# Factors Influencing the Location of Non-indigenous[1] Industries in Slinger, Wisconsin—A Case Study[2]

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Numerous studies have been made in an attempt to analyze the locational factors which tend to situate industries in sub-central locations. Most of the obvious factors influencing industrial location in sub-centers, such as: cheaper labor supply, lower tax rates, and the availability of parasitic labor have been strongly emphasized in many publications. Other factors of a more subtle nature have a distinct influence on the location of such industries. In an attempt to analyze the relative importance of the various locational factors a case study has been made. A study of this type must of necessity be detailed so that it will produce specifics rather than generalities. Slinger, Wisconsin, which was chosen for this study, is not a large industrial concentration, and thus lends itself to a detailed study. On the other hand there are enough industries in the town to lend a fair degree of validity to the study.

Slinger, Wisconsin, a town of some 800 people, located about 30 miles northwest of Milwaukee, is quite similar to other small service type communities in southeastern Wisconsin. Slinger differs, however, from many of the other towns of comparable size because of the industries located within the town. Some of these industries are not peculiar to Slinger. They are relatively typical of the small farm-oriented communities of this area. They include two feed mills, a creamery, and a brewery. These industries are oriented to local markets, local raw materials, or both. In addition, however, certain other industries of a different type are located in this small urban center. Factors which have influenced the location of this latter type industry are investigated here. No locational principles can be formulated on the basis of this study alone. However, through case studies of a similar nature it may be possible to formulate principles relating to the location of such industries.

The four industries not oriented to local raw materials or local markets analyzed here are: The Schaefer Organ Company, The Carbon Engineering Corporation, The Wisconsin Carbon Company, and the Slinger Foundry Company.

## The Schaefer Organ Company

The Shaefer Organ Company occupies a two-storied frame building which is only slightly larger than a large sized residence. Apparently there has been no particular emphasis placed on plant location, as it possesses no advantages over adjacent residences from a site standpoint. The plant employs about 12 workers at the present time, and thus must be considered a small industry.

There is little or no correlation between the location and acquisition of raw materials which would tend to situate such an industry in Slinger. Most of the woods used in the manufacturing process are imported from Indiana, and, although in the industry's infancy they were purchased in part, locally, even then a considerable amount of the wood had to be imported from considerable distances. English tin and lead pipes are acquired chiefly from brokers in Milwaukee and New York after importation from

[1] The terms 'non-indigenous' and 'indigenous' are defined in the first paragraph of the conclusion.

[2] The material for this paper was obtained by personal interviews with responsible persons connected with the industries in Slinger. The material was gathered during the Northwestern-Syracuse Field Course, Summer, 1949 in which the author was enrolled. The paper was written under the direction of Dr. G. Donald Hudson in a graduate seminar at Northwestern in the Fall of 1949. Special thanks are due to Mr. Dee Eberhart for his aid in interviewing; he is not responsible for any errors which may have crept into the manuscript.

England. Other pipe, chiefly galvanized, is purchased in Milwaukee or Chicago. The complex electrical equipment is purchased, for the most part, in Milwaukee and Chicago.

The finished organs, which retail from $8,000 to $50,000, are sold primarily in the midwestern states of Wisconsin, Illinois, Indiana, Missouri, Michigan, and Minnesota. Occasionally an organ is sent to an area outside this midwestern bloc. The finished organs are moved to market by truck. Their installation is supervised by the manufacturers themselves.

Historical accident has had a greater influence on the location of this industry than has any other single factor. ' The industry was established in 1860 as a clock manufacturing company, and has evolved through the years to its present status as an organ manufacturing concern. The industry owes its birth to the individual skill and initiative of the founding Schaefer. Following the pursuits of his avocation in Germany, the elder Schaefer established the original plant with the idea of supplying the local market with clocks. Eventually the business grew, and the profits which were received from the sale of some small mechanical organs proved to be consistently larger and more reliable than those which could be derived from the manufacture and sale of clocks. The highly developed skills which are required in the manufacture of organs have been passed down through the family and to a few close associates. As the manufacturing process has become more complex, the industry has kept pace, maintaining the original driving force of the founding Schaefer. The operation has been profitable enough so that the industry has continued in the family.

Thus, after examination of the locational factors of this particular plant it is seen that the plant was located in Slinger because of the personal preference of the founder of the plant, who preferred to live and work in Slinger.

### The Carbon Engineering Corporation

The Carbon Engineering Corporation, which was established in Slinger in 1928, occupies a relatively new concrete block building on the Minneapolis, St. Paul, and Sault Ste. Marie ('Soo Line') Railroad. The plant employs about 17 persons at the present time.

Carbon brushes for motors are the chief articles manufactured, but several other items of carbon are made for use in a variety of electrical products and appliances. Raw materials for the manufacture of the finished products are widespread in their origin, but in most cases they are purchased from brokers located in Chicago and Milwaukee. These products include: carbon, pitch, carbon black, lamp black, and graphite. Other products used in the manufacturing process, such as copper, lead, and tin dust are purchased in New York. These raw materials are moved to the plant both by train and truck.

The finished articles are relatively small and are high enough in unit value to justify shipping costs to distant points. The products are sold throughout the United States and Canada; and on occasion the finished articles are sent to a foreign country. Fuel for the manufacturing operation is manufactured gas which is piped from Milwaukee.

