

Does Performance Information Impact Budgeting and Planning in the Public Sector : Lessons Learned from Global and Japanese Experiences

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Definitions of performance based budgeting?

- Broadly it means that performance information is used in resource allocation.
- However, there are variations in linkage between performance information and resources or results with funding : from no linkage to directly and numerically linked (Schick, 2003; OECD 2016; World Bank 2016).
- Also performance does not always mean just results like outputs and outcomes, sometimes includes inputs and processes.
- So it might be called as ‘performance based budgeting’, ‘performance informed budgeting’, ‘results based budgeting’, ‘program budgeting’ other than ‘performance budget(ing)’.

Objectives of performance based budgeting

- Enhancing performance: efficiency and effectiveness
- Transparency and Accountability
- Improving resource allocation process
- Cultural change

Current situation in adopting performance based budgeting

- Before the big wave: performance measurement in City of New York
- First wave: in the 1960s, PPBS in the US
- Second wave: in the 1990s, NPM in New Zealand, UK, Australia, Netherlands, result oriented budget
- Third (current) wave: since the early of 21st century, developing and emerging countries introduced the idea of performance based budgeting, and early adopters such as the US, Australia also have adopted new version as a part of comprehensive performance management (World Bank 2016) .

Contrasted Figure on Performance Budgeting

| Item | Positive side | Negative side |
|-----------------------------|--------------------------|-------------------------------------|
| Goal setting and evaluation | Stretching | Gaming |
| Organizational culture | Challenging | Less innovative/suppress innovation |
| Decision making | Rational process | Ignore political process |
| Objectives | Clear message | Complexed partly conflicted |
| Time horizon | Annual cycle | Short time oriented |
| Feasibility/Practicality | Routinized and numerical | Burdensome and time consuming |

Introduction

- **Research questions:**

Has performance management caused successful outcomes?

And how will performance information improve decision making in organization?

It is still uncertain whether performance management has improved budgeting and planning in the public sector. Also most of the research used data from qualitative survey, not based on objective data.

Performance management in Japanese government

- Performance management is influenced from NPM movement alongside organizational management reform like agencification and accrual accounting.
- The government has promoted performance management by linking performance measurement to budgeting.
- Since the beginning of the 21st century, total quality management or PDCA cycle has been adopted in the government sector.
- The movement is strongly related to NPM rather than policy evaluation or analysis, though policy evaluation law was enacted in 2001.

Uses of performance information in Japanese local governments

According to the survey by MIC(2017),

- National government

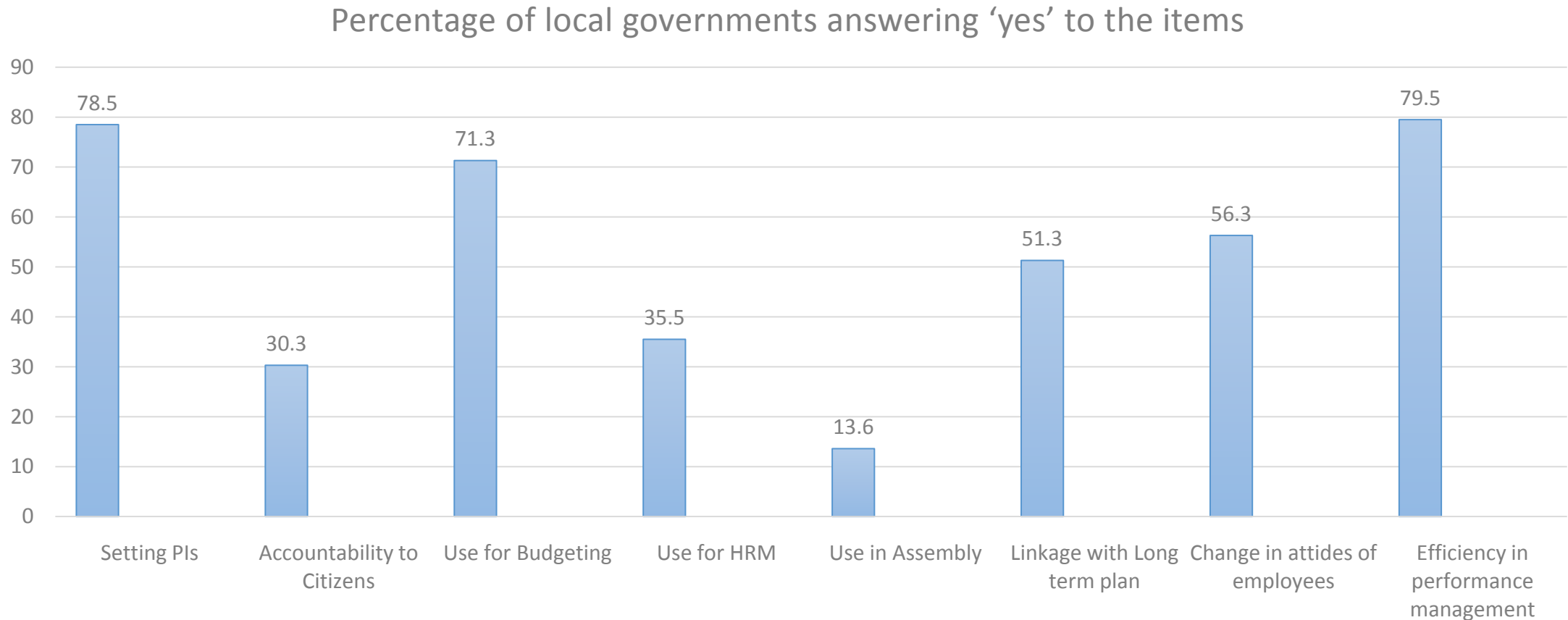
79.6 % of the results by performance measurement which is based on the Policy Evaluation Law in 2001 were reflected in their budget requests.

