

Causal Variables Affecting Rural Industry Outsourcing In Northeast Thailand

Thongphon Promsaka Na Sakolnakorn, Khon Kaen University, Thailand
Suranart Khamanarong, Khon Kaen University, Thailand
Kimaporn Khamanarong, Khon Kaen University, Thailand
Virasit Imtawil, Khon Kaen University, Thailand

ABSTRACT

The purpose of this research was to study causal variables affecting outsourcing of rural industry management in northeast Thailand. This study focused on entrepreneurs in small and medium enterprises in the manufacturing sector. A path analysis technique with multiple regression method was used as a tool to analyze the influence of factors in rural industry outsourcing. According to the analysis, we found three factors directly affecting rural industry outsourcing management: (1) cost of production, (2) facilities of management and production efficiency and (3) potential for subcontracting. We also found that rural industry outsourcing management was indirectly influenced by two additional factors: (1) government policies and law, and (2) the environment of the outsourcing area. A coefficient of determination of $R^2 = 0.244$ and Durbin-Waston = 1.936 were obtained in the study.

Keywords: Rural industries, Outsourcing

INTRODUCTION

Nowadays, macroeconomics and microeconomics have been changing very rapidly, in every region. This situation is forcing all countries in the world to adapt to competition resulting from globalization, including modifying government policies, international relations, free trade area agreements, etc. Changes are also occurring in industrial management, especially organizational management, production management and technology, delivery, and marketing management, in response to both local and international competition.

However, changing economies and production methods means delivering goods from one country to another or one region to another, and using companies in other countries to produce some goods and products. Multinational companies in the U.S., UK, and Europe send some part of production to other regions where the cost of labor is lowest, or where other advantages exist in cost of production (Graf and Mudambi, 2005).

Transitions in the world economy increasingly involve the flow of intermediate goods from one country to another as multiple countries complete successive steps in a globally integrated production process. More and more firms have located different stages of production processes in different countries. Many companies in the U.S. and Europe send some part of their production to other countries such as China, Thailand, Vietnam, and India in order to reduce costs. However, although outsourcing has become important, the process is still under the auspices of one company, which therefore must consider how to use its management tools.

Because of this industrial transformation, a new phenomenon is appearing on the industrial world map. China and India are major locations for industry, and many firms have sent goods and products to these countries for further production. This industrial map changing involves changing technology and convenient communications mean we can work from different countries but still work together as if in the same place and close to each other. (Gupta and Govindarajan, 2004).

Contract manufacturing is an emerging phenomenon with industry-wide implications. Contract manufacturing refers to the recurring buyer–seller relationship at the design manufacturing interface (Sturgeon, 1999). The relationship at the design manufacturing interface is inherently interaction intensive. Chan and Chung (2002) capture this assumption in the definition of contract manufacturing, when a provider of goods and services works collaboratively with other providers of goods and services as networked business partners to satisfy market niches by exchanging information through an interorganizational information system.

Business process outsourcing has been an accepted business practice for more than two decades. It has shown a remarkable increase in recent years and has been a source of growth in several industrial sectors. In many countries, agreements have been made between a small number of multinational industry service suppliers and large client organizations, including central and local governments and large services and manufacturing firms. Outsourcing is the process of shifting tasks and services previously performed in-house to outside vendors (Jenster, Pedersen, Plackett, and Hussey, 2005). However, outsourcing is a common phenomenon, despite much attention being given to both globalization and regionalization, and occurs when organizations in one country contract work to another country either by creating operations in the foreign country or by contracting with an outsourcing provider. (Niederman, 2005).

Outsourcing is a dynamic and recurring process that rests largely on the propositions of socio-technical theory, including open systems theory and contingency theory. Hence, it seems reasonable to assume that one static or unambiguous road map relating to outsourcing of manufacturing, which meets the requirements of every sectoral pattern, cannot be developed (Momme and Hvolby, 2001). Thus outsourcing is a method in which management responsibility is transferred to an external organ or corporation in order to expand the core activities of the outsourcing company in fields complementary to its main activities. Outsourcing is and will remain an important method of satisfying the needs of business such as lower cost and competitiveness in the foreseeable future.

Outsourcing means the act of obtaining services from an external source, and business process outsourcing (BPO) occurs when an organization turns over the corporate environment of a particular business process or some part of production activities to a third party that specializes in that process (Brown and Wilson, 2005: 20). Business process outsourcing comprises activities in relation to management of an organization, including some part of production outside of the organization and/or third party by collaboration with a partner to produce that process for more efficiency of organization and competition (Magnezi, Dankner, Kedem, and Reuveni, 2006).

