2974	0.4419	0.9669	0.4504	0.1509	0.3655	0.7560	0.3289	0.1326	0.2945
Pets and related products	325412	Pharmaceutical preparation manufacturing	0.3335	0.0363	0.0289	0.2682	0.3026	0.0375	0.0293	0.2358	0.2865	0.0374	0.0473	0.2018
Pharmaceutical products	324110	Petroleum refineries	2.1592	1.4343	0.0625	0.6625	1.0955	0.6831	0.0451	0.3674	0.9161	0.5461	0.0543	0.3158
Pharmaceutical products	325120	Industrial gas manufacturing	4.9816	3.4937	0.9234	0.5645	4.1768	2.9192	0.7654	0.4921	2.1791	1.4531	0.4211	0.3049
Pharmaceutical products	325412	Pharmaceutical preparation manufacturing	0.3335	0.0363	0.0289	0.2682	0.3026	0.0375	0.0293	0.2358	0.2865	0.0374	0.0473	0.2018
Photo processing	812900	Other personal services	0.1952	0.0283	0.0421	0.1249	0.1952	0.0283	0.0421	0.1249	0.1952	0.0283	0.0421	0.1249
Photo studios	541920	Photographic services	0.2071	0.0201	0.0507	0.1363	0.2071	0.0201	0.0507	0.1363	0.2071	0.0201	0.0507	0.1363
Photographic equipment	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Photographic equipment	316900	Other leather and allied product manufacturing	0.7726	0.1084	0.0400	0.6242	0.6214	0.0921	0.0374	0.4919	0.4649	0.0690	0.0590	0.3369

Photographic equipment	333315	Photographic and photocopying equipment manufacturing	0.6526	0.0594	0.0734	0.5198	0.4969	0.0529	0.0590	0.3851	0.4157	0.0477	0.0687	0.2993
Photographic equipment	333314	Optical instrument and lens manufacturing	0.4362	0.0274	0.0718	0.3370	0.3876	0.0293	0.0640	0.2943	0.3070	0.0339	0.0784	0.1947
Physician services - HH	621B00	Medical and diagnostic labs and outpatient and other ambulatory care services	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543
Physician services - HH	621A00	Offices of physicians, dentists, and other health practitioners	0.1440	0.0143	0.0244	0.1054	0.1440	0.0143	0.0244	0.1054	0.1440	0.0143	0.0244	0.1054
Physician services - NPISH	621B00	Medical and diagnostic labs and outpatient and other ambulatory care services	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543
Pleasure aircraft	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pleasure aircraft	335911	Storage battery manufacturing	0.8812	0.0959	0.1606	0.6248	0.7646	0.0969	0.1340	0.5338	0.6772	0.0867	0.1263	0.4642
Pleasure aircraft	336411	Aircraft manufacturing	0.4120	0.0348	0.0256	0.3516	0.4181	0.0427	0.0256	0.3499	0.3792	0.0414	0.0401	0.2976
Pleasure boats	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pleasure boats	336214	Travel trailer and camper manufacturing	0.9503	0.1670	0.0253	0.7579	0.9108	0.1617	0.0256	0.7235	0.6830	0.1188	0.0473	0.5169
Pleasure boats	336999	All other transportation equipment manufacturing	0.7253	0.0478	0.0203	0.6571	0.6895	0.0488	0.0210	0.6196	0.5372	0.0448	0.0444	0.4480
Pleasure boats	333618	Other engine equipment manufacturing	0.7342	0.0749	0.0437	0.6156	0.6783	0.0722	0.0423	0.5638	0.5512	0.0618	0.0560	0.4333
Pleasure boats	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Pleasure boats	336612	Boat building	0.5792	0.0471	0.0311	0.5010	0.5668	0.0549	0.0309	0.4810	0.4905	0.0506	0.0448	0.3950
Pleasure boats	332500	Hardware manufacturing	0.7262	0.0595	0.0517	0.6150	0.6854	0.0624	0.0496	0.5734	0.4910	0.0512	0.0670	0.3728
Pork	31161A	Animal (except poultry) slaughtering, rendering, and processing	3.2007	0.1779	0.0707	2.9521	2.8263	0.1667	0.0654	2.5943	2.1314	0.1318	0.0716	1.9280
Portfolio management and investment advice services	523000	Securities, commodity contracts, investments, and related activities	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661

