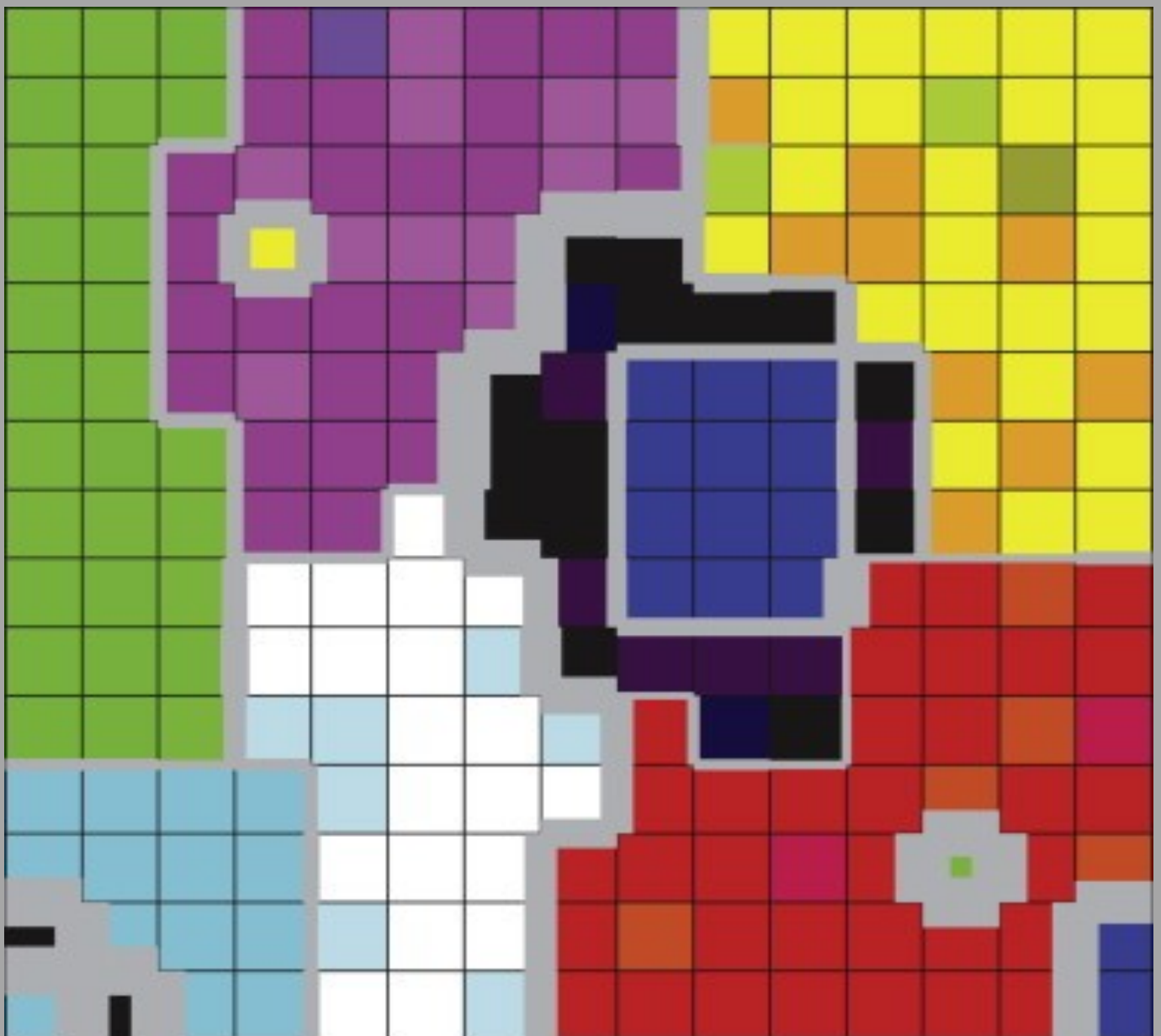# Geographic Clusters as a Means to Rural Economic Growth Initiative

