

The Actants and KPI in Privatization of Solid Waste Management in Malaysia.

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Abstract

The focus of this study is to understand the management control system used in privatization of solid waste management in Malaysia. After privatization, many parties involved in solid waste management, including public and private sectors. Due to the involvement of many parties with different objectives, the needs of management control system become pivotal to align these objectives. Using Actor Network Theory (ANT) and a case study approach, the study discusses the use of Key Performance Indicators (KPIs) as the main control system in the privatization of solid waste management. ANT assumes that the interactions between multiple actors with different interests are important, hence, the paper also discuss on how the interactions among human and non-human actors translate the KPIs. Finally, the paper discusses the translation of KPIs in the network using four moments of translation which is problematization, interesement, enrolment and mobilisation.

Keywords: Management control system, Privatization, Public Sector, Actor Network Theory

1. INTRODUCTION

Over recent decades, the change of current business environment has influence management control system (MCS) to change as well. Managing resources well in order to attain the company's objectives is the definition of MCS given by Langfield-smith (1997). Whereas, Tessier and Otley (2012) referred MCS as a formalized procedure that is used to monitor the organization activities in order to achieve the degree of coherence in the accomplishment of the organization's objectives. With the new business environment where the boundaries have expanded, the new management control system is needed.

The change in current business environment did not only affect the private sector but also the public sector. In Malaysia, in the mid-1980s, the Malaysian government introduced public sector administrative reforms under the umbrella of New Public Management (NPM) for their departments and other government funded agencies. The aim is to ensure that the services are delivered in an efficient and effective way, and to improve accountability (Nichol and Taylor, 2001). This is due to the fact that the range of services provided by the public sector are so wide, making it a challenging task for them to perform efficient services with limited budget and other resources. Furthermore, the government also has multiple objectives, such as to ensure the resources are used efficiently, to ensure the service provided is in accordance to the Act, and to ensure transparency and accountability, which differentiate it to the private sector where there is only one main objective of private sector, which is profit maximization. With this burden, public sector is expected to provide satisfactory services to the public. This situation has created conflict in assessing their performance and implementing control.

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1.1 Issues and objectives of the study

Solid waste management (SWM) is one of the area that affected by NPM. Previously, SWM is under the jurisdiction of local government. However, in 2011, SWM was federalized and privatized to private concession. Among the most influential factor that motivates the government to share the responsibility with the private concession is due to the incompetency of local councils to solve the increasing problems of solid waste management. However, as Periathamby and Hamid (2009) mentioned, the privatization of SWM did not solve any problem. It is just a quick solution to transfer the problems to the private concession.

After privatization, the government will act as a monitoring body on the work done by private concessions. However, Abdul Aziz and Ali, (2004) claimed that it is a challenge for public sector because it is known to have problems of lack in necessary skills and capabilities. This is proven by a study done by Hassan et al. (2001) where they showed that there is a mismatch between the data on waste generated reported by the local government with the private vendors, and also with the data collected at site by the researchers.

In addition, there are two main issues highlighted by the Audit Report 2014, Series III, which were released on 23 November 2015. The first issue was improper payments of RM56.29 million were made to the cleaning concessionaries in 2013. The payment included claims from services not covered in concessions' agreement. The second issue is SWCorp's officers were overloaded with work. On average, one SWCorp's officer monitor 6,905 premises, 60,809 square meter of grass areas, 21,858 meter of road and 77,911 meter of drain. The overloaded work on each officer resulted in monitoring task not able to be carried out thoroughly and effectively.

The privatization of SWM involved many parties, in a complex interaction. There is separation of work or responsibility between the parties involved. The involvement of many parties with different responsibility makes the relationship becomes complex. Furthermore, the privatization of SWM involved longer tenure. Transactions through longer term interfirm alliances are normally repeated transactions, and thus the uncertainties are high (Chua and Mahama, 2007). For record, the SWM concessionaries were awarded to the private vendor for 22 years with seven years cycle. Since the first cycle will end in 2018, many problems and issues are expected to arise.