Poultry	311615	Poultry processing	1.5398	0.1494	0.0907	1.2998	1.4582	0.1461	0.0867	1.2254	1.1329	0.1168	0.0872	0.9289
Prerecorded and blank audio discs/tapes/digital files/downloads	334613	Magnetic and optical recording media manufacturing	0.5718	0.0624	0.0710	0.4384	0.5211	0.0577	0.0660	0.3974	0.4386	0.0514	0.0729	0.3143
Prerecorded and blank audio discs/tapes/digital files/downloads	512200	Sound recording industries	0.2126	0.0089	0.0299	0.1738	0.2056	0.0166	0.0301	0.1588	0.2194	0.0230	0.0483	0.1481
Private higher education - NPISH	611A00	Junior colleges, colleges, universities, and professional schools	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707
Processed dairy products	311513	Cheese manufacturing	2.5139	0.1959	0.0713	2.2468	2.2596	0.1819	0.0666	2.0110	1.7217	0.1432	0.0725	1.5060
Processed dairy products	31151A	Fluid milk and butter manufacturing	2.2584	0.1829	0.0959	1.9796	2.1168	0.1754	0.0912	1.8502	1.6137	0.1381	0.0905	1.3850
Processed dairy products	311514	Dry, condensed, and evaporated dairy product manufacturing	2.1385	0.2167	0.0774	1.8443	1.7138	0.1790	0.0672	1.4676	1.3188	0.1408	0.0730	1.1051
Processed dairy products	311520	Ice cream and frozen dessert manufacturing	1.2754	0.0909	0.1078	1.0767	1.0629	0.0815	0.0925	0.8888	0.8435	0.0696	0.0915	0.6825
Processed fruits and vegetables	311210	Flour milling and malt manufacturing	2.4435	0.2422	0.2137	1.9876	2.1394	0.2524	0.1840	1.7030	1.6300	0.1944	0.1582	1.2774
Processed fruits and vegetables	1111B0	Grain farming	4.7150	3.5628	0.0921	1.0601	3.4367	2.5660	0.0722	0.7985	3.4367	2.5660	0.0722	0.7985
Processed fruits and vegetables	311410	Frozen food manufacturing	1.4578	0.2128	0.1228	1.1222	1.3269	0.2073	0.1115	1.0081	1.0369	0.1615	0.1053	0.7701
Processed fruits and vegetables	311990	All other food manufacturing	1.2168	0.1844	0.1143	0.9181	1.0638	0.1664	0.1012	0.7962	0.8443	0.1316	0.0978	0.6149
Processed fruits and vegetables	311420	Fruit and vegetable canning, pickling, and drying	1.1368	0.2469	0.0757	0.8141	1.0483	0.2304	0.0712	0.7467	0.8328	0.1782	0.0759	0.5787
Professional services	541610	Management, scientific, and technical consulting services	0.1141	0.0140	0.0122	0.0879	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Professional associations - NPISH	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Professional associations' services - HH	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Proprietary and government nursing homes services	623000	Nursing and residential care facilities	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669

Proprietary and public higher education	611A00	Junior colleges, colleges, universities, and professional schools	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707
Proprietary hospitals services	622000	Hospitals	0.3275	0.0603	0.0767	0.1904	0.3275	0.0603	0.0767	0.1904	0.3275	0.0603	0.0767	0.1904
Railway transportation	482000	Rail transportation	1.2915	1.0294	0.0066	0.2555	1.2915	1.0294	0.0066	0.2555	1.2915	1.0294	0.0066	0.2555
Recreation - NPISH	711A00	Promoters of performing arts and sports and agents for public figures	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201
Recreation - NPISH	711100	Performing arts companies	0.1540	0.0506	0.0264	0.0770	0.1540	0.0506	0.0264	0.0770	0.1540	0.0506	0.0264	0.0770
Recreation - NPISH	713B00	Other amusement and recreation industries	0.5423	0.1977	0.1403	0.2042	0.5423	0.1977	0.1403	0.2042	0.5423	0.1977	0.1403	0.2042
Recreation - NPISH	713940	Fitness and recreational sports centers	0.4740	0.0951	0.2181	0.1609	0.4740	0.0951	0.2181	0.1609	0.4740	0.0951	0.2181	0.1609
Recreation - NPISH	712000	Museums, historical sites, zoos, and parks	0.3950	0.0914	0.1698	0.1338	0.3950	0.0914	0.1698	0.1338	0.3950	0.0914	0.1698	0.1338
Recreation - NPISH	611B00	Other educational services	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241	0.1872	0.0394	0.0237	0.1241
Recreation - NPISH	515100	Radio and television broadcasting	0.1703	0.0342	0.0146	0.1216	0.1703	0.0342	0.0146	0.1216	0.1703	0.0342	0.0146	0.1216
Religious organizations - NPISH	813100	Religious organizations	0.1820	0.0548	0.0117	0.1155	0.1820	0.0548	0.0117	0.1155	0.1820	0.0548	0.0117	0.1155
Religious organizations' services - HH	813100	Religious organizations	0.1820	0.0548	0.0117	0.1155	0.1820	0.0548	0.0117	0.1155	0.1820	0.0548	0.0117	0.1155
Rental of tenant landlord durables	531000	Real estate	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857
Rental of tenant occupied mobile homes	531000	Real estate	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857
Rental of tenant occupied stationary homes	531000	Real estate	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857
Rental value of farm dwellings	S00800	Owner-occupied dwellings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rental value of farm dwellings	531000	Real estate	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857	0.2372	0.0190	0.1325	0.0857
Repair and hire of footwear	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880



Repair of audio-visual, photographic and information processing equipment	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880
Repair of audio-visual, photographic and information processing equipment	532A00	General and consumer goods rental except video tapes and discs	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330
Repair of audio-visual, photographic and information processing equipment	811200	Electronic and precision equipment repair and maintenance	0.1778	0.0205	0.0441	0.1132	0.1778	0.0205	0.0441	0.1132	0.1778	0.0205	0.0441	0.1132
Repair of furniture, furnishings and floor coverings	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880
Repair of household appliances	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880
Repair of household appliances	532A00	General and consumer goods rental except video tapes and discs	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330
Repair of household appliances	811200	Electronic and precision equipment repair and maintenance	0.1778	0.0205	0.0441	0.1132	0.1778	0.0205	0.0441	0.1132	0.1778	0.0205	0.0441	0.1132
Residential mental health and substance abuse - NPISH	623000	Nursing and residential care facilities	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669
Sewing items	313210	Broad woven fabric mills	1.1961	0.1448	0.2176	0.8338	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sewing items	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sewing items	313230	Nonwoven fabric mills	1.1780	0.1647	0.1728	0.8406	1.1780	0.1647	0.1728	0.8406	0.9596	0.1347	0.1529	0.6720
Sewing items	313100	Fiber, yarn, and thread mills	1.5824	0.0979	0.2587	1.2258	1.3679	0.0982	0.2197	1.0500	0.7896	0.0667	0.1519	0.5711
Sewing items	313310	Textile and fabric finishing mills	1.1036	0.2574	0.1253	0.7209	0.9757	0.2290	0.1109	0.6358	0.6190	0.1347	0.0999	0.3843
Shoes and other footwear	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shoes and other footwear	316200	Footwear manufacturing	0.7974	0.0911	0.0555	0.6507	0.6756	0.0832	0.0502	0.5421	0.6756	0.0832	0.0502	0.5421

