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Autonomy and Performance of Agentification: Cases of Nine Independent Agencies in Thailand*

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Facing the limitations of bureaucracy and the pressures of crisis and change, the government reforms in many countries adopted a discipline of new public management (NPM) by separating autonomous agencies (agentification) in the public sector. Nonetheless, there are still very few empirical studies of performance assessment of this type of agency. This paper has two main objectives: (1) to explore the governance and autonomy of nine independent agencies under the Ministry of Industry (MOI) in Thailand; and (2) to present performance assessment of these nine independent agencies. This study uses both qualitative and quantitative approaches in collecting data, including three focus groups, 37 in-depth interviews, and 3,428 questionnaire surveys. The paper applies the concepts of agentification of NPM to examine the multidimensions of autonomy and to evaluate the performance of the nine agencies, covering effectiveness, financial self-reliance, and the impact on industrial development. Finally, this paper discusses the effects of agentification and suggests policy and managerial implications as well as further research directions.

Keywords: agentification, autonomy, performance, industry, Thailand

Over the past three decades, the new public management (NPM) concept has exerted a widespread influence on public sector reform in many countries (Pollitt & Bouckaert, 2000). One core element of NPM is "agentification" which involves the breaking down of traditional bureaucracies into separate autonomous agencies in order to increase efficiency and effectiveness in the public sector. Despite its popularity in public reform strategies, there is still a paucity of empirical research emphasizing the results of NPM, especially for evaluation studies using a quantitative empirical approach (Boyne, 2002; Norman, 2003; Van de Walle & Hammerschmid, 2011). This paper, therefore, attempts to examine and discuss the governance and autonomy of nine independent institutions under the foundation of the Thai Ministry of Industry (MOI), and assess their performance.

The Thai public sector originally institutionalized only two main kinds of organizations to perform tasks under the administrative branch, i.e., government agency and state enterprise. Government agencies carry out

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the basic functions of the public sector, i.e., education, public health, and social work; while state enterprises undertake commercial activities on behalf of the government. The influence of NPM began in Thailand in the early 1990s, through the establishment of various quasi-autonomous organizations for public services, including those for fostering and strengthening the competitiveness and capabilities of industries, especially small and medium supporting industries.

In Thailand, the industrial sector contributed toward 38.1% of the total GDP (gross domestic product) in 2014 (Bank of Thailand, 2014) and 76% of the total value of exports in 2013 (Office of Permanent Secretary of Ministry of Commerce, 2014). SMEs (small and medium-size enterprises) account for more than 75% of jobs in the real sector. However, the problems faced by the Thai SMEs are related to insufficient capital, labor, and raw material shortages, marketing problems, uncertain government policies, and poor state management in SME promotion, resulting in a lack of entrepreneurship and declining competitiveness (Office of Small and Medium Enterprise Promotion [OSMEP], 2002; Wiboonchutikula, 2001).

During 1992-2000, the Thai cabinet proposed the establishment of nine independent institutions to support and strengthen the growth, efficiency, and international competitiveness of the industrial sector. The nine institutions included the Thai-Germany Institute, the Thailand Productivity Institute, the Thailand Textile Institute, the National Food Institute, the Management System Certification Institute (Thailand), the Thailand Automotive Institute, the Electrical and Electronics Institute, the Iron and Steel Institute of Thailand, and the Institute of Small and Medium Enterprise Development. These nine institutions are under the foundation and run by a board appointed by the MOI in order to remain autonomous and perform their tasks efficiently and effectively. According to the cabinet resolution, the government intended to support them financially for only 3-10 years. After that, the operations of the institutions would then be transferred to the private sector. However, all institutions are still operating according to their original status, and many of them rely on an inclusive source of income from the government, despite now having been established for over 10 years.

The adoption of these new models for public service under the MOI has been highly controversial in other jurisdictions. The Annual Budget Act Commission (2007-2008) raised some important observations regarding the unclear responsibilities, duplication, and potential loss of democratic control and accountability for the provision of public services through such transfers. The effectiveness of these organizations has also been challenged in the context of a number of high profile losses. The Annual Budget Act Commission viewed that the government should review their mission, evaluate their performance, and terminate the ineffective ones.

Therefore, the aims of this study are to explore and discuss the autonomy of the nine independent agencies under the MOI and to evaluate their performance by applying the concept of value for money. In particular, the measures of performance to be engaged are effectiveness, financial self-reliance and the impact on industrial development. The results of the performance assessment are based on the collective basis of the nine institutions, rather than that of an individual institution, in order to understand the application of NPM in Thai contexts. Also, in this current study, an agency is defined as a formally disaggregated entity with specialization that is separate from its parent ministry. Such a unit is still a public organization with operating autonomy at the national level and one that is financially supported by the government. It would perform public tasks and be subject to public legal procedures (Pollitt, Talbot, Caulfield, & Smullen, 2004; Pollitt & Talbot, 2004; Christensen, Lie, & Laegreid, 2008).

In this study, data from a research project (Lorsuwannarat, Tepthong, & Rukhamate, 2011) funded by the Bureau of the Budget, will be used and reanalyzed by using the NPM concept of agentification and performance in order to gain better understanding about NPM application in Thai circumstances.

This study is arranged around five divisions. First, the paper will describe the background of the nine institutions. Second, the concepts of agentification and autonomy are reviewed and discussed in order to be used for analysis. Third, the research methodology of mixed methods is discussed. Fourth, the findings of the two objectives of the study are then presented. Finally, a discussion of the analysis results and recommendations, as well as directions for further research is outlined.