In Thailand, rural development began in 1961 with the first National Economic and Social Development Plan. The third plan was concerned with rural industrial development. As regionalization of industrial growth occurred, the manufacturing sector emerged toward the end of the fourth plan as not significantly different from where it had been after the end of the third plan. Several explanations can be offered for encouragement of the industry to decentralize. First, Bangkok faced the problem of pollution and heavy traffic; thus industries needed to decentralize to other regions, but outer areas were lacking in development. Thus it was important to develop an infrastructure to encourage competitiveness against other regions. Second, regionalization created incentives and benefits for industrial distribution such as natural resources, land prices, and advantages in cost of labor. These concepts motivated industries to move their factories to rural areas. Thus industries spreading out to local land was one part of the policy to develop social, economic, and well-being of the population. (Panpiemras, 1993).

Rural industry in Thailand is one sector of increasing economic growth, and of economic growth of Small and Medium Enterprises (SMEs). Over the years, small industry development programs have greatly contributed to the growth of the national economy by creating opportunities for more employment and earning of foreign exchange through exports, production of goods and services, and import substitution. Small firms possess certain advantages not found in bigger firms. Thus SMEs play a major role in economic activities. Rural industries increase the income of peasants and help to lift many peasants from poverty. Village industries benefit from outsourcing activities from urban industries. Some huge urban industries do not want many employees because they want to reduce the cost of labor, including wages and salaries. They hire only skilled workers for certain aspects of production that use complicated machinery and then send the rest of the production to rural villages through subcontracting systems.

Some factories provide raw materials and some knowledge to the village for production; after that, the pieces are returned so the goods can be finished in their own factory.(Khamanarong, 1993).

In addition, when industry spreads to rural areas, more activities follow from urban or huge industries that outsource some part of their production to that area. So, all activities in that region are called rural industries. Rural industry is defined as manufacturing by small, medium, and large enterprises located in rural areas and far from developed places.(Panpiemras, 1998). In this paper the concept of rural industries includes those provincial industries and village industries located outside of Bangkok, outside the capital city.(Khamanarong, 2000).

In northeast Thailand, outsourcing activities come from urban industries that send some part of their production to rural villages by subcontract in order to reduce the cost of production (Khamanarong, 2006).

On the one hand, outsourcing has clear advantages, for instance, in terms of sharing institutional regimes and lower transportation and transaction costs, especially the advantageous cost of labor. Therefore, outsourcing is a method in which management responsibilities are transferred to an external organization in order to expand the core activities of the outsourcing company in a field complementary to its main activities.

To survive economically today, organizations must transform themselves and their markets in an ever more daunting challenge to redefine the business world before it redefines them. To this end, outsourcing has emerged as the single most powerful tool available to executives seeking this level of business change. They can take advantage of transformations that outside specialists bring to their customers' business. Rural industry outsourcing is important and contributes to national economic growth as well as to the income in a region. Rural industries include many different sectors, such as trade, services, manufacturing, financial, and investment. Yet several important issues are unaddressed. In this paper, we seek to determine the factors influencing the decision by entrepreneurs to outsource to small and medium enterprises in the manufacturing sector in northeast Thailand. We will provide a picture of rural industry outsourcing and examine unaddressed questions concerning rural industry outsourcing management.

METHODOLOGY

The aim of this research is to study causal variables affecting rural industry outsourcing management in northeast Thailand. In this research we collected and analyzed data by both qualitative and quantitative methods. The qualitative method used in-depth interviews of 20 entrepreneurs in small and medium enterprises in the manufacturing sector in northeast Thailand. From the interviews, we found five factors to be affecting rural industry outsourcing management. After that, all data from in-depth interviews were reviewed and used to analyze related factors and variables. These were (1) cost of production, (2) facilities of management and production efficiency, (3) potential for subcontracting, (4) government policies and laws, and (5) the environment of the outsourcing area.

Factors and variables drawn from in-depth interviews were compiled into a questionnaire that was provided to 30 entrepreneurs in order to test its reliability. Reliability analysis resulted in Alpha Coefficient $\alpha = 0.9140$.

