

Effects of Knowledge Outsourcing on Public Policy of Public Sectors

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ABSTRACT Policy formulation is facing new accommodation because the coverage of public affairs and the involvement of public governance becomes more complex than they used to be. More opportunities are open to the civil societies in the beginning of policy formulation, and a lot of new information, knowledge, and suggestions for policy construction are included. The supervisors and public servants of the departments and bureaus in Kaohsiung City Government are selected as the research participants for questionnaire survey. Total 460 copies were distributed, and 278 copies were retrieved. Having deducted 16 incomplete ones, total 262 valid copies were retrieved, with the retrieval rate 57%. Each retrieved copy is regarded as a valid sample in this study. Centered on work value, the empirical research shows partially positive correlations between Knowledge Outsourcing and Distributive Policy, Redistributive Policy, and Redistributive Policy in Public Policy, significantly positive correlations between Knowledge Outsourcing and Self-regulatory Policy, and moderating effects of demographic variables on the correlations between Knowledge Outsourcing and Public Policy.

INTRODUCTION

Bureaucratic system is currently a common organizational structure of governments in the world and presents the functions and importance on the public affair promotion and policy execution. Nevertheless, in the operation of bureaucratic model appears certain shortcomings, which could result in government failure. As the coverage of public affairs and the involvement of public governance getting more complex than they used to be, policy formulation is facing new accommodation, more opportunities are open to the civil societies in the beginning of policy formulation, and a lot of new information, knowledge, and suggestions for policy construction are covered. Such changes and accommodation present the systematic maturity of a democratic nation and the multiple open characters in policy formulation. Especially, the collection of enormous policy knowledge or suggestions before the formulation would have the governmental sectors include such knowledge into the formulation and change it into specific administration directions. A government mainly focuses on providing the people with guarantee and services, particularly the services not being achieved by the market system. In this case, the re-position-

ing of governmental functions is induced that, under the premise of not hindering the national management, currently nation-regulated and served affairs should be appropriately open for being conducted by the civil and managed by the market. It is considered as the introspection of the re-division or regulation of governmental matters and civil affairs for the consideration of commissioning governmental matters to private institutes. Such governmental outsourcing is the resource integration management of public sectors, private sectors, and the third sectors, aiming to create new benefits for the society. As a consequence, the relevant policy knowledge and suggestions from the outsourcing could remarkably assist in the formulation of public policies.

I. Governmental Outsourcing

Chen (2009) mentioned that, in order to establish the government-civil partnership, the Executive Yuan, following the first resolution of Organizational Reform Commission in July 8th 2002, notified in writing to various institutes examining the operation of the entire institutes, school-authorized private enterprises or non-profit organizations, and the ones turned to public artificial person, foundation constituted as a juristic person, or privatization, according to Future Administrative Business Evaluation Principles. The principles contained that (1) public

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services not requiring the governmental execution were terminated; (2) the civil conducted governmental production or services with better efficiency; (3) private sector-provided production or services created higher benefits than governmental sectors did; (4) governmental sector-provided production or service did not satisfy the public demands, while private sector-provided ones could; (5) based on the supervision and control of quality, commissioning governmental matters to the civil could reduce the scale and the responsibility of governmental organizations; (6) the civil power and resources could assist the government in promoting public affairs, when the governmental capability and budget were insufficient; (7) affairs involved in low public power or were not governmental core matters; (8) affairs were not prohibited from outsourcing; and, (9) the civil presented the intention and capability to undertake public services.

