Stronger Economies Together

Strategies for Building New Economic Opportunities

Module Five: Focusing on Regional Competitive Advantage

Alison F. Davis, University of Kentucky

Module Five: Focusing on Regional Competitive Advantage

Module Five will focus on identifying clusters in a region and the related workforce and economic data for each region. Please allow two weeks for your region-specific data requests to be completed.

Using the *Participants' Guide*

The *Participants' Guide* contains handouts designed to assist participants in planning their economic development effort.

Group Exercises

Theses exercises will help the participants understand the materials, provide a break from listening to the presenter, and allow the participants to get to know each other better.

Slide 2:   Reflecting on the Previous Session
Slide 4:   Exploring Competitive Advantage (Handout One)
Slide 10:   Identifying Skills in the Region (Creative, Working and Service
               Classes Data Sheet)
Slide 12:   Business & Industry (Businesses and Industries Data Sheet)
Slide 19:   Overview of Clusters in Your Region (Cluster Data Report)
Slide 24:   Business and Industry (Businesses and Industries Data Sheet)
Slide 23:   Regional Clusters: 2002-2007
Slide 24:   Regional Clusters: 2006-2011
Slide 30:   Cluster Choices (Handout Two)
Slide 32:   Examining Clusters in the Region
Slide 32:   Homework for Next Time (Handout Three)
Slide 34:   Final Reflections

Facilitator Note

This module has several slides that will depict region-specific charts and data. Please review the PowerPoint presentation and replace the sample data and charts with your region's information where indicated.

References

Web links
ACCRA Cost of Living Index
http://www.coli.org/

Bureau of Economic Analysis
http://www.bea.gov/regional

California Department of Food and Agriculture
http://www.cdfa.ca.gov

Cashing in on Business Opportunities
http://srdc.msstate.edu/cashing/

Census Bureau:
- Current Population Survey - Annual Social and Economic
  http://www.census.gov/hhes/www/hlthins/data/historical/index.html

- Educational Attainment by State
  http://www.census.gov/prod/2003pubs/c2kbr-24.pdf (for the year 2000)
  http://www.census.gov/prod/2009pubs/p20-560.pdf (for the year 2007)

- Population Change Data
  http://www.census.gov/popest/states/NST-comp-chg.html

- Population Changes by County Over the 2000-09 Period
  http://www.census.gov/popest/counties/CO-EST2009-popchg2000_2009.html

- Population projections by State (along with changes by age)
  http://www.census.gov/population/www/projections/projectionsagesex.html

- Resident Population by Age, Sex, Race, and Hispanic Origin for Counties
  http://www.census.gov/popest/counties/asrh/CC-EST2009-alldata.html
  AND
  http://www.census.gov/popest/counties/asrh/CC-EST2009-agesex.html

- Total Population Data
  http://www.census.gov/popest/states/NST-ann-est.html

Center for Rural Entrepreneurship
http://www.energizingentrepreneurs.org

Dun and Bradstreet
http://www.dnb.com/

Economic Research Service - Natural Amenities Scale
http://ers.usda.gov/Data/NaturalAmenities/

Economic Modeling Specialists, Inc. (EMSI)
http://www.economicmodeling.com

ESRI Business Information Solutions
http://www.esri.com/products/index.html

EXCEL Management Systems, Inc.
County Business Pattern Data & IMPLAN Data
http://www.emsi.com

FASTTRAC entrepreneur training, Kauffman Foundation
http://fasttrac.org/

Federal Communications Commission
http://www.fcc.gov/

Food and Nutrition Service/USDA
http://www.fns.usda.gov/pd/16SNAPpartHH.htm

Hand Made in America
http://madeinamerica.org

IMPLAN Economic Modeling
http://implan.com/V4/Index.php

Missouri Economic Research and Information Center
http://www.missourieconomy.org/indicators/cost_of_living/index.stm

National Assessment of Educational Progress Information
http://nces.ed.gov/nationsreportcard/states/

National Telecommunications and Information Administration
http://www.ntia.doc.gov/data/index.html

Social Security Administration - SSI Data by State and County
http://socialsecurity.gov/policy/docs/statcomps/ssi_sc/2009/index.html#table3alt

STATSAmerica - Occupational Clusters
http://www.statsamerica.org/innovation/

The Economic Research Service - SNAP Participation by States and Counties/Parishes
http://maps.ers.usda.gov/snap/Default.aspx

The Rural Assistance Center (The poverty maps are created from data published by
the U.S. Census Bureau Small Area Income and Poverty Estimates.)
http://www.raconline.org/maps/#poverty

University of Wisconsin Extension
http://www.uwex.edu

U.S. Department of Labor - Bureau of Labor Statistics
http://www.bls.gov/opub/working/page3b.htm

U.S. Department of Labor/Employment and Training Administration (USDOL/
ETA) - O*Net
http://www.onetcenter.org/

UWEX Center for Community Economic Development
http://www.uwex.edu/ces/cced

Woods and Poole Economics
http://www.woodsandpoole.com/main.php?cat=metro

Your Economy.org
http://youreconomy.org

Text
Florida, R. (2002). *Rise of the creative class: And how it is transforming work,
leisure, community, and everyday life.* New York, NY: Basic Books. ISBN 0-465-
02476-9

Primont, D. and Domazlicky, B. (2008). I*ndustry Cluster Analysis for the Southeast
Missouri Region.* Center for Economic and Business Research. Cape Girardeau,
MO. Retrieved from http://www6.semo.edu/cebr/studies/Southeast_rpc_industry_
cluster_study_1.pdf

Porter, M. (1990). *The competitive advantage of nations.* New York, NY: The
Free Press. Retrieved from http://asesoriainternacional.com/Clases%20URN/The_
Competitive_Advantage_of_Nations.pdf