Shoes and other footwear	316900	Other leather and allied product manufacturing	0.7726	0.1084	0.0400	0.6242	0.6214	0.0921	0.0374	0.4919	0.4649	0.0690	0.0590	0.3369
Small electric household appliances	333991	Power-driven hand tool manufacturing	0.6413	0.0460	0.0418	0.5534	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Small electric household appliances	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Small electric household appliances	335210	Small electrical appliance manufacturing	0.6154	0.0553	0.0414	0.5187	0.5713	0.0587	0.0400	0.4725	0.4800	0.0526	0.0538	0.3736
Social advocacy - NPISH	813A00	Grant making, giving, and social advocacy organizations	0.2074	0.0248	0.0226	0.1600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Social advocacy and civic and social organizations - HH	813A00	Grant making, giving, and social advocacy organizations	0.2074	0.0248	0.0226	0.1600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Social advocacy and civic and social organizations - HH	813B00	Civic, social, professional, and similar organizations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Social assistance - HH	624200	Community food, housing, and other relief services, including rehabilitation services	0.2975	0.0367	0.0732	0.1877	0.2975	0.0367	0.0732	0.1877	0.2975	0.0367	0.0732	0.1877
Social assistance - HH	624A00	Individual and family services	0.2365	0.0448	0.0231	0.1686	0.2365	0.0448	0.0231	0.1686	0.2365	0.0448	0.0231	0.1686
Social assistance - HH	623000	Nursing and residential care facilities	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669	0.3199	0.0488	0.1041	0.1669
Specialty outpatient care facilities and health and allied services - HH	541400	Specialized design services	0.1428	0.0105	0.0247	0.1076	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Specialty outpatient care facilities and health and allied services - HH	621B00	Medical and diagnostic labs and outpatient and other ambulatory care services	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543	0.2265	0.0349	0.0373	0.1543
Specialty outpatient care facilities and health and allied services - HH	621A00	Offices of physicians, dentists, and other health practitioners	0.1440	0.0143	0.0244	0.1054	0.1440	0.0143	0.0244	0.1054	0.1440	0.0143	0.0244	0.1054

Spectator sports	611A00	Junior colleges, colleges, universities, and professional schools	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707	0.7716	0.3213	0.1797	0.2707
Spectator sports	611100	Elementary and secondary schools	0.3839	0.1440	0.0581	0.1818	0.3839	0.1440	0.0581	0.1818	0.3839	0.1440	0.0581	0.1818
Spectator sports	561500	Travel arrangement and reservation services	0.2147	0.0670	0.0180	0.1297	0.2147	0.0670	0.0180	0.1297	0.2147	0.0670	0.0180	0.1297
Spectator sports	711A00	Promoters of performing arts and sports and agents for public figures	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201	0.1896	0.0203	0.0493	0.1201
Spectator sports	711200	Spectator sports	0.1386	0.0156	0.0407	0.0823	0.1386	0.0156	0.0407	0.0823	0.1386	0.0156	0.0407	0.0823
Spirits	311990	All other food manufacturing	1.2168	0.1844	0.1143	0.9181	1.0638	0.1664	0.1012	0.7962	0.8443	0.1316	0.0978	0.6149
Spirits	312140	Distilleries	0.4464	0.1268	0.0199	0.2997	0.3255	0.0856	0.0250	0.2150	0.3112	0.0764	0.0371	0.1977
Sporting equipment, supplies, guns, and ammunition	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sporting equipment, supplies, guns, and ammunition	331200	Steel product manufacturing from purchased steel	2.4949	1.2159	0.1537	1.1253	2.2458	1.0885	0.1393	1.0180	1.3653	0.6247	0.1169	0.6237
Sporting equipment, supplies, guns, and ammunition	3259A0	All other chemical product and preparation manufacturing	1.0886	0.1335	0.0738	0.8813	1.0170	0.1470	0.0685	0.8015	0.6803	0.0988	0.0773	0.5042
Sporting equipment, supplies, guns, and ammunition	336999	All other transportation equipment manufacturing	0.7253	0.0478	0.0203	0.6571	0.6895	0.0488	0.0210	0.6196	0.5372	0.0448	0.0444	0.4480
Sporting equipment, supplies, guns, and ammunition	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Sporting equipment, supplies, guns, and ammunition	316900	Other leather and allied product manufacturing	0.7726	0.1084	0.0400	0.6242	0.6214	0.0921	0.0374	0.4919	0.4649	0.0690	0.0590	0.3369
Sporting equipment, supplies, guns, and ammunition	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Sporting equipment, supplies, guns, and ammunition	33221A	Cutlery, utensil, pot, and pan manufacturing	0.7650	0.0864	0.0532	0.6253	0.6281	0.0772	0.0476	0.5033	0.4453	0.0579	0.0674	0.3201