With regard to the issue raised regarding the problems of managing the privatization of SWM, it shows that there is a need to coordinate the role played by each party in the relationship. An appropriate governance structures and good MCS are required as suggested by Das and Teng, 2001; Spekle, 2001. It is because MCS is an instrument that can influence the other parties' behaviour to ensure that the desirable objectives are achieved (Marques, Ribeiro, and Scapens, 2011).

Thus, the objective of this research is to understand how do inter-organizational control system being translated by the various parties involved in solid waste management in Malaysia.

2. LITERATURE REVIEW

Hopwood (1996); and Otley (1994) were the first two studies that create attention for the accounting researcher to give more attention to study the relationship between MCS and interfirm relationship. Following it, there are many research on the inter-firm relationship (Langfield-smith, 1997; Langfield-Smith and Smith, 2003; Mouritsen, Hansen, and Hansen, 2001; van der Meer-Kooistra and Vosselman, 2006). However, most of the research are conducted in dyadic relationship especially on the relationship between buyer and supplier in supply chain management. There is not much research done on the network relationship which involved many parties (Mauritsen, Mahama, and Chua, 2010). Furthermore, in public organizations, as Barretta and Busco, (2011) concluded, not much attention was given to study the role of MCS in inter organizational relationship eventhough the outsourcing process at public organizations shows an increase after the introduction of NPM.

In this study, ANT has been chosen to explain the relationship of each actor involved in the SWM relationship towards the establishment of MCS. It is because the relationship involved many actors, i.e the Ministry, the monitoring entities, the implementing entities, and the non-human actors. Using ANT approach, the researcher may have the answer on how such pattern of control system come into life, how the control system are maintained, modified or destroyed or how the control system are enacted (Vosselman, 2012).

ANT become the interest of accounting researchers since early 1980s. ANT is different from other theories because it provides a performative lens for the study of social relations including relations between accounting and inter organizational relationship (Mauritsen et al., 2010). From a performative ANT perspective, the focal

area is translation. In ANT, actors become attached via the process of translation. Through the process of translation, the identity of the actors and the possibility of interaction are discovered (Callon, 1986). The specific definition of translation is given in work by Latour, (1999) as displacement, drift, invention, mediation and the creation of a link that did not exist before. In ANT, the role of inscriptions and calculations has been brought back as central object in explaining the activities in an accounting study (Justesen and Mouritsen, 2011). Thus, it can be claimed that ANT brings new setting to accounting studies. Rather than simply describing the accounting numbers, ANT focus on the contribution by each actor in the network.

As stated by Vosselman (2012), control is translated by the researcher as it emerges from the doing of human and non-human actors in an inter-firm relationship. Control itself is an actor and the emergence come from connections and ties. On the one hand, research based on ANT views control as a moving target that takes the identity of a mediator.

Vosselman (2012) further suggest that the researcher should try to follow the actor since the control is continuously in the making. By doing that, the unpredicted and unexpected connections will discover. Furthermore, accounting phenomena are never merely diffused, adopted or implemented. Rather, they are adapted and translated. At the same time, they are enrolled in an actor network that reconfigures other actors' interest (Briers and Chua, 2001).

Justesen and Mouritsen, (2011) highlighted the issue of how the translation of the control system may continue after the system is being used. They claimed that researchers often stop their investigation when the new accounting technology become institutionalized and stabilized in the centre of calculation. Thus, this study will contribute towards this gap by focusing on the process of privatization of SWM that had started in 2011. In addition, the study perhaps will contribute to the amendment (if any) on control system used by parties involved because the relationship contract agreement will be revised in seven years cycle. The second cycle will begin in 2018.

3. RESEARCH METHODOLOGY

This study based on the subjective ontological assumption and under the epistemology of interpretive. Thus, the qualitative methodology is more appropriate because it will provide the researcher with an in depth experience by directly involved in the process through the various methods (Stake, 2010). Based on the objective of this study, it falls under case study method. Case study research is a study that focus on issues under one boundary. Under case study, the researchers explore in depth and detail bounded case(s) using multiple data sources (e.g. interview, document reviews, observation, and audio visual material), and finally report it as case based themes (Creswell, 2007). Based on the definition given by Yin, (2003) case study is "an empirical enquiry that investigates a contemporary phenomenon within its real-life context especially when the boundaries between phenomenon and context are not clearly evident (p. 13)".