Reynolds, P. D., Carter, N.M., Gartner, W.B., & Greene, P.G. (2004). The prevalence of nascent entrepreneurs in the United States; Evidence from the panel study of entrepreneurial dynamics. *Small Business Economics*, 23. pp. 263-264. Retrieved from http://ehis.ebscohost.com/eds/pdfviewer/pdfviewer?sid=aa14a383-953f-4639-8267-63db6b16c713%40sessionmgr13&vid=3&hid=5

Rural Policy Research Institute. (2011). *Energizing entrepreneurship; Community readiness factors.* Retrieved from http://www.energizingentrepreneurs.org/site/images/research/tp/et/et5.pdf

Shield, M. (2003). *Using employment data to better understand your local economy:Tool 3. Use location quotients to identify local strengths, opportunities, and industry clusters.* University Park, PA: The Pennsylvania State University. Retrieved from http://cecd.aers.psu.edu/pubs/Tool%203.pdf

Tawari, R, Buse, S, & Herstatt, C. (2007). Innovation via global route: Proposing a reference model for chances and challenges of global innovation process. *Proceedings of the Second International Conference of Globally Distributed Work,* No. 49, pp.451-465. Retrieved from http://www.global-innovation.net/publications/PDF/Working_Paper_49.pdf

UWEX Center for Community Economic Development, (2004). *Creative class occupations: County creative class by location quotient.* Retrieved from http://www.uwex.edu/ces/cced

This module focuses on the elements that create and strengthen a region's competitive advantage. Specific data are explored that aid the team in identifying clusters for the region and exploring the related workforce availability and economic leakages. Prior to this meeting, you will have data available to hand out to the group. The data will include information on the general industrial make up of the region and potential industrial clusters. Depending on the group's overall planning experience level, you might request additional analyses from your appropriate Regional Rural Development Center. It may also be helpful to have available demographic information from Module Two.

NOTE: Please allow two weeks for data requests to be completed.

Script:

"Welcome to Module Five: Focusing on Regional Competitive Advantage. This session will introduce specific data that might be used to guide the advancement of your regional economy."

Slide: 1

Time: 1 Minute. Have this slide showing as people enter the meeting room.

If the group had homework from the previous session, review the group's accomplishments. In addition, clarify any questions from the previous session.

"As you have reflected on Module Four, what are your observations? What were the most useful elements of the previous session? Have you made any progress on your team assignments since the last time we met? Any questions, comments or concerns before we proceed to this session?"

Reflecting on the Previous Session

- What did you find most useful or valuable?
- What progress have you made since then?
- Any questions or clarification needed?

Slide: 2

Time: 5 Minutes

This slide provides an overview of the content of this module.

Overview of Module Five
- Investigate the elements that contribute to regional economic advantage
- Explore regional data that may help identify regional clusters
- Select clusters for further exploration

Script:

Slide: 3

Time: 2 Minutes

"This module is packed full of information organized under three main topics. First, we will explore the basic elements of competitive advantage. In essence, what does a region need to gain a competitive advantage in a particular industry?

Next, we will examine some of the region-specific data that can help us identify potential regional clusters. Finally, we will select key industries for further exploration in Module Six.

There is no magic bullet here. The data and analyses serve only as a foundation and catalyst for strategically thinking about opportunities the regional team can explore. Additionally, the process is greatly hindered without the knowledge of those living in the region who can attest to the accuracy of the data and those who have historical knowledge of previous community and economic development movements and a keen sense of the regional business environment and workforce."

This section provides a brief overview of the concept of competitive advantage. Review this section with even experienced groups to ensure the group has a common understanding and definition as it proceeds with its planning activities.

Script:

"Often in an athletic race, speculators can make fairly good predictions about who will be the front runners. Why is that? [Allow for brief discussion. Possible answers may be experience, training, natural abilities, among others.]

Just like runners may have competitive advantages, so do regions when it comes to successfully sustaining and growing the economy. The next few minutes will be devoted to thinking within this realm."

EXPLORING COMPETITIVE ADVANTAGE
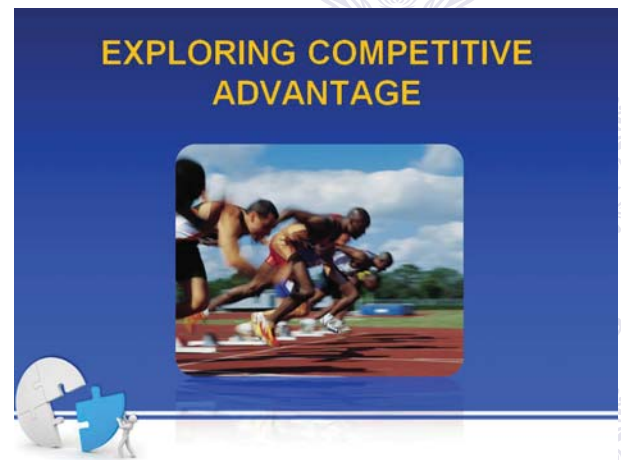
Slide: 4

Time: 2 Minutes

Handout One: Support Links [This is a supplemental handout that provides links to other types of data beyond what will be discussed in this section.]

Ask the group to reflect on the statement on the slide. Do they agree or disagree? Why?

Script:

Competitive Advantage

Business shapes the economic value of a region, but places can help shape, nourish, and sustain local enterprises and industry.

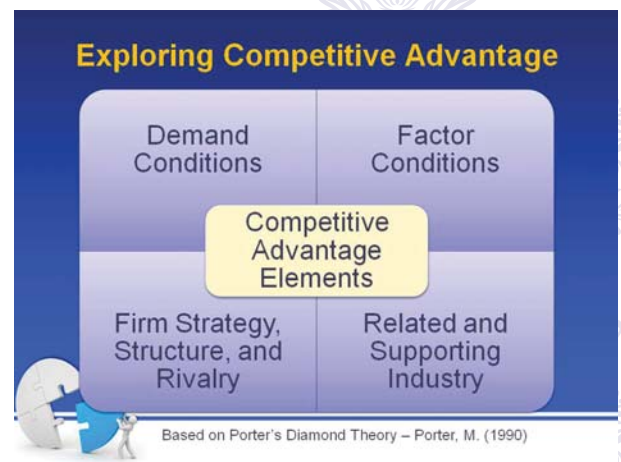"What are your thoughts about this statement? What are some ways that places or regions can helps nourish, shape, and sustain businesses?" [Allow for short discussion.]