Sporting equipment, supplies, guns, and ammunition	339920	Sporting and athletic goods manufacturing	0.6793	0.0642	0.0430	0.5722	0.5500	0.0713	0.0386	0.4401	0.4348	0.0582	0.0578	0.3188
Sporting equipment, supplies, guns, and ammunition	314910	Textile bag and canvas mills	0.5768	0.0700	0.0325	0.4742	0.5658	0.0820	0.0320	0.4519	0.4340	0.0633	0.0556	0.3152
Sporting equipment, supplies, guns, and ammunition	339113	Surgical appliance and supplies manufacturing	0.4317	0.0458	0.0355	0.3503	0.4430	0.0687	0.0341	0.3403	0.3699	0.0567	0.0547	0.2584
Sporting equipment, supplies, guns, and ammunition	33299B	Arms, ordnance, and accessories manufacturing	0.4831	0.0653	0.0506	0.3672	0.4275	0.0625	0.0464	0.3186	0.3589	0.0528	0.0627	0.2435
Sporting equipment, supplies, guns, and ammunition	33299A	Ammunition manufacturing	0.5743	0.1016	0.1130	0.3598	0.5003	0.0921	0.0959	0.3124	0.4034	0.0708	0.0930	0.2395
Sporting equipment, supplies, guns, and ammunition	811400	Personal and household goods repair and maintenance	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880	0.3022	0.0337	0.0805	0.1880
Standard clothing issued to military personnel	316200	Footwear manufacturing	0.7974	0.0911	0.0555	0.6507	0.6756	0.0832	0.0502	0.5421	0.6756	0.0832	0.0502	0.5421
Standard clothing issued to military personnel	314120	Curtain and linen mills	0.7928	0.1077	0.0683	0.6168	0.7148	0.1059	0.0623	0.5466	0.5320	0.0789	0.0726	0.3805
Standard clothing issued to military personnel	316900	Other leather and allied product manufacturing	0.7726	0.1084	0.0400	0.6242	0.6214	0.0921	0.0374	0.4919	0.4649	0.0690	0.0590	0.3369
Standard clothing issued to military personnel	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Standard clothing issued to military personnel	314910	Textile bag and canvas mills	0.5768	0.0700	0.0325	0.4742	0.5658	0.0820	0.0320	0.4519	0.4340	0.0633	0.0556	0.3152
Standard clothing issued to military personnel	315900	Apparel accessories and other apparel manufacturing	1.0773	0.4758	0.0496	0.5519	0.7743	0.3270	0.0430	0.4044	0.5671	0.2124	0.0610	0.2936
Standard clothing issued to military personnel	315100	Apparel knitting mills	0.7548	0.1478	0.0930	0.5139	0.5524	0.1090	0.0705	0.3729	0.4357	0.0813	0.0775	0.2769
Standard clothing issued to military personnel	315230	Women's and girls' cut and sew apparel manufacturing	0.6375	0.1455	0.0313	0.4607	0.5603	0.1292	0.0311	0.4001	0.4150	0.0861	0.0580	0.2709

Standard clothing issued to military personnel	315220	Men's and boys' cut and sew apparel manufacturing	0.5342	0.0867	0.0397	0.4077	0.4720	0.0803	0.0379	0.3539	0.3863	0.0637	0.0574	0.2653
Stationery and miscellaneous printed materials	339940	Office supplies (except paper) manufacturing	0.6137	0.1019	0.0569	0.4549								
Stationery and miscellaneous printed materials	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stationery and miscellaneous printed materials	325520	Adhesive manufacturing	1.2186	0.1944	0.0631	0.9612	1.1644	0.2074	0.0599	0.8971	0.6067	0.1036	0.0774	0.4257
Stationery and miscellaneous printed materials	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Stationery and miscellaneous printed materials	322230	Stationery product manufacturing	0.8617	0.0670	0.0714	0.7233	0.7311	0.0664	0.0628	0.6019	0.4396	0.0487	0.0784	0.3125
Stationery and miscellaneous printed materials	323110	Printing	0.5684	0.0795	0.0768	0.4121	0.5480	0.0824	0.0734	0.3922	0.4214	0.0632	0.0798	0.2783
Stationery and miscellaneous printed materials	339994	Broom, brush, and mop manufacturing	0.8073	0.3507	0.0491	0.4074	0.6875	0.2943	0.0424	0.3507	0.5318	0.2029	0.0588	0.2702
Stationery and miscellaneous printed materials	5111A0	Directory, mailing list, and other publishers	0.2248	0.0165	0.0208	0.1875	0.2388	0.0307	0.0216	0.1864	0.2424	0.0328	0.0433	0.1663
Sugar and sweets	311340	Non-chocolate confectionery manufacturing	1.0791	0.1220	0.0760	0.8811	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sugar and sweets	311221	Wet corn milling	4.2145	1.8245	0.2880	2.1021	3.7875	1.6613	0.2553	1.8708	2.8308	1.2221	0.2102	1.3985
Sugar and sweets	31131A	Sugar cane mills and refining	2.2884	0.6722	0.0968	1.5194	2.0207	0.5945	0.0880	1.3382	1.5403	0.4433	0.0881	1.0089
Sugar and sweets	311313	Beet sugar manufacturing	2.6618	1.2026	0.0972	1.3620	2.3398	1.0531	0.0881	1.1986	1.7876	0.7847	0.0882	0.9147
Sugar and sweets	311320	Chocolate and confectionery manufacturing from cacao beans	1.2412	0.1163	0.0818	1.0430	1.1042	0.1088	0.0748	0.9206	0.8738	0.0895	0.0785	0.7058
Sugar and sweets	311990	All other food manufacturing	1.2168	0.1844	0.1143	0.9181	1.0638	0.1664	0.1012	0.7962	0.8443	0.1316	0.0978	0.6149
Sugar and sweets	311420	Fruit and vegetable canning, pickling, and drying	1.1368	0.2469	0.0757	0.8141	1.0483	0.2304	0.0712	0.7467	0.8328	0.1782	0.0759	0.5787
Sugar and sweets	311330	Confectionery manufacturing from purchased chocolate	0.9907	0.1045	0.0792	0.8069	0.9013	0.0998	0.0734	0.7282	0.7279	0.0831	0.0774	0.5673
Taxicab	485000	Transit and ground passenger transportation	0.6418	0.3302	0.0551	0.2565	0.6418	0.3302	0.0551	0.2565	0.6418	0.3302	0.0551	0.2565