We also used questionnaires to survey a population of 313 entrepreneurs by purposive sampling. Factor analysis (SPSS) was used to analyze the data. From analysis, 5 factors and 52 variables were found to have an effect on outsourcing to rural industries. According to factor analysis, 5 factors analyzed by path analysis with multiple regression method were used to analyze the influence of factors in rural industry outsourcing.

RESULT OF ANALYSIS

From factor analysis, among 5 factors with 52 variables, 5 were found to be significant for outsourcing to rural industries: (1) cost of production (variance = 19.945%), (2) facilities of management and production efficiency (variance = 17.060%), (3) potential for subcontracting (variance = 14.495%), (4) government policies and laws (variance = 11.887%), and (5) the environment of the outsourcing area (variance = 8.667%). Total variance explained was 72.054 %.

According to the factor analysis, these 5 factors were used in path analysis with multiple regression to analyze the influence of the factors. The hypothesis model is shown in figure 1.

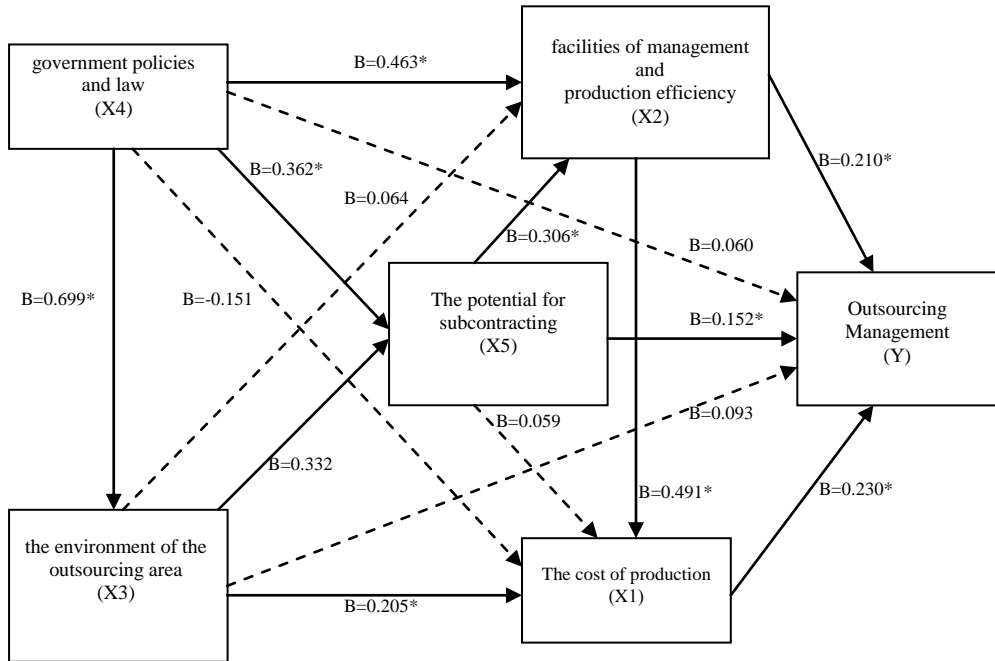


Figure 1: Model of causal variables affecting rural industries outsourcing management in northeast Thailand

As shown in figure 1, variables that have a direct effect on outsourcing management are (1) the factor of cost of production (x1) (direct coefficient of determination = 0.230), (2) the factor of facilities of management and production efficiency (x2) (direct coefficient of determination = 0.210), (3) the potential for subcontracting (x5) (direct coefficient of determination = 0.162).

We also found that rural industry outsourcing management was indirectly affected by two additional factors: (1) government policies and laws (indirect coefficient of determination = 0.261), processed through the factor of facilities of management and production efficiency (x2), and (2) the environment of the outsourcing area (indirect coefficient of determination = 0.130), processed through the factor of potential for subcontracting (x5).

According to the structural hypothesis model, we measured goodness of fit of the hypothesis model to the fully structural model by Specht’s method (Specht, 1973; Pedhazur, 1982), with $W = 2.2358$, which is less than $\chi^2 = 28.9$ (df = 18) at significance = 0.05. Thus the hypothesis model explains the observed data.