Slide: 5

Time: 5 Minutes

This section focuses on the key components to regional economic growth. These four main elements that tend to shape competitive advantage for an industry will be discussed in more detail in the following slides. The "People" component (contained within "factor conditions") has already been discussed to some extent in Module Two, but it will be explored further in terms of specialized skills or occupations the region might want to target for further expansion.

Exploring Competitive Advantage

Demand Conditions	Factor Conditions
Competitive Advantage Elements	
Firm Strategy, Structure, and Rivalry	Related and Supporting Industry

Based on Porter's Diamond Theory – Porter, M. (1990)

Slide: 6

Time: 3 Minutes

Script:

"In general, four main elements tend to shape competitive advantage for an industry. The first is demand conditions. The second is the set of factor conditions within the region. Third is firm strategy, structure and rivalry, and the fourth factor is related and supporting industries.

In the next few slides, we'll take a closer look at each of these elements."

This slide addresses demand conditions. Lead the group in considering the conditions both within and without the region that influence demand for goods and services produced in the region. Demographics (People) play a role in this. It may be helpful to have the data from Module Two handy as a referral.

Script:

"The first element of competitive advantage is demand conditions. Demand for a particular product or service may be influenced by a number of conditions. Consumer population is certainly an important driver. What are some of this region's demographic characteristics, discussed in Module Two, that may support or diminish demand for a particular industry in this region? [Allow for discussion. Make sure that participants consider such factors as age, gender, income, poverty levels, etc.]

What other conditions may have an influence on demand?" [Possible answers may include economic conditions, political climate, etc.]

Introduce factor conditions as the key inputs, or factors, that would be needed for a firm to produce a product. Ready access to these becomes a significant factor a firm considers in deciding to move to or expand within a particular region. These factors fall under three main subheadings: infrastructure, resources and materials, and the availability of a skilled workforce to support the work of the industry.

Slide: 8

Time: 3 Minutes

Script:

"A number of different factors influence a firm's decision to locate or expand in a region. Factor conditions refer to the key inputs (or factors) needed for a firm to produce a product. These factor conditions tend to fall in three main subheadings:

- **Infrastructure:** Solid infrastructure must be available to support the industry's work. For instance, if goods are transported, access to transportation (roads, railways, etc.) may play an important role in the decision of where to locate. Likewise, if broadband Internet access is a must-have, rural places lacking these services may be quickly dismissed as possible locations. Other examples include:
  - Research and development facilities
  - Available land and buildings
  - Telecommunications/Internet access
  - Cost of living
  - Access to transportation networks
  - Tax structure

- **Resources and Materials:** Resources can include natural resources, raw materials, capital, or other inputs necessary for production. Time and cost in obtaining needed resources is a big decision-maker for an industry in choosing a place to do business.

- **Availability of a skilled workforce:** The types and number of workers available to support the industry's needs are also very important considerations. Let's explore this factor in a little more detail."

Availability of a quality workforce is a vital factor consideration a firm may explore. The main considerations for workforce are identified and discussed in this slide.

Script:

Factor Conditions: Workforce

Who are the region's workers?
- Skilled/unskilled
- Labor force participation rate
- Unemployment rate
- Occupation mix
- Experience/age

"Key components of a region's workforce include an examination of the concepts noted on this slide. Specifically:

Who are the region's workers?
- Are they blue collar or white collar?
- Do labor force participation rates indicate a willingness to work?
- What experience do they have in related industries?
- What are the skills or education needed for targeted occupations?

Also worth considering: Is our workforce
- Adapting to change?
- Keeping up with technology?
- Recognizing and responding to the changing needs of regional businesses?

Let's take, for example, the changing workforce needs in the health care industry. In the coming years, all hospitals must implement electronic medical records, and all nurses, doctors, and clerical staff must be prepared for the technological shift. For many, this will require significant retraining. The degree of difficulty adapting to this change will vary by past exposure to technological improvements and by how quickly the current workforce can learn new tools and skills."

Slide: 9

Time: 3 Minutes

Resource:
The O*net Online website (http://www.onetonline.org/) provides an immense amount of information regarding workforce needs/opportunities and projected demand.

Instructions:

Refer to the Creative, Working and Service Classes Data Sheet for your region, which is available on the SET website. Insert the top portion of the first page into the presentation as shown on this slide.

Script:

"Let's look in more detail at the growth in occupations in the region. You can see more clearly here (or on the chart on the handout) how the region's workforce is divided by three categories: Service, Creative, and Working. The chart on the back of the handout provides more details as to what kinds of occupations are classified within each of these three categories. You might notice that not all occupations within the creative class jobs are within the more classic definitions (artists, writers, designers, etc). However, these occupations tend to be used as measures of the capacity for the creative workforce.

[Lead a discussion based on the data sheet. Suggested questions are below, but feel free to adapt to the regional setting.]

Based on the information presented on this data sheet:
• Where do you see the largest declines and largest increases?
• What do you see that is encouraging as you think about regional strengths? What is discouraging?
• Where do you see some potential opportunities to leverage the strengths of the workforce?
• Where may the region need to consider shoring up workforce?"

Slide: 10

Time: 2 Minutes

Handout: Creative, Working and Service Classes Data Sheet

Next, turn the team's attention to existing businesses in the region as a critical component of a region's competitive advantage.

Script:

"The third element of competitive advantage focuses on existing businesses within the region. The existing economic composition of your region is very important to consider. What is the portfolio of businesses that exist in the region? Are most of the businesses small, or is there a good mix of small, medium, and large firms? (By small, we mean businesses with less than 10 employees; medium means businesses with 10-50 workers; and large are those with more than 50 employees.) Are there visible, successful entrepreneurs?