- Local government

76.3 % of the results by performance measurement system which is neither a mandatory nor standardized were reflected in their budgeting.

The survey result shows performance management and information works well for managers. But, does it indicate real figures?

Problems in performance measurement system of Japanese local governments(MIC 2017)

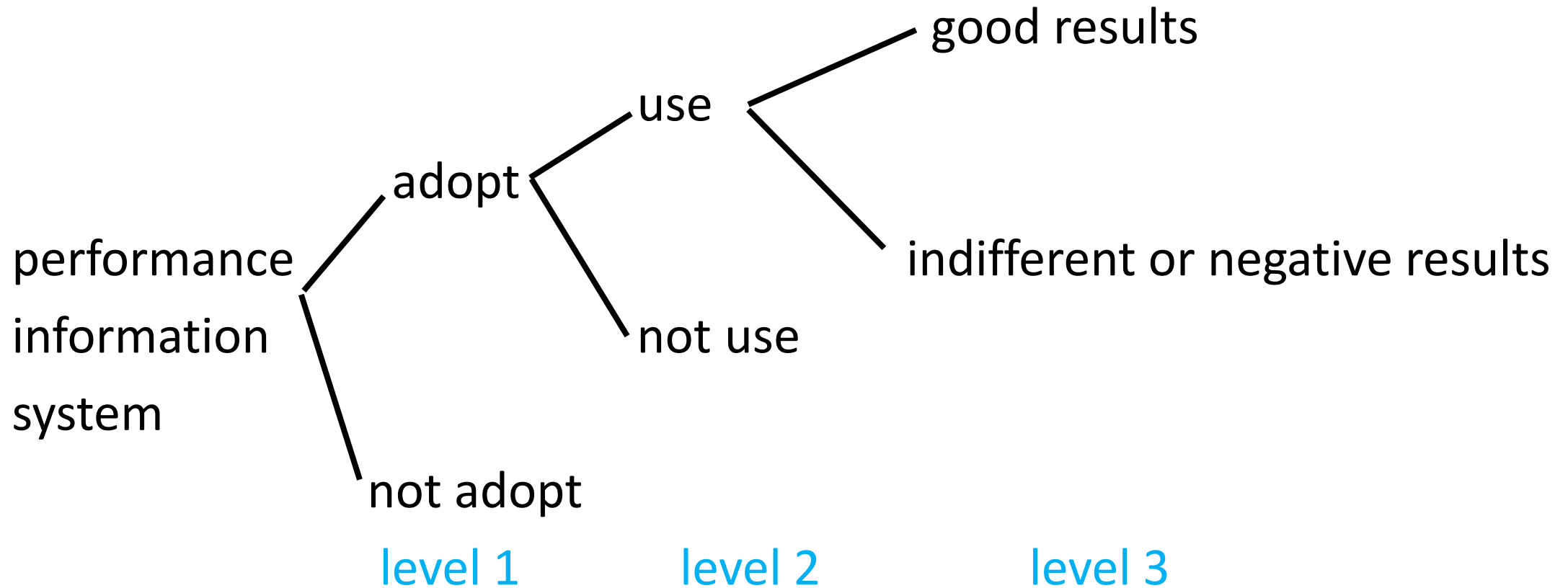


Literature Review(1)

- Many studies focus on its introduction and implementation in performance management(OECD, 2005), not impact or results.
- Exceptional studies using an aspiration model by Salge(2011) and Nielson(2014).
Nielson mentioned that we “know little about how performance information generates learning and affects organizational responses”.
There still are limitations on using proxies and survey data.
- Measurement theory shows that administrators’ self-perceptions can lead to spurious results (Meier and O’Toole, 2013).

