

## Business Processes and Business Functions: a new way of looking at employment

*A new BLS classification system used in conjunction with the Agency's Mass Layoff Statistics program yields fresh information on business processes and functions affected by mass layoff events*

Sharon P. Brown

When employers decide to add or eliminate jobs, they are sometimes guided by larger choices to add or eliminate entire classes of activity—business functions—within the company. What may appear to be incremental hiring may in fact be the gradual buildup of a new business function, such as an in-house information technology development department. Or, instead, a mass layoff may stem from a decision to outsource a specific business function, such as human resources management, logistics, janitorial maintenance, or even manufacturing. Deciding which business functions to source to outside vendors and which to perform in-house is a critical part of corporate strategy, as companies seek to become more efficient and competitive or address changes in demand for outputs or supply of inputs.

In an attempt to shed more light on how workplaces and industries are changing, a classification system has been developed that describes basic business processes of the firm and the business functions that are associated with them. This system is now being used in the Mass Layoff Statistics (MLS) program to identify the functions and processes involved in job losses from extended mass layoffs. The system, which is now providing new information on the nature of this type of change in establishments and industries, can be applied equally to other measures of employment,

including the current employment structure of a firm, organizational expansions and job growth, and the geographic location of outsourced work. Called Business Processes and Business Functions, the system is based on an approach that is a synthesis derived from existing literature, models of firms' activities, current research on outsourcing and offshoring, the results of a feasibility study of business functions conducted by the BLS MLS program, and the ongoing collection of the relevant information throughout the Nation by the program.

### **Movement of work statistics**

Restructuring and outsourcing of business functions has long been part of the U.S. economic landscape. Companies continually identify strategies to cut costs, become more efficient, expand, and gain access to new markets, among other motivations. As the horizons for moving work have expanded, the offshoring of jobs has become an option that is available to a growing number of employers. Offshoring is often thought to affect only, or at least mainly, manufacturing jobs and production functions. In the early 2000s, however, job losses in information technology and related areas emerged as an important indicator of ongoing change in industries. By 2004, stories on the offshoring of these business functions and the resultant

Sharon P. Brown is Chief, Division of Local Area Unemployment Statistics, Office of Employment and Unemployment Statistics, Bureau of Labor Statistics. E-mail: brown.sharon@bls.gov

job losses in the United States had become a regular topic of debate in the popular media.<sup>1</sup>

As greater attention was placed on a firm's decision to outsource activities, stories also continued about corporate reorganizations and restructurings. These actions were occurring essentially for the same reasons that firms outsource and also involved processes and functions within the company. Companies were consolidating activities, eliminating layers of management, outsourcing some functions, and expanding others internally, to become more efficient and competitive and thereby improve the corporate bottom line.

In order to quantify the anecdotal information on offshoring and outsourcing, the BLS focused on the MLS program, in which monthly and quarterly statistics are collected on plant closings and mass layoffs involving at least 50 workers from businesses employing 50 or more.<sup>2</sup> A set of questions on the movement of work was added to the MLS employer interview to obtain the following data:

- *Job loss associated with outsourcing.* The movement of work to a different company when that work was formerly conducted in-house by employees paid directly by the outsourcing company. The different company can be located inside or outside of the United States. The work may occur at a geographic location different from that of the outsourcing company, or it may remain on-site.
- *Job loss associated with offshoring.* The movement of work from within the United States to a location outside of the Nation. Offshoring can occur either within the same company, when it involves the movement of work to a different location of that company outside of the United States, or to a different company altogether (called *offshoring/outsourcing*).

Statistics on outsourcing and offshoring have been collected by the MLS program since 2004. Job losses associated with the movement of work outside of the United States and that took place for reasons other than seasonal or vacation-related reasons averaged about 2.3 percent of all private nonfarm separations identified by the MLS program over the period 2004–07. Contrary to expectations, job losses associated with the movement of work were not concentrated in industries directly connected to computer and electronic products or information. Also, the majority of this layoff activity was associated with domestic relocation of work, mostly within the company.

If media reporting on offshoring correctly identified an emerging economic phenomenon, one implication of the

MLS statistics on offshoring job losses was that the action involved an activity or function *not* directly associated with the industry designation of the firm. That is, information technology jobs were being moved out of the country, but from firms with other industry designations. An additional impetus for studying business functions came from the high level of activity in domestic relocations. The single most reported reason for these relocations was reorganization within the company. Despite the details collected on the layoff, the employer interview questions did not reveal what was behind these actions and what, in fact, was the affected part of the company.

The traditional classification schemes for identifying industries (the North American Industrial Classification System, or NAICS) and for defining occupations (the Standard Occupational Classification system) are not reflective of the full range of activities of the firm. The industry classification approach is based on the primary activity of the establishment, as measured by the largest number of jobs performing that activity; other important direct and support activities that operate within the firm are not explicitly recognized. Hence, any change in employment is associated with the industry code determined by the main activity, even if the change in activity has nothing to do with it. Looking at the occupational classification reveals that the problem is that the system defines the firm's workers, but lacks a direct tie to the firm's internal organization and decisionmaking. Thus, both industry and occupation provide a limited picture of the dynamic nature of industrial organization and economic change.

As it became clear that companies were using internal organizational schemes in analyzing and implementing employment change that could—and did—involve any part of the corporate structure, a new classification system reflecting these components was needed in order to better understand the nature of changes in employment.

## Describing a firm's activities

Although Federal statistical programs have not collected statistics on business processes or functions, such data have been used in economic studies and, in recent years, have been mentioned in the popular press in stories on globalization, offshoring, and firm restructuring. Academic economists have described a firm's activities theoretically and used the concept of business organization in firm and industry studies. Among such approaches is Michael Porter's *value chain*, which divides a company's technologically and economically distinct activities that it performs to do business into primary activities and support activities.<sup>3</sup> Similarly, George

Yip has described the impact of global competition and technological improvements on the organization of firm activities and industries, and Timothy Sturgeon and Gary Gereffi, coorganizers of the Global Value Chains Initiative, have contributed to the discussion by identifying and distinguishing between core business processes and support activities, using an approach based on the classification scheme developed for the MLS program.<sup>4</sup>

Many offshoring studies and news accounts focused on activities such as software development and data processing, and relocations of call centers and customer services. One such report, prepared by Ursula Huws and Simone Dahlmann, described the following seven functions in which patterns of global outsourcing exist in the European Union: software development; data processing; sales; customer services; creative and content-generating functions, including research, development, and design; financial functions; and management, human resources, and training functions.<sup>5</sup> These functions could not be viewed solely as industries or occupations, because they can, and do, operate within any establishment, irrespective of its industry classification, and they involve a range of occupations. Not only were studies and news accounts discussing offshoring in terms of business functions, but new companies were being created to provide these outsourced functions to employers.

## Business Processes and Business Functions

In order to provide a standard classification approach for use in the MLS program, a set of eight business processes was identified that defines the full range of activities a firm engages in to conduct its business. Within these processes are business functions that describe in greater detail the specific activity that a firm performs in order to produce its product, provide its service, or otherwise achieve its objective. The processes begin with the procurement of inputs and end with those services provided after the sale of the good or service. The eight processes are grouped into core business processes and support business processes. Core business processes relate most directly to the basic business of the firm, with operations representing the key industry activity of the company. Support business processes facilitate core business processes.