II. Internal Matter Commission

Internal matter commission or internal facility entrust are further divided. Both of them present the outward purchase, and the payer is the agency commissioned. Such commission does not involve in the exercise of public power, and the civil has the least administrative participation. Based on the characters, it is further divided into (1) outsourcing of internal routine work, such as cleaning of the institutes, training services, and vehicle maintenance and (2) management commission of internal facilities or assets, such as restaurants and canteens in the institutes. 1. Internal matter commission is actually the governmental business of purchase that it is regulated by Government Procurement Act, rather than the regulations of governmental matters contracting to the civil. Different from supply administration, they are governmental services. Contrarily, the government commissioning matters to the civil and the commissioned matters are regulated by Act of Commissioned Governmental Matter to the Civil. 2. Some matters handled in the administrative institutes (1) could encourage the investment of the civil and activating the civil economy and enhancing the administrative efficiency and (2) directly reduce the personnel cost because of the decreased matters for the full-time staff. For instance, Family Maintenance Enforcement Program in the USA was commissioned to the civil. However,

the governmental matters were increasing under the reduction of manpower. The US department of human services started to consider outsourcing and determined to commission the family maintenance enforcement program to private companies for collecting the child support from the parents.

III. External Matter Commission

(1) The concept of organizational outsourcing merely relates to payment, services, and other matters not involving in restricting or depriving the right of freedom. Organizational outsourcing should be taken into account when an organizational matter could be completely replaced by the market functions, but might be market failure, and the public appear the strong reliability and perception of such a matter belonging to the national responsibility, which should be handled or commissioned by the nation. (2) After the evaluation of organizational matters, which does not need to be deregulated, localized, corporatized, or outsourced, specific matters should be actively promoted the outsourcing under the following conditions. 1. The civil presents the capability to deal with the matters involved in restricting or depriving the right of freedom. 2. Payment, services, and other matters not involving in restricting or depriving the right of freedom could be reduced the cost with the management of enterprising spirit. (3) Organizations commissioning the civil to assist in control and organizations commissioning the civil to provide services are further divided. The former reveals commissioned administration or administrative assistant. Aiming at traditional regulatory outsourcing, modern performance outsourcing, and concessionary outsourcing, Behn and Kant (1999) preceded value philosophy and difference comparisons. Behn and Kant's (1999) evaluating dimensions for outsourcing are applied to this study. 1. *Relationship*. Traditional regulatory outsourcing is based on control management, that is paying the fee according to the actual performance of the commissioned agency. The evaluation indicators therefore are more specific. Modern performance outsourcing applies common responsibilities of both parties to paying out and then concerning the results, which emphasizes the final results, rather than the investment of agency or the specific process. Concessionary outsourcing of

public welfare lotteries allows the autonomic operation of Taipei Fubon Commercial Bank, and the profits return to the government. It is assumed that the agency in traditional regulatory outsourcing would cheat the client; the government therefore should often supervise and control, which results in both parties lack of favorable supervisory and cooperative relationship. Modern performance outsourcing could receive certain effectiveness and stresses on incentive management. 2. *Urge*. Traditional regulatory outsourcing proceeds supervision and evaluation with control, while modern performance outsourcing evaluates the performance. Concessionary outsourcing restricts the executor's power by regulations. 3. *Environment character*. Traditional regulatory outsourcing faces high-stability political environments that it is easy to master, while both modern performance outsourcing and concessionary outsourcing face low-stability political environments. Before issuing public welfare lotteries, the regulated contents, the number of people buying lotteries, and the profit distribution could not be predicted in advance. 4. *Responsibility*. Executors of traditional regulatory outsourcing take less responsibility, as the executors would take all responsibility. The interaction between executors in modern performance outsourcing and concessionary outsourcing are based on the common objective that they reveal high responsibility on the success of outsourced matters.

This study refers to the evaluation dimensions, proposed by Chu (2010) for Knowledge Outsourcing.

(1) Making Process

1. Knowledge Outsourcing implies a lot of external costs or benefits that it can hardly be quantified or evaluated by prices. 2. Research costs being actually transformed into knowledge or simply the research results not being able to be applied cannot be quantified. 3. Various feasibility should be compared in order to evaluate the best program or policy, as any policies present advantages and shortcomings.

(2) Enforcement

1. Authorization refers to limits of authority. 2. Execution indicates the problems of interference with political benefits and the qualification

of public participants when selecting outsourcing companies. 3. Resource applications refer to the available resources for the applications of outsourcing companies. 4. Supervision and communication shows that it is still restricted in written supervision, as field supervision is regarded difficult.