Literature Review (2)

- Many studies focus on information use or explore its drivers in levels of 1 and 2 (see Kroll 2015). However, the objectives are related to level 3.



Literature Review: Actual linkage between performance and funding

OECD Performance Budgeting Survey 2016.

Q.28: If performance targets are not met by Line Ministries/Agencies, how likely is it that any of the following consequences are triggered?

Budget freeze: 9 countries

Budget increase: 8

Budget decrease: 8

Separate answers about the response to poor performance.

Linkage with Performance and Budget in case of municipalities of Japan: Theoretical Framework

- Aspiration model based on behavioral theory of the firm (Cyert and March, 1963): Aspiration levels influence behavior.

Historical aspiration, social aspiration, coercive aspiration.

In accordance with the PDCA cycle, NPM assumes that performance evaluation (C) shall be reflected in planning and budgeting (P) through action (A). Here, aspirations (P) and performance (C) through executions (D) in the public sector are obliged to be measured in two dimensions, financial and non-financial terms.

Data

- Analysis of the aspiration model requires time series data for aspiration and performance levels.
- However, local governments in Japan do not always set the targets or aspiration levels in outputs and outcomes while they measure actual performance in quantitative or qualitative terms.
- So we use the derived data for 2009-2012 from the performance evaluation system for City A (see next slide).
- The data included 133 projects, however, during the above period, some projects were abolished or restructured and some performance indicators were changed. So comparable projects were reduced to 93.

Evaluation Sheet by Project

| Item | Unit or measure | 2009 (actual) | 2010 (plan) | 2010 (actual) | 2011 (plan) | 2011 (actual) | 2012 (plan) |
|-------------------|-----------------|---------------|-------------|---------------|-------------|---------------|-------------|
| PI(output based) | | | | | | | |
| PI(outcome based) | | | | | | | |
| Expenditure* | | | | | | | |

* Cash basis, not accrual basis

Method

- $A_{i,t} = \alpha_0 + \alpha_1 A_{i,t-1} + \alpha_2 P_{i,t-2} + \varepsilon_1$ *Non-financial aspiration*
 $C_{i,t} = \beta_0 + \beta_1 C_{i,t-1} + \beta_2 P_{i,t-2} + \varepsilon_2$ *Financial aspiration*

$A_{i,t}$: aspiration level for project i in year t

$P_{i,t}$: performance or account for project i in year t

$C_{i,t}$: budget for project i in year t

ε_j : error term for $j = 1, 2$.

Hypotheses

- H1: Non-financial goals and budgeting in current aspirations are associated with prior aspirations and actual performance.
- H2: Surveys of managers on the effectiveness of performance management will yield different results when using objective performance measures.

Changes in aspirations on results

| Variables | Model 1(AR2012) | Model 2(AA2012) | Model 3(AR2012) | Model 4(AA2012) |
|----------------------------|-----------------|-----------------|-----------------|-----------------|
| AR2011 | - 0.4986** | | - 0.4384* | |
| AA2011 | | - 0.1929** | | -0.1879** |
| PR2010 | 0.2503* | | | |
| PA2010 | | 0.1540 | | |
| (PA2010- AA2010)/AA2010 | | | | 0.0940 |
| (PR2010- AR2010)/AR2010 | | | 0.0323 | |
| Constant | -0.0249 | 0.0043 | -0.0269 | 0.0042 |
| Adj R2 | 0.0915 | 0.1268 | 0.0394 | 0.1209 |
| F-value | 5.331** | 7.533** | 2.765+ | 7.191** |

ARt: change in outcome-based target from FY(t-1) to FY(t), AAt: change in output-based target from FY (t-1) to FY(t), PRt: change in outcome-based performance from FY(t-1) to FY(t), PAAt: change in output-based performance from FY(t-1) to FY(t), **p<0.01, *p<0.05, +p<0.10 , N=93.

