

Dissecting the Political Business Matrix of Municipal Waste Management in Malaysia

Lam Choong Wah
Senior Fellow
choongwah@refsa.org

Waste management is a forgotten topic in Malaysia. In most people's views, rubbish is waste; something that when it is out of our sight is out of our mind. Yet, whether we like it or not, from the day we are born we have been producing rubbish and wastes; which means waste management is a major issue to be tackled.



While many assume that waste management is a dirty and unwanted business, the Malaysian Federal government has taken a drastic move to restructure the country's waste management framework and has introduced privatisation into this sector.

The Federal government has realised that waste management is a profitable business worth billions of ringgits. To understand how the implementation of waste management policy can

be translated into lucrative businesses, we need to look more in depth into the relationship connection of centralisation of power, political business and the “Umnonisation” phenomenon.

Even though the government is using the name of federalisation to centralise waste management, in actuality the real spirit of federalisation is not carried through. What has happened is the centralisation of power. The result is the erosion of federalism, resulting in the powers of the local government being reduced and affecting the effectiveness and efficiency of governing policies.

Privatising public services as an operating mode is a common phenomenon in many countries. What complicates matters is when privatisation is mixed with political business. The resulting crony economy has affected the country’s economic competitiveness.

This paper intends to discuss the relationship between federalisation, privatisation and “Umnonisation” from the historical context and proceeds to analyse how waste management is connected to the aforementioned matter and how it affects the current waste management thinking.

The roots of federalisation

In Malaysia, people tend to call the national government and provincial governments as central government and state governments. Technically, it is not correct except for the terminology of state government. Despite it is not named with federation, Malaysia is a federal country where the entire political, socio-economic, monarchical, states’ relations, public service and others are built on top of federalism. But, what is federalism? Having your country name affiliated with federation does not guarantee you are more federal than others. The nature and substances of public governance matter more than others. To begin, we need to define the meaning of federalism. There are several definitions of federalism that can be used for reference.

Firstly, the Report of the Royal Commission on the Australian Constitution defines Federal Government as a form of government in which sovereignty or political power is divided between the central and the local governments, so that each of them within its own sphere is independent of each other.¹ Secondly, D.J. Elajar defines federalism as the mode of political organisation that unites separate polities within an overarching political system so as to allow each to maintain its fundamental political integrity.² Thirdly, William H. Riker defines federalism consists of two levels of governments that rule the same land and the same people, and the existence of at least one area of action in which the government is

¹ JC Fong, *Constitutional Federalism in Malaysia*, Sweet & Maxwell Asia 2008, p. 46.

² Abdul Aziz Bari, *Malaysian Constitution: A Critical Introduction*, The Other Press 2003, p. 126.

autonomous which means division of powers, and the existence of guarantees of autonomy for each government within their own spheres.³

Even though the three authors’ definition of federalism is different, in substance it has one common view and that is federated states have at least two levels of government. The first level is the federal government that has jurisdiction over the entire country while the second level is the local government that has independent jurisdiction over local matters. Both the federal and local governments’ limits of power is defined and constrained by legal statutes and conventions.

Looking back at Malaysia’s situation, the country’s administration is divided into two levels, namely the federal government and state governments. The division of powers of the federal and state government are stated clearly in the Federal Constitution:

Table 1: Articles related with federal and state relations in constitution

Parts	Articles
Part 1 The States, Religion, and Law of the Federation	1, 2, 3, 4
Part V The States	70, 71, 72
Part VI Relations between the Federation and the States	73, 74, 75, 76, 76A, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 95A, 95B, 95C, 95D, 95E
Part XIIA Additional Protections for States of Sabah and Sarawak	161, 161A, 161B, 161E

Of particular note is Article 4 of the federal constitution which states that the highest law of country is the Federal Constitution. Both the federal and state governments are bound by and administered under the constraints of the Federal Constitution. If there are any arising disputes it must be resolved within the framework of the Federal Constitution. This has protected and maintained the federal nature of this country. Particularly, the federal constitution provides federal, state and concurrent legislative lists in Ninth Schedule which states clearly the jurisdiction of the federal and state government.