3.1 Data sources

In term of data collection method, there are two periods of visit. The first visit was on November until December 2015. This is the period of pre-visit. Next, the second period started at February 2016 until February 2017. This study uses multiple data collection method. The use of multiple data sources allowed the study to perform data triangulation and method triangulation.

Data collection process started with document review process. The researcher was allowed to review the following documents, (1) operation manual 2014; (2) concession agreement, (3) appendix of concession agreement, (4) guidelines in monitoring concession companies by PPSPA, and (5) a few minutes of meeting. The duration taken to complete the document review process was three weeks. The researcher had no permission to photocopy the documents, hence all outputs from this process were written in the diary.

Based on the data gathered during document review, the second technique, in-depth interview follows. The study used semi structured interview to provide participants with flexibility to describe their relationship with the process, how the relationship evolves and the reason why such relationships exist. The interview protocol was prepared but it serves as a guideline only. The interview process was conducted in leisure way to create comfortable environment for the participants. The interview participants were selected based on their involvement in the management function of solid waste management. This study used the concept of follow the actor by asking the key personnel to name other important actors who need to be interviewed. All interviews are recorded. There are twenty interview sessions were conducted at different management level.

In order to strengthen the data gathered, the third data collection method involved is observation method. The purpose of doing observation is to ensure the real-time events and natural settings are covered by the researcher. There are three series of observation were done. The first observation done on the work done by the assistant enforcement officer in two areas. The second observation done on the work done by the concessionary on their daily task inclusive of collection and public cleansing. The third observation done on the process at landfill.

3.2 Data analysis

The data gathered during the document review and observation process are recorded in diary. Whereas, the data gathered from interview process are transcribed. All data are then analysed using thematic analysis. Thematic analysis is the illustration (networks) that summarize the main themes constituting of text. Thematic networks are the graphical presentation as web like nets. The purpose of it is to remove any notion of hierarchy, giving fluidity to the themes and emphasizing the interconnectivity throughout the network (Attride-Stirling, 2001).

4. FINDINGS

4.1 Preliminary visit

Listed below are the findings from the first visit, i.e. preliminary visit that was done in November until December 2015.

1. The contract was awarded to concession company in 2011 for 22 years with 7 years cycle. Seven years cycle means that the concessionaries agreement will be revised for every 7 years. Currently, the contract was in the first cycle ended in 2018, hence, there are many issues and problems arises. The main problem or issue mentioned by the concession's representatives is the penalty, or known as Key Performance Indicator (KPI), imposed by the government on them. There are many areas of KPI that is still not clear and unsatisfactory.
2. Concessionaries agreement (CA) is the main document used in the relationship. The problem mentioned by the managers are (1) the understanding of the CA by each party involved are different. (2) Too many parties involved, such as, implementation, monitoring and penalty are by different entity.
3. The main control system enforced are KPI, inventory and technology (i-MEMS, GPS, GIS). The manager expressed his dissatisfaction towards the penalty and implementation of KPI.
4. Different level of meeting held for controlling purposes between vendor and monitoring agency, includes ; (1) Regional Implementation Committee, which is the monthly meeting, chaired by the State Director; (2) Service Level Committee, conducted once in 3 months, chaired by Director of the Department; (3) Concessionaries Performance Appraisals Meeting; and (4) Technical Meeting/Ad-Hoc Meeting.

4.2 Reasons for privatization

Privatization become the most choices of public sector. Most of the reason associated were to reduce size and cost of government. However, for solid waste management in Malaysia, based on the data gathered, there are two main reasons; different service level and financial constraints.

