Chicago Metropolitan Agency for Planning

CHICAGO WORKFORCE INVESTMENT COUNCIL

MEMORANDUM

To: **Economic Development Committee**

From: **CMAP and CWIC staff**

Date: **July 20, 2011**

Re: **Cluster Freight Drill Down Preliminary Findings**

This memorandum summarizes the preliminary findings of the research to date on the Freight Cluster Drill Down report. The memo begins with a brief review of the motivation behind and goals of the report, discusses the most recent CMAP and CWIC progress, and then reviews next steps.

GO TO 2040 recommends that analyses be undertaken to "drill down" into the operations and relationships of prominent regional industry clusters. These cluster drill downs are intended to help identify opportunities to nurture these clusters with the goal of enhancing regional prosperity. The first drill down is focused on the region's freight and logistics cluster, and is scheduled for completion this fall. The Chicago Workforce Investment Council has partnered with CMAP to produce this report. The drill down has seven methodological components. This memorandum discusses preliminary results from the shift-share, economic base, and economic multiplier analyses, the workforce analysis, and reviews some of the information gained from conducting stakeholder interviews.

Preliminary Economic Analysis Results

Drafts of three of the economic analyses have been completed: the shift-share analysis, the economic base study, and the multiplier analysis. The shift-share analysis assesses economic and labor trends of the region's freight and logistics cluster relative to trends for the industries

nationally and for the national economy as a whole. The economic base analysis identifies which industries supply goods and services outside the region, and calculates the size of the workforce that is supported by the production of these "exports." The multiplier analysis looks at the linkages between different parts of the freight cluster, its suppliers, customers, and the rate at which workers are hired. Considered together, the preliminary results of these analyses reveal trends and industry dynamics that lead to a better understanding of how targeted policies can strengthen the regional economy.
The preliminary results indicate that:

- **Trucking** sectors of the freight cluster have changed more in the Chicago region than nationally. General long distance freight trucking (less than truckload) and general local freight trucking have gained more employment in the region than national trends predicted they would; specialized local freight trucking has lost more. Different trucking sectors also both generated (and lost) more revenue than rail, water, and air freight – this indicates that regional influences have a significant impact on trucking – which means that trucking can be affected by local policy implementation. In other words, the trucking sector's performance is not solely tied to national trends. When it expands, the trucking sector generates more revenue than other freight modes in the region, though not as many jobs. Despite this finding, the trucking sector is more dependent on the employment services sector than other freight modes. Local freight trucking also exports a substantial amount of services outside the region, and supports a large labor force to support the export of those goods and services (5,600+ workers). The trucking sector is relied on very heavily by other businesses when they expand; the industries for which trucking is an especially significant supplier are food product manufacturing and processing, durable and non-durable goods manufacturing, and mining and quarrying. The trucking sector also has stronger relationships with its regional suppliers than the other freight transportation modes have with theirs.
- In comparison, **rail freight** generates less revenue for the region on a dollar-for-dollar basis, but more jobs. Regional rail freight lost about 900 more jobs than the shift share calculated national trends would have predicted which, like trucking, indicates that local conditions influence the industry. Chicago-area rail freight also generates a substantial amount of value by providing services to those outside the region; these exported rail services employ about 3,300 workers in the region.
- **Regional warehousing and storage** generated more income than the shift share national trends predicted, but also lost substantially more workers. This finding is consistent with the multiplier analysis which indicates that warehousing and storage expansions have very small hiring impacts. Despite these effects, the warehousing sector "exports"

services outside the region, and supports a large workforce (6,700 workers) based upon these exports.

- **Commercial and industrial machinery and equipment rental and leasing** had modest employment gains relative to the nation, but lost more revenue than national trends predicted. The multiplier analysis indicates that this industry generates substantial regional revenues and employment when it grows. This industry is also a significant supplier to the rail and air freight industries.
- **Paperboard container manufacturing** grew more in the Chicago region than it did nationally, and it supports a large workforce (6,800) based on its exports outside the region. This industry has modest income generation traits, but high employment growth rates when the industry expands.
- **Logistics sectors**, such as freight transportation arrangement, performed better in both employment and revenue growth in the region than nationally, and these industries support a substantial workforce (8,400+ workers) based on services they produce for consumers outside the region.
- **Mail order houses and the postal service** both lost more employment than national trends predicted, though mail order houses in the region generated substantially more revenue. Although the postal service has relatively minor employment effects when it does grow, it generates a substantial amount of revenue. The location of mail order houses and the postal service in the transportation hub of the Chicago region enables them to supply a substantial amount of services to those outside the region; the workforce associated with those exported services constitutes more than 5,000 workers.
- Chicago based **financial institutions** are especially significant suppliers for rail freight, and supply trucking and water freight sectors to a lesser extent. The **insurance** industry is a significant supplier for all transportation types in Cook County, and for trucking and waterborne freight to a smaller extent in other counties.