Background of Nine Independent Institutions

The Thai economy was originally solely agriculturally based. However, in the 1950s, the economy developed to be more industrialized with a variety of industrial productions. At present, the industrial sector has become primary to the Thai economy. From 2001 to 2010, the export value of the industrial sector was higher than that of other sectors. In 2010, the value of industrial exports contributed as much as 76.9% of total export value, whereas the agricultural value was only 11%, the industrial agriculture was 6.8%, and mineral and fuel was 5.4% (Office of Permanent Secretary of Ministry of Commerce, 2011).

The nine institutions are particularly significant within the studied industrial sectors in terms of the value of export and employment (see Table 1). They are also upstream industries which are linked with the development of other industrial sectors. For example, electricity and electronic appliances, food and beverage, vehicles and parts substantially contributed to the export income of the country. Food has high potential in terms of world competitiveness due to a stockpile of supplies, high demand, and the generation of employment within the country. Although the iron and steel and molding industries do not have a high export value, they are upstream industries which link with the development of other sectors.

Diligent consideration of the Thai industrial structure reveals that SMEs are the backbone of the structure. In 2010, the number of SMEs in Thailand accounted for 99.6% of total enterprises and provided 77.9% of total employment opportunities (Fiscal Policy Office, 2012). The government of Thailand has, therefore, adopted various policies to encourage private enterprise in general, and SMEs in particular, to gain more competitiveness. The policy instruments used by the government have included the establishment of semi-autonomous organizations to provide International Organization for Standardization (ISO) certification, research and development, training, equipment testing, and information distributing, and increase the productivity of industry.

Literature Review

Agentification

Agentification is one of the main elements of NPM (Pollitt, Bathgate, Caulfield, Smullen, & Talbot, 2001; Greve, Flinders, & Van Thiel, 1999; Organization for Economic Co-operation and Development [OECD], 2002). Agentification is concerned with the creation of specialized agencies and combines expertise, autonomy, and specialization of tasks in a narrow range of policy issues (Majone, 1997). Pollitt et al. (2004) define an agency as the following: (1) has its status defined principally or exclusively in public law (i.e., agencies are public bodies, not the third sector bodies); (2) is functionally disaggregated from the core of its ministry or department of state; (3) enjoys some degree of autonomy which is not enjoyed by the core ministry; (4) is nevertheless linked to the ministry/department of state in ways which are close enough to permit ministers/secretaries of state to alter budgets and main operational goals of the organization; (5) is therefore not statutorily fully independent of its ministry/department of state; and (6) is not a commercial corporation. There is a separation both on a vertical dimension between agencies and ministries and on a horizontal dimension between different agencies responsible for different tasks (Christensen & Laegreid, 2006). Schick (2002) defines agency as having:

> The only common element in that agencies is not departments, that is, they are not conglomerations of multiple activities. The typical agency has a single or relatively narrow purpose, and each has substantial operating independence, even if it is still housed within a department.

Table 1

Export Value, Number of Enterprises, and Number of Workers, Classified by Sectors

Industry by sector	Export value[1/] (in billion baht)	No. of enterprises[2/]	No. of workers[2/]
Electricity and electronic	1,689 (27.34)	3,035 (0.72)	435,209 (9.56)
Food	803 (13.00)	106,631 (24.9)	892,179 (19.37)
Automobile and parts	598 (9.69)	2,506 (0.59)	247,240 (5.43)
Textile and garment	344 (5.57)	131,353 (30.97)	783,547 (17.20)
Iron and steel	148 (2.83)	1,962 (0.44)	96,635 (2.12)
Mold and engines	8 (0.12)	34,350 (8.10)	399,015 (8.76)
Total	3,590 (60.26)	278,737 (65.71)	2,843,825 (62.44)

Notes. (…) = percentage compared with the total; 1 USD = 32 Thai baht (approximate). Source: [1/] The Office of Permanent Secretary of Ministry of Commerce (2011); [2/] The Office of National Statistics (2012).

The specific definitions of agency from the perspective of Pollitt et al. (2004) and others cover the concept of disaggregation and autonomy, however, their definitions exclude contractualisation. Torsteinsen (2007) comments that this specific definition is insufficient to apply to a real situation. Therefore, for the practical purpose, the scholars suggested that agentification is composed of three doctrines: structural disaggregation, autonomisation, and contractualisation (Pollitt et al., 2004; Fedele, Galli, & Ongaro, 2007). In the "structural disaggregation" process, a separate delimited entity is established formally from an existing organization. Then, in the "autonomisation" process, autonomy is granted to the disaggregated entity. Finally, in the "contractualisaton" process, detailed requirements on conduct and performance (in relation to various partners in the public sector) are imposed.

In this paper, agency is defined as a formally disaggregated entity with specialization that is separated from its parent ministry, with each having its own operating autonomy and the requirements on performance.

Autonomy

Molnar and Rogers (1976) describe autonomy as the degree to which an organization is free to make decisions with respect to its own operations. Autonomy can be broadly defined as the ability of organizations to make their own decisions on internal matters and arrangements. This is a key aspect of NPM. For public agencies, the level of organizational autonomy refers to the degree of delegation that is given to the agency by the government for its decision-making. Autonomy, in this paper, means the degree of organizational capacity in self-governing without depending on other agencies (Lorsuwannarat, 2008).

In general, autonomy may be classified into the four dimensions proposed by Christensen et al. (2008): structural, financial, legal, and interventional. Structural autonomy allows the agency independence in terms of choosing its own organizational structure and possible governance systems. Financial autonomy allows the agency to decide internally how to spend their financial resources, but it also means the agency needs to find its own source of additional revenue instead of solely relying on government funding. It would also be largely responsible for any incurred financial losses. Legal autonomy allows the agency independence to make legally-binding decisions. Interventional autonomy means that the agency is largely granted independence in terms of accountability.