Telephone and facsimile equipment	334220	Broadcast and wireless communications equipment	0.3276	0.0211	0.0272	0.2794	0.3202	0.0219	0.0282	0.2702	0.2887	0.0287	0.0553	0.2047
Telephone and facsimile equipment	334210	Telephone apparatus manufacturing	0.3409	0.0527	0.0149	0.2734	0.3237	0.0532	0.0169	0.2536	0.2816	0.0441	0.0578	0.1798
Televisions	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Televisions	334300	Audio and video equipment manufacturing	0.6007	0.0487	0.0373	0.5147	0.5531	0.0503	0.0364	0.4664	0.4707	0.0467	0.0506	0.3734
Therapeutic medical equipment	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Therapeutic medical equipment	335210	Small electrical appliance manufacturing	0.6154	0.0553	0.0414	0.5187	0.5713	0.0587	0.0400	0.4725	0.4800	0.0526	0.0538	0.3736
Therapeutic medical equipment	335912	Primary battery manufacturing	0.6126	0.0383	0.0471	0.5271	0.5580	0.0407	0.0449	0.4724	0.4657	0.0397	0.0579	0.3681
Therapeutic medical equipment	335120	Lighting fixture manufacturing	0.6175	0.0585	0.0429	0.5161	0.5500	0.0608	0.0405	0.4486	0.4306	0.0514	0.0596	0.3196
Therapeutic medical equipment	339113	Surgical appliance and supplies manufacturing	0.4317	0.0458	0.0355	0.3503	0.4430	0.0687	0.0341	0.3403	0.3699	0.0567	0.0547	0.2584
Therapeutic medical equipment	339111	Laboratory apparatus and furniture manufacturing	0.4197	0.0366	0.0316	0.3516	0.4041	0.0554	0.0308	0.3180	0.3419	0.0481	0.0541	0.2398
Therapeutic medical equipment	334510	Electromedical and electrotherapeutic apparatus manufacturing	0.3798	0.0251	0.0269	0.3277	0.3533	0.0313	0.0275	0.2946	0.3040	0.0341	0.0566	0.2132
Therapeutic medical equipment	339112	Surgical and medical instrument manufacturing	0.3353	0.0414	0.0383	0.2556	0.3403	0.0595	0.0359	0.2449	0.2906	0.0472	0.0648	0.1785
Tires	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tires	326210	Tire manufacturing	1.1368	0.1344	0.1103	0.8921	1.0286	0.1266	0.1006	0.8014	0.5926	0.0766	0.0939	0.4222
Tobacco	3122A0	Tobacco product manufacturing	0.3273	0.0557	0.0192	0.2523	0.2889	0.0494	0.0222	0.2173	0.2825	0.0474	0.0331	0.2020
Tools, hardware, and supplies	33221B	Hand tool manufacturing	0.8855	0.0734	0.0811	0.7310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tools, hardware, and supplies	333991	Power-driven hand tool manufacturing	0.6413	0.0460	0.0418	0.5534	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tools, hardware, and supplies	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tools, hardware, and supplies	331200	Steel product manufacturing from purchased steel	2.4949	1.2159	0.1537	1.1253	2.2458	1.0885	0.1393	1.0180	1.3653	0.6247	0.1169	0.6237

Tools, hardware, and supplies	325510	Paint and coating manufacturing	1.1901	0.1045	0.0423	1.0434	1.1005	0.1187	0.0405	0.9413	0.7502	0.0851	0.0603	0.6048
Tools, hardware, and supplies	332600	Spring and wire product manufacturing	1.0806	0.1117	0.0791	0.8898	0.9971	0.1091	0.0739	0.8140	0.6742	0.0780	0.0803	0.5159
Tools, hardware, and supplies	3259A0	All other chemical product and preparation manufacturing	1.0886	0.1335	0.0738	0.8813	1.0170	0.1470	0.0685	0.8015	0.6803	0.0988	0.0773	0.5042
Tools, hardware, and supplies	326290	Other rubber product manufacturing	0.9771	0.0928	0.1190	0.7653	0.8458	0.0860	0.1038	0.6560	0.5836	0.0646	0.0971	0.4220
Tools, hardware, and supplies	332720	Turned product and screw, nut, and bolt manufacturing	0.8027	0.0702	0.0938	0.6387	0.5866	0.0583	0.0717	0.4567	0.5321	0.0549	0.0744	0.4028
Tools, hardware, and supplies	325610	Soap and cleaning compound manufacturing	0.7937	0.1650	0.0476	0.5811	0.6869	0.1549	0.0438	0.4882	0.5826	0.1268	0.0545	0.4013
Tools, hardware, and supplies	335312	Motor and generator manufacturing	0.7357	0.0646	0.0520	0.6190	0.6524	0.0625	0.0487	0.5413	0.5149	0.0538	0.0623	0.3988
Tools, hardware, and supplies	33329A	Other industrial machinery manufacturing	0.7112	0.0656	0.0629	0.5826	0.6344	0.0625	0.0581	0.5138	0.5179	0.0548	0.0673	0.3958
Tools, hardware, and supplies	337920	Blind and shade manufacturing	0.7569	0.0631	0.0449	0.6489	0.6475	0.0757	0.0405	0.5313	0.5017	0.0616	0.0581	0.3820
Tools, hardware, and supplies	33399A	Other general purpose machinery manufacturing	0.6644	0.0702	0.0580	0.5361	0.6585	0.0747	0.0570	0.5268	0.5087	0.0610	0.0685	0.3792
Tools, hardware, and supplies	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Tools, hardware, and supplies	332500	Hardware manufacturing	0.7262	0.0595	0.0517	0.6150	0.6854	0.0624	0.0496	0.5734	0.4910	0.0512	0.0670	0.3728
Tools, hardware, and supplies	33351A	Metal cutting and forming machine tool manufacturing	0.6020	0.0496	0.0628	0.4896	0.5640	0.0532	0.0592	0.4516	0.4493	0.0474	0.0699	0.3321
Tools, hardware, and supplies	33999A	All other miscellaneous manufacturing	0.6769	0.0676	0.0519	0.5574	0.6057	0.0862	0.0463	0.4732	0.4526	0.0651	0.0645	0.3230
Tools, hardware, and supplies	314910	Textile bag and canvas mills	0.5768	0.0700	0.0325	0.4742	0.5658	0.0820	0.0320	0.4519	0.4340	0.0633	0.0556	0.3152
Tools, hardware, and supplies	327992	Ground or treated mineral and earth manufacturing	1.3015	0.6011	0.2085	0.4920	1.2477	0.6264	0.1748	0.4465	0.8088	0.3672	0.1368	0.3047
Tools, hardware, and supplies	339994	Broom, brush, and mop manufacturing	0.8073	0.3507	0.0491	0.4074	0.6875	0.2943	0.0424	0.3507	0.5318	0.2029	0.0588	0.2702
Tools, hardware, and supplies	327910	Abrasive product manufacturing	0.6221	0.1426	0.1273	0.3521	0.5336	0.1229	0.1064	0.3043	0.4089	0.0852	0.0986	0.2251