Where it concerns waste management, under Article 7 of the concurrent list in the Ninth Schedule of the Federal Constitution, waste management is defined as ‘sanitation’ matter that is to be the joint responsibility of the federal and state governments. In the past, the federal government usually provide funds and financial assistance for the various state governments for their waste management and did not get involved directly in the state’s waste management (with the exception of the Federal Territories of Kuala Lumpur, Labuan and Putrajaya).

³Ibid.
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In turn the state governments would delegate the task of waste management to the local governments such as the City Hall, City Council, Municipal Council, District Council and Local Authority.

According to the Department of National Solid Waste Management, due to the lack of funds and advanced technological expertise and manpower and resources, in the past the local governments had poorly administered the cities' wastes, resulting in the deterioration of the environment's quality and pollution of the areas surrounding the landfills.

To resolve the troublesome waste issue, in 1990s the federal government announced the concept of federalising waste management with plans to takeover waste collection, sorting and management functions of the state and local governments. Beginning 1st January 1997, the federal government took over from 44 local councils their solid waste collection and transportation's function. The southern region of the Peninsular Malaysia was managed by a private company known as Southern Waste Sdn Bhd while the central region was handled by another private company, Alam Flora Sdn Bhd.

In 1998, the federal government drafted regulations to comprehensively take over the local governments' waste management powers; however due to the inopportune timing it was not submitted for parliamentary approval. In July 2005, the federal government endorsed the National Strategic Plan for Solid Waste Management (NSP). Meanwhile the Housing and Local Government ministry had set up a solid waste management team to implement the strategic plan.

In 2006 the federal government formulated the National Solid Waste Policy and in March 2006 a National Committee on Solid Waste Management and Environment chaired by the then Deputy Prime Minister Najib Razak was formed. The solid waste management team was converted into a government department.

The department of national solid waste management then Director General, Nazdri Yahaya pointed out that in early 2006, "the political solid waste agenda had changed substantially since the first draft bill was prepared. The attention on solid waste issues had increased tremendously internationally as well as nationally."⁴

In June 2007, the federal government passed five bills in its attempt to consolidate federalisation. The five statutes passed were : 2007 Solid Waste and Public Cleansing Management Act, 2007 Solid Waste and Public Cleansing Management Corporation Act, 1976 Local Government Act (amended), 1974 Street, Drainage and Building Act (Amended) and 1976 Town and Country Planning Act (amended).

⁴ Ibid.

The 2007 Solid Waste and Public Cleansing Management Act allows the federal government to lead the country's waste management, the Solid Waste and Public Cleansing Management Corporation Act authorises the establishment of a national executive body that will take over the waste management function of the local councils, 2007 Local Government Act (amendment) allows the federal government to take over the rubbish, wastes, carcasses and all worthy wastes management function of the local councils.

The 1976 Local Government Act (Amendment), 1974 Street, Drainage and Building Act (Amendment) and 1976 Town and Country Planning Act (Amendment) furthers strengthen federalisation program. The above acts were all passed in the lower house of the parliament in July 2007, paving the way for the federal government to clear off all legal obstacles to federalisation of waste management.

Why was the federal government in such a haste to pass those acts? What did the Director General of the National Solid Waste management Nazdri Yahya meant by saying that "the political solid waste agenda had changed substantially?"

A look at history has shown that the federal government had initially planned to build a waste incinerator in Broga, Selangor. Even though the Broga's incinerator contract was granted in October 2005, due to massive public protests and lack of funds the project was shelved in September 2006.⁵ The incident's evolution and timing coincided with the federal government's active promotion of federalising waste management. It is most likely that the anti Broga incinerator project public movement was the political event that sparked that legislative move.

It appears that the federal government's haste to push through the legislations was most probably due to the lesson it learnt from the Broga incinerator project incident, which it believes was due to the fact that the project lacked the legal basis and had shown it to be passive and hence losing out.