*Core business processes.* Following are the five core business processes characterizing any firm:

- *Procurement, logistics, and distribution.* Those activities associated with obtaining and storing inputs,

and storing and transporting finished products to customers.

- *Operations.* Those activities which transform inputs into final outputs, either goods or services.
- *Product or service development.* Activities associated with bringing a new, improved, or redesigned product or service to market. Among these activities are research, marketing analysis, design, and engineering.
- *Marketing, sales, and customer accounts.* Activities aimed at informing existing or potential buyers. These activities include promotion, advertising, tele-marketing, selling, and retail management.
- *Customer and aftersales services.* Support services provided to customers after they purchase the good or service. Such activities include training, help-desk services, call-center services, and customer support for guarantees and warranties.

*Support business processes.* Three support business processes characterize a firm:

- *General management and firm infrastructure.* Corporate governance (legal, finance, planning, and public and government relations), accounting, building services, management, and administrative support.
- *Human resource management.* Activities associated with recruiting, hiring, training, compensating, and dismissing personnel.
- *Technology and process development.* Activities related to maintenance, automation, design or redesign of equipment, hardware, software, procedures, and technical knowledge.

The classification approach used in the MLS program differs slightly from the major models of a firm's activities defined by Porter, on the one hand, and Sturgeon and Gereffi, on the other. The MLS approach identifies *product or service development* as a core business process, whereas Porter includes it under support activities. Also, the MLS scheme includes *procurement* as a core business function, along with *logistics* and *distribution*. By contrast, in Porter's value chain, *procurement* is a separate support activity. As regards the Sturgeon-Gereffi model, *customer and aftersales service* is categorized as a support activity, whereas the BLS

scheme includes it as a core business process. Perhaps the most significant difference in the BLS and Sturgeon-Gereffi conceptual frameworks is the inclusion in the latter, but not the former, of *strategic management* as a core business process.<sup>6</sup> Although Sturgeon and Gereffi's categorization is undoubtedly correct, its relevance to the collection of job losses associated with mass layoffs and plant closings is questionable. Those individuals making up strategic management in a firm would most likely *not* be unemployed and, therefore, filing for unemployment insurance in the event of a layoff or closing—a necessary action for identification by the MLS program. Thus, although *strategic management* is a core business process for the company, it was not identified as a core business process in the BLS MLS approach.<sup>7</sup>

Exhibit 1 describes the full Business Processes and Business Functions system—including strategic management—with examples within each category. The functions are gathered from literature and from recent experience in collecting business functions in the MLS program and are not meant to be definitive or all inclusive. The term “business function” is distinct from both “industry” and “occupation” as a descriptor of the firm. For example, the business functions listed under the process *procurement, logistics, and distribution* include such activities as *buying, loading, and transporting*. These activities are not analogous to industry designations or occupations: within a function, there can be a number of different occupations and a range of skill levels.

To properly classify a business function by the higher level process, it is essential to consider the industry of the employer. Business functions that are performed in order to directly transform inputs into final outputs are classified under the business process *operations*, which, in most cases, corresponds to the production process that is the basis for the establishment's NAICS classification or the activity most directly associated with it. The specific business function (*producing goods of a certain type* or *providing services of a certain type*) depends on whether the establishment is classified as a goods-producing or service-producing establishment in NAICS. Examples of other business functions that are considered *operations* are the *direct supervision* of the activity, *fabricating*, and *assembling*.

It is important to note that a business function which falls into *operations* in one industry can be classified as a different business process in another industry. For example, let *accounting services* be the reported business function in an accounting firm. Then, in this case, the business process for the function is *operations*, because that activity directly relates to the service provided by the company. If, however, the function *accounting services* were reported by a manufacturing company, it would not be considered *op-*

*erations*, but would be classified under *general management and firm infrastructure*.

### MLS feasibility study: business function collection

In advance of the development of the formal structure of the Business Processes and Business Functions system, the BLS conducted a feasibility study of business functions through the MLS program. The program collects important information on extended mass layoffs at large establishments through an interview with the affected employers. The interview includes 15 questions that address the nature of the layoff. For the feasibility study, an open-ended question about the business functions involved in the layoff or closing was added to the employer interview. Among the questions to be answered by this test were the following:

- Would an appropriate individual be found to respond to the business function question?
- Would that person understand the question and the concept of a business function?
- Would the responses be pertinent to business functions?

Ten States participated in the feasibility test as part of their regular MLS employer interview, asking the business function question for all layoff events identified in the State in September and October of 2006. Like regular MLS interviews, the test interviews were conducted by telephone and the employers were not given a copy of the interview questions with response options. Data on business functions involved in layoffs were collected through an open-ended question.

The sequence of the questions used in the interview was viewed as very important in ensuring that the discussion of the layoff event would lead to the concept of “business function.” That is, the layoff or closing was verified, the economic reason for the layoff was provided, and the industry of the establishment was verified, leading to the question about business functions involved in the layoff. The interview questions and objectives leading to the business function question are shown in exhibit 2. (The full set of questions for the employer interview is presented in exhibit 3.)

*Summary of major findings.* The 10 participating States collected business function responses related to 154 extended mass layoff events reported for September and October 2006. In all, 237 business functions were reported.

**Exhibit 1. Classification of business processes with selected business functions****Core business processes**

*Strategic management.* Those activities carried out at the highest managerial levels. Included are the formation, implementation, and evaluation of cross-functional decisions that enable the organization to achieve long-term objectives. Among such operations are the following:

Coordinating activities	Identifying new investments, acquisitions, and divestments
Setting product strategy	

*Procurement, logistics, and distribution.* Those activities associated with obtaining and storing inputs and with storing and transporting finished products to customers:

Buying	Shipping
Distributing	Receiving
Loading	Transporting
Packing	Warehousing

*Operations.* Those activities which transform inputs into final outputs, either goods or services. In most cases, business functions categorized as operations will equate with the industry code of the establishment or the activity most directly associated with that code. The specific function—the production of a good or the provision of a service—will relate to the specific industry. Operations activities are as follows:

Assembling products	Managing production
Producing goods	Managing services
Providing services	Conducting quality assurance or quality control
Fabricating components	

*Product or service development.* Activities such as the following, associated with bringing a new, improved, or redesigned product or service to market (many of these activities are research, marketing analysis, design, and engineering activities):

Developing business plans	Developing products or services
Analyzing markets	Researching products or services
Designing products or services	Testing

*Marketing, sales, and customer accounts.* Activities aimed at informing existing or potential buyers (many of these activities are promotion, advertising, telemarketing, selling, and retail management activities):

Advertising	Conducting market research
Managing accounts	Coordinating media relations
Billing	Merchandizing
Branding or managing products	Processing orders
Collecting payments	Selling
Marketing	Telemarketing

*Customer and aftersales service.* Activities, including training, help desks, call centers, and customer support for guarantees and warranties, that provide support services to customers after purchase of the good or service:

Offering call center services	Maintaining and repairing products
Providing customer relations	Providing technical support
Providing customer service or support	Providing warranty support
Installing products	

**Support business processes**

*General management and firm infrastructure.* Corporate governance (legal, finance, planning, and public and government relations), accounting, building services, management, and administrative support activities:

Accounting	Managing fraud
Providing administrative support	Providing general management
Providing cafeteria services	Managing government relations
Providing clerical support	Providing housekeeping services
Managing contracts	Providing investor relations

**Exhibit 1. Continued—Classification of business processes with selected business functions**

Managing documents Providing facility or maintenance services Managing finances	Providing legal and regulatory support Planning Maintaining security
<i>Human resources management.</i> Activities associated with recruiting, hiring, training, compensating, and dismissing personnel:	
Providing employee assistance Managing human resources Offering labor relations services Managing payroll and compensation	Hiring and firing personnel Recruiting Training
<i>Technology and process development.</i> Activities related to maintenance, automation, design or redesign of equipment, hardware, software, procedures, and technical knowledge:	
Developing computer systems Maintaining or repairing computer systems Managing data Processing data Engineering	Providing Internet services Designing processes Developing and testing software Providing software and information technology services

The function most reported fell under the business process *operations*. This result was expected for the MLS program, because the program focuses on relatively large layoffs (50 or more workers) at relatively large firms (employing 50 or more), and the firm has the largest number of its workers involved in operations.

The new question on business functions worked well. The States reported little difficulty in finding a knowledgeable respondent. Relatively few respondents had difficulty answering the question, thus supporting the assumption that the concept of a business function had meaning and applicability for them. Most employers provided the names of one or more business functions in their immediate response to the question. The study did identify areas where clarification and guidance were needed. For example, it was necessary to ensure that information on *all* business functions involved in the layoff, and not just the main function, was collected. Also, during the test, probes were developed for use when the employer responded with occupations instead of business functions.

On the basis of the feasibility study results, the collection of data on business functions in the MLS program in all States began with mass layoffs and closings reported for the first quarter of 2007.

**Functions and processes in the MLS program**

Since the January 2007 implementation of the system, State analysts have collected data on business functions

involved in extended mass layoffs (those lasting more than 30 days) as part of the employer interview, and since June 2007, they have coded those functions to higher level business processes. Analysis of the performance of the system over the first year indicates no significant issues on the part of either the employers interviewed or the data collectors. (See table 1.)

Asking employers about business functions has not adversely affected either the interview or the response rate. In 2007, a total of 14,046 employers were contacted because administrative data on unemployment insurance claims indicated that a layoff occurred. Extended layoffs and closings were identified for 5,364 private employers in nonfarm industries. Employers refused to participate in an interview in well below 5 percent of events. “Do not know” responses to the business function question remained low, indicating that the correct person is being reached for the interview and that most respondents in fact think in terms of business functions. The number of employers that the interviewer was unable to contact was relatively high and likely reflects total closure of the establishment by the time contact was made.

In order to preclude the analysts’ influencing results by having them interpret the business functions cited by employers, responses are reported as stated. This approach results in variations in the words used to identify the business function. (As an example, the following terms were among those reported to describe construction activities: construction, constructing, road construction, construc-

**Exhibit 2. Selected Mass Layoff Statistics survey employer interview questions leading to business functions involved in the layoff event**

Wording of question	Objective of question
<p>1. <b>Based on our unemployment insurance claims records, we believe that you may have had a (layoff/reduction in staff) during (month). Is that true?</b></p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> Valid No (Probe: Do you know why these unemployment claims were filed against your company? Enter explanation. End interview.)</p> <p><input type="checkbox"/> Don't know (Ask for another contact)</p> <p><input type="checkbox"/> Refusal</p>	<p>To determine whether a layoff occurred at the establishment or worksite. (An example of a "valid no" is the filing of 50 or more initial claims throughout the State, but not all of them at the same worksite.)</p>
<p>2. a. <b>When did that layoff begin?</b> _____</p> <p>b. <b>When did you stop laying off workers?</b> _____</p>	<p>For data-editing purposes, to obtain the dates that the employer started and stopped laying off workers in this event.</p>
<p>3. <b>Were workers laid off for more than 30 days?</b></p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>To establish whether the layoff meets the criterion of permanency—that is, an extended event. If so, then the analyst proceeds to ask further questions. If not, the interview ends.</p>
<p>4. <b>About how many workers were laid off for more than 30 days?</b> (Probe: If there is a big gap between the number of initial claims and the number of separations)</p> <p>Number: _____</p> <p><input type="checkbox"/> Don't Know/INA<sup>1</sup></p>	<p>To ascertain the number of workers affected (that is, separated). If the number is less than 50, then the event is out of the scope of the survey.</p>
<p>5. <b>What was the primary reason for the job cutbacks?</b></p> <p><input type="checkbox"/> Don't Know/INA<sup>1</sup></p> <p>Primary: _____</p> <p>Secondary: _____</p>	<p>To obtain the primary economic reason(s) for the layoff and, if possible, any secondary reason(s).</p>
<p>6. <b>What kind of business is conducted at the worksite that experienced the layoffs?</b> (Probe: What product do you manufacture or what service do you provide at that location?)</p> <p>Industry: _____</p> <p><input type="checkbox"/> Don't Know/INA<sup>1</sup></p>	<p>To verify the NAICS code of the worksite.</p>
<p>7. <b>Regarding the workers who were laid off, what was their main role or function within the company? For example, were they in manufacturing, sales, personnel, computer support, or something else?</b> (Probe: In addition to [function mentioned], were any of the employees affected by the layoff involved in other activities of the firm, such as clerical support, warehousing, or sales?)</p> <p>Main: _____</p> <p>Other: _____</p>	<p>To ascertain the business functions involved in the layoff, including the main function.</p>

<sup>1</sup> INA = "is not available."

**Exhibit 3. Employer Interview script**

Employer Name:  
 UI Account No.:  
 Address:  
 Layoff Event ID#:  
 Layoff Quarter:  
 Trigger Week:  
 Contact Name/Phone Number:

O.M.B. No. 1220-0090  
 Approval Expires  
 Jan 31, 2009

Cover these points in your introduction:

- Introduce yourself, and the office you are calling from.
- Explain why you are calling.
- Summarize key points of confidentiality pledge. If asked, give 1220-0141 as the OMB clearance number.
- Explain that this data collection is voluntary, and it will only take a few minutes

**Question about the layoff**

1. **Based on our unemployment insurance claims records, we believe that you may have had a (layoff/reduction in staff) during (month). Is that true?**

- Yes
- Valid No → (Probe: Do you know why these unemployment claims were filed against your company? Enter explanation. End interview.)
- Don't know → (Ask for another contact)
- Refusal

2. **a. When did that layoff begin?** \_\_\_\_\_  
**b. When did you stop laying off workers?** \_\_\_\_\_

3. **Were workers laid off for more than 30 days?**

- Yes
- No

4. **About how many workers were laid off for more than 30 days?** (Probe: If there is a big gap between the number of initial claims and the number of separations)

Number: \_\_\_\_\_  
 Don't Know/INA<sup>1</sup>

5. **What was the primary reason for the job cutbacks?**

Don't Know/INA<sup>1</sup>  
 Primary: \_\_\_\_\_  
 Secondary: \_\_\_\_\_

6. **What kind of business is conducted at the worksite that experienced the layoffs?** (Probe: What product do you manufacture or what service do you provide at that location?)