Besides the four dimensions of autonomy seen from Christensen's view, Verhoest, Peters, Bouckaert, and Verschuere (2004) reviewed and suggested measures involving another two dimensions, i.e., managerial autonomy and policy autonomy. Managerial autonomy allows an agency the freedom to choose management issues such as the general systems of budget and human resource management. Policy autonomy means that the agency is able to set its own policies provided they remain within general governmental regulations. This paper uses the reviewed five dimensions of autonomy to examine the nine institutions: legal, managerial, structural, financial, and policy. Interventional autonomy is excluded due to its partial duplicate meaning with contractualisation.

Methodology

The research methodology of this paper used both qualitative and quantitative methods, by using various procedures to collect data from many sources: the so-called "triangulation method". The mixed research methodologies were applied here in order to advocate a pragmatic position (Creswell, 2003; Hammersley, 2000; Onwuegbuzie & Leech, 2006) and to complement each methodology with the strengths of the other. Due to the lack of related research, a qualitative approach was used to provide understanding for the research (Creswell, Shope, Plano Clark, & Green, 2006) to describe the autonomy of the nine independent agencies. The qualitative approach also focused on understanding the "insider perspective" of people and their cultures in the nine institutions, which helped to prepare the questionnaire survey concerning the performance of the nine agencies. A quantitative approach was used to assess the performance of the nine independent agencies through postal questionnaires via the perspectives of the related stakeholders. In judging the results of a quantitative approach, simple statistical criteria are used for analysis. The data from the qualitative methodology also complemented the results of the quantitative investigation.

The qualitative methodology was conducted through documentary reviews, together with 37 in-depth interviews with top management personnel of the nine institutions and related agencies, and three focus groups with representatives from the central agencies, the Federation of Thai Industries, related industrial associations, the nine institutions, the Industrial Development Foundation, the Office of the Permanent Secretary of the MOI, the Thai Industrial Standards Institute, the Office of Industrial Economics, the Board of Investment of Thailand, the Department of Industrial Promotion, the Office of Small and Medium Enterprises Promotion, and the Budget Bureau. The interviews took between 45 minutes to an hour, whereas the focus group took about three hours. All interviews and discussion in three focus groups were recorded, with the permission of the interviewees and participants. At the conclusion of the interviews and focus groups, the recordings were transcribed into computer files.

Quantitative methodology was engaged to evaluate the performance of the nine institutions through the adaptation of value for money (VFM). VFM is an approach used to assess an organization in terms of economy, efficiency, and effectiveness (Emni, Ozlem, Maja, Ilan, & Florian, 2011; Jackson, 2012; Power, 1997; Pollitt et al., 1999; Dittenhofer, 2001; Broadbent & Laughlin, 2003), which is consistent with the NPM concept. The definition of value is not clear-cut, and there might be competing interpretations of what value is or should be, and who ought to define it (Emni et al., 2011). The Director of the VFM unit in the Department for International Development, in the UK, stated that VFM is the "determination to get the most impact for the money we have" (Emni et al., 2011). In addition, VFM has some limitations of measurement, such as the difficulty of measurement in some social projects, and the risk to focus on easy-to-reach groups rather than harder-to-reach areas (Jackson, 2012).

This study therefore has modified VFM to be the measurement of effectiveness, financial self-reliance, and impact on the industry in order to respond to the country's quest. Financial self-reliance is the value about which the National Budget Commission has concerned most, and the impact on the industry underscores the original intention behind the establishment of these institutions.

In this research, data collection was executed by distributing 3,428 questionnaires to experts (814 questionnaires) and customers (2,614 questionnaires), whose names were supplied to the researchers by the nine institutions. The experts are the committee members from the related associations with the institutions. The total of returned questionnaires was 1,108, or a 32.32% response rate, of which 240 responded questionnaires (29.48%) were from experts, and 868 questionnaires (33.21%) were from customers. The discipline of descriptive statistics was used in the data analysis to support the qualitative data. That is, in the research survey, the opinions were measured by using rating scales: 4-point agreement scale. On a Likert scale, the data are interpreted as five levels: 1.00-1.60 = "very dissatisfied or least"; 1.61-2.20 = "dissatisfied or less"; 2.21-2.80 = "medium or moderate"; 2.81-3.40 = "satisfied or more"; and 3.41-4.00 = "very satisfied or most". The quantitative data were analyzed by using means as descriptive statistics.

Findings

Disaggregation

The nine institutions were established as independent agencies which implement their tasks under the auspices of the MOI. Five of them provide services for industrial development in specific sectors, i.e., textiles, food, iron and steel, electrical and electronics, and automotive parts. The other four are related to the increase of productivity, ISO certification, SME promotion, and high-technology skills development (see Table 2).

The Office of the Public Sector Development Commission, a central agency responsible for administrative reform in Thailand, posits that the nine institutions can be classified as agencies using state power to be the economic tools to provide public services. They are established by the Ministry's Order, under the supervision of the MOI, but not classified as public organizations and have no legal person status. Each institution has two boards, a foundation board and an executive board. An executive board is set up to formulate policy guidelines, as well as to monitor and evaluate the performance of the office. This executive board comprises representatives from three groups: the public organizations, the private sector, and experts. The executive board is accountable to a foundation board, and the foundation board reports to the MOI.

The functions of these institutions involve training, research and development, information distribution, testing, and consulting. Also, some are related to policy suggestion. Some focus group participants commented that there is duplication between the functions of the institutions and the government agencies and even among the institutions themselves, particularly in training. Sometimes, they have to compete with one another to get the same target group for training.