Government choose to privatize solid waste management because of different service level provided by different local government. Local government in Malaysia are divided into city councils, municipal councils and district councils. Each of them has their own power to set their own key performance indicator (KPI) in term of solid waste collection and public cleansing. Some councils do have KPI but in term of enforcement is different. Some councils are active in enforcement of KPI but others do not enforce it. There are also council that even have no KPI at all in solid waste management. So, the service level between the councils are different. The different service level has given impact on community. It is not fair to the residents who pay assessment tax¹. The residents pay the assessment taxes, thus they have the right to enjoy same services as other councils provided. That is why, as mention by the former Head of Director for the Department, government would like to privatize the solid waste management services in order to make it the uniform services delivered.

We want to take over because we can standardize their quality of work. If not, you see Selangor, they have more money, so they are beautiful. Kedah has no money, so their area is less beautiful compared to Selangor. But, when we took over, doesn't matter whether you are poor or you give us more money, our standard is 3 times a week [waste collection frequency].

¹ Assesment tax is the main sources of fund for local governments in Malaysia. It is used to pay all the services and maintenance of local government areas, including solid waste management.

Apart from that, privatization of solid waste management also influences by the factor that there is financial constraint at local government. The only source of income for local government in Malaysia is assessment tax. The total collection of assessment tax is then allocated to all the services provided by local government including solid waste management. The assessment tax rate is different between state. There are some states that did not increase their assessment tax rate for many years although the responsibility to provide public services keep on increasing every year due to increasing in population and also housing areas. This situation affects the ability of local government to provide good quality services. The record also shows the inability of local government to pay their own contractor on solid waste and public cleansing². This is due to the financial constraints exist in local government. The financial constraints in local government exist for many years. Although the federal government also assist local government in term of financial support to manage solid waste, but still, the quality is not as expected.

Why? [reason for privatization] First we see, local government has no ability. Based on their financial and their human resources to implement solid waste management. On top of that, before we privatized, we have given them a lot of money. Assist them in managing solid waste. So, what's the point we give them money but they did not perform? So, might as well, other than give them money, better we take back [the solid waste management process] and implement by ourselves [federal government].

There is also reason for privatization is due to ensure the focus of the workforce. At local government, there is no enforcement dedicated³. Local government has constraint in term of workforce. Thus, one worker is assigned to do more than one job. For instance, one worker is responsible to monitor hawkers during night market. At the same time, he also responsible to monitor parking area. The problem of multiple responsibility affects the quality of work. So as mention by Assistant Director of Department X, after privatization, there will be an agency that is focus on managing solid waste only. Thus, the services provided is better than the services provided by the local government.

Due to these factors, the government decided to privatize solid waste management. The privatization process started when National Solid Waste Management Act or known as Act 672 was gazetted in 2007. To start with, there is one task force was formed. The task force named Public Private Partnership Committee (JKAS)⁴. There are Public Private Partnership Unit (UKAS), Project Steering Committee (PUU) and many other parties involved in that team. The function of the team is to discuss on privatization matters. They reviewed back the draft, the list of regulations, and the original draft of concession agreement. This is mentioned by The Director of the Department:

“During early process, we develop one core team. This core is led by the Department. The members of the core team are the Corporation, Attorney General Chambers, and foreign consultant. We hire foreign consultant to develop Act 672, develop concessionary agreement all that. The Department was developed first, in 2007. The Corporation developed later on. Once the Corporation exist, we delegate the enforcement task to them, for them to monitor the concession. But, before 2011, we prepare our KPI, we prepare our regulation, together with the Corporation. So, the direction, the way forward, is us [the Department], from our head of director.”

To make it happen, the second step of privatization is to engage an agency to responsible on the privatization issue. Next section will discuss about it.

4.2 Actants of Privatization of Solid Waste Management

In Actor Network Theory, actors consist of humans and non-humans actors, and known as actants. According to Law, 1992, ANT make no difference between people and objects. Human and non-human should not be separated to understand the complex situations.

² As mentioned by the Engineer of the Corporation

³ As mentioned by Former Head of Director, the Department

⁴ As mentioned by Deputy Director for the Department.

In privatization of solid waste management, the main step is to engage an agency to responsible on the privatization issue. Thus, the ministry decided to develop one Department. The development of this department is together with the enforcement of Act 672 in 2007.