Tools, hardware, and supplies	532A00	General and consumer goods rental except video tapes and discs	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330	0.2354	0.0404	0.0620	0.1330
Truck leasing	532100	Automotive equipment rental and leasing	0.1190	0.0070	0.0197	0.0923	0.1190	0.0070	0.0197	0.0923	0.1190	0.0070	0.0197	0.0923
Trust, fiduciary, and custody activities	522A00	Nondepository credit intermediation and related activities	0.0933	0.0058	0.0178	0.0698	0.0933	0.0058	0.0178	0.0698	0.0933	0.0058	0.0178	0.0698
Trust, fiduciary, and custody activities	523000	Securities, commodity contracts, investments, and related activities	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661	0.0846	0.0031	0.0154	0.0661
US student expenditures	S00300	Non-comparable imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
US travel outside the US	S00300	Non-comparable imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vegetables (fresh)	1119B0	All other crop farming	2.9291	1.8265	0.2872	0.8154	2.5846	1.6058	0.2489	0.7299	1.9529	1.1813	0.2055	0.5660
Vegetables (fresh)	111400	Greenhouse, nursery, and floriculture production	1.3812	0.8633	0.0903	0.4276	1.1672	0.7147	0.0781	0.3744	0.9192	0.5315	0.0809	0.3067
Vegetables (fresh)	111200	Vegetable and melon farming	1.7561	1.0742	0.2136	0.4682	1.2325	0.7239	0.1451	0.3634	0.9671	0.5385	0.1299	0.2988
Veterinary and other services for pets	115000	Support activities for agriculture and forestry	1.1872	0.3622	0.0472	0.7778	1.1872	0.3622	0.0472	0.7778	1.1872	0.3622	0.0472	0.7778
Veterinary and other services for pets	541940	Veterinary services	0.2564	0.0429	0.0146	0.1989	0.2564	0.0429	0.0146	0.1989	0.2564	0.0429	0.0146	0.1989
Veterinary and other services for pets	812900	Other personal services	0.1952	0.0283	0.0421	0.1249	0.1952	0.0283	0.0421	0.1249	0.1952	0.0283	0.0421	0.1249
Video cassettes and disc, blank and prerecorded	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Video cassettes and disc, blank and prerecorded	334613	Magnetic and optical recording media manufacturing	0.5718	0.0624	0.0710	0.4384	0.5211	0.0577	0.0660	0.3974	0.4386	0.0514	0.0729	0.3143
Video cassettes and disc, blank and prerecorded	512100	Motion picture and video industries	0.1335	0.0148	0.0388	0.0799	0.1335	0.0148	0.0388	0.0799	0.1569	0.0193	0.0488	0.0888
Video media rental	532230	Video tape and disc rental	0.3674	0.0258	0.1764	0.1652	0.3674	0.0258	0.1764	0.1652	0.3674	0.0258	0.1764	0.1652
Vocational rehabilitation services - NPISH	624200	Community food, housing, and other relief services, including rehabilitation services	0.2975	0.0367	0.0732	0.1877	0.2975	0.0367	0.0732	0.1877	0.2975	0.0367	0.0732	0.1877