Autonomy

In this paper, five aspects of autonomy are explored through application of the concept of the multidimensions of autonomy (Christensen, 2008; Verhoest et al., 2004) as follows:

Legal autonomy. The nine institutions were established by cabinet resolution. There are no public laws to support their establishment. After the cabinet passed a resolution on the institutional establishment, the MOI issued an order to found each institution specifying the objectives, functions, and governance of each institution. According to the ministry's order, these institutions are independent organizations based on cooperation between the public and private sectors. However, the public authorities tend to have different interpretations of the institutional status and cause confusion among them. For example, one case was sent to the Office of the Council of State and the Supreme Court who ruled that, according to their acts and the presented documentation, the institutions are public organizations. However, the Office of Public Sector Development Commission interpreted these institutions as non-governmental organizations. The institutions themselves think that they are public organizations and have expectations of regularly receiving a budget from the government. The customers also expect to receive inexpensive or even free service delivery from these institutions.

During an interview, the Permanent Secretary of the MOI admitted that the status of these institutions is still unclear. The terms used to describe these institutions include "independent institutions", "supervised institutions", and "network institutions". From his point of view, the Permanent Secretary considers that the institutions are nonprofit organizations, running their operation under the authority of the MOI.

Managerial autonomy. According to the orders of the MOI regarding the nine institutional establishments, the administration of the nine institutions does not need to conform to governmental laws and regulations. Their executive boards have the autonomy to design and control their own administrative procedures. Consequent to the interview with the Permanent Secretary of the MOI, the ministry recently appointed a committee charged with the governance and procedure standardization of these nine institutions. However, a particular expert in the focus group holds that the ministry should pay more attention to the policy and roles of the institutions rather than the standardization of the works inside the institutions. The reason being that standardization is an issue which the institutions can manage themselves. The foundation boards are responsible for setting general standards and rules for institutions. Each institution can adjust these standards and rules to fit with its own contexts. Such managerial autonomy makes it difficult to control the standards and to audit the performance of the institutions, due to the differences of their salary structures and the format of their financial reports.

Structural autonomy. Considering the composition of the representatives on the executive board in each institution, it was found that the public sector proportion of most institutional committees is higher than that from the private sector, many of whom are retirees from the MOI. Only the Institute of Textile Development has less representation from the public sector, compared with the private sector. The number of representatives on the board from the public sector ranges from four to nine of the total 8-16 persons (see Table 3). Only the National Food Institute has no expert representatives. The board meeting is organized approximately four to six times a year. The Permanent Secretary of the MOI chairs five of the institutions, the Deputy Permanent

Secretary of the MOI chairs three, and only one institution has a chairperson from the private sector. In addition, the present Permanent Secretary of the MOI also chairs two foundations, while the former Permanent Secretary of the MOI chairs the third foundation.

In this sense, the nine institutions are not shielded from influence by the government and politics (interview, former Permanent Secretary of MOI, 2005) through the line of hierarchy and accountability. They all have low structural autonomy. The advantages of having more representation from the public sector on the board include that this can create a link with the ministry and express the choice of preference as an implementation body for the ministry. However, the limitations include a lack of understanding of the private sector of which can lead to difficulties in offering effective solutions to private sector problems. Some criticisms that surfaced from the interviews and questionnaires included that the work in some institutions is very bureaucratic, performance is retarded and non-professional, public relations are inefficient, and full use is not made of information technology for services.

Financial autonomy. Since the nine institutions have no legal status and are not classified as public organizations, according to the definition of the Budget Bureau, they are not allowed to request a budget directly from that bureau. Instead, they are required to request a budget through the departments under the MOI. In short, most institutions have three main funding sources: (1) government budget; (2) income from their services; and (3) others.

Thus, most institutions have a low level of financial autonomy since the income from their services does not cover their expenditures. Their main source of income which offers some financial benefit comes from grants through government projects. However, as many institutions attempt to improve their financial structure, the trend of expenditure is decreasing and income from services is increasing.

Policy autonomy. Because the structure of the institutions' executive and foundation boards is quite close to those of the ministry, institutions are afforded little power, within a judicial context, to make decisions or choice about institutional policies, instruments, and detailed objectives. In fact, the structure of the institutions is akin to an extended body of the ministry. The strength of this kind of structure is that there will be less conflict between the institutions and the ministry. The limitation is that the ministry retains the potential to afford significant influence on the nine institutions, and the working procedures of many institutions are bureaucratic-like.

Contractualisation

The nine institutions are accountable to the MOI, via high ranking authorities within the ministry. However, there are no clear lines of accountability or guidance for any evaluation systems. Surprisingly, only three institutions publish annual reports, the remainder sporadically presents an annual report. However, the institutions do submit performance and financial reports to their foundation boards. Although each institution is audited by an audit committee, appointed by the foundation board, there is no standardized format of their audit reports.

Indeed, it was revealed through the interviews conducted with experts regarding the accountability systems within the institutions that the foundation board has set up an internal audit committee within each institution. The foundation board is responsible for the selection and appointment of the executive committees. The executive board is also responsible for making the recommendations concerning institutional performance to the foundation board. It would be beneficial for the institutions if the committees of these two boards were to have higher capability and experiences related to the industrial sector.