Industry: \_\_\_\_\_  
 Don't Know/INA<sup>1</sup>

7. **Regarding the workers who were laid off, what was their main role or function within the company? For example, were they in manufacturing, sales, personnel, computer support, or something else?** (Probe: In addition to [function mentioned], were any of the employees affected by the layoff involved in other activities of the firm, such as clerical support, warehousing, or sales?)

Main: \_\_\_\_\_  
 Other: \_\_\_\_\_

8. **In which county is the worksite located?**

County: \_\_\_\_\_  
 Layoffs occurred at more than one worksite and county

9. **Just prior to the layoff, what was the total number of employees at this worksite, counting both hourly and salaried workers (an estimate is okay)?**

Number: \_\_\_\_\_  
 Don't Know/INA<sup>1</sup>

See footnote at end of exhibit.

**Exhibit 3. Continued—Employer Interview script**

10. During the cutbacks/layoff, has your worksite remained completely open, partially open, or has it shut down completely?

- Open, no change in operating status
- Open, divisions stopped or shifts cut
- Partial closure of single-unit establishment
- Closed, entire worksite(s)
- Closed, entire establishment
- Long-term work completed offsite
- Don't know/INA

11. Will there be a recall of workers, and, if so, what percent will return to work?

- Yes, enter percent: \_\_\_\_\_ (and check box)
  - 100%
  - 50–99%
  - Up to 50%
  - Don't know
- No → Skip to Question 13
- Don't know (ask for another contact) → 13

12. What is the anticipated return date for those who were separated?

Date: \_\_\_\_\_ (and enter range)

- Less than 90 days
- 90–180 days
- 181–270 days
- 271–364 days
- 365 or more days
- Don't know/INA<sup>1</sup>

**Questions about Movement of Work**

Do not ask Questions 13–14, if:

- Reason for layoff was seasonal or vacation
- Layoff was temporary (30 days or less)

13. a. Did this layoff include moving work from this worksite to a different geographic location within your company?

- Yes → Ask 13b
- No → Go to 14a
- Don't know → Go to 14a

b. Is the other location inside or outside the U.S.?

- Don't know/INA<sup>1</sup>
- Inside U. S. → In what State(s)?  
\_\_\_\_\_
- Outside U.S. → In which country(ies)?  
\_\_\_\_\_

c. Of the total number of workers laid off, how many were laid off because your company moved work to this new location? (an estimate is okay)

Don't know/INA<sup>1</sup>

Number inside U.S. \_\_\_\_\_

Enter State(s) & No: \_\_\_\_\_

Number outside U.S. \_\_\_\_\_

Enter Country(ies) & No: \_\_\_\_\_

14. a. Did this layoff include moving work that was conducted in-house by your employees to a different company, through contractual arrangement?

- Yes → Ask 14b
- No → Go to 15
- Don't know → Go to 15

b. Is that company located inside or outside of the U.S.?

Don't know/INA<sup>1</sup>

Inside U. S. → In what State(s)?  
\_\_\_\_\_

Outside U.S. → In which country(ies)?  
\_\_\_\_\_

c. Of the total number of workers laid off, how many were laid off because your company moved work to a different company? (an estimate is okay)

Don't know/INA<sup>1</sup>

Number inside U.S. \_\_\_\_\_

Enter State(s) & No: \_\_\_\_\_

Number outside U.S. \_\_\_\_\_

Enter Country(ies) & No: \_\_\_\_\_

15. Thank you very much. Let me be sure I have all of your information correct just in case I need to get back to you at a later date. Can you tell me your name, job title, and phone number?

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Direct telephone number: \_\_\_\_\_

See footnote at end of exhibit.

**Exhibit 3. Continued—Employer Interview script**

**Summary Information**

**Layoff Status (check one)**

- Temporary:* Layoff less than 31 days
- Permanent/Extended:* Layoff included at least 50 separations and lasted more than 30 days
- Closure:* One or more worksites closed or entire establishment closed
- No Layoff:* Employer indicates that there was no layoff or that separations were either voluntary (e.g., quits, retirements, transfers to other locations in company) or involuntary (e.g., firings due to employee misconduct, failure to perform duties).

**Employer Contact Status (check one)**

- Contact completed
- Contact incomplete
- Refused to provide any information

**Additional Contact Persons**

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Direct telephone number:

Name:

Job Title:

Direct telephone number:

Name:

Job Title:

Direct telephone number:

**Comments:**

<sup>1</sup> INA = "is not available."

tion activity, construction activities.) In the first quarter, 487 terms were used to report 1,862 business functions. Twenty-eight of those terms were used 10 or more times, accounting for 1,113 business functions, 60 percent of the total reported. (See table 2.)

Guidance was provided to analysts in an attempt to standardize terms for a number of functions and eliminate overly detailed functions. For the second through fourth quarters, about three-quarters of the business functions reported were associated with terms used 10 or more times.

The standardization effort focused on business func-

tions that frequently appear in a firm, such as administrative support, clerical support, construction activities, general management, food services, and lodging services. Exhibit 4 lists some standardized nomenclature for reported business functions. In some instances, the functions reported (for example, dishwashers and electricians) were overly detailed, approximating occupations. In industries such as construction, the activities reported were closely aligned to the industry. In providing guidance to the analysts conducting the employer interview, an attempt was made to standardize the level of detail and the reported activity where appropriate.

**Table 1. Total mass layoff events, selected measures, 2007, by quarter**

Action	First quarter	Second quarter	Third quarter	Fourth quarter
Total potential mass layoff events.....	3,139	3,289	3,025	4,593
Total private nonfarm extended layoff events .....	1,110	1,421	1,019	1,814
Events with business function responses .....	977	1,297	884	1,587
Does not know.....	9	6	15	51
Refused (entire event) .....	49	49	43	54
Unable to contact .....	75	69	77	122

Exhibit 5 displays the business functions reported in extended layoff events for the third and fourth quarters of 2007 (as reported in early 2008), loosely grouped by business process and without regard to the industry of the establishment experiencing the layoff. As an example, functions that involve the provision of services are grouped together. From the business process perspective, and as previously described, it is important to recognize that any one of the listed business functions can represent either *operations* of the establishment (if the function directly represents the industry code) or a non-*operations* process. For example, the 30 business functions reported in the third quarter as *accounting services* may represent *operations* from accounting firms or *general management and firm infrastructure* if the accounting functions were associated with firms from other industries.

Fifty-five business functions are identified in the exhibit, based on functions specifically cited by employers and those which could easily be associated with the stated function. Out of 1,666 functions reported in the third quarter, 1,528 were grouped into these standard functions. For the 2,325 business functions reported in the fourth quarter, 2,075 were so categorized. Taking into account those instances in which the employer did not know the affected function, analysts were able to assign more than 90 percent of the reported functions to these standard functions each quarter.

About 25 percent of the 1,666 functions reported in the third quarter were associated with the production of goods and with construction activities. The provision of services accounted for nearly the same proportion of functions. Of interest during this quarter were reports of functions likely associated with the housing and mortgage downturn—that is, those involving *real estate, lending (including mortgage), financial, and banking services*. Also in this quarter were layoffs associated with *educational services*, as schools closed for the summer. Functions considered under the *procurement, logistics, and distribution* process accounted for about 12 percent of reported activity, with some of those grouped as *transporting* also reflecting school closings. In the fourth quarter, 28 percent of the

2,325 functions that were reported involved extended layoffs associated with *construction* functions, reflecting the seasonal slowdown in that activity. *Landscaping services* functions also were related to the time of year.