(3) Evaluation

1. The effects of Knowledge Outsourcing on social culture cannot be quantified. 2. Execution indicates that Knowledge Outsourcing companies should present complete regulations for team cooperation corresponding to the efficiency. 3. Economic benefits show the spirit of social welfare country, but the economic supervision still lack of public credibility and use transparency.

IV. Public Policy

Domestic and international researchers have presented distinct classification of Public Policy. Frohock, according to the objective, content, and usage, divided Public Policy into Regulatory Policy, Distributive Policy, Redistributive Policy, Capital Policy, and Ethic Policy (Frohock 1979). Lester and Stewart classified it into Distributive Policy, Regulatory Policy, Redistributive Policy, and Self-regulatory Policy (Chiu 2010). Dye divided it into substantial Public Policy and symbolic Public Policy (Dye 1975). Lowi classified it into Distributive Policy, Regulatory Policy, and Redistributive Policy (Lowi 1966). Ripley and Franklin divided it into Distributive Policy, Competitive Policy, Protective Policy, and Redistributive Policy (Ripley and Franklin 1986).

Apparently, the classification of Public Policy is diverse. However, it can be generally classified into Distributive Policy, Regulatory Policy, Redistributive Policy, and Self-regulatory Policy, which are consistent and common in modern academia. Most domestic researchers also agree with such classification (Wu 2009; Tsao 2009; Weng et al. 2009; Chiu 2010; Chang and Chen 2010). The common dimensions of Distributive Policy, Regulatory Policy, Redistributive Policy, and Self-regulatory Policy for Public Policy therefore are applied to this study. The meanings are described as follows. (1) Distributive Policy refers to the governmental institutes distributing benefits, services, or costs, obligation to various target population shared or undertak-

en. Such a policy is the Non-zero Sum Game policy, as the execution does not result in the income of the other party, but is based on the loss (Wu 2009). (2) Redistributive Policy refers to the governmental institutes transferring the benefits, power, wealth, status, or costs, obligation of the target population to another target population shared or undertaken, under the considerations of Public Benefit and Social Justice (Wu 2009), so as to balance the target population with more resources and the other target population with fewer resources. (3) Regulatory Policy refers to the authority setting the consistent regulations or rules to guide the governmental institutes or the target population taking certain actions. The regulated or restricted people are under the surveillance of regulations, while the ones formulating or executing rules or restrictions are called regulators (Chiu 2010). (4) Self-regulatory Policy refers to the authority not setting strict and consistent regulations or norms, but principled rules, and having the governmental institute or the target population determine the actions, without being interfered by the authority. The execution of such type of policy does not affect the stake between the regulators and the ones being regulated and does not show benefit exclusiveness that it is a non-zero sum game (Chiu 2010).

V. Effects of Knowledge Outsourcing on Public Policy

With distinct national conditions and regulations, the governmental outsourcing matters are numerous, from internal cleaning to the correction matters in prisons. The list of domestic and international governmental outsourcing matters might be able to induce the aspiration and ideas of governments promoting matter outsourcing and to build the basis of government reengineering.

From the aspect of the entire social environment, the modeling and effects of present social knowledge on various policies have been the key points in public administration since 1990 (Rueschemeyer and Skocpol 1995). The discussions of policy knowledge have focused on the effects of network society on knowledge aggregating and investing in policies (Castells and Cardoso 2006) and the integration and applications of knowledge network to actually applying

knowledge management to policy ideas and execution (Liu 2004).

When knowledge management becomes more important for the governance, researchers started to introduce knowledge management systems and contents from various departments into governmental sectors (Wu 2002; Wang 2002; Huang 2004; Chen 2004). Some research discussed the methods, standards, and dilemmas of applying knowledge to policies (Chen 1996, 2001); others analyzed the indicators and evaluations for modeling such social knowledge and contemporary policies (Innes 1989). As a result, the literature review in this study could assist in introspecting governmental sectors including policy knowledge and transforming them into effective policies so as to build the connection between Policy Knowledge Outsourcing and Policy Content.