*“For this takeover, it must be one agency responsible. So, we put one agency to take the responsibility. So, the Department was developed together with the gazetted of Act 672 in 2007.”
(Head of Department, the Department)*

The function of the Department at that time is more towards the preparation of the documents needed for privatization.

“Department drafted Solid Waste Management and Public Cleansing Act. That is the first contribution from Department although there are also members from the Corporation. But, we [the Department] is the organizer. Then, the Department also drafted Tripartite Agreement. And the third is, the Department involved in the preparation of concession agreement, then the Department also involved in preparation of the rules under Act.” (Head of Department, the Department)

The function of the Department is subject to Act 672. The main task is to develop the policy related to solid waste management. Furthermore, the Department also act as a main body that give license to those who involved with solid waste management, start from collection until disposal.

“We [the Department] will monitor according to Act 672. Because in the Act, it has stated the requirement for license, then agency involved in the process, example : dumping waste. The method of dumping waste are state clearly in the Act and Rules. Then, when the rules are ready, the Act is ready, agreement ready, next we go to the second stage which is to check whether they follow or not. The Department as policy maker can monitor, and the Corporation also can monitor.” (Deputy Director, the Department)

Another setup done for the Corporation. The Corporation is established for the purpose of implementation, monitoring and management of concession related to privatization of solid waste management. The establishment of the Corporation is according to Solid Waste and Public Cleansing Management Corporation Act 2007 or known as Act 673. Act 673 is the source of power for the Corporation to administer and enforce laws, rules and regulations related to management of solid waste and public cleansing.

“We [the Corporation] monitor their [concession company] services according to schedule. Every month they have to upload their schedule to us for the enforcement officer review it. So, the enforcement officer will do monitoring based on the schedule uploaded.” (State Director, the Corporation)

Once the Department and the Corporation are ready, the next stage is to appoint concession company. Concession company were appointed according to the region. Privatization of solid waste is done at Peninsular Malaysia only. It is divided into three regions; northern region, southern region, and central region. Each region is under the responsibility of one concession company. The function of concession company is to ensure the implementation of Act 672.

Concession company were given responsibility to manage the solid waste at their respective areas. All the scope of works is mentioned in the Act and also in concession agreement. In term of implementation, concession company are free to do it by themselves or appoint sub-contractors. The relationship of sub-contractors is just with concession company only. The department and the Corporation has no direct relationship with the sub-contractor. The contract signed is between government (represented by the Department and the Corporation) and concession company. That is why, in the hierarchy of privatization of solid waste management system, only three main agencies were stated; which are the Department, the Corporation, and the Concessionary.

“the appointment of sub-contractors is under the responsibility of concession company. We [the Corporation] have no power to involve in the process of appointment.”(State Director of the Corporation)

“the most important thing is we [the Department] deal with the concession company. If the sub-contractors do mistake that violate KPI, we [the Department] will charge it to the concession

company. How many layer of sub contractors is the decision made by concession company only. We [the Department] did not involve.” (Head of Department, the Department)

Below is the Figure 1 to show the relationship between human and non-human actors in the process of implementation on privatization of solid waste management