Changes in aspirations on expenditures

| Variables | Model 5(AE2012) | Model 6(AE2012) |
|-----------|------------------|-----------------|
| PR2010 | -0.1358 | |
| PA2010 | 0.1962 | |
| AE2011 | -0.1646+ | -0.1598+ |
| PE2010 | -0.0329 | |
| constant | 0.0808 | 0.0766 |
| Adj R2 | 0.047 | 0.0254 |
| F-value | 0.4724 | 3.193+ |

AEt: change in budget expenditure from FY(t-1) to FY(t)

PEt: change in actual expenditure from FY(t-1) to FY(t)

Results

- H1 was not supported.
- H2 was generally supported.
- Performance below aspiration does not affect strategy.

The results could be explained by:

- Pre-set targets might not be a major concern to public managers.
- Planning and budgeting sections are separated in Japan.

Findings

- In analyzing the case of an innovative city, we found that:
- Prior performance in outcome terms significantly affected current aspiration levels, while output-performance did not affect them.
- Neither output nor outcome based prior performance affected current budgeting.
- Coercive aspiration levels or preset performance targets did not affect current aspiration levels.

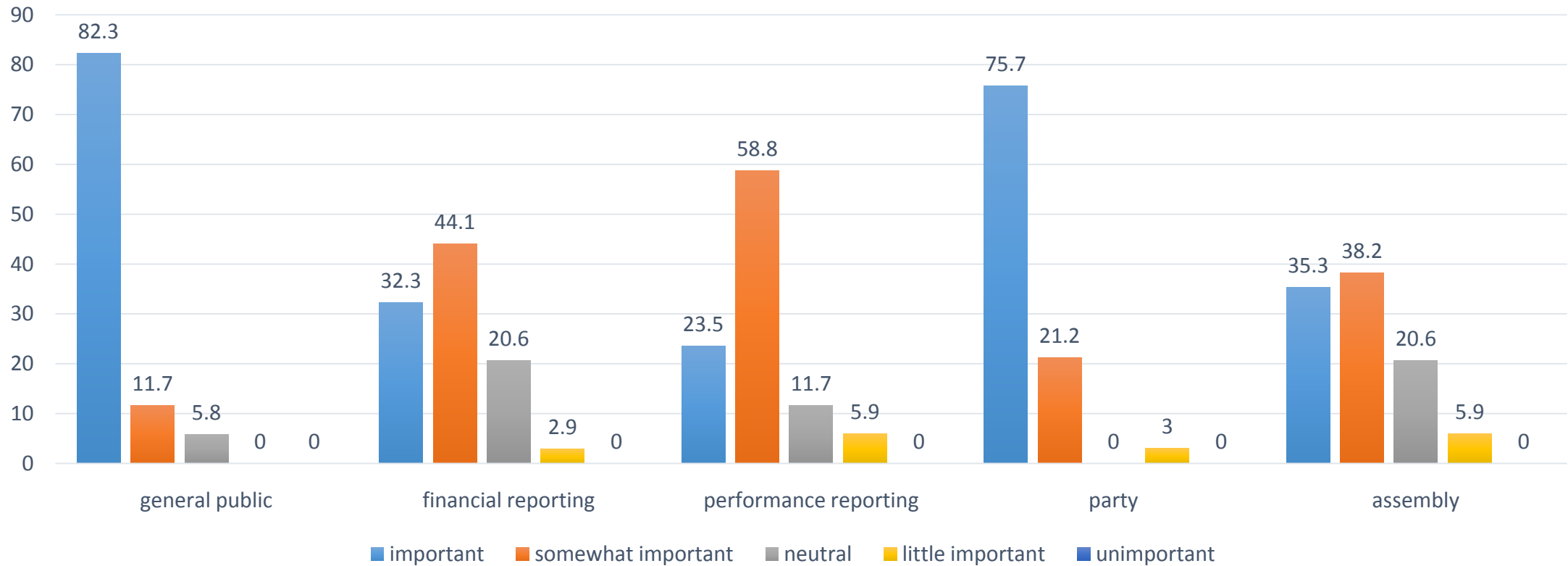
Performance budgeting in case of Agencies: Yamamoto(2008a)

| Variable | Total expenditures | Operating expenditures | Operating grants |
|------------------|--------------------|------------------------|------------------|
| TE(t-1) | 1.062** | | |
| OE(t-1) | | 0.980** | |
| OG(t-1) | | | 0.979** |
| Δ TE(t-2) | -0.146** | | -0.005 |
| Δ OE(t-2) | | -0.238** | |
| Δ EI(t-2) | -1.712** | 0.727** | 0.091* |
| Δ OS(t-2) | 2.090** | 0.193 | 0.263** |
| LOG(t-2) | | | -0.019 |
| ER(t-2) | -734.64 | -137.62 | -17.67 |
| F | 915.30** | 10878.18** | 58345.39** |
| Adjusted R2 | 0.967 | 0.997 | 0.999 |