Aiming at the above descriptions, the following research framework and hypotheses are proposed in this study.

- H1:** Knowledge Outsourcing shows significantly positive correlations with Distributive Policy in Public Policy.
- H2:** Knowledge Outsourcing presents notably positive correlations with Redistributive Policy in Public Policy.
- H3:** Knowledge Outsourcing reveals remarkably positive correlations with Regulatory Policy in Public Policy.
- H4:** Knowledge Outsourcing appears significantly positive correlations with Self-regulatory Policy in Public Policy.
- H5:** Gender presents remarkable moderating effects on the correlations between Knowledge Outsourcing and Public Policy.
- H6:** Age shows notable moderating effects on the correlations between Knowledge Outsourcing and Public Policy.
- H7:** Seniority reveals significant moderating effects on the correlations between Knowledge Outsourcing and Public Policy.
- H8:** Educational background appears significant moderating effects on the correlations between Knowledge Outsourcing and Public Policy.
- H9:** Position shows notable moderating effects on the correlations between Knowledge Outsourcing and Public Policy.

VI. Conceptual Framework

The conceptual framework (Fig. 1.), drawn by the summary of the above literature review, tends to discuss the relations among demographic variables, Knowledge Outsourcing, and Public Policy.

RESEARCH METHOD

I. Sample Analysis of Research Framework

The sectors in Kaohsiung City Government are selected as the research subjects, including 23 bureaus of Civil Affairs Bureau, Finance Bureau, Education Bureau, Economic Development Bureau, Marine Bureau, Agriculture Bureau, Tourism Bureau, Urban Development Bureau, Public Works Bureau, Water Resources Bureau, Social Affairs Bureau, Labor Affairs Bureau, Police Department, Fire Bureau, Department of Health, Environmental Protection Bureau, Mass Rapid Transit, Bureau of Cultural Affairs, Transportation Bureau, Legal Affairs Bureau, Military Service Bureau, Land Administration Bureau, Information Bureau, four departments of Secretariat Department, Personnel Department, Department of Budget, Accounting and Statistics, Civil Service Ethics Office, and three commissions of Research, Development and Evaluation Commission, Indigenous Affairs Commission, Hakka Affairs Commission.

II. Sampling and Data Analysis

Total 460 copies of questionnaire are distributed on-site to the supervisors and public servants in the sectors in Kaohsiung City Government. Within the retrieved 278 copies, 16 invalid

ones are deducted that 262 valid copies are retrieved, with the retrieval rate 57%; and, each retrieved copy is regarded as a valid sample. SPSS is utilized for data analyses, and Factor Analysis, Reliability Analysis, Regression Analysis, and Analysis of Variance are used for testing the hypotheses.

III. Analyses

Regression Analysis is utilized for understanding the relations between Knowledge Outsourcing and Public Policy, and Analysis of Variance is further applied to discussing the effects of personal traits on Knowledge Outsourcing and Public Policy.

RESULTS AND DISCUSSION

I. Factor Analysis of Knowledge Outsourcing

Knowledge Outsourcing in this study was measured according to the dimensions proposed by Chu (1999). With Factor Analysis, three factors were extracted, including Making Process (eigenvalue=2.731, $\alpha=0.90$), Enforcement (eigenvalue=2.426, $\alpha=0.87$), and Evaluation (eigenvalue=1.438, $\alpha=0.80$). The covariance explained achieved 79.512%.

Public Policy was measured according to the dimensions proposed by Ripley and Franklin (1986). With Factor Analysis, four factors were extracted, containing Distributive Policy (eigenvalue=3.237, $\alpha=0.81$), Redistributive Policy (eigenvalue=2.351, $\alpha=0.84$), Regulatory Policy (eigenvalue=1.722, $\alpha=0.87$), and Self-regulatory Policy (eigenvalue=1.149, $\alpha=0.91$). The covariance explained reached 83.814%.