Furthermore, what is the industrial mix of our region? Do the manufacturing, agriculture, and service-based industries constitute the majority of firms, or is the region home to a broad combination of different industries?"

Slide: 11

Time: 2 Minutes

Insert the Businesses and Industries chart from your region's data sheet, which is available on the SET website. This chart compares the region and state by industry, allowing the team to determine if the trends in the region match that of the state. If differences in trends are evident, lead a discussion about why those differences exist. If the region has excelled at something compared to the state, this might be one indication of a competitive advantage. If the region is lagging behind, this might start a conversation about workforce development opportunities or lack of infrastructure or resources. As the discussion proceeds to any potential strategies or directions, add to the chart the team began in Module Four.

Script:

"Let's see how the region has fared during the last five years by looking at the number of jobs by industry. We will start by looking at aggregate industries. For example, we will look at manufacturing as a whole. While thousands of different types of manufacturers and manufacturing jobs exist, let's just start by looking at how the industry has fared overall.

This chart from the Businesses and Industries Data Sheet handout compares the region's and the state's make up of jobs and shows how this distribution has changed over a five year span.
• Where do you see trends between the state and region tracking consistently? Where are they different?
• What might cause these differences between state and regional trends?
• What industry has seen the largest increase in the number of jobs? Where have been the greatest declines? How does the quality associated with those industries with large job increases compare to the quality of industries that have lost jobs?" [Refer to the hourly wage information on the table in the handout if needed.]

Slide: 12

Time: 5 Minutes

Handout: Businesses and Industries Data Sheet

Additional Information:
The Businesses and Industries Data Sheet for your region/state is just a brief introduction to the basic changes in employment by two-digit North American Industrial Classification System (NAICS) code. Adopted in 1997, NAICS codes range from general industries (two-digit as used for this slide) to very specific (six-digit). As a result, thousands of NAICS codes can be explored. Your team's goals will dictate how detailed the data should be. Individuals may ask what makes up a particular industry, and a list of NAICS industries is available at http://www.census.gov/eos/www/naics/.]

Source: Economic Modeling Specialists, Inc. (EMSI) http://www.economicmodeling.com/

This slide describes the final element of competitive advantage.

"The fourth element related to competitive advantage is the presence and interdependence of related and supporting industries in a given region. Where do existing businesses buy and sell their goods? Are they importing their inputs from outside the United States, outside the state, outside the region? Or, are they buying their goods regionally? To whom and where are they selling their products? Do they export their goods across the nation? Or, do they serve as suppliers to other regional industries?

The interconnections of businesses and industries can be viewed as a value chain. A value chain is a physical representation of the various processes involved in producing goods and services, starting with raw materials and ending with the final delivered product. In other words, it is how businesses receive raw materials as input, add value to the raw materials through various processes, and sell finished products to customers."

Slide: 13

Time: 2 Minutes

Instructions:

This slide explores one way to look at a value chain, using wine as an example. Walk the participants through this example, ensuring that they see how many businesses are interconnected in the process.

Script:

Value Chain Example
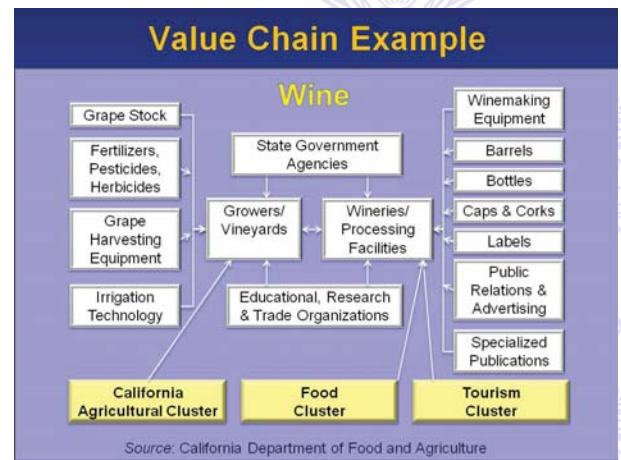Source: California Department of Food and Agriculture

"This is an example of a value chain for wine manufacturing based on two large industries, growers and wineries. Each industry has specific inputs that are vital.

To grow grapes, a producer needs grape stock, fertilizer, grape harvesting equipment and irrigation technology.

To produce wine, a winery needs winemaking equipment, barrels, bottles, caps and corks, labels, public relations and advertising, and specialized publications, such as trade journals.

In addition, the cluster is supported by state government agencies such as the Select Committee on Wine Production & Economy in California, as well as educational, research, and trade organizations (e.g. Wine Institute, UC Davis, Culinary Institutes).

By mapping the cluster, we can visualize all the components that go into making wine. However, there isn't necessarily just one cluster here. For instance, the wine industry may also play a part in the California agriculture cluster, the food cluster, and, of course, the tourism cluster."
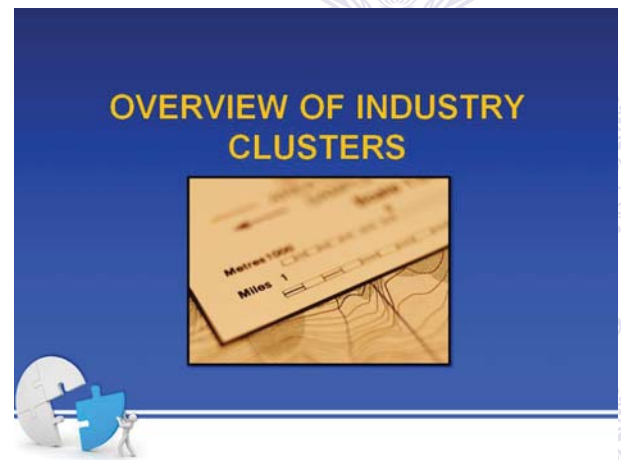
Slide: 14

Time: 5 Minutes

Source: California Department of Food and Agriculture
http://www.cdfa.ca.gov

This section explores different approaches to mapping clusters. Guide participants in exploring the data provided for their own region.