Watches	33451A	Other Measuring and Controlling Device Manufacturing	0.3813	0.0252	0.0472	0.3089	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Water supply and sewage maintenance	S00203	Other state and local government enterprises	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Water supply and sewage maintenance	221300	Water, sewage and other systems	1.4578	1.1893	0.0381	0.2305	1.4578	1.1893	0.0381	0.2305	1.4578	1.1893	0.0381	0.2305
Water transportation	483000	Water transportation	1.4817	1.1763	0.0388	0.2665	1.4817	1.1763	0.0388	0.2665	1.4817	1.1763	0.0388	0.2665
Water transportation	48A000	Scenic and sightseeing transportation and support activities for transportation	0.3759	0.1331	0.0351	0.2077	0.3759	0.1331	0.0351	0.2077	0.3759	0.1331	0.0351	0.2077
Window coverings	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Window coverings	337920	Blind and shade manufacturing	0.7569	0.0631	0.0449	0.6489	0.6475	0.0757	0.0405	0.5313	0.5017	0.0616	0.0581	0.3820
Window coverings	314120	Curtain and linen mills	0.7928	0.1077	0.0683	0.6168	0.7148	0.1059	0.0623	0.5466	0.5320	0.0789	0.0726	0.3805
Window coverings	314910	Textile bag and canvas mills	0.5768	0.0700	0.0325	0.4742	0.5658	0.0820	0.0320	0.4519	0.4340	0.0633	0.0556	0.3152
Window coverings	4A0000	Retail trade	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242
Wine	312130	Wineries	0.6722	0.0934	0.0699	0.5089	0.5232	0.0795	0.0574	0.3863	0.4668	0.0707	0.0638	0.3322
Women's and girl's clothing	S00401	Scrap	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Women's and girl's clothing	S00402	Used and secondhand goods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Women's and girl's clothing	313320	Fabric coating mills	1.0436	0.1527	0.0889	0.8020	0.8817	0.1325	0.0774	0.6718	0.6424	0.0964	0.0816	0.4644
Women's and girl's clothing	313310	Textile and fabric finishing mills	1.1036	0.2574	0.1253	0.7209	0.9757	0.2290	0.1109	0.6358	0.6190	0.1347	0.0999	0.3843
Women's and girl's clothing	314990	All other textile product mills	0.9320	0.1167	0.1051	0.7102	0.7972	0.1090	0.0901	0.5981	0.5430	0.0756	0.0894	0.3779
Women's and girl's clothing	339920	Sporting and athletic goods manufacturing	0.6793	0.0642	0.0430	0.5722	0.5500	0.0713	0.0386	0.4401	0.4348	0.0582	0.0578	0.3188
Women's and girl's clothing	315900	Apparel accessories and other apparel manufacturing	1.0773	0.4758	0.0496	0.5519	0.7743	0.3270	0.0430	0.4044	0.5671	0.2124	0.0610	0.2936
Women's and girl's clothing	315100	Apparel knitting mills	0.7548	0.1478	0.0930	0.5139	0.5524	0.1090	0.0705	0.3729	0.4357	0.0813	0.0775	0.2769

Women's and girl's clothing	315230	Women's and girls' cut and sew apparel manufacturing	0.6375	0.1455	0.0313	0.4607	0.5603	0.1292	0.0311	0.4001	0.4150	0.0861	0.0580	0.2709
Women's and girl's clothing	339113	Surgical appliance and supplies manufacturing	0.4317	0.0458	0.0355	0.3503	0.4430	0.0687	0.0341	0.3403	0.3699	0.0567	0.0547	0.2584
Women's and girl's clothing	315290	Other cut and sew apparel manufacturing	0.5391	0.0803	0.0497	0.4091	0.4415	0.0703	0.0441	0.3271	0.3692	0.0578	0.0609	0.2506
Women's and girl's clothing	4A0000	Retail trade	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242	0.2500	0.0372	0.0885	0.1242

**APPENDIX F: Producer Price Index (PPI) Adjustments to Convert 2009 \$ to 2002 \$.**  
(BLS 2011)

EIOLCA Sector	Sector Code	PPI Category: 1	PPI Category: 2	2002 PPI	2009 PPI	PPI Adjust
Accounting, tax preparation, bookkeeping, and payroll services	541200	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Adhesive manufacturing	325520	Chemicals and allied products	Adhesives and sealants	159.2	222.2	0.716471647
Advertising and related services	541800	Advertising space and time sales	Advertising space and time sales	131.1	172.9	0.758241758
Air conditioning, refrigeration, and warm air heating equipment manufacturing	333415	Machinery and equipment	Machinery and equipment	122.9	131.3	0.936024372
All other food manufacturing	311990	Processed foods and feeds	Processed foods and feeds	136.2	176.2	0.772985244
All other miscellaneous electrical equipment and component manufacturing	335999	Machinery and equipment	Machinery and equipment	122.9	131.3	0.936024372
All other miscellaneous professional, scientific, and technical services	5419A0	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Analytical laboratory instrument manufacturing	334516	Machinery and equipment	Laboratory analytical instruments	121.1	137.8	0.878809869
Architectural, engineering, and related services	541300	Construction (partial)	Construction (partial)	131.1	172.9	0.758241758
Audio and video equipment manufacturing	334300	Miscellaneous products	Miscellaneous products	182.4	217.5	0.83862069
Biological product (except diagnostic) manufacturing	325414	Miscellaneous products	Miscellaneous products	182.4	217.5	0.83862069
Book publishers	511130	Pulp, paper, and allied products	Pulp, paper, and allied products	185.9	225.6	0.824024823
Business support services	561400	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Cable and other subscription programming	515200	Telecommunication, cable, and internet user services	Telecommunication, cable, and internet user services	131.1	172.9	0.758241758
Civic, social, professional, and similar organizations	813B00	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Commercial and industrial machinery and equipment rental and leasing	532400	Rental and leasing of goods (partial)	Rental and leasing of goods (partial)	131.1	172.9	0.758241758
Construction machinery manufacturing	333120	Construction (partial)	Construction (partial)	131.1	172.9	0.758241758
Couriers and messengers	492000	Transportation services	Transportation services	131.1	172.9	0.758241758
Other cut and sew apparel manufacturing	315290	Textile products and apparel	Textile products and apparel	119.9	129.5	0.925868726
Sporting and athletic goods manufacturing	339920	Textile products and apparel	Textile products and apparel	119.9	129.5	0.925868726
Data processing, hosting, and related services	518200	Data processing and related services	Data processing and related services	131.1	172.9	0.758241758
Dry-cleaning and laundry services	812300			131.1	172.9	0.758241758
Electromedical and electrotherapeutic apparatus manufacturing	334510	Miscellaneous products	Miscellaneous products	182.4	217.5	0.83862069
Electronic and precision equipment repair and maintenance	811200	Repair and maintenance services (partial)	Repair and maintenance services (partial)	131.1	172.9	0.758241758
Electronic computer manufacturing	334111	Electronic computer	Electronic computer	152.3	54.2	2.8099631
Employment services	561300	Employment services	Employment services	131.1	172.9	0.758241758
Fabricated pipe and pipe fitting manufacturing	332996	Rubber and plastic products	Rubber and plastic products	126.8	165.2	0.767554479