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Geographic Clusters as a Means to Rural Economic Growth Initiative

By Ralf Wilhelms

Abstract

This project examined a rural regional cluster in terms of geographical setting rather than in terms of the common industry categorization. A website was created with products from Eastern Upper Peninsula manufacturing firms and numerous country specific marketing campaigns were employed. The visitor data was recorded and then analyzed. The findings pointed towards an increased international audience for the EUP and showed initial support for the geographic cluster paradigm. The project also offered a framework as well as suggestions for future rural regional exporting initiatives.

E-Commerce

The Internet has been around for decades and we still have yet to tap into its full potential. What was once considered a novelty is now accessed daily by a quarter of the world's population (Manyika and Roxburgh, 2011). We use the Internet daily in a variety of ways whether we are taking an online class, playing a virtual game, or keeping in touch with colleagues. The Internet was once thought of only as a source of entertainment and information. It has only been in the last couple of decades that it has become an instrument that allows electronic bank transfers, bill paying, and a substitute for shopping at a bricks and motor store. Harrington and Reed (1996, p.2) defined electronic commerce as "the electronic exchange of information, goods, services, and payments." In 1996, E-commerce really started to take off in direct correlation to technological advancements. These technological advancements included "wider availability of networks, easier access to those networks, growth in support services, and development of critical processes" (Harrington and Reed, 1996, p.4).

Electronic commerce is a potentially endless marketplace. Manyika and Roxburgh (2011, p.2) stated that "the Internet constitutes 3.4 percent of GDP in large and developed economies." This percentage translates into about 8 trillion dollars of online transactions per year. The internet percentage of GDP in developing countries will continue to increase as those countries strengthen their internet infrastructures. McKinsey & Company recently released a two hundred page report that covered exactly how the Internet was impacting aspiring countries. According to the report, the Internet constitutes 1.9 percent of GDP in the 30 aspiring countries that were studied and there is major room for growth. These countries account for one billion internet users which is half of all users and growth is five times faster there than in developed countries (Nottebohm, Manyika, Bughin, Chui, and Syed, 2012).

E-commerce has changed the way in which customers make purchases and companies sell their goods. Extensive marketing research has been conducted in terms of overall web experience which essentially includes aiding the customer in their buying process from start to finish (Constantinides, 2004). Customers can research, find, and buy the product they desire in a matter of a couple clicks. The buyer is now more likely to type a desired product into the search and then qualify the company making this new market more product oriented. This gives small businesses with little to no brand recognition a chance in the market. Research done by Manyyika and Roxburgh (2011, p.4) shows "small and medium sized enterprises using Web technologies extensively are growing more quickly and exporting more widely".

The Internet has also brought numerous advantages to business-to-business selling including productivity gains and an increased marketing audience. Business-to-business commerce includes any intercompany transactions. More specifically, Lucking-Reiley and Spulber (2001, p.55) explain that "B2B e-commerce is the substitution of computer data processing and Internet communications for labor services in the production of economic transactions." According to the Gartner Group (as cited in Lucking-Reiley and Spulber, 2001, p. 55), "total Internet B2B transactions in 1999 were $90 billion compared to only $16.7 billion in business to consumer transactions." Kenjale and Phatak (2002) went as far as to say that "the B2B marketplace is ten times larger than the B2C marketplace because of all the intermediate transactions involved in bringing products to market." It is crucial that firms, especially geographically disadvantaged firms, work together in order to begin to discover the potential depth of the B2B marketplace.

The Role of Business Clusters in Rural Economic Development

Rural residents comprise about twenty percent of the American population with rural areas accounting for more than eighty percent of total US landmass (United States Department of Agriculture, 1995). Production in these rural areas is no longer purely agricultural rather it spans across almost all industries. The US government spent forty billion dollars on rural economic development in 2007 alone (Kilkenny, 2010). Much of that money was spent on non agricultural industries as research shows that agricultural improvements alone will not result in economic success (Vincze and Mezei, 2011; Kilkenny, 2010).