### Identifying the business process

Business process identification involves categorizing the specific business function into one of the eight processes previously described and used in the MLS program. The first step is determining whether the business function is part of *operations* for the establishment. This key categorization hinges on the relationship of the function to the industry of the establishment. As previously described, in most cases, when a business function is identified as part of *operations*, it is because it corresponds to the production process that is the basis for the establishment's NAICS classification or to the activity most directly associated with that classification. The specific business function depends on whether the establishment is classified as a goods-producing or service-producing establishment in NAICS. (Other business functions, such as the direct management of the specific services or production, also are classified under *operations*.)

A business function that is classified under *operations* for one establishment can be correctly classified as a different business process for another establishment, depending on the industry of the establishment. The business function *warehousing* provides an example: if the job loss associated with this business function occurred in an establishment identified as a warehouse, then the process involved would fall under *operations*; however, if the function was reported by a manufacturing establishment, then the process involved was *procurement, logistics, and distribution*.

It is important to recognize that the MLS-identified establishment and its industry designation are from QCEW data used to administer the unemployment insurance program in a particular State. Industry classification is based on the majority (or plurality) of the work the firm reports that it performs in that State. In the case of firms with multiple establishments in the State, all locations will

**Table 2. Business function terms and responses, 2007**

Quarter	Unique business function terms		Business function terms with 10 or more responses	
	Number	Total business functions	Number	Total business functions
First.....	487	1,862	28	1,113
Second.....	302	2,350	33	1,815
Third.....	218	1,666	30	1,307
Fourth.....	288	2,445	35	1,977

NOTE: Table excludes responses of "don't know" and "is not available" to the business function question.

reflect the activity of the majority of employment in the State.

If the establishment identified by the MLS program as having a layoff event is part of a larger corporate entity located outside of the State and with an industry designation different from that of the establishment, then the business processes determined from the business functions that take place at the worksite will not relate to that larger corporate entity. An example is retail outlets of a manufacturing company. If the State has only the retail stores, and not the parent manufacturing firm, then layoffs at those stores involving the business function *selling* would be identified as *operations*, because the industry is retail sales. However, relating the business function to the industry of the larger corporate entity located in another State would place the function under the business process *marketing, sales, and customer accounts*. Thus, the MLS program may categorize an inflated number of business functions as *operations*, because the industry identification of the establishment may reflect neither the firm's position in the corporate structure nor corporate actions.

### 2007 analysis of MLS business processes

In 2007, the MLS program reported on 5,364 extended mass layoff events involving the separation of 966,526 workers.<sup>8</sup> During this period, the collection of data on business functions involved in layoffs was implemented, as was the coding of these functions to higher level business processes. As previously noted, the early collection was important not only for providing the initial, nationwide data on this activity, but also for identifying areas in which guidance was needed and automation would improve both collection and analysis. The discussion that follows focuses primarily on business processes because of

refinements that were made to business functions in the early stages of data collection in 2007.

In 2007, employers reported a total of 8,323 business functions involved in 5,364 layoff events. When multiple business functions were cited in responses, the employer was asked to identify the main business function, on the basis of the largest number of jobs lost. The business functions were assigned to 6,679 business processes. (See table 3.) A single business process can reflect multiple business functions involved in a layoff. Over the year, 67 percent of mass layoff events involved only one process, but that proportion may reflect collection issues that arose in the first quarter and may change as interviewers become more familiar with the concepts and situations that apply. Almost 21 percent of events involved between 2 and 5 business processes. On average, the typical layoff involved 1.4 business processes.

Core business processes dominated in the reporting of layoff activity. *Operations* accounted for the majority of processes involved in layoffs: sixty-seven percent of all processes reported, and 94 percent of the main process reported, reflected one or more business functions categorized as *operations*. This is not an unusual finding for a program that looks at relatively large layoff events. Also, significant shares of mass layoffs are due to seasonal reasons and contract completions, activities typically associated with business functions that would be categorized as *operations* for the affected firms.

In layoffs involving more than one business process, there was a greater likelihood that some business functions other than *operations* that were involved in the layoff would be categorized as support processes rather than core processes. Excluding the main business process associated with the layoff, over the year, 58 percent of business processes other than the main one of the layoff were support processes, with 41 percent involved with *general management and firm infrastructure* and 10 percent with *human*

**Exhibit 4. Examples of standardized business functions for similar activities and levels of detail**

<p><b>Construction services</b></p> <ul style="list-style-type: none"> <li>Bricklaying</li> <li>Carpentry</li> <li>Concrete pouring/ finishing</li> <li>Demolition</li> <li>Ditch digging</li> <li>Electrical</li> <li>Flagging</li> <li>General labor</li> <li>Ironwork</li> <li>Painting</li> <li>Pipefitting</li> <li>Plumbing</li> <li>Road construction</li> <li>Roofing</li> <li>Welding</li> </ul>	<p><b>Food services</b></p> <ul style="list-style-type: none"> <li>Banquet and catering services</li> <li>Bussing tables</li> <li>Cashier services</li> <li>Dining room service</li> <li>Dishwashing</li> <li>Hosting</li> <li>Restaurant operations</li> <li>Room service</li> <li>Waiting tables/serving</li> </ul> <p><b>Clerical support</b></p> <ul style="list-style-type: none"> <li>Answering phones</li> <li>Clerical services</li> <li>Filing</li> <li>Front-office clerical</li> <li>Scheduling</li> <li>Typing</li> </ul>	<p><b>Lodging services</b></p> <ul style="list-style-type: none"> <li>Bellman services</li> <li>Concierge</li> <li>Front desk, check in/out</li> <li>Guest services</li> </ul> <p><b>Entertainment services</b></p> <ul style="list-style-type: none"> <li>Christmas events staff</li> <li>Gambling services</li> <li>Guides</li> <li>Music production</li> <li>Sports production</li> </ul> <p><b>Facility maintenance services</b></p> <ul style="list-style-type: none"> <li>Building maintenance</li> <li>Facility services</li> <li>Groundskeeping</li> <li>Janitorial services</li> </ul>
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*resource management.* Core processes other than *operations* also played significant roles as secondary processes in layoffs. Nineteen percent of secondary business processes were identified as *procurement, logistics, and distribution*, followed by *customer and aftersales service* (9 percent) and *marketing, sales, and account management* (9 percent).

*Open and closed status.* During the January–December period, nearly 72 percent of the 4,745 layoff events reported no change in the worksite status, while 5 percent of the events involved full closure of the employer (without regard to recall expectations). Partial closures (for example, closures of worksites, divisions, or shifts) accounted for 22 percent of the events.

When the worksite status was not affected by the layoff, the distribution of main business processes involved was virtually identical to the total layoff distribution, with *operations* dominating. When worksites closed, the representation of support processes and of core processes other than *operations* rose significantly.

*Industry distribution of extended layoffs.* During 2007, manufacturing industries accounted for 25 percent of private nonfarm layoff events and separations. The largest concentrations were in transportation equipment and food manufacturing, followed by computer and electrical products. As regards nonmanufacturing sectors, 25 percent of all events were from construction, involving 16 percent of all separations over the period. Other signifi-

cant contributors to layoff activity included the retail trade and transportation and warehousing.