DISCUSSION AND CONCLUSION

Outsourcing management for rural industrial entrepreneurs is one of the strategies used when some aspects of production are moved from an internal organization to an external organization. For outsourcers, one motivation for distributing work is the cost of production, especially costs of employees such as wages and compensation. Currently, there is much competition among industries. Entrepreneurs must compete with other entrepreneurs who have the same standards, so the cost of production will directly affect prices. If entrepreneurs can compete in quality and price, their producing industries will survive in the current environment. Outsourcing is good for industrial entrepreneurs because it produces benefits for both the outsourcers and the subcontractors. For industrial

entrepreneurs, outsourcing helps them keep up with demand for products. They do not have to expand their production lines or decrease the cost of employees, especially wages and compensation.

Nevertheless, the study found that entrepreneurs cannot consider only the costs of outsourcing. Other factors must be considered, including the following:

1. **Cost of production.** This is the first factor an entrepreneur should consider, because outsourcing can help in management of every part of production, for example, by reducing a budget and getting valuable work in quantity. Entrepreneurs must have a plan to use raw materials in their own industry and then distribute products to subcontractors to finish. They can manage quality more easily because they can choose to pay only for quality products. In outsourcing, entrepreneurs must look for processes where subcontractors' costs are lower than their own. This will help them save on expenses such as wages and compensation. Consequently, this will be advantageous for both the entrepreneurs, who save on production costs, and subcontractors, who gain more income

2. **Facilities of management and production efficiency.** Entrepreneurs should consider outsourcing products that require many employees but are of lower quality. Moreover, they must consider whether subcontractors can do the process or not, how much the outsourcing will cost, and what the production plan is. When products are outsourced, entrepreneurs should note finished quality and the cost of production.

3. **The potential for subcontracting.** This is important because quality products will be made by skillful employees. In addition, subcontractors will be attracted by entrepreneurs if they use new technology in production, because technology will produce efficiency in production. Thus, determining a subcontractor's efficiency and experience is very important for entrepreneurs. If entrepreneurs select the right subcontractors, it will have a positive effect on rural industry.

4. **Government policies and laws.** This is a factor that supports outsourcing to rural industries because the government has made a policy that distributes development to rural areas including investment and tax and fee exemptions and construction of simple utilities for industry. This policy will aid industrial distribution from the city to rural areas. When these industries are set in rural areas, rural industries will grow in order to support the main industries that are set in that area, and connections will be made between medium or small industries and rural subcontractors. However, entrepreneurs must consider related policies to determine which policy is advantageous for outsourcing products and the proper area for outsourcing.

Currently, laws related to industries are being adopted to support the economy, including a minimum wage law which is constantly being increased and affects the cost of production. To solve this problem, most entrepreneurs avoid doing some production processes and use outsourcing, but this doesn't mean they don't do any of their own production. Entrepreneurs will select only processes that are not costly to do themselves. Outsourcing entrepreneurs will thus not have to worry about employees and won't have to pay compensation such as social security. Moreover, when entrepreneurs have a lot of orders, they don't have to increase their machinery, nor will they have to pay a tax on machinery. Thus, outsourcing products to small industries is a way to make more products without having to pay more.

5. **The environment of the outsourcing area.** This is also important because if the outsourcing area has a relationship with the economy and industry, the area will have skilled employees. If the subcontractor cannot take charge of production, an entrepreneur may let a familiar subcontractor distribute products to others. Moreover, if the outsourcing area has a connection with other areas, a movement of resources and employees will occur. However, entrepreneurs must learn about the traditions of the subcontractors thoroughly, because there are many days off in the northeastern region.

According to this study, outsourcing occurs as a result of intimate acquaintance between subcontractors and managing departments. In addition, the research found that outsourcing in northeast Thailand does not have to have contracts. They trust each other. So anyone who wants to increase earnings can be a subcontractor if he is familiar to the factory or there is someone who will stand security. Moreover, the subcontractors will use only skilled workers,

and the outsourcers will provide raw materials. This is a worthwhile investment because the work that the outsourcers distribute is the work that uses more skilled work and time than technology, and everyone can do it.

A fact about outsourcing is that outsourcers want to decrease the cost of production and the cost of management by distributing work to avoid other costs such as wages and compensation. However, outsourcing helps society by decreasing unemployment, making the economy grow and decreasing social problems.

Finally, outsourcing is a way to boost the economy and it helps producing industries to survive in the market. However, it is not a guarantee that the producing industries will survive. It is just one of the devices that entrepreneurs should use in management, but it depends on managerial efficiency in the industries. If entrepreneurs want to survive in the age of globalization, they have to adopt management techniques suitable for each situation in order to survive in the current industrial climate.

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