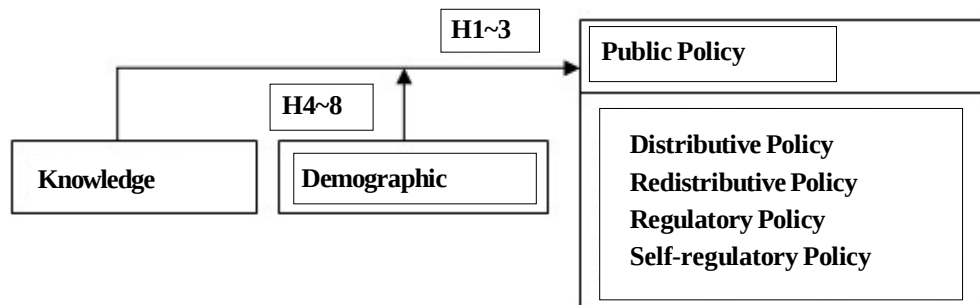


Fig. 1. Research framework

II. Correlation Analysis of Knowledge Outsourcing and Public Policy

(1) Correlation Analysis of Knowledge Outsourcing and Distributive Policy in Public Policy

With Multiple Regression Analysis to test H1, Table 1, the results showed the notable effects of Making Process (Beta=0.165, $p<0.05$) and Evaluation (Beta=0.183, $p<0.05$) on Distributive Policy that H1 was partially agreed.

(2) Correlation Analysis of Knowledge Outsourcing and Redistributive Policy in Public Policy

With Multiple Regression Analysis to test H2, Table 1, the results presented the significant effects of Making Process (Beta=0.174, $p<0.05$) and Enforcement (Beta=0.168, $p<0.05$) on Redistributive Policy that H2 was partially agreed.

(3) Correlation Analysis of Knowledge Outsourcing and Regulatory Policy in Public Policy

With Multiple Regression Analysis to test H3, Table 1, the results revealed the remarkable effects of Making Process (Beta=0.195, $p<0.05$) and Enforcement (Beta=0.202, $p<0.05$) on Regulatory Policy that H3 was partially agreed.

(4) Correlation Analysis of Knowledge Outsourcing and Self-regulatory Policy in Public Policy

With Multiple Regression Analysis to test H4, Table 1, the results showed the significant effects of Making Process (Beta=0.247, $p<0.01$), Enforcement (Beta=0.169, $p<0.05$), and Evaluation (Beta=0.229, $p<0.01$) on Self-regulatory Policy that H4 was agreed.

III. Moderating Effects of Demographic Variables

(1) Effects of Gender on the Correlations between Knowledge Outsourcing and Public Policy

With Analysis of Variance, the empirical results, Table 2, appeared the notable moderating effects of gender on the correlations between Making Process, Evaluation and Distributive Policy, between Enforcement, Evaluation and Redistributive Policy, between Enforcement, Evaluation and Regulatory Policy, and between Making Process, Enforcement and Self-regulatory Policy that H5 was partially agreed.

(2) Effects of Age on the Correlations between Knowledge Outsourcing and Public Policy

With Analysis of Variance, the empirical results, Table 2, revealed the significant moderating effects of age on the correlations between Enforcement and Distributive Policy, between Enforcement, Evaluation and Redistributive Policy, between Making Process, Enforcement and Regulatory Policy, and between Making Process and Self-regulatory Policy that H6 was partially agreed.

(3) Effects of Seniority on the Correlations between Knowledge Outsourcing and Public Policy

With Analysis of Variance, the empirical results, Table 2, presented the remarkable moder-

Table 1: Multiple regression analysis of knowledge outsourcing and public policy

Dependent variable'→ Independent variable ↓	Public policy											
	Distributive policy			Redistributive policy			Regulatory policy			Self-regulatory policy		
Knowledge outsourcing	β	Beta	ρ	β	Beta	ρ	β	Beta	ρ	β	Beta	ρ
Making process	1.539*	0.165	0.028	1.753*	0.174	0.020	1.936*	0.195	0.014	2.183**	0.247	0.005
Enforcement	1.334	0.126	0.072	1.638*	0.168	0.025	1.991*	0.202	0.012	1.723*	0.169	0.022
Evaluation	1.826*	0.183	0.018	0.536	0.083	0.138	1.163	0.103	0.145	2.046**	0.229	0.008
F	44.684	53.941	68.813	73.915								
Significance	0.000***	0.000***	0.000***	0.000***								
R2	0.212	0.286	0.328	0.395								
Regulated R2	0.034	0.046	0.052	0.066								

Note: * stands for $p<0.05$, ** for $p<0.01$.