Among manufacturing industries, *operations* was reported to be the main business process for 95 percent of layoff events, about the same percentage as in all industries. However, these industries had a greater-than-average representation of secondary processes involved in the layoff. They also reported higher proportions of processes identified as *procurement, logistics, and distribution* and *product development*, as well as *human resource management* and *technology and process development*, than the proportion for all reported layoff events. (See tables 4 and 5.)

Both wholesale and retail trade reported lower proportions of events with *operations* as the main business process, but higher proportions with *marketing, sales, and account management*. The wholesale and retail sectors also reported high representations of secondary business processes, especially in *procurement, logistics, and distribution* and in *marketing, sales, and account management*.

As with most events, layoffs in the transportation and warehousing sector involved *operations* as the main business process. This sector had relatively higher representations of secondary support processes involved with *general management and firm infrastructure* and with *human resource management*.

In finance and insurance, the proportion of events in which *operations* was identified as the main business process was only slightly below that of all layoffs. With regard

**Exhibit 5. Number of business functions reported in extended mass layoffs, third and fourth quarters, 2007**

Business function	Quarter		Business function	Quarter	
	Third	Fourth <sup>1</sup>		Third	Fourth <sup>1</sup>
Total .....	1,666	2,325			
Construction activities .....	175	660	Buying .....	7	5
Producing goods.....	244	332	Distributing .....	11	26
Accounting services.....	30	24	Loading .....	12	7
Banking services.....	6	1	Logistics .....	2	5
Cafeteria services.....	4	2	Packing .....	9	12
Conference services .....	12	14	Receiving.....	2	6
Contracted services .....	11	13	Shipping.....	28	20
Educational services .....	41	9	Transporting.....	84	67
Engineering services .....	20	18	Warehousing.....	44	49
Entertainment services.....	22	30	Administrative support.....	61	65
Facility maintenance services .....	22	25	Business management.....	10	6
Financial services .....	17	18	Clerical support .....	80	66
Food services .....	41	46	Management .....	86	84
Health care services.....	11	6	Planning .....	3	0
Housekeeping services .....	6	15	Human resources.....	55	36
Landscaping services.....	0	48	Payroll/compensation .....	4	7
Lending services .....	25	10	Account management.....	8	11
Lodging services .....	5	19	Call center .....	3	7
Maintenance/repair services.....	41	43	Customer service .....	43	39
Providing services.....	8	13	Installing.....	11	6
Real estate services .....	58	29	Marketing.....	16	19
Social services.....	14	0	Merchandising.....	0	3
Software and IT services.....	18	18	Processing orders .....	3	10
Assembly.....	8	8	Selling.....	61	79
Fabricating .....	2	5	Telemarketing.....	1	5
Quality control/assurance.....	12	8	Business process responses	20	16
First-line supervision .....	20	11	No response	23	246
Development/design of products/services .....	6	5	Unassigned functions	95	210
Research products/services.....	5	3			
Testing .....	0	2			

<sup>1</sup> Data are based on information received through March 2008.

to secondary processes involved in the layoff, of all industry groups, the finance and insurance sector had higher-than-average reporting of *marketing, sales, and account management* (along with wholesale trade and arts, entertainment, and recreation) and *customer and aftersales service*.

*Economic reasons for layoff.* Among the seven categories of economic reasons for a layoff, seasonal reasons accounted for 35 percent of the 5,364 layoff events and 364,225 separations over 2007. Business demand reasons followed, with 35 percent of events and 248,055 affected workers. Job losses associated with financial issues (bankruptcy, cost

control or cost cutting, or financial difficulty) accounted for nearly 9 percent of events and 102,362 separations. Organizational changes (business ownership change and reorganization or restructuring) were cited in more than 7 percent of events, involving 124,175 workers. Reorganization or restructuring accounted for the majority of these events, but business ownership change involved the majority of the separations.

Although the average layoff event involved 1.4 business processes, layoffs associated with organizational changes and financial reasons reported 2 or more processes involved. Layoffs due to these reasons were more

**Table 3. Total, main, and secondary business processes involved in extended mass layoffs, 2007**

Business processes in Mass Layoff Statistics layoff events	Total	Main	Secondary
Total business processes identified.....	6,679	4,745	1,934
Core processes.....	5,437	4,619	818
Procurement, logistics, and distribution .....	442	67	375
Operations.....	4,487	4,442	45
Product development.....	61	17	44
Marketing, sales, and account management.....	230	59	171
Customer and aftersales service.....	217	34	183
Support processes.....	1,242	126	1,116
General management and firm infrastructure.....	886	90	796
Human resources management.....	229	26	203
Technology and process development.....	127	10	117

likely to report secondary support processes affected. In fact, other than the small number of events associated with disaster and safety, the highest proportions of *human resource management* as secondary support processes were associated with organizational changes and financial reasons. Business ownership changes were less likely to involve *operations* as the main process and more likely to involve a secondary support process, particularly *human resource management*. (See tables 6 and 7.)

*Movement of work.* Movement of work accounted for 8 percent of the 3,484 extended mass layoff events (excluding those which took place for reasons other than seasonal or vacation-related reasons) and 8 percent of the associated separations. Of the 4,745 extended layoff events for which business functions were provided, 264 involved the movement of work; these 264 events involved the movement of work to other U.S. locations or to locations outside of the United States, and the movement occurred either within the same company or to other companies. A large majority (88 percent) of these actions involved moving work within the company, and most (71 percent) were domestic relocations.

When layoffs were associated with the domestic relocation of work, *operations* was cited as the main business process in 87 percent of events, compared with 94 percent when work left the United States. Secondary

business processes involved when work was geographically relocated were heavily weighted toward support processes. For relocations within the United States, *general management and firm infrastructure* accounted for 41 percent of secondary processes reported in domestic relocations, followed by *procurement, logistics, and distribution* (19 percent) and *human resource management* (16 percent). Proportions for out-of-country moves were similar.

*Operations* was the main business process cited when work moved within the company (91 percent of events) and when work was moved to another company (84 percent of events). Secondary business processes were concentrated in support processes for both internal company moves and moves to another company and were generally similar.