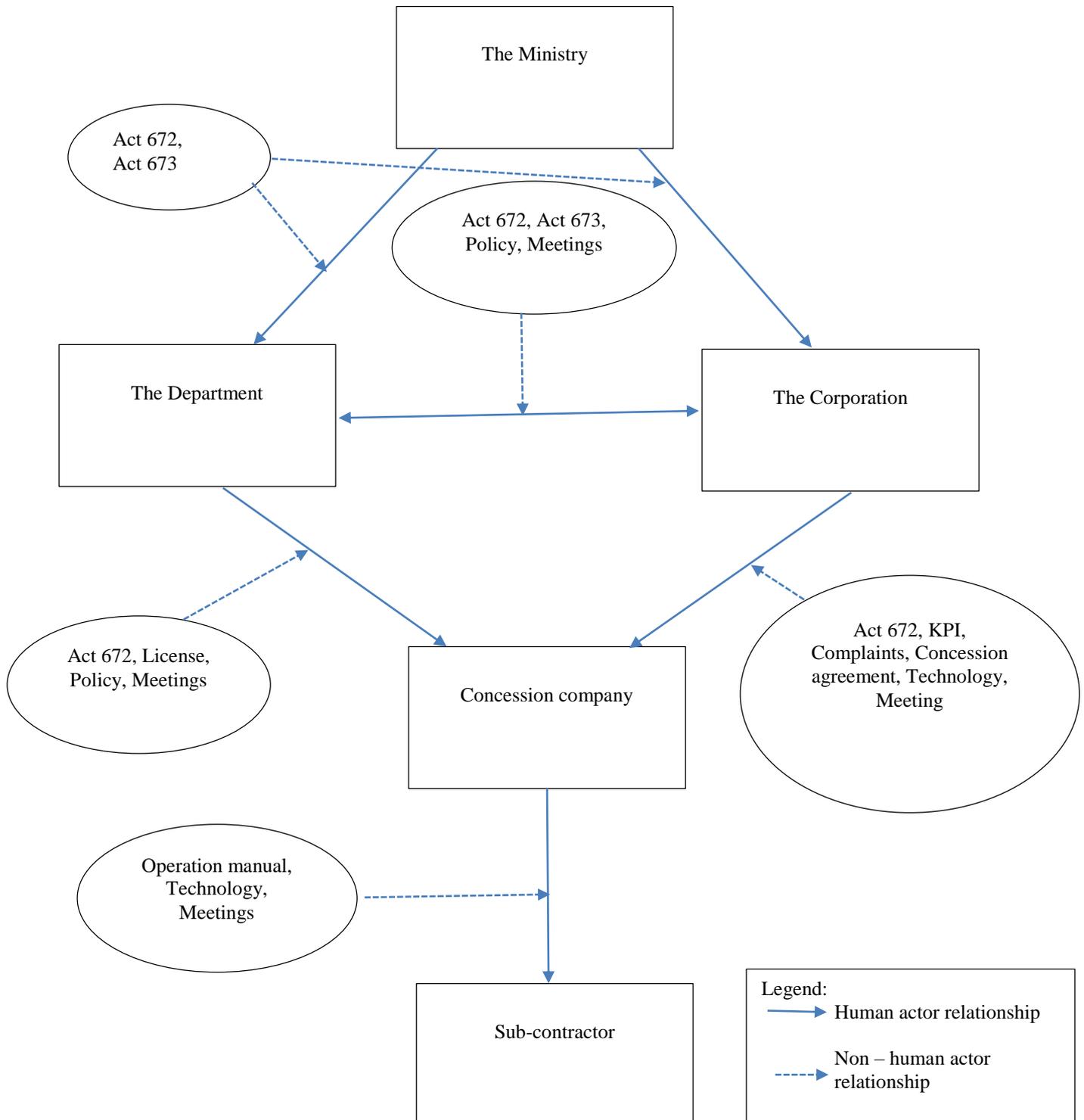


Figure 1 : The actants (human and non-human actor)

5 CONCLUSION

This is a study done to understand the translation of control system in a privatization process of solid waste management in Malaysia. After the solid waste management was federalized and privatized by federal government, many parties involved. The main control system used in the relationship is KPI. Thus, the used of Actor Network Theory as a guidance in answering the research question is suitable. The study uses case study research method. Data was gathered using three methods; documents review, interview, and observation.