Data source: Organized in this study

Table 2: Effects of demographic variables on the correlations between knowledge outsourcing and public policy

<i>Demographic variables</i>	<i>Knowledge outsourcing</i>	<i>Distributive policy</i>	<i>Redistributive policy</i>	<i>Regulatory policy</i>	<i>Self-regulatory policy</i>
<i>Gender</i>	Making process	Significant	Not significant	Not significant	Significant
	Enforcement	Not significant	Significant	Significant	Significant
	Evaluation	Significant	Significant	Significant	Not significant
<i>Age</i>	Making process	Not significant	Not significant	Significant	Significant
	Enforcement	Significant	Significant	Significant	Not significant
	Evaluation	Not significant	Significant	Not significant	Not significant
<i>Seniority</i>	Making process	Significant	Not significant	Significant	Significant
	Enforcement	Not significant	Significant	Not significant	Not significant
	Evaluation	Significant	Significant	Significant	Significant
<i>Educational Background</i>	Making process	Significant	Significant	Significant	Not significant
	Enforcement	Significant	Not significant	Not significant	Significant
	Evaluation	Not significant	Significant	Significant	Not significant
<i>Position</i>	Making process	Significant	Significant	Not significant	Significant
	Enforcement	Not significant	Significant	Significant	Not significant
	Evaluation	Significant	Not significant	Significant	Significant

Source: Organized in this study

ating effects of seniority on the correlations between Making Process, Evaluation and Distributive Policy, between Enforcement, Evaluation and Redistributive Policy, between Making Process, Evaluation and Regulatory Policy, and between Making Process, Evaluation and Self-regulatory Policy that H7 was partially agreed.

(4) Effects of Educational Background on the Correlations between Knowledge Outsourcing and Public Policy

With Analysis of Variance, the empirical results, Table 2, showed significant moderating effects of educational background on the correlations between Making Process, Enforcement and Distributive Policy, between Making Process, Evaluation and Redistributive Policy, between Making Process, Evaluation and Regulatory Policy, and between Enforcement and Self-regulatory Policy that H8 was partially agreed.

(5) Effects of Position on the Correlations between Knowledge Outsourcing and Public Policy

With Analysis of Variance, Table 2, the empirical results revealed notable moderating effects of position on the correlations between Making Process, Evaluation and Distributive Policy, between Making Process, Enforcement and Redistributive Policy, between Enforcement,

Evaluation and Regulatory Policy, and between Making Process, Evaluation and Self-regulatory Policy that H9 was partially agreed.

CONCLUSION

From the research results, Table 1, beta between all dimensions appears positive, showing the positive correlations. In other words, the public servants consider the more successful knowledge outsourcing could enhance public policy. Because of the restricted information, a contract covering all conditions in the outsourcing is impossible, particularly to implement the uncertain benefits in a long-term contract. In this case, mutual trust and commitment could solve the problem. Besides, the policy executor may face the support or suppression from public-opinion representatives or other political environments during the execution, affecting the policy performance. The supportive attitudes of public-opinion representatives or other political environments could present positive assistance on the policy execution and further enhance the performance. On the contrary, the suppressive or resistant attitudes of public-opinion representatives or other political environments could negatively obstruct the policy execution and result in unfavorable performance. In this case, sector supervisors should actively deal with the intercession of public-opinion representatives and encourage the basic level fairly and justly exe-

cutting policies so that the basic-level personnel focus on the control and inspection of policies, without fear of the external political pressure, to effectively present the governmental authority.

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