Table 2

Description of Nine Independent Institutions Under the MOI

Independent agencies	Cabinet's resolution	Duration of budget support*	Total staff (contracts)	Staff education (below bachelor, bachelor, master, PhD)	Composition of the executive board (public, private, experts)	Chair of the executive board	Foundation board (chair)
1. Thai-German Institute	1992	10 years	171 (38)	14:72:14:0	7:3:5	Former Director General of a Department of MOI	Industrial Development Foundation (Chair: Former Permanent Secretary of MOI)
2. Thailand Productivity Institute	1994	6 years	170 (4)	0:59:39:2	7:6:2	Deputy Permanent Secretary of MOI	Foundation for Thailand Productivity Institute (Chair: Present Permanent Secretary of MOI)
3. Thailand Textile Institute	1996	6 years	103 (5)	13:57:28:2	4:7:2	Permanent Secretary of MOI	Industrial Development Foundation (Chair: Former Permanent Secretary of MOI)
4. National Food Institute	1996	6 years	173 (15)	8:65:25:2	9:7:0	Deputy Permanent Secretary of MOI	Industrial Development Foundation (Chair: Former Permanent Secretary of MOI)
5. Management System Certification Institute (Thailand)	1997	3 years	139 (9)	2:25:71:2	7:4:4	Permanent Secretary of MOI	Industrial Development Foundation (Chair: Former Permanent Secretary of MOI)
6. Thailand Automotive Institute	1998	5 years	100 (1)	8:72:20:0	5:4:4	Deputy Permanent Secretary of MOI	Industrial Development Foundation (Chair: Former Permanent Secretary of MOI)
7. Electric and Electronics Institute	1998	5 years	121 (9)	32:52:13:3	6:5:2	Permanent Secretary of MOI	Industrial Development Foundation (Chair: Former Permanent Secretary of MOI)
8. Iron and Steel Institute of Thailand	1998	5 years	77 (18)	5:53:39:3	5:3:3	Permanent Secretary of MOI	Industrial Development Foundation (Chair: Former Permanent Secretary of MOI)
9. Institute for Small and Medium Enterprise Development	1999	5 years	84 (59)	1:60:38:1	4:2:2	Permanent Secretary of MOI	Foundation for Institute for SMEs Development (Chair: Present Permanent Secretary of MOI)

Notes. MOI = Ministry of Industry; * = according to the cabinet's resolution.

In fact, a department is like a “purchaser” who buys services from the institutions who, in turn, act like “providers”. However, this relationship becomes more complex when a particular institution is called to defend its budget projects alone, before the Budget Act Commission. Some of the interview and focus group participants disagree with this process. In their opinion, if the government has determined that these institutions are not government agencies, then there should be no need for them to participate in and defend their projects, especially by themselves, in such budget meetings.

Performance Assessment

The performance evaluation of the nine institutions conducted in this research engaged measurements of effectiveness, financial self-reliance, and impact on the industrial development. The results of the evaluation are presented as follows:

Effectiveness. This study assessed the effectiveness of the institutions through the collection of data from focus groups and a survey of the opinions of customers and experts toward the institutional missions regarding training, consultation, testing, and information distribution. The demographic background of the respondents is presented in Table 3.

The results from the survey from nine institutions’ customers reveal that service appreciation is at the satisfied level. It is also found that training is the service with which most are satisfied, this is followed by product testing, consultation, and information distribution (mean = 3.11, 3.06, 3.03, 2.99, respectively) (see Table 4). Moreover, the results of the survey from the experts disclose that respondents view that design and equipment testing, policy suggestion, and the training of the nine institutions are at the satisfied level (mean = 2.89, 2.83, 2.81, respectively); while data provision, consulting, and research and development are at the moderate level (mean = 2.79, 2.70, 2.69, respectively) (see Table 5). Only two institutions can offer all services at the satisfied level.

The focus group participants commented that at the beginning stage, five institutions were established to promote competitiveness in five industrial sectors, i.e., automobile, textile, food, iron and steel, and electric and electronics. The other four institutions emphasized four aspects, i.e., productivity improvement, quality certification, SMEs development, and advanced manufacturing technology transfer. Nonetheless, the functions of many institutions are duplicated both amongst themselves and within government agencies within the ministry. Some experts hold that the institutions should play a role at the macro- rather than the micro-level. Industrial promotion should not be limited to the skill development of labor, in fact, more attention should be paid to innovation development or management skills.

Additionally, the open questionnaires and interviews with customers and experts found that the limitations regarding institutional services are consistent. The training programs, testing, and consulting services of some institutions are too general, indistinguishable from those offered by others. The areas in which the institutions outperform other missions are testing and training, whereas research and development and consulting are not at the satisfactory level. Other limitations include an inability to provide up-to-date information, especially website information, unsystematic training courses, unclear training content, delayed testing results, inexperienced consultation, incapable staff, a bureaucratic-like culture, and the inconvenient location of the institutions.

Financial self-reliance. Financial self-reliance is analyzed by consideration of the proportion of the government budget to total revenue, the proportions of expenditure and earning income, and the proportion of salary and wages to total expenditure.

Table 3

Demographic Background of the Respondents

	Experts		Customers	
	Number	Percent (%)	Number	Percent (%)
Age				
20-30 years	2	0.8	190	21.9
31-40 years	37	15.4	368	42.4
41-50 years	79	32.9	210	24.2
More than 51 years	119	49.6	90	10.4
Missing	3	1.3	10	1.2
Total	240	100.0	868	100.0
Type of organizations				
Limited company	158	65.8	623	71.8
Public limited company	30	12.5	121	13.9
Limited partnership	15	6.3	50	5.8
Government agencies	5	2.1	19	2.2
State enterprises	2	0.8	15	1.7
Others	30	12.5	31	3.6
Missing	0	0	9	1.0
Total	240	100.0	868	100.0
Position				
High	163	67.9	227	26.2
Middle	38	15.8	412	47.5
Low	5	2.1	147	16.9
Others	10	4.2	49	5.6
Missing	24	10.0	33	3.8
Total	240	100.0	868	100.0

Table 4

Opinions of Customers Toward the Institutions' Services

Services	Number	S.D.	Mean	Min	Max
1. Training services	606	0.499	3.11	1.00	4.00
2. Consulting services	305	0.572	3.03	1.00	4.00
3. Design and equipment testing	305	0.519	3.06	1.00	4.00
4. Information distribution	393	0.550	2.99	1.00	4.00
Average		0.535	3.05		