LOG: liability of operating grants, ER: evaluation results(max=5, min=1), OS: operating surplus, EI: earned income

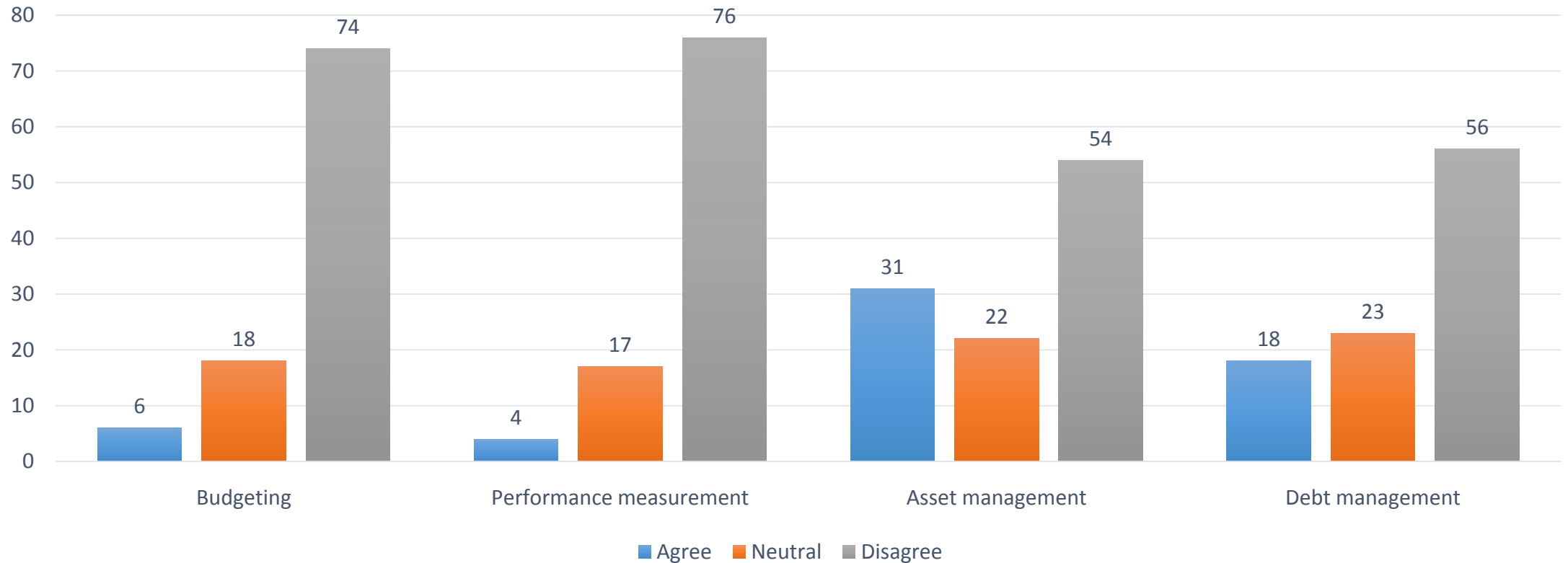
Politicians' use of information: Yamamoto(2008b)

Information sources for councilors of Metropolitan Tokyo



Performance information and accruals in Japanese local governments: Kobayashi, Yamamoto and Ishikawa(2016)

Utility of accrual information in decision making



Implications

- Expectation gaps between idea and actual figures
- Need a long term strategy for politicians and bureaucrats with interest of citizens
- Performance measurement
- Performance evaluation
- Budget cycle and measurement/evaluation cycle
- Cost constraints

Conclusion

- Budget is a democratic control mechanism, so Citizens have to be more involved and interested in the decision makings or performance.
- Politicians have to make a balance between budgets for new needs and obligatory/mandatory expenditures, in addition to inputs vs outputs or outcomes.
- Bureaucrats shall enhance skills and knowledge about performance management, and learn their experiences.
- Evidence based policy making and management or program evaluation shall be complemented with performance budgeting and measurement.
- Innovative culture has to be developed.

Future Issues

- Causal relationships between funding(budgeting) and performance information.
- The mechanism how the performance based budgeting works or does not work.
 - Different uses or utility by stakeholder: politicians, administration(public officials),
citizens
- Fields Studies and interviewing.
- Other nations and contexts have to be examined.

Thank you for your watching and listening.

- If you have any questions and comments, please contact the following address:

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