Rural areas are normally comprised of a variety of business types that are only loosely connected by region. The customers of these rural firms are located outside the region and often hard to reach with the small independent efforts of each firm. After all one rural firm on its own has very limited resources to add to an already disadvantageous location. Kilkenny (2010, p.1) sums up this business conundrum by saying "rural communities are too small to survive mistakes, but also too small to support in-house the analytical capacity to avoid them."When businesses join together they can share resources, cut expenses, and therefore be more economically successful.

Business clusters were first popularized in Micheal Porter's book, *The Competitive Advantage of Nations.* The firms which make up business clusters are widely defined as being not only from

the same geographical area but also in the same industry (Rosenfeld, 1997). Business clusters such as Silicon Valley, the Big Three Automakers, and French fashion houses are all good examples of firms located in the same industry and geographical location. Muro and Katz (2010) point out that clusters have gained a renewed interest as a way to rebuild our devastated economy. In order to be successful these firms must be dynamic and change according to a multitude of factors like new technology, disappearing natural resources, new customer demands, etc. As long as these firms are flexible and geared toward growth they are able to reap enormous rewards from shared resources.

Business clusters come in all shapes and styles but for the purposes of this paper we will focus on a rural regional cluster. Depending on what region of the US is being discussed there are unique inputs offered only by that host area. Rural clusters may suffer both from a lack of homogenous members and the sheer breadth of territory that they include. The large distances that rural clusters stretch may be less of a disadvantage or not one at all with the interconnectedness of the World Wide Web. To their advantage, rural clusters involve a high degree of trust and even dissimilar industries can gain through a vast network of communications (Rosenfeld, 1997). Successful clusters can positively impact entire regions (Muro and Katz, 2010). Too often in the literature we find that geographical clusters are defined as being made up only of firms in the same industry. The authors believe that rural development can be successful by thinking of business clusters in terms of geographic location rather than fixating on industry categorization.

The Eastern Upper Peninsula

This study was centered in the Eastern Upper Peninsula of Michigan. This area comprises three counties: Chippewa, Luce, and Mackinac. As of the 2010 Michigan census data total population of the EUP was 56,264 people and total land mass was 3,485.8 square miles. The Eastern Upper Peninsula's economy is heavily tourism based with the timber industry also being a large contributor (MDOC). Tourism dependence becomes a problem when summers are colder than normal or snow fall is less than normal. The timber industry is fairly steady but shows little room for economic growth. Many of the region's largest employers are population based such as hospitals, school systems, and the local Indian tribe. As population numbers continue to decrease these fields will provide fewer jobs. As people leave to find employment, the economy will be further weakened.

Manufacturing provides a large potential source of income to the region. As of 2010, there were less than a dozen major manufactures in this region which exported products (EUPRPDC). The number of total manufacturers will continue to grow with help from new economic initiatives which promote entrepreneurship and foster small businesses. Two such programs are the Eastern Upper Peninsula Regional Planning and Development Commission and the Upper Peninsula Economic Development Alliance. Now the task is to link these businesses together into a regional cluster that will be able to benefit member firms and ultimately the region. The trial

project detailed below offers a potential framework in order to investigate creating regional clusters that are constrained only by geography in the Eastern Upper Peninsula.

Methodology

Study Timeline

This experimental project was done in three phases. The first phase was establishing the website as a central location to highlight the products. This included gathering the necessary information for the website like pictures and material specifics from the businesses. The second phase of the project was the student teams coming up with advertising campaigns for their specific countries. Students chose their countries and marketing strategies independently and were only restrained by a marketing budget of between $250 and $500. Google Analytics was utilized in order to track website audience and traffic sources which made up the third phase. Data provided below was tracked during a 3-month initiative.