Next Steps for the Economic Analyses

The next steps of this analysis will be to process, compile, and analyze the Dun and Bradstreet new business starts data. This information will show which freight and logistics cluster industries have the most start-ups, where start-ups are occurring, and where businesses are relocating to and/or from.

Labor Force Analysis

CMAP and CWIC staff are currently in the process of completing the three components of the labor force analysis. The team has approached the analysis by first identifying and gathering data from publicly available sources. Using data from the US Department of Labor, the Illinois

Department of Employment Security, US Census American Community Survey, and other sources, the team has developed an understanding of the labor force associated with the cluster as a whole, as well as each of the 42 component industries that make up the regional cluster.

For the cluster, and in each industry, the data collection includes:

- Current size of cluster/industry workforce
- Projected cluster/industry employment growth
- Average salaries in the cluster/industry
- Demographics of current workforce (age, gender, education, race)
- Other characteristics of current workforce (employees vs. proprietor, health insurance coverage, hours worked/week)

CWIC also looked at the available data on top occupations in the cluster and in each industry, including:

- Current and projected number of workers in each occupation
- Median wage
- Minimum education level required (according to the Department of Labor)
- Knowledge, skills, and abilities required

Based on the publically available data, the following preliminary findings are apparent:

- According to EMSI, 24 industries in the cluster are projected to lose jobs by 2018. However, with the remaining 16 industries adding jobs, the net change is less than a one percent decrease (from 172,500 in 2008 to 170,300 in 2018).
- The industries projected to have a job loss of at least 1,000 by 2018 include mail order houses, specialized freight trucking (local), freight transportation arrangement, and the postal service.
- The industries projected to see the highest job gains include general warehousing and storage (2,300), process and logistics consulting services (2,000), general freight trucking (long-distance, less than truck load) (1,500), couriers and express delivery services (1,300), and other warehousing and storage (1,000). Looking at the top occupations in each of these industries, only six require a degree beyond a high school diploma. The requirements for the remaining occupations are short or moderate-term on-the-job-training or work experience in a related field.

With this information, the team has begun interviewing industry representatives to determine the accuracy of the publicly available data. In the limited number of interviews conducted to

date, the team has gathered information that has validated certain findings, and called others into question. For example, our first interviews were with representatives from the trucking and rail industries. Publicly available data indicated the following:

- Rail workers make a considerably higher salary, on average, than trucking workers ($73,000/year vs. $48,000/year).
- The trucking industry in the region is larger than the rail industry in terms of employees, though both industries are projected to shrink by 2018 (in the region as well as nationally).
- Both industries employ many workers with a high school diploma or less education.
- Rail workers are older, on average, than trucking workers.

Our interviewees reacted to the information we had collected, explained any differences and the reasons for them, and provided additional knowledge and data.

- We learned that the salary information is generally correct, with factors such as union representation increasing rail salaries, while lack of union representation and the competitive nature of the trucking industry potentially drive trucking salaries down.
- We learned of some policy and regulatory issues that could be leading to the projected decline in the trucking industry, and were pointed toward additional data showing that the rail industry is actually expected to grow.
- Opportunities abound for individuals with low education levels in both industries, provided they can meet certain other requirements and are willing to adapt to tough working conditions and long hours. The rail industry, in particular, can offer well-paying jobs to individuals with only a high school diploma and will provide all necessary training on the job.
- At least a third of rail workers are older than 50 and the average retirement age in that industry is 60.

We are also using the industry interviews to develop an understanding of the hiring process, hiring challenges, and career advancement and retention trends.

We will continue interviews with industry and intermediary stakeholders to vet the results we have found and to help us understand the policy and institutional barriers that are most pressing. The policy barriers section has developed into a study of three types of regulatory and policy issues that may impede business operations: government efficiency, taxation policy, and land use controls.