Table 5

Opinions of Experts Toward the Institutions' Roles and Impact

Opinions	Number	S.D.	Mean	Min	Max
Institutional roles					
1. Industrial policy suggestions	237	0.740	2.83	1.00	4.00
2. Research and development	238	0.726	2.64	1.00	4.00
3. Training services	235	0.691	2.81	1.00	4.00
4. Consulting services	236	0.781	2.70	1.00	4.00
5. Design and equipment testing	207	0.730	2.89	1.00	4.00
6. Information center	237	0.785	2.79	1.00	4.00
Average		0.742	2.77		

Table 5 continued

Opinions	Number	S.D.	Mean	Min	Max
Impact to the industry					
1. To support entrepreneurial potential	237	0.662	2.62	1.00	4.00
2. To promote entrepreneurial competiveness	237	0.707	2.58	1.00	4.00
3. To coordinate between public and private sectors	235	0.795	2.83	1.00	4.00
4. To collaborate with the private sector in industrial and production technology development	233	0.742	2.71	1.00	4.00
Average		0.727	2.69		

From 2007 to 2010, the institutions received a budget from the government, ranging from 0%-71.1% of the total income of the institutions. This paper classifies the institutions into three groups by aggregating the proportion of received government budget to total revenue. The first group is the institutions which receive a budget from the government that is lower than 30%. There are two institutions in this group, one of which receives no grants from the government, while the other receives a government budget amounting to only 28% of total revenue. The second group is comprised of those which receive a budget between 31% and 60% of total revenue. Four institutions are classified under this group. The third group includes those which received a budget of more than 60% of the total revenue. Three institutions are categorized in this group (see Table 6).

Table 6

Financial Self-Reliance

Group	Description	No. of institutions
Government budget/total revenue		
1	Receive government budget lower than 30%	2
2	Receive government budget between 31% and 60%	4
3	Receive government budget more than 60%	3
Expenditures/earning income		
1	Less expenditure than income	3
2	Expenditure/income = 125%	3
3	Expenditure/income = 150%-237%	3
Salary and wages/total expenditure		
1	Salary and wages/total expenditure < 30%	2
2	Salary and wages/total expenditure = 30%-40%	3
3	Salary and wages/total expenditure > 40%	4

In addition, the proportion of institutional expenditures to income earning helps to classify the institutions into three groups, ranging from the one that has less expenditure than income, the second one has more expenditure than income at a ratio of 125%, and the third one with a ratio of 150%-237%. Three institutions are in the first group, three others are in the second group, and the remainders are to be found in the last group.

The final indicator is the proportion of salary and wages to total expenditure. It is found that the first group has a ratio of not more than 30%; the second group, between 30% and 40%; and the last group, more than 40%. Two institutions belong to the first group, three to the second group, and four are in the third group.

Impact to the industry. The questionnaires invited the experts in each sector to evaluate the impact of the institutions on the industry. The question items included the extent to which the institution fosters the potential of entrepreneurs, the extent to which the institution promotes entrepreneurial competitiveness, the degree of cooperation between the public and private sectors, and the degree of collaboration between the institutions and private sectors in industrial development.

The experts viewed that the capacity of these institutions to coordinate with the private sector is at the satisfied level (mean = 2.83). The collaboration for industrial development, and the support of entrepreneurs to realize their potential and to promote entrepreneurial competitiveness are at the moderate level (mean = 2.71, 2.62, 2.58, respectively) (see Table 5). In particular, it was found that only four institutions impact the industry at the satisfied level. The remainder impacts on the industry are at the moderate level.

The focus group participants held that these institutions play a major role in industrial development, especially in product testing, which helps to lessen the burden of the private sector. However, since their structures comprise of many representatives from the public sector, they have limited capacity to solve private sector problems.

Discussion

This section aims to provide insightful discussion on the governance and autonomy of the nine independent agencies under the MOI in Thailand as well as to assess their performance. These nine independent agencies were established as government mechanisms to strengthen the efficiency and international competitiveness of the industrial sectors. Following a pragmatic approach, a mixed research method was designed to answer the research questions and to complement the strengths of the methods making up the mix. The nine institutions investigated were originally established by cabinet resolution with an order from the MOI to support their foundation and governance. They are designed to be autonomous agencies overseen by two boards—an executive and a foundation board, which report to the MOI.

Agentification

According to the concept of NPM, agentification is a means to disaggregate bureaucracy into smaller government units in order to increase the efficiency and effectiveness of the public sector (Christensen & Laegreid, 2008). Agentification is concerned with the separation of bureaucracy into agencies based on the principles of autonomy and contract. This study found that the agentification process has made the organizational structure of the ministry more complicated. For example, the organizational structure of the MOI is classified by function and industrial sectors (cane, sugar, and mines). The ministry has one agency under supervision (Office of Small and Medium Enterprise Promotion) and one state enterprise (Industrial Estate Authority of Thailand). When the nine institutions were established, their missions were duplicated with those of some existing government agencies. For example, the case can be made that the function of training for entrepreneurs within the institutions is duplicated with the Department of Industrial Promotion. The Institute of SMEs Development has functional duplication with the Office of SME Promotion, the consultation of certification (ISO) of the Thai Industrial Standards Institute with the Management System Certification Institute (Thailand), the Planning and Information Functions of the Office of Industrial Economics with the Policy and Information of the Institutions. Indeed, the results of the focus groups and interview with the top management of the departments and the directors of some of the institutions confirmed this duplication problem. Such duplication contradicts the efficiency principle of agentification. That is, it does not make government smaller, and there is no transfer of public activities to agencies. One of the participants in the second focus group mentioned that: "… These institutions turn out to be a burden for the government because it opposes the principle of downsizing and efficiency".