Companies

This study included 8 small/medium sized manufacturing companies all of which are located in the Eastern Upper Peninsula of Michigan. Due to the small size of the companies they had little to no international exposure before this project. By participating in this project they demonstrated that they were interested in international exportation. It is important to note that this study allowed each company to represent itself. The study coordinators did not act as sales intermediaries but rather lead generators and therefore the companies controlled their own sales process once provided with a sales lead. The coordinators merely facilitated a network and communication process to connect international buyers with regional sellers. Also, there was no language adjustment made to the website because the local companies were not able to provide language support during the sales process. Therefore the site targeted international customers that would commonly know English.

Website

The website was set up as an international business to business exchange. The site allowed for potential buyers to search by industry, material, and product. Products represented on the site spanned across several different categories. Product categories included machinery, automotive, medical engineering, raw material/mining, and construction/building. Wood, plastic, metal and composites were the four choices to search by material type. Each product included a picture and information about the product. Primary use, secondary use, and manufacturing process for each product were highlighted on the site as well. There was also a form available for visitors to contact the site coordinators about specific products they were looking for which were not offered on the site.

Marketing Strategies

Students from an international marketing course at Lake Superior State University identified potential markets based on personal knowledge, cultural backgrounds, and personal connections. Brazil, Argentina, Russia, Germany, Turkey, England, and Canada were the final market selections. The next step in the process was to evaluate the options to facilitate and market the website to buyers in the specific countries. The students looked at several different options and weighed the cost of advertising against the lead potential in order identify the most effective marketing approach within budget constraints. After deciding that a one year membership to the German Chamber of Commerce would spend the entire budget, Team Germany chose to use Google Adwords only. Team Canada opted to use Facebook and word of mouth as their marketing vehicles because many of the members were from Canada. Team Russia had originally researched Yandex the Russian equivalent of Google Adwords but was not approved by the Russian government. They then turned to Google Adwords and targeted Moscow and St Petersburg specifically. Team Turkey went with Facebook Ads only after not having enough money in their budget to advertise in a Turkish newspaper. After contacting disaster relief agencies as possible customers, Team Argentina went exclusively with Google Adwords. Team United Kingdom used a profile on an online yellow pages site that boasts over a million UK users per month. Since the profile was free, Team United Kingdom also used Google Adwords as a supplemental advertising vehicle. Finally, Team Brazil advertised on an online Brazilian newspaper and they also invested an equal amount of money in Google Adwords.

Google Adwords was the most commonly used strategy by the students to advertise the site. Out of the seven groups, five groups used Google Adwords as at least part of their marketing campaigns. The two groups, which did not utilize Adwords, relied on the social media Facebook. Translation problems were a common theme with all teams. During the course of the project, students would modify strategies by changing keywords, translating words, and increasing per click amounts. They then monitored the changes to ensure that they were in fact increasing traffic to the site.

Results

Audience

There were a total of 4,618 visits to the page with 4,282 unique visitors. These figures equaled to about 92% of visits being new. There were a total of 7,307 page views with about 1.6 pages viewed per visit. The average visit was 36 seconds with a total bounce rate of about 78%. Total results are shown in Table 1.

Table 1

Visits	4,618
Unique Visitors	4,282
Pageviews	7,307
Pages/Visits	1.58
Average Visit Duration	00:00:36
Bounce Rate	77.83%
% of New Visits	91.86%

It is important to note that 27% of total visits were from mobile devices including tablets. Mobile visitors visited fewer pages (1.39) and had higher bounce rates (82.23%) than the average visitor. Mobile users stay duration was 33 seconds which is slightly shorter than the average visit of 36 seconds.

Almost 30 different countries visited the website. Traffic from Argentina made up almost 50% of all visitors to the site. Russia came in second with about 13% of visitors. Canada also posted double digit traffic numbers to the site with a little over 10%. A shortened version of the results by country is summarized in Table 2. The remaining 22 countries not shown in the table made up as a group about 2% of total traffic to the site.