Script:

"Now that you know what factors can influence the development and strengthening of economic clusters, we will look in more detail at the specific data for your region. A variety of ways to map clusters exists. We will consider just a few examples."

OVERVIEW OF INDUSTRY CLUSTERS

Slide: 15

Time: 1 Minute

This slide provides a definition of industry clusters. Ask the participants to consider potential benefits associated with clusters.

Industry Clusters Defined

Groups of similar and related firms in a defined geographic area that share common markets, technologies, worker skill needs, and that are often linked by buyer-seller relationships

Slide: 16

Time: 2 Minutes

Source: Porter, M. (1990). *The competitive advantage of nations.* New York, NY: The Free Press. Retrieved from http://asesoriainternacional. com/Clases%20URN/The_ Competitive_Advantage_of_ Nations.pdf

"A business cluster is a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular area. Specifically, industry clusters are groups of similar and related firms in a defined geographic area that share common markets, technologies, worker skill needs, and that are often linked by buyer-seller relationships.

Clusters are considered to increase the productivity with which companies can compete, nationally and globally. A cluster approach can help firms achieve a competitive advantage by promoting their common interests and can make the public sector more effective in supporting the economy. Working with clusters can enable regions to identify the most promising opportunities to encourage further innovation, develop particular worker skills, and address issues that affect productivity.

Clusters can be used in a number of different ways to organize thoughts about the economy, to network groups of private sector firms for their mutual advantage, to efficiently promote clear lines of communication between the public and private sectors, and to serve as a vehicle for organizing public policy."

Briefly explain these two types of clusters listed on the slide.

Two Types of Clusters

- Value chains (Vertical clusters): working together toward a common product → Auto Industry
- Competing (horizontal clusters): drawing from the same raw materials, infrastructure, labor force → Software Industry

Script:

"Two basic types of clusters exist:
- **Value chains**, or vertical clusters, in which multiple businesses are working together to generate a common product. The auto industry is a good example, as cars are composed of many parts made by multiple firms.
- **Competing clusters**, or horizontal clusters, form when similar, yet possibly competing, firms all choose to locate in the same region to take advantage of a common set of raw materials, workforce, and infrastructure. The software industry is a good example of a competing cluster."

Slide: 17

Time: 1 Minute

This slide begins an explanation of an industry cluster analysis.

"One way to begin identifying regional clusters is through a cluster analysis, which is a type of assessment that views firms, and therefore, industries, as interdependent, not isolated. This should make sense since we know that firms locate near other firms with which they interact or compete.

Clusters can be value chains, or activities for a firm operating in a specific industry. Michael Porter notes that products pass through activities of the chain in order. At each activity, the product gains some value. It typically begins with some type of raw materials and goes through various activities to produce a product that is sought by certain end-users. An important goal is delivering maximum value at the lowest possible total cost.

An example of a value chain cluster is glass and tire companies locating close to automobile plants to minimize transportation costs when the automobile companies purchase their inputs regionally.

Clusters also can be a collection of businesses producing similar output. For example, gas stations tend to locate at different sides of the same intersection (competing firms). Software companies locate in the Northwestern United States because they share the same labor pool, even though the software companies are technically competing with each other. Think of how many times you see auto dealerships located closely to one another."

Slide: 18

Time: 3 Minutes

Source: Porter, M. (1990). *The competitive advantage of nations.* New York, NY: The Free Press. Retrieved from http://asesoriainternacional. com/Clases%20URN/The_ Competitive_Advantage_of_ Nations.pdf

Instructions:

Distribute the Cluster Data Report provided for your region. Using the next few slides, walk the group through the cluster report and help them interpret the information for the possible presence of clusters in the region.

Script:

"Now that we have explored some of the important keys of understanding clusters in a region, let's take a look at the cluster data on your region."

Overview of Clusters in Your Region

Slide: 19

Time: 2 Minutes

Handout: Cluster Data Report

Draw participants' attention to the bubble charts. Using the next four slides, explain how to interpret the data presented.

"The regional Cluster Data Report contains two charts with industry 'bubbles.' As you flip back and forth between the two charts (two points in time), you may notice that some industry bubbles move within the chart's boundaries. Let's take a minute to explore what that movement demonstrates. First, a bubble may move up or down within the chart. This movement represents the change in the percentage of jobs within an industry over time. If the percentage of jobs declined, the bubble moved lower in the chart. Likewise, if the percentage rose, the bubble shifted upward on the chart. Do you see some examples of up or down movement?" [Allow for responses.]

Understanding Changes

Moving Up or Down

Change in Percentage of Jobs in Industry over Time
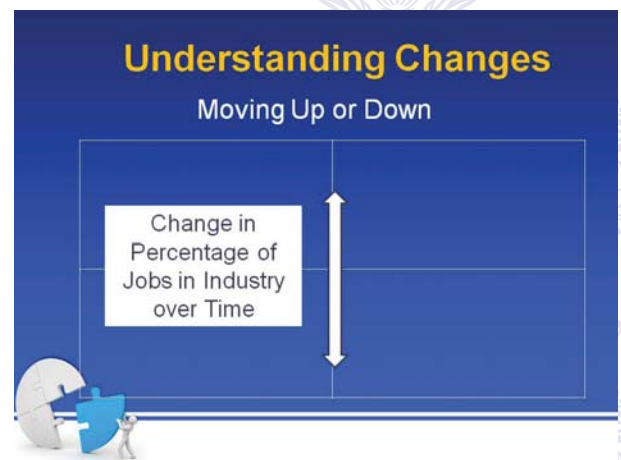
Slide: 20

Time: 2 Minutes

Handout: Cluster Data Report

Instructions:

Explain location quotient and how it is depicted on the bubble chart.

Script:

"Left and right movement on the bubble chart is a change in an industry's location quotient. The location quotient is often used to measure the concentration of a particular industry relative to some base location. For these reports, the base location is the continental United States.