In this paper, autonomy is categorized under five dimensions which are used to explore the nine institutions' characteristics. In contrast to the NPM concept, it was found that the nine institutions have low autonomy in the legal arena, structure, policy dimensions, high autonomy in the administration dimension, and variations from high to low autonomy in the financial dimension. A more in-depth discussion on the results from the analysis of the five dimensions of autonomy is provided as follows.

It was found that the nine institutions have low legal autonomy as their establishment is based on the orders of a government ministry. In the Thai public sector, organizations are established by different types of law, i.e., a Ministry's Order, a Royal Decree, an Act and the Constitution. Organizations set up by a Ministry Order have the least autonomy, compared with ones set up by Royal Decree, Act and the Constitution (Lorsuwannarat, 2007). The design of organizational establishment with the Ministry's Order may come from the lessons of restructuring in Thailand. In the past, many new organizations in the public sector were created with supporting laws for the stability of the organizations, especially during a time of political change. Moreover, it is difficult to terminate organizations founded by public law even when they are found to be futile. The strength of an organization founded by a Ministry's Order is its flexibility. Its management is easier especially when no other necessities are required or in the situation where the priority of the industrial sector is changed in the future.

The nine institutions have low structural autonomy because they are too closely linked with the ministry, through the chairman of their executive boards and the foundation boards which are comprised by higher authority ministry figures. Besides, the board structure is to be composed of a majority from the public sector, which tends to be confined to the structural autonomy of these institutions. Such a composition of the board enables the ministry's absolute control of the agencies; as well, it relegates policy autonomy to a low level. Focus group participants from the private sector also demanded more voice from the private sector.

Financial autonomy is low in most institutions, because their budget must be requested through government agencies and this budget must then be defended by the individual institution before the Budget Commission. This process creates uncertainty for the institutions because project proposals may not receive approval. A department head in MOI reported that the department has not approved any budget to these institutions since the Office of the Public Sector Development Commission interpreted the institutions as non-government agencies. The reason for this decision is based on a fear of conflict with the regulation that provides budget only to government agencies.

Overall, the nine institutions have low autonomy in four dimensions, including legal, structure, financial and policy autonomy, and are high in managerial autonomy. However, even if they have high managerial autonomy, they have not fully utilized this dimension to carry out their functions more efficiently. Instead, some institutions may abuse their managerial autonomy by setting up a high salary structure for themselves even if it means posting a loss in their financial status. That is, good accountability systems are yet to be instilled within the system.

However, the institutions request a government budget through the Departments of the Ministry by proposing projects which are compatible with the functions of the departments. The cooperation between the institutions and the ministry can be seen through this budgeting process. When considering the whole picture of the organizational structure of the MOI, there is much fragmentation and confusion regarding the criteria used to design this structure. The higher authorities of the ministry need to have a high level of expertise and experience to be able to coordinate all its departments and agencies in order to move the industrial sector effectively in the same direction.

By introducing the concept of public choice theory in NPM, it is expected that the purchaser and provider will be separated in order to increase efficiency in the bureaucracy (Osborne & Gaebler, 1992). Nonetheless, the market relationship between the ministry and the institutions is not clearly apparent in this case. In short, while the ministry retains its hold on what Osborne (2007) describes as the rowing functions, duplication cannot be avoided.

Furthermore, the financial reports highlight that there are only a few project contracts between the ministry and institutions. It seems that the institutions provide services directly to its customers rather than through the ministry.

Performance Evaluation

The performance evaluation of the institutions is presented through the criteria of effectiveness, VFM, and impact on the industry. It is found that customers are satisfied with the services offered by the institutions. However, the experts seem to have a higher expectation of the services than the customers. The experts are satisfied with policy suggestions, training, testing, and data services from the institutions, but they are only moderately satisfied with research and development and the consulting services of the institutions. In fact, some of the focus group participants cite that the past industrial development focused on labor skill capability training. Nowadays, the industry needs more emphasis on innovation development and management skills. They expected that the institutions should play a major role at the macro-level rather than at the micro one, e.g., research and development, higher-technical knowledge provision, and problem-solving within the industrial sectors. Testing service is another role that the institutions should emphasize, because it can help private sector cost sharing.

Moreover, an analysis of performance assessment findings underscored that some institutions perform more efficiently and effectively than others. One assumption of the NPM concept regarding autonomy is that an autonomous agency with specialized skills should have superior performance but only if there are sufficient incentives for the agency to perform well (Verhoest et al., 2004). With the various kinds of services the institutions have to provide, it is difficult for institutions to be effective at every function. The institutions may emphasize their specialized functions or the ones that can earn them more income, e.g., training. In fact, many institutions do not have organizational units to serve all of their functions. Many experts and interviewees stated that most of the institutions lack clear direction or policy to accomplish their goals, hence, it is the reason why they cannot meet the entrepreneurs’ expectations. Some experts commented that SMEs are the target group of many institutions. Most of the SMEs are located in regions where it is difficult to access the services of the institutions. They cannot afford high cost services from institutions, only subsidized or free services are feasible options for them.

From the financial measurement perspective, only three of the nine institutions have a high financial self-reliance. These three institutions depend on the government for approximately 30% or less of their budget and can manage to keep their expenditure lower than their income. In fact, the experts surveyed for this study hold that these three institutions focus their role on specialization in some particular functions. For example, one such institution focuses on certification testing, the second one on data center and testing, and the third one on management training and consulting. In general, some interviewees said that the institutional establishment does not help to reduce the burden of government work and budget. However, others argue that some institutions are income oriented rather than trying to help solve industrial sector problems. Therefore, financial criteria alone may not answer whether the institutions can respond to the intentions of their establishment.