THE CLASSIFICATION APPROACH of the BLS Business Processes and Business Functions system is a viable way of describing the establishment and its employment. The development and use of standardized business functions points to the greater potential of analyzing economic events at this detailed level. Despite the limitations imposed by the first year of data collection, the Business Processes and Business Functions system applied to extended mass layoffs provides interesting and timely insights into firms' decisions and how they are reflected in plant-closing and mass layoff data. □

**Table 4. Percentage of main and secondary business processes affected in extended mass layoff events, by industry, core processes, 2007**

Industry	Total business processes	Core processes					
		Total	Procurement, logistics, and distribution	Operations	Product development	Marketing, sales, and account management	Customer and aftersales service
Total, main .....	4,745	97.3	1.4	93.6	0.4	1.2	0.7
Accommodation and food services.....	264	95.8	.4	94.7	.0	.0	.8
Administrative and waste services .....	297	94.9	.3	91.9	.0	1.7	1.0
Arts, entertainment, and recreation.....	135	93.3	.0	88.1	.7	.7	3.7
Construction .....	1,296	99.5	.0	99.3	.1	.2	.0
Educational services.....	24	79.2	.0	75.0	.0	.0	4.2
Finance and insurance .....	271	94.5	.0	87.8	.0	5.2	1.5
Health care and social assistance .....	241	97.9	.4	95.9	.0	.4	1.2
Information .....	60	85.0	.0	71.7	5.0	5.0	3.3
Management of companies and enterprises.....	25	84.0	24.0	40.0	.0	12.0	8.0
Manufacturing .....	1,225	98.5	1.9	95.0	1.0	.3	.3
Mining .....	37	100.0	.0	100.0	.0	.0	.0
Other services, except public administration .....	84	97.6	2.4	95.2	.0	.0	.0
Professional and technical services .....	138	92.8	1.4	87.7	.0	2.2	1.4
Real estate and rental and leasing.....	17	100.0	.0	88.2	.0	11.8	.0
Retail trade .....	235	95.7	5.1	81.7	.0	7.7	1.3
Transportation and warehousing.....	304	98.4	4.3	93.4	.0	.0	.7
Utilities .....	9	88.9	.0	88.9	.0	.0	.0
Wholesale trade.....	80	98.8	7.5	86.3	.0	3.8	1.3
Unclassified .....	3	100.0	.0	100.0	.0	.0	.0
Total, secondary.....	1,934	42.3	19.4	2.3	2.3	8.8	9.5
Accommodation and food services.....	81	25.9	3.7	3.7	.0	8.6	9.9
Administrative and waste services .....	48	37.5	14.6	2.1	.0	6.3	14.6
Arts, entertainment, and recreation.....	58	56.9	8.6	8.6	1.7	22.4	15.5
Construction .....	83	47.0	24.1	1.2	1.2	12.0	8.4
Educational services .....	10	10.0	.0	.0	.0	10.0	.0
Finance and insurance .....	232	38.4	1.3	1.3	.0	17.2	18.5
Health care and social assistance .....	128	32.0	28.1	1.6	.0	.8	1.6
Information .....	36	36.1	5.6	.0	5.6	13.9	11.1
Management of companies and enterprises.....	20	40.0	15.0	10.0	.0	15.0	.0
Manufacturing .....	809	42.2	24.8	2.0	4.4	5.6	5.3
Mining .....	11	18.2	18.2	.0	.0	.0	.0
Other services, except public administration .....	41	48.8	43.9	2.4	.0	2.4	.0
Professional and technical services .....	60	36.7	11.7	3.3	.0	10.0	11.7
Real estate and rental and leasing.....	5	40.0	.0	.0	20.0	.0	20.0
Retail trade .....	183	62.8	25.7	2.7	1.1	10.4	23.0
Transportation and warehousing.....	62	27.4	8.1	3.2	.0	4.8	11.3
Utilities .....	1	100.0	.0	100.0	.0	.0	.0
Wholesale trade.....	62	53.2	24.2	1.6	1.6	21.0	4.8
Unclassified .....	4	50.0	25.0	.0	.0	25.0	.0

**Table 5. Percentage of main and secondary business processes affected in extended mass layoff events, by industry, support processes, 2007**

Industry	Total business processes	Support processes			
		Total	General management and firm infrastructure	Human resources management	Technology and process development
Total, main .....	4,745	2.7	1.9	0.5	0.2
Accommodation and food services.....	264	4.2	3.8	.4	.0
Administrative and waste services .....	297	5.1	2.7	2.4	.0
Arts, entertainment, and recreation.....	135	6.7	6.7	.0	.0
Construction .....	1,296	.5	.4	.0	.1
Educational services.....	24	20.8	20.8	.0	.0
Finance and insurance .....	271	5.5	4.8	.4	.4
Health care and social assistance.....	241	2.1	.8	.4	.8
Information .....	60	15.0	.0	13.3	1.7
Management of companies and enterprises.....	25	16.0	16.0	.0	.0
Manufacturing .....	1,225	1.5	1.1	.2	.2
Mining .....	37	.0	.0	.0	.0
Other services, except public administration .....	84	2.4	2.4	.0	.0
Professional and technical services .....	138	7.2	4.3	2.9	.0
Real estate and rental and leasing .....	17	.0	.0	.0	.0
Retail trade .....	235	4.3	3.8	.0	.4
Transportation and warehousing.....	304	1.6	1.0	.7	.0
Utilities .....	9	11.1	.0	.0	11.1
Wholesale trade.....	80	1.3	.0	.0	1.3
Unclassified .....	3	.0	.0	.0	.0
Total, secondary.....	1,934	57.7	41.2	10.5	6.0
Accommodation and food services.....	81	74.1	65.4	7.4	1.2
Administrative and waste services .....	48	62.5	45.8	10.4	6.3
Arts, entertainment, and recreation.....	58	43.1	41.4	1.7	.0
Construction .....	83	53.0	42.2	6.0	4.8
Educational services.....	10	90.0	30.0	30.0	30.0
Finance and insurance .....	232	61.6	46.6	8.2	6.9
Health care and social assistance.....	128	68.0	58.6	7.8	1.6
Information .....	36	63.9	47.2	11.1	5.6
Management of companies and enterprises.....	20	60.0	45.0	5.0	10.0
Manufacturing .....	809	57.8	36.5	13.0	8.4
Mining .....	11	81.8	36.4	18.2	27.3
Other services, except public administration .....	41	51.2	48.8	2.4	.0
Professional and technical services .....	60	63.3	46.7	10.0	6.7
Real estate and rental and leasing .....	5	60.0	60.0	.0	.0
Retail trade .....	183	37.2	26.8	7.7	2.7
Transportation and warehousing.....	62	72.6	48.4	22.6	1.6
Utilities .....	1	.0	.0	.0	.0
Wholesale trade.....	62	46.8	30.6	11.3	4.8
Unclassified .....	4	50.0	50.0	.0	.0

**Table 6. Percentage of main and secondary business processes affected in extended mass layoff events, by reason for layoff, core processes, 2007**