Calculating the location quotient for a particular industry is very straightforward. You begin by determining what proportion of the region's workforce is employed in a specific industry. You then determine the percentage of the workforce employed in that same industry for your reference area's workforce (for example, your state or in the nation). Next, you calculate the ratio between your region and the reference unit (with regard to the industry you are examining). Here's an example: Let's assume you found that 25 percent of your region's workforce is employed in the manufacturing sector. You then determine the national figure of workers employed in the manufacturing industry is 18 percent. The location quotient for your region is 25 percent divided by 18 percent = 1.39.

A location quotient greater than one suggests that the region exhibits concentration in that industry. It also assumes this sector is exporting their goods and/or services to areas outside of the region. A location quotient less than one, however, implies that the area is below average in terms of its concentration in a given industry.

While a useful beginning tool, the location quotient measure does not offer any insights on what you should do, as it only shows that a specific cluster might exist in your region. Just because a location quotient is greater than one does not imply that the region should invest more in this sector. Nor should we abandon a given sector if the quotient has a value of less than one. Looking at the changes taking place in the location quotient over time is important. If it is increasing, this may be an emerging cluster. If it is decreasing, it could be an indication that the cluster is declining and that caution may need to be taken before further investments are made.

Considering the region's bubble chart, which industries have shown a rise in location quotient over time? Where has there been a decrease?

It's also possible to map the bubble charts in other ways by looking at the quality of the job measured by average earnings and job growth."

The labels on this slide are often used to categorize the industries that fall within each of the four quadrants of the chart. These labels are also included in the cluster report provided.
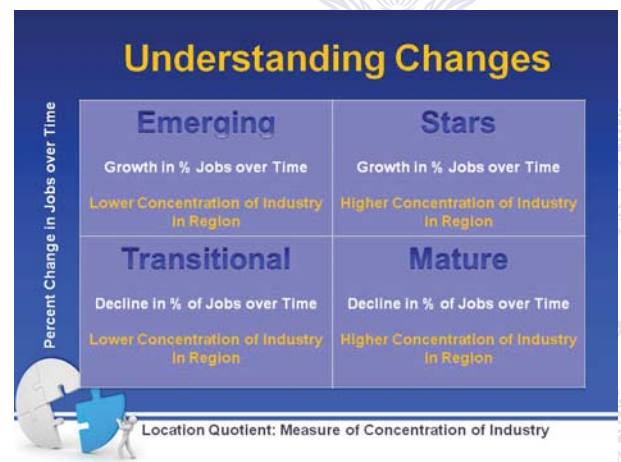
"The terms on this slide are often used to categorize the industries by where they fall within the bubble chart.

Star clusters are those whose concentration for a given industry is larger than that in the nation **and** whose percentage of employment has increased over time. Star clusters are considered specialized in the region compared to the nation.

Mature clusters are those whose concentration of employment in the region is larger than that in the nation **and** whose percentage of employment has decreased over time. Mature clusters are specialized as compared to the nation and becoming less specialized.

Emerging clusters are those whose concentration of employment in the region is currently less than that in the nation **and** whose percentage of employment has increased over time. These clusters are less specialized in the region as compared to the nation. Some of the emerging clusters may become specialized clusters in the future.

Transitional clusters are those whose concentration of employment in the region is less than that in the nation **and** whose percentage of employment has decreased over time. These clusters are less specialized in the region. The transforming clusters are unlikely to become specialized."

Instructions:

This slide and the next should be inserted from the region's cluster report. Draw participants' attention to the same charts in their handouts. Have them consider changes between this chart and the next.

Script:

"This slide details the relative concentration of several industries in our region compared to the rest of the nation within the years shown.
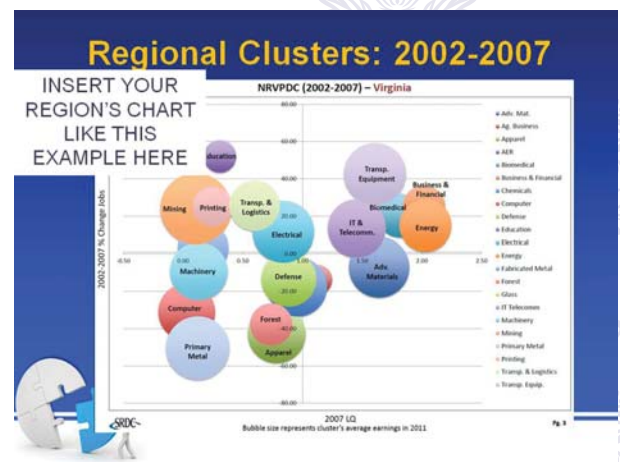
1. Which clusters have a location quotient greater than one?
Answer: Any bubble that is above the horizontal axis

2. Which clusters have grown over the time period?
*Answer:* Any bubble that is to the right of the vertical axis

Now, let's look at how this picture has changed over time." [Next slide.]

Slide: 23

Time: 7 Minutes

Handout: Businesses and Industries Data Sheet

Sources: Economic Modeling Specialists, Inc. (EMSI) http://www.economicmodeling.com

Shield, M. (2003). *Using employment data to better understand your local economy:Tool 3. Use location quotients to identify local strengths, opportunities, and industry clusters.* University Park, PA: The Pennsylvania State University. Retrieved from http://cecd.aers.psu.edu/pubs/Tool%203.pdf

Change between this slide and the previous slide is vital in identifying potential opportunities for regional cluster development. Use the questions in the script below to help guide exploration of changes.

Script:

"This slide details the relative concentration of several industries in our region compared to the rest of the nation over a more recent period of time.