REFERENCES

- Abas, M. A. (2014). Sustainable Solid Waste Management in Malaysia : The Concept of Multi-Stakeholder Governance in Solid Waste Policy Implementation. *Public Policy & Administration Research*, 4(10), 26–36.
- Abdul Aziz, A. R., and Ali, N. (2004). Outsourcing and quality performance: Malaysia's public works department. *Structural Survey*, 22(1), 53–60.
- Attridge-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research*, 1(3), 385–405.
- Briers, M., and Chua, W. F. (2001). The role of actor-networks and boundary objects in management accounting change : a ® eld study of an implementation of activity-based costing, 26, 237–269.
- Callon, M. (1986). Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay, 196–223.
- Chua, W. F., and Mahama, H. (2007). The Effect of Network Ties on Accounting Controls in a Supply Alliance: Field Study Evidence. *Contemporary Accounting Research*, 24(1), 47–86.
- Creswell, J. W. (2007). *Qualitative Inquiry and Research Design Choosing among Five Approaches* (Second edi.). United States of America: Sage Publications.
- Das, T., and Teng, B. (2001). Trust, control and Risk in Strategic Alliances: An Integrated Framework. *Organizational Study*, 22(2), 251–283.
- Gibson, W., and Brown, A. (2009). *Working with Qualitative Data*. SAGE Publications Ltd.
- Hassan, M. N., Chong, T. L., Rahman, M., Salleh, M. N., Zakaria, Z., and Awang, M. (2001). Solid Waste Management in Southeast Asian Countrie with Special Attention to Malaysia. In *Sardinia 2001, Eighth International Waste Management and Landfill Symposium*.
- Hopwood, A. G. (1996). Looking Across Rather Than Up and Down: On the Need to Explore the Lateral ProceSSION Information. *Accounting, Organizations and Society*, 21(6), 589–590.
- Justesen, L., and Mouritsen, J. (2011). Effects of actor-network theory in accounting research. *Accounting, Auditing & Accountability Journal*, 24(2), 161–193.
- Langfield-smith, K. (1997). Management Control System and Strategy : A Critical Review. *Accounting, Organizations and Society*, 22(2), 207–232.
- Langfield-Smith, K., and Smith, D. (2003). Management control systems and trust in outsourcing relationships. *Management Accounting Research*, 14(3), 281–307.
- Latour, B. (1999). *Pandora's Hope : Essays on the reality of science study*. United States of America: President and Fellows of Harvard College.
- Latour, B. (2005). *Reassembling the social: An Introduction to Actor-Network-Theory*. United States of America: Oxford University Press Inc., New York.
- Marques, L., Ribeiro, J. a., and Scapens, R. W. (2011). The use of management control mechanisms by public organizations with a network coordination role: A case study in the port industry. *Management Accounting Research*, 22(4), 269–291.
- Mauritsen, J., Mahama, H., and Chua, W. F. (2010). Actor Network Theory and the Study of Inter-Organisation Network Relations. In H. Hakansson, K. Kraus, & J. Lind (Eds.), *Accounting in Networks* (pp. 292–313). New York: Routledge Taylor and Francis Group.
- Mouritsen, J., Hansen, A., and Hansen, C. . (2001). Inter-organizational controls and organizational competencies: episodes around target cost management/functional analysis and open book accounting. *Management Accounting Research*, 12, 221–244.
- Otley, D. (1994). Management control in contemporary organizations: towards a wider framework. *Management Accounting Research*, 5, 289–299.
- Periathamby, A., and Hamid, F. . (2009). Evolution of solid waste management in Malaysia: impacts and implications of the solid waste bill, 2007. *J Mater Cycles Waste Management*, 11, 96–103.
- Spekle, R. F. (2001). Explaining management control structure variety : a transaction cost economics perspective. *Accounting, Organizations and Society*, 26, 419–441.
- Stake, R. E. (2010). *Qualitative Research : Studying How Things Work*. New York: The Gulford Press.
- Tessier, S., and Otley, D. (2012). A conceptual development of Simons' Levers of Control framework. *Management Accounting Research*, 23(2012), 171–185.
- van der Meer-Kooistra, J., and Vosselman, E. G. J. (2006). Research on management control of interfirm transactional relationships: Whence and whither. *Management Accounting Research*, 17(3), 227–237.

- Vosselman, E. (2012). Approaching control in interfirm transactional relationships: Contrasting and connecting a transaction cost economics perspective with an actor-network theory perspective. *Qualitative Research in Accounting & Management*, 9(1), 4–20.
- Yin, R. K. (2003). *Case Study Research . Design and Methods*. SAGE Publications (Third edit., Vol. 26). United States of America: Sage Publications.