From the survey of the experts, it was revealed that the institutions have moderate impact on the industry, except for the role of coordination between the public and private sectors. From the first focus group, the participants said that at the beginning, these institutions are able to respond to industrial development. But when the situations change, the objectives of self-reliance and industrial development of the institutions become contradictory, especially for the ones who have SME customers. Some participants said that the institutions should attract large enterprises in order to cooperate with assistance to SMEs to lessen the institutions' costs.

In summary, agentification of the MOI does not help to reduce the size of its bureaucracy. On the contrary, it seems that agentification acts as a tool to expand the boundary of the ministry. The ministry recently established three more institutions, which have the same characteristics as the existing nine ones. These three institutions include the Plastic Institution of Thailand, the Construction Institution of Thailand, and the Rubber Product Development Institute. As a result, the ministry has become more fragmented, and the strategic alignment of government policies and plans has become a challenge for the ministry. This interpretation is consistent with other studies (Pollitt, 2000; Pollitt, 2008; Norman, 2003; Van de Walle & Hammerschmid, 2011). From experience in the United Kingdom, Walsh (1995) pointed out that government agencies might reluctantly decrease centralized control. Specifically, budget request procedures require the institutions to be channeled through government agencies which allow the ministry more control over these institutions, but also burden the higher authorities of the ministry. In addition, the coordination mechanism between the ministry and the institutions relies on the higher authorities of the ministry. Agentification in this study has tightened up existing central control of the ministry, which is in line with other studies (Walsh, 1995).

Conclusion and Suggestions

One key element of NPM is to break up big government into semi-autonomous organizations or executive agencies (Pollitt & Summa, 1997). Agencies are required to conduct their relations with central departments on a contractual basis rather than the traditional hierarchy. This study presents the side effects of agentification and shows that actors involved with the transformation may not always act rationally. The department is expected to transfer its duties to the new agencies, but this does not happen in the MOI. Instead, they maintain the status quo, carrying out the same functions as well as duplicating functions conducted between the government agencies and institutions. The institutions are designed to be both policymaker and implementer. There is blurred division between the central department and the institutions. As well, the creation of numerous specialized agencies causes fragmentation in the public sector, particularly when coordination is based on persons rather than the systems. The process of budget request through government agencies impairs the relationship between the central departments and the institutions; and it makes the institutions more dependent on the central departments.

This study makes the following policy suggestions. First, the MOI needs to restructure both its organizational structures and the relationship framework between the ministry and the agencies if the problems of duplication are to be resolved. Then, the ministry should create coordination mechanisms between the ministry and the agencies. Also, the MOI needs to play a major role in setting clear policy guidelines, while the institutions should be the implementers in the industrial sector. As such, the function of the institutions should be revised to foster collaboration between the ministry and the nine institutions. Such cooperation would assist to formulate and integrate industrial policy and planning by the various sectors in order to prioritize the sectors according to high potential and impact. This type of plan should be reviewed from time to time to examine the suitability of the sectors being or needing to be promoted. Currently, the role of the institutions in policy suggestion for the institutions is rather weak. Also, neither is research and development impressive. The institutions should strengthen the cooperative networks with the educational or research institutes, both inside and outside the country, in order to develop their capability, especially for research and development.

This study also makes the following managerial suggestions. First, the composition of the board should have a suitable proportion of representatives from various sectors: the private sector, related industries, experts, and other stakeholders. Such a selection should be based on a capability and readiness consistent with good governance principles. Moreover, the performance of the institutions improved should emphasize the following functions: policy guidance for the institutions through coordination with the ministry, follow-up of the institutes' executives' performance, follow-up of the institutes' expenditures, and strengthen the accountability systems, the strategic thinking of financial self-reliance, and the institutes' adaptation to industry trends. Finally, the institutions' long range planning should include the formulation of a financial risk management plan.

Following a comparison of different organizational designs, this paper suggests that a non-profit organizational model is suitable for the institutions under discussion. Because of the different interpretations of their organizational status, confusion may occur among related agencies. Since the institutions are run as ministry foundations, they can be considered as nonprofit organizations, similar to those in Germany, Japan, and South Korea. However, many institutions misunderstand that nonprofit organizations cannot earn income. As a result, a full feasibility study seeking alternative sources of income has not been undertaken. In fact, a nonprofit organization is permitted to generate surplus revenue, but it is not allowed to distribute its net earnings to its management or members as profit sharing. Such profits should be used to continue to achieve its established purposes rather than rewarding its staff. A non-profit organization here would be a government engine for implementing industrial policies and be a link between the public and private sectors to foster cooperative networks of knowledge distribution for the purpose of industrial development. Such a non-profit organization should be competitive and self-reliant.

Finally, these contributions must be considered in the light of the limitations of this study. First, this evaluation study reveals the overall assessment of nine institutions, not an individual institution assessment for the purpose of conceptual revision. Data from the survey are from the customers and experts selected from the institutions. The triangulation source of data in this paper reduces any bias that may occur from the purposive sampling. Moreover, this study originated from questions from organizations in the public sector, the quantitative data are not analyzed in a sophisticated way and do not find a causal relationship between autonomy and performance. This study focuses on policy and practical suggestions for the related agencies. Finally, this paper provides a basis from which future studies may be derived in order to refine the findings of this research. For example, future research on agentification and performance could be explored from other perspectives, e.g., resource dependence, political, or cultural perspectives. In addition, the comparison of the agencies from different sectors may be further extended, e.g., to the industrial and public health sectors. Additional factors may also be of interest, e.g., the role of the board and executive management, and accountability systems.

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