Apparently none of the above mentioned factors have influenced the location of this plant in Slinger. Legislation has played a major role in the location of the Carbon Engineering Corporation in Slinger. The plant was moved from Milwaukee in 1928 in order to take advantage of the more lenient smoke and dust ordinances in Slinger. Since carbon companies are inherently dirty because of the nature of the manufacturing process, the leniency of Slinger's smoke and dust ordinances was thus of major importance.

### The Wisconsin Carbon Company

The Wisconsin Carbon Company occupies two buildings. One is a single story frame structure, and the other, very similar in size and shape, is made of concrete blocks. The plant is located on the 'Soo' Line, only a short distance from the Carbon Engineering Corporation, and employs only 10 people.

Concerned with the same products and processes, the list of raw materials, fuel, and transportation facilities of the Wisconsin Carbon Company are almost identical to those of the Carbon Engineering Corporation.

Carbon companies have a tendency to group together, for on occasion there is an interchange of raw materials which may be critically short in one plant. Therefore, the previous location of the Carbon Engineering Corporation may have had some influence upon the location of the Wisconsin Carbon Company. Undoubtedly the less stringent smoke and dust ordinances of Slinger also tended to influence the plant officials to locate in Slinger.

The most important factor which tended to locate the Wisconsin Carbon Company in Slinger was the availability of a suitable factory building. This building was available largely because it had been erected by local capital for use by another industry, but was never occupied. The investors were naturally anxious to have someone occupy and make us of the building; and as a result the Wisconsin Carbon Company moved in and began operations in the late 1930's.

### The Slinger Foundry Company

Of the four industries investigated in this study the largest is the Slinger Foundry Company. Employment varies from a peak of 150 men to a low of 15 depending upon contract demands. The building which houses the industry is relatively old, but has been sufficiently repaired to house adequately the largest industry in Slinger.

Apparently the availability of raw materials was not the dominant consideration in locating the foundry in Slinger. Most of the raw materials are, however, obtained at relatively short distances from the plant. Coke is purchased in Milwaukee where it is manufactured from Appalachian coals. Scrap iron is purchased in Milwaukee and Chicago, and the pig iron which is used in the operation is obtained from the Chicago area. Fire brick is shipped from Mexico, Missouri. Excellent sands for molds are obtained locally from the St. Petersburg formation, and dolomite for flux is obtained nearby.

After casting parts (according to a strict trade secret formula) the finished castings are sold on a contract basis throughout the midwest and as far east as New York. Because the finished articles are shipped in less than carload lots, all of them are shipped to market by truck. The raw materials, on the other hand, move in either by rail or truck depending on the bulkiness of the raw material in question.

Availability of a building was also one of the most conspicuous factors which tended to locate the foundry in Slinger. The Holton Brothers, who established the plant in 1943, chose Slinger as the site for their projected foundry largely because there was a building which remained from a long since defunct foundry. The building could be purchased cheaply because of its poor state of repair. The combined purchase price and the repair bill were less than the price of a new building, however. Another factor not specifically mentioned, but which was probably of some importance was the lack of stringent anti-smoke and dust ordinances in Slinger.

## Conclusions

The industries investigated in this study are those which are not generally encountered in a rural farm oriented community. This being the case, they may perhaps be termed "non-indigenous" in contrast to those which depend on local raw materials or markets for their existence and may be termed "indigenous."

Slinger possesses no outstanding advantage which would tend to locate non-indigenous industries in the town. The transportation facilities are adequate, but they are no better than those of other towns in the same general area. The labor force is satisfactory, but is not superior. With the minor exception of the few skilled artisans working for the organ company there is no skilled labor available. There is no great stock of capital in the town. Obviously, then, there have been other factors which have attracted non-indigenous industries to the town.

Investigation of the non-indigenous industries revealed several factors influencing the location of such industries. Historical accident has had a strong influence on plant location in this town. The narrative of Schaefer's founding of the clock-organ factory, and of its sustained existence as an organ factory exemplifies the importance of personal preference in the location of industrial establishments. Other factors which have influenced the location of non-indigenous industrious in Slinger are: availability of building space, and lack of ordinances restricting smoke and dirt.

It is noteworthy that the factors which have tended to locate these non-indigenous industries in Slinger bear little resemblance to the reasons often advanced for the non-centralized location of industries. The following factors are commonly advanced as influential reasons for the establishment of industries in non-central locations: lower wages in smaller communities, better living conditions for labor, availability of parasitic labor in small communities, and lower tax rates. Of these the only one whch has any bearing on plant location in Slinger is a slightly lower tax rate there than in the larger industrial areas, such as Chicago and Milwaukee. Cheaper labor in sub-central locations is definitely not a factor in the case of Slinger; in fact the wages are as high, and in one case higher, than those which are paid in Milwaukee for a similar type of work. Only an insignificant number of women and other cheap laborers are employed in Slinger—there is no parasitic labor in the town. Although Slinger may possess some residential advantages because of its rural location, it does not seem probable that this factor has been instrumental in locating industries in Slinger.

Obviously no general conclusions can be made on the basis of this one case study alone. However, this study indicates that some of the established ideas regarding the location of industries in sub-centers merit further investigation and analysis. From such studies a clearer understanding of the relative weights accorded to locational factors that are discovered may be derived. To achieve this end, since some of the factors are inherently subtle in the influence they exercise, these studies must necessarily be detailed and specific.