1. Which clusters have a location quotient greater than one?
Answer: Any bubble that is above the horizontal axis

2. Which clusters have grown over the time period?
Answer: Any bubble that is to the right of the vertical axis

3. Where do you see shifts from the previous chart that concern you?

4. Are there any clusters that are declining but still potentially important to the region?
Answer: Any clusters that fall in the upper left hand quadrant

5. As a group, which clusters would you think have the most potential and why?
Answer: Clusters to the right of the vertical axis, even if they are in the bottom right hand quadrant, as there could be potential for growth."
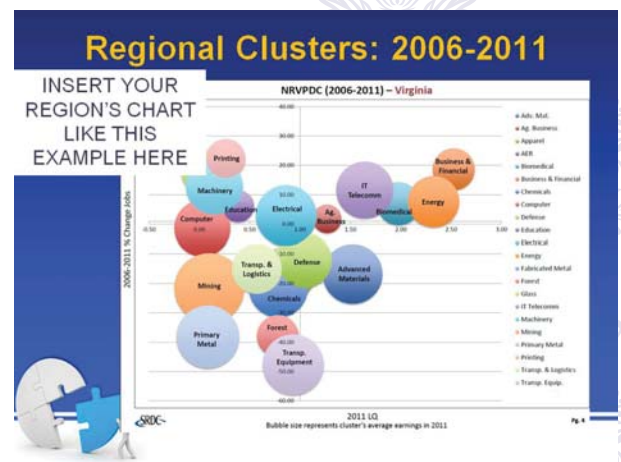
Slide: 24

Time: 7 Minutes

Sources: Economic Modeling Specialists, Inc. (EMSI) http://www.economicmodeling.com

Shield, M. (2003). *Using employment data to better understand your local economy:Tool 3. Use location quotients to identify local strengths, opportunities, and industry clusters.* University Park, PA: The Pennsylvania State University. Retrieved from http://cecd.aers.psu.edu/pubs/Tool%203.pdf

Insert the table from your region's cluster report. Explain how the table is associated with the bubble chart.

"This table depicts the data that make up the bubble chart.
Remember that any location quotient greater than one will fall to the right on the bubble chart."

Slide: 25

Time: 2 Minutes

Source: Economic Modeling Specialists, Inc. (EMSI) http://www.economicmodeling.com

The Job Change column drives the up/down movement of the bubbles on the chart. Note the five largest percentages of growth.

"The Job Change column drives the up and down movement of the bubbles over time. The red circles indicate the five largest percentages of growth."
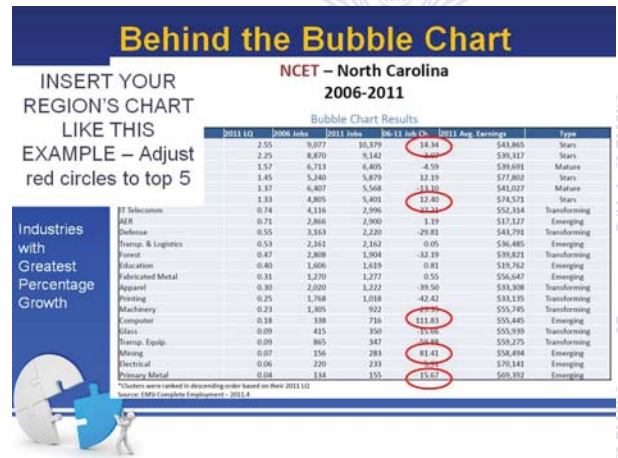
Slide: 26

Time: 2 Minutes

Source: Economic Modeling Specialists, Inc. (EMSI) http://www. economicmodeling.com

Another important consideration in this discussion is where economic leakages are occurring. This slide begins explaining this concept by helping participants understand how the flow of dollars out of the region may weaken the regional economy.

Examining the Leaky Bucket

The Regional Economy

Goods or Services Purchased outside the Region

Script:

Slide: 27

Time: 2 Minutes

"Another aspect of this discussion that needs to be considered in that of economic leakages. Think of the regional economy as a bucket. Money flows in and out of a regional economy (the bucket) based on goods and services that businesses and people buy and sell. When money leaves the region because goods were purchased from outside either by people or by businesses, this constitutes a leak in the bucket. We can plug the leaks by reducing the leakage of capital from the system. Import substitution constitutes one approach to plugging these leaks." [Move to next slide to begin exploring the regional data.]

Insert this chart from your region's report. Draw participants' attention to this chart in their regional cluster report. It shows two vital pieces of information: (1) total annual expenditures by the industries in the region and (2) the proportion of those expenditures that stay in the region vs. those that leave (leakages).

Slide: 28

Time: 5 Minutes

Script:

"This table helps paint a picture of how industries within the region compare in the amount of expenditures each has annually to support its work. This gives a sense of scale to the industry discussion. The chart also shows the percentage of total expenditures that are being used to purchase goods/services within the region versus outside the region. Those expenditures outside the region are economic leakages that could point to potential strategies for strengthening the cluster within the region. Is there anything in this picture that surprises you? Why/why not?" [Allow for short discussion.]
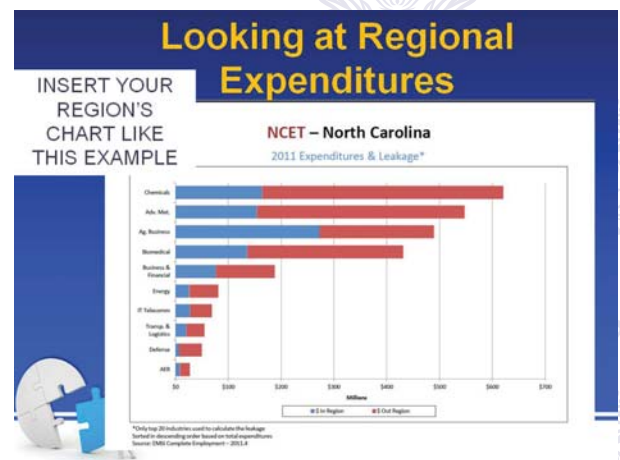
Given the information explored in this module, begin guiding participants toward identifying clusters to examine in greater detail. This slide provides an overview of the steps that follow from that point.

Regional Industrial Clusters: Digging Deeper

- Identify the industries within the cluster
- Determine if growing or declining
- Evaluate regional capacity
- Identify potential leakages & opportunities
- Determine potential strengthening strategies

Script:

Slide: 29

Time: 2 Minutes

"During this session, you have had the opportunity to examine several aspects of the regional economy that are important to consider as we move forward. The next module will guide the process to the next step. The steps outlined on this slide provide an overview of what will happen next as we explore the possible existence of one or more clusters in the region and identify some potentially useful regional strategies intended to foster their growth.