Table 2

Country	# of visits	% of total visits
Argentina	2,253	48.79
Russia	623	13.49
Canada	470	10.18
United Kingdom	380	8.23
United States	336	7.28
Germany	287	6.21
Brazil	169	3.66

Traffic Sources

There were three main traffic sources as shown in Figure 1. Direct sources were responsible for the smallest percentage of site visitors with 16% of visitors. Search traffic made up 18% of the total. Ask (47%) and Google (43.6%) were the two largest contributors to search traffic. Referral traffic was the largest contributor to traffic sources with about 65%. Google Ads (60%) and Facebook (15.65%) were the top two sources of referral traffic.

Figure 1

Traffic Sources

- Direct Traffic
- Search Traffic
- Referral Traffic

Inquiries

There were a total of four inquire emails that came through the website. Two inquires about specific products listed on the site were generated from Brazil and Argentina. These two inquires were passed on to the appropriate companies. Brazil also produced a general request about finding products for a specific industry that was not listed. The final inquiry was a job request. The latter two requests were kept internal.

Limitations

As with many experimental projects there were inherent limitations. Since this project was conducted in an academic setting the timeline of this project had to start and finish within an academic semester. The results given above covered only a two month time span. Students were constrained with rather small budgets of between $250-$500 per group. Budget and time constraints were responsible for two additional limitations which were language accessibility and the number of products displayed on the website. English was used on the site and no translation services were employed. The website was set up with a limited number of products. The authors believe that the above limitations reflected the academic setting in which this experiment was conducted. It is also the belief of the authors that even taking into account these limitations, this project was still able to provide a solid foundation for future research on regional business clusters based on geographic clusters.

Findings

This experimental project had three objectives. The first goal was to introduce EUP manufacturing firms to a wider audience. The second goal was to demonstrate that regional clusters focusing on geography rather than industry can be successful in rural developmental business planning. The final objective was to create a framework on which to build future regional cluster exporting projects on and provide improvement suggestions for those projects.

The first aim of generating awareness of EUP products and services was clearly achieved by looking at the data. There were a total of 4,282 unique visitors to the site in a period of two months. By looking at the per country data, we see that over 90% of this traffic came from

international sources. The fact that visitors from Argentina accounted for just under half of all visitors demonstrates that the marketing campaign for that country was very successful. The other marketing campaigns were still successful with visits from Russia and Canada also contributing 13% and 10% respectively. Before the project the participating firms had little to no international exposure and this project was able to greatly increase their international audiences.

The project showed very limited success in terms of inquiries vs. visitors based solely on geography rather than by industry type. Out of thousands of visits, four inquiries were received. Further weakening the results in this objective, was the fact that out of the four leads only half of them were potential business transactions. The authors believe that the limited success in this area was mainly attributed to the short two month time span of the project. In future projects, a longer run would more adequately determine if this idea could be successful.

Finally, this project was successful at providing a framework for future regional cluster projects. Since regional firms have limited budgets it is important to use resources as efficiently as possible. The results show that even with limited budgets, well thought out marketing approaches can be successful. Also highlighted in the study was the utilization of the business to business marketing approach as a means to navigate language and budget restrictions. The project also demonstrated the need to further develop the site and include additional products and services to increase the relevance of the site for foreign buyers. Increases in both time and budget were also warranted for future projects.

The approach showed efficiency of resources and know-how to highlight EUP manufacturing products in foreign markets as shown in the unique visitors to the website. Ultimately, due mainly to time limitations this study shows limited evidence to support the believe that rural development can be successful by thinking of business clusters in terms of geographic location rather than fixating on industry categorization. Finally, this experimental project provided a framework and revealed suggestions for future regional cluster projects. It is the authors' hopes that future regional exporting initiatives may build upon the framework and suggestions offered by this experiment and create economic gains for rural areas.

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