Reason	Total business processes	Core processes					
		Total	Procurement, logistics, and distribution	Operations	Product development	Marketing, sales, and account management	Customer and aftersales service
Total, main .....	4,745	97.3	1.4	93.6	0.4	1.2	0.7
Business demand .....	1,842	97.9	.9	94.9	.5	1.0	.7
Contract cancellation .....	70	100.0	2.9	91.4	.0	.0	5.7
Contract completion.....	882	98.2	.1	97.4	.6	.0	.1
Domestic competition .....	15	93.3	.0	93.3	.0	.0	.0
Excess inventory or saturated market .	36	100.0	.0	100.0	.0	.0	.0
Import competition.....	71	100.0	.0	100.0	.0	.0	.0
Slack work, insufficient demand, or nonseasonal business slowdown..	768	97.3	1.8	91.7	.5	2.3	.9
Organizational changes.....	386	91.7	2.8	81.1	1.0	4.9	1.8
Business ownership change.....	96	87.5	3.1	77.1	2.1	4.2	1.0
Reorganization or restructuring of company.....	290	93.1	2.8	82.4	.7	5.2	2.1
Financial issues.....	444	96.6	1.8	90.5	.5	2.5	1.4
Bankruptcy .....	64	96.9	1.6	92.2	.0	1.6	1.6
Cost control, cost cutting, or increased profitability .....	170	94.7	3.5	84.1	1.2	2.9	2.9
Financial difficulty .....	210	98.1	.5	95.2	.0	2.4	.0
Production specific.....	82	93.9	2.4	87.8	.0	1.2	2.4
Disaster or safety related.....	32	100.0	3.1	96.9	.0	.0	.0
Seasonal .....	1,861	98.1	1.5	95.7	.1	.5	.4
Other or miscellaneous.....	98	100.0	1.0	96.9	1.0	1.0	.0
Total, secondary.....	1,934	42.3	19.4	2.3	2.3	8.8	9.5
Business demand .....	498	42.0	19.5	3.2	4.4	7.6	7.2
Contract cancellation .....	43	39.5	9.3	4.7	2.3	11.6	11.6
Contract completion.....	59	30.5	13.6	6.8	1.7	3.4	5.1
Domestic competition .....	13	46.2	30.8	.0	7.7	.0	7.7
Excess inventory or saturated market .	30	53.3	30.0	.0	6.7	13.3	3.3
Import competition.....	108	39.8	25.9	.0	7.4	3.7	2.8
Slack work, insufficient demand, or nonseasonal business slowdown..	245	44.5	18.0	4.1	3.7	9.4	9.4
Organizational changes.....	382	35.3	12.0	1.6	1.8	9.7	10.2
Business ownership change.....	91	34.1	9.9	2.2	.0	15.4	6.6
Reorganization or restructuring of company.....	291	35.7	12.7	1.4	2.4	7.9	11.3
Financial issues.....	504	38.1	15.1	.8	2.0	10.1	10.1
Bankruptcy .....	104	39.4	11.5	1.9	1.0	12.5	12.5
Cost control, cost cutting, or increased profitability .....	175	41.1	22.3	1.1	4.0	5.1	8.6
Financial difficulty.....	225	35.1	11.1	.0	.9	12.9	10.2
Production specific.....	35	40.0	17.1	5.7	8.6	2.9	5.7
Disaster or safety related.....	10	50.0	30.0	.0	.0	10.0	10.0
Seasonal .....	438	55.0	31.5	3.7	.2	8.2	11.4
Other or miscellaneous.....	67	32.8	13.4	1.5	1.5	10.4	6.0

**Table 7. Percentage of main and secondary business processes affected in extended mass layoff events, by reason for layoff, secondary processes, 2007**

Reason	Total business processes	Support processes			
		Total	General management and firm infrastructure	Human resources management	Technology and process development
Total, main .....	4,745	2.7	1.9	0.5	0.2
Business demand .....	1,842	2.1	1.2	.7	.2
Contract cancellation .....	70	.0	.0	.0	.0
Contract completion .....	882	1.8	1.1	.6	.1
Domestic competition .....	15	6.7	.0	6.7	.0
Excess inventory or saturated market .....	36	.0	.0	.0	.0
Import competition .....	71	.0	.0	.0	.0
Slack work, insufficient demand, or nonseasonal business slowdown .....	768	2.7	1.7	.8	.3
Organizational changes .....	386	8.3	6.7	.3	1.3
Business ownership change .....	96	12.5	10.4	.0	2.1
Reorganization or restructuring of company .....	290	6.9	5.5	.3	1.0
Financial issues .....	444	3.4	3.2	.2	.0
Bankruptcy .....	64	3.1	3.1	.0	.0
Cost control, cost cutting, or increased profitability .....	170	5.3	4.7	.6	.0
Financial difficulty .....	210	1.9	1.9	.0	.0
Production specific .....	82	6.1	.0	4.9	1.2
Disaster or safety related .....	32	.0	.0	.0	.0
Seasonal .....	1,861	1.9	1.5	.4	.1
Other or miscellaneous .....	98	.0	.0	.0	.0
Total, secondary .....	1,934	57.7	41.2	10.5	6.0
Business demand .....	498	58.0	42.2	8.8	7.0
Contract cancellation .....	43	60.5	39.5	14.0	7.0
Contract completion .....	59	69.5	52.5	6.8	10.2
Domestic competition .....	13	53.8	23.1	7.7	23.1
Excess inventory or saturated market .....	30	46.7	40.0	6.7	.0
Import competition .....	108	60.2	36.1	15.7	8.3
Slack work, insufficient demand, or nonseasonal business slowdown .....	245	55.5	44.1	5.7	5.7
Organizational changes .....	382	64.7	40.1	15.4	9.2
Business ownership change .....	91	65.9	42.9	16.5	6.6
Reorganization or restructuring of company .....	291	64.3	39.2	15.1	10.0
Financial issues .....	504	61.9	41.9	12.7	7.3
Bankruptcy .....	104	60.6	41.3	13.5	5.8
Cost control, cost cutting, or increased profitability .....	175	58.9	41.7	10.3	6.9
Financial difficulty .....	225	64.9	42.2	14.2	8.4
Production specific .....	35	60.0	51.4	5.7	2.9
Disaster or safety related .....	10	50.0	30.0	20.0	.0
Seasonal .....	438	45.0	39.0	5.0	.9
Other or miscellaneous .....	67	67.2	44.8	14.9	7.5

## Notes

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<sup>1</sup> See, for example, Leslie Haggin Geary, "Offshoring backlash rising," *CNN Money*, Jan. 12, 2004, on the Internet at [money.cnn.com/2004/01/09/pf/q\\_antioffshore](http://money.cnn.com/2004/01/09/pf/q_antioffshore).

<sup>2</sup> Sharon P. Brown and Lewis B. Siegel, "Mass layoff data indicate outsourcing and offshoring work," *Monthly Labor Review*, August 2005, pp. 3–10.

<sup>3</sup> Michael Porter, *On Competition* (Boston, Harvard Business School Publishing, 2008), p. 77.

<sup>4</sup> George S. Yip, *Total Global Strategy II: Updated for the Internet and Service Era* (Upper Saddle River, NJ, Prentice Hall, 2003); and Timothy J. Sturgeon and Gary Gereffi, "The Challenge of Global Value Chains: Why Integrative Trade Requires New Thinking and New Data," paper prepared for Industry Canada and presented at the Global Value Chains Workshop, Ottawa, Ontario, Canada, Sept. 27, 2007.

<sup>5</sup> Ursula Huws and Simone Dahmann, *Outsourcing of ICT and related services in the EU: A status report* (Luxembourg, European Foundation for the Improvement of Living and Working Conditions, 2004).

<sup>6</sup> Sturgeon and Gereffi, "The Challenge of Global Value Chains," p. 24, define *strategic management* as "activities that support the setting of product strategy (i.e., deciding what 'new product development' works on), choosing when and where to make new investments and acquisitions, or sales of parts of the business, and choosing the business partners (e.g., suppliers and service providers)."

<sup>7</sup> The MLS system does specify that the direct management of an *operations* business function is also classified under *operations*, as the twin functions *managing production* and *managing services*. *General management* functions are classified under the process *general management and firm infrastructure*.

<sup>8</sup> See the BLS MLS Web site [www.bls.gov/mls](http://www.bls.gov/mls) for the "Extended Mass Layoffs" news release for the fourth quarter of 2007.