Here are the steps that will be explored in depth during upcoming modules:
- Identify the industries that make up the cluster
- Determine if the cluster is growing or declining
- Evaluate the region's capacity to supply the necessary industries/products
- Identify potential leakages and/or opportunities that might exist for launching new enterprises
- Determine potential economic strategy(ies) that might be successful in strengthening the cluster

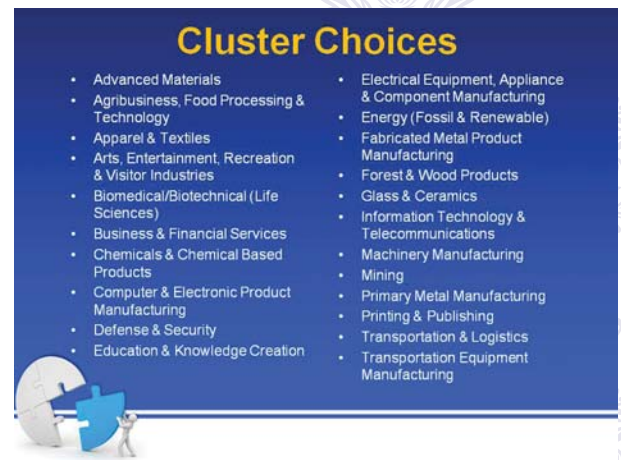We will devote time in Module Six to develop a deeper understanding of the potential cluster(s) in your region."

Clusters are generally organized into the categories listed on this slide and on Handout Two: EMSI Predefined Clusters. Your team may not readily see where the cluster they are considering falls within these groups. If not, guide the group in defining the businesses that make up the cluster of interest. For example, tourism might include hotels, motels, restaurants, arts, sporting events, natural resources, etc. Most of the time though, these predefined cluster choices provide direction for exploring most identified industries.

Cluster Choices

- Advanced Materials
- Agribusiness, Food Processing & Technology
- Apparel & Textiles
- Arts, Entertainment, Recreation & Visitor Industries
- Biomedical/Biotechnical (Life Sciences)
- Business & Financial Services
- Chemicals & Chemical Based Products
- Computer & Electronic Product Manufacturing
- Defense & Security
- Education & Knowledge Creation

- Electrical Equipment, Appliance & Component Manufacturing
- Energy (Fossil & Renewable)
- Fabricated Metal Product Manufacturing
- Forest & Wood Products
- Glass & Ceramics
- Information Technology & Telecommunications
- Machinery Manufacturing
- Mining
- Primary Metal Manufacturing
- Printing & Publishing
- Transportation & Logistics
- Transportation Equipment Manufacturing

Slide: 30

Time: 5 Minutes

Handout Two: EMSI Predefined Clusters

Script:

"Clusters are generally organized into the categories listed in this slide and on Handout Two: EMSI Predefined Clusters. Do you see your cluster of interest defined in this list? [Allow for responses.] If not, the team may need to define the types of businesses that compose the potential cluster. For example, tourism might include hotels, motels, restaurants, arts, sporting events, natural resources, etc.

Let's take a moment to consider these clusters and make some decisions."

Once you feel confident that participants understand the data presented, allow time for them to break into groups of 3-5 to examine these questions (and any others you feel are important) using the two bubble charts and related data.

NOTE: Forward requests from the region regarding the detailed cluster reports requested to the Southern Rural Development Center. Please allow at least two weeks to prepare the reports and return them to you.

Examining Clusters in the Region

What industries:
- Seem worth exploring further?
- Should the region avoid investing for the future?
- May be viable future regional industries?
- Are declining but may be worth reviving?

Slide: 31

Time: 20 Minutes

Script:

"Let's take some time now to think through what we have. The questions on this slide will provide some framework for you to discuss in teams of 3-5. We will take about 15 minutes to explore the two bubble charts and related data, then report back to the group." [Allow time to work, then ask each team to report back one or two key discoveries.]

Briefly review these two steps and distribute Handout Three: C.A.R.E. for the Region

"When we begin Module Six, we will have specific reports in hand on the potential clusters we have identified. In preparation for that analysis, please be familiar with Handout Three: C.A.R.E. for the Region."

Slide: 32

Time: 1 Minute

Handout Three: C.A.R.E. for the Region

Take a few minutes to ask for some feedback from your group on the content of this module using the questions on the slide.

Final Reflections

- What topics did you find most helpful?
- What did you find confusing?
- What other data do you need?
- Other items you want to mention?

"We've gone through a good bit of information in this session. Now please share your ideas and reactions to the topics and strategies introduced to you." [Read through each of the questions outlined on the slide and allow time for discussion.]

Slide: 33

Time: 5 Minutes

Module Six applies what the team has in learned Module Five. This module will look at possible strategies to strengthen these clusters based on the concept of import substitution.

Script:

Looking Ahead to Module Six

- Identify the economic leaks in the region
- Explore basic avenues for strengthening clusters
- Provide an overview of some specific strategies within each avenue
- Select potential directions for the region to explore

Slide: 34

Time: 2 Minutes

"Module Six is organized under four main topics. First, we will identify the economic leaks, or import substitutions, that may need to be addressed. Then, we will explore four basic avenues for strengthening regional clusters. In essence, what does a region need to do to gain or strengthen its competitive advantage in a particular industry?

We will also examine several potential strategies within each avenue that may enhance your region's clusters. Finally, we will begin to hone in on some specific strategies that have the potential for being effective in enhancing this region's identified cluster(s).

The data on clusters that we considered during this session will serve as a foundation and catalyst for strategically thinking about opportunities the regional team can explore. However, the knowledge and experience of each of you will be vital in determining the best course of action for the future."

Acknowledgements

www.srdc.msstate.edu

2012