Food services and drinking places	722000	Food and beverage for immediate consumption services (partial)	Food and beverage for immediate consumption services (partial)	131.1	172.9	0.758241758
Grantmaking, giving, and social advocacy organizations	813A00	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Handtool manufacturing	33221B	Machinery and equipment	Metals and metal products	125.9	186.8	0.673982869
Hardware manufacturing	332500	Machinery and equipment	Metals and metal products	125.9	186.8	0.673982869
Institutional furniture manufacturing	337127	Furniture and household durables	Furniture and household durables	133.5	153.1	0.871979099
Insurance carriers	524100	Insurance and annuities	Insurance and annuities	131.1	172.9	0.758241758
Investigation and security services	561600	Selected security services (partial)	Selected security services (partial)	131.1	172.9	0.758241758
Laboratory apparatus and furniture manufacturing	339111	Machinery and equipment	Laboratory analytical instruments	121.1	137.8	0.878809869
Legal services	541100	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Lighting fixture manufacturing	335120	Furniture and household durables	Furniture and household durables	133.5	153.1	0.871979099
Management, scientific, and technical consulting services	541610	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Monetary authorities and depository credit intermediation	52A000	Credit intermediation services (partial)	Credit intermediation services (partial)	131.1	172.9	0.758241758
Nonresidential maintenance and repair	230301	Repair and maintenance services (partial)	Repair and maintenance services (partial)	131.1	172.9	0.758241758
Office supplies (except paper) manufacturing	339940	Miscellaneous products	Miscellaneous products	182.4	217.5	0.83862069
Offices of physicians, dentists, and other health practitioners	621A00	Health care services	Health care services	131.1	172.9	0.758241758
Other amusement and recreation industries	713B00	Entertainment services (partial)	Entertainment services (partial)	131.1	172.9	0.758241758
Other basic organic chemical manufacturing	325190	Chemicals and allied products	Chemicals and allied products	151.9	229.4	0.662162162
Other industrial machinery manufacturing	33329A	Machinery and equipment	Machinery and equipment	122.9	131.3	0.936024372
Other information services	519100	Data processing and related services	Data processing and related services	131.1	172.9	0.758241758
Other personal services	812900	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Paint and coating manufacturing	325510	Chemicals and allied products	Paints and allied products	167.2	235.4	0.710280374
Paper mills	322120	Pulp, paper, and allied products	Pulp, paper, and allied products	185.9	225.6	0.824024823
Periodical publishers	511120	Pulp, paper, and allied products	Pulp, paper, and allied products	185.9	225.6	0.824024823
Pharmaceutical preparation manufacturing	325412	Chemicals and allied products	Drugs and pharmaceuticals	265.8	364.5	0.729218107
Plastics pipe and pipe fitting manufacturing	326122	Rubber and plastic products	Rubber and plastic products	126.8	165.2	0.767554479
Postal service	491000	Transportation services	Transportation services	131.1	172.9	0.758241758
Prefabricated wood building manufacturing	321992	Lumber and wood products	Lumber and wood products	173.3	182.8	0.948030635
Printing	323110	Pulp, paper, and allied products	General book printing and binding	131.1	172.9	0.758241758
Pump and pumping equipment manufacturing	333911	Machinery and equipment	Machinery and equipment	122.9	131.3	0.936024372
Real estate	531000	Real estate services (partial)	Real estate services (partial)	131.1	172.9	0.758241758
Scientific research and development services	541700	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Services to buildings and dwellings	561700	Construction (partial)	Construction (partial)	131.1	172.9	0.758241758

Specialized design services	541400	Professional services (partial)	Professional services (partial)	131.1	172.9	0.758241758
Surgical and medical instrument manufacturing	339112	Machinery and equipment	Electromedical equipment, including diagnostic	131.1	172.9	0.758241758
Surgical appliance and supplies manufacturing	339113	Machinery and equipment	Electromedical equipment, including diagnostic	131.1	172.9	0.758241758
Telecommunications	517000	Telecommunication, cable, and internet user services	Telecommunication, cable, and internet user services	131.1	172.9	0.758241758
Telephone apparatus manufacturing	334210	Miscellaneous products	Miscellaneous products	182.4	217.5	0.83862069
Tire manufacturing	326210	Rubber and plastic products	Tires	93	128.2	0.725429017
Transit and ground passenger transportation	485000	Transportation services	Transportation services	131.1	172.9	0.758241758
Truck transportation	484000	Transportation services	Truck transportation of freight	131.1	172.9	0.758241758
Vending, commercial, industrial, and office machinery manufacturing	33331A	Machinery and equipment	Machinery and equipment	122.9	131.3	0.936024372
Veterinary services	541940	Health care services	Health care services	131.1	172.9	0.758241758
Warehousing and storage	493000	Warehousing, storage, and related services	Warehousing, storage, and related services	131.1	172.9	0.758241758
Waste management and remediation services	562000	Waste collection and remediation services (partial)	Waste collection and remediation services (partial)	131.1	172.9	0.758241758
Wiring device manufacturing	335930	Metals and metal products	Metals and metal products	125.9	186.8	0.673982869
Wood windows and doors and millwork	321910	Lumber and wood products	Wood window units	168.4	190.8	0.882599581