Nevertheless, even with the enactment of the aforesaid five statutes, the state governments through the protection of the Federal Constitution can reject to hand over the waste management powers to the federal government and can even take back the waste management powers from a private waste management company which was appointed by the Federal government. For example, in 2011, the Selangor State government took back the waste collection and public cleansing powers from Alam Flora Sdn Bhd after Alam Flora's concession expired.⁶

This is because in order for the federal government to take over the waste management powers permanently from the state governments would require it to amend the Article 7 of

⁵ The Sun, *Gov drops Broga incinerator project*, 6 July 2007, <http://www.thesundaily.my/node/169813>

⁶ The Star, *The Cleaning Begins*, 9 August 2011,

<http://www.thestar.com.my/story/?file=%2f2011%2f8%2f9%2fcentral%2f9260017&sec=central>

the concurrent list in the Ninth Schedule of the Federal Constitution which is a difficult undertaking, particularly after the Barisan Nasional led federal government lost two third majority in House of Representatives in 2008's general election. Therefore that part of Federal Constitution was maintained. As of December 2014, seven out of thirteen states had surrendered their waste management powers to the federal government, except for Penang, Perak, Selangor, Kelantan, Sabah and Sarawak.⁷

Taking over more responsibilities from state governments doesn't consolidate federalism, but eroding it instead. The idea of federalism is a division of powers between national and local governments, the former takes care of overarching and interstates issues, while the latter takes care of local centric issues whereby waste management falls under this category. Certainly, concentrating waste management power into federal government is nothing more than a centralisation approach which is against the idea of federalism.

Moreover, when a state government surrenders its waste management powers, the federal government will delegate the waste processing to its appointed private company and cast aside the state government and local governments. In a more precise word, that is called privatisation which is a classical neoliberalist approach. Another question that begs to be answered: is privatisation a panacea?

Privatisation – a panacea?

It cannot be denied that the Federal Government under BN has the traits of neo-liberalism, favouring market economics and believing that privatisation is the panacea to all the problems. However, the matters are not as simple. Compared with the privatisation policies practised in the European and North American countries which is to advance the concept of small government under the neo-liberalism thought and big market concept, in Malaysia the privatisation policies has taken a different thread of thought.

In the early years following independence, the Malayan and then Malaysian government had continued the political and economic system inherited from the British and also continue the laissez faire economic policies, making minimal interference in the business and industrial development. From 1957 to 1969, not many government corporations were involved in the sectors of transport, energy, communications, infrastructures and commodities market.

In 1969 after the May 13 racial riots occurred, as the conservative nationalist Abdul Razak took over the governance from the founding premier and Western-influenced Tunku Abdul Rahman, Malaysian politics took a rightist turn when the far-reaching New Economic Policy (NEP) was implemented. In economics Abdul Razak began to adopt some of the leftist thoughts, by using public powers to establish government-owned corporations to enter into

⁷ Parliamentary Hansard, DN 9.12.2014, p. 11.
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the economy. The New Economic Policy, or “Razaknomics” in modern term, there is only one aim for these two new polices which is economic restructuring and to uplift the economic position of the bumiputeras (natives), specifically so that the bumiputeras will control at least 30 percent of the equities.

These policies have affected many public policies. The government linked corporations (GLCs), which were entrusted with this important task of increasing the bumiputeras’ equity share, blossomed numerically. In 1960 there were only 22 GLCs; in 1970 there 109 GLCs, by 1980 the number has grown to 656. In March 1990 it has reached a staggering 1158 GLCs.⁸ Most of these GLCs are concentrated in the financial, manufacturing, services, transports and property sectors. Malaysia became one of the few countries on earth with the most GLCs involved in unplanned economies.

As a result of a lack of monitoring and control, many GLCs encountered problems of poor management. According to a research by Jomo K. S, from the late 1970s onwards, the number of GLCs facing losses had gradually risen. In 1986 half of the GLCs encountered losses.⁹

Table 2: State Owned Enterprises Saw Red in Mid 1980s (%)

	1983	1981	1982	1983	1984	1985	1986	1987	1988
Profitable	61	60	54	58	58	52	52	53	60
Unprofitable	39	40	46	42	42	48	50	47	40

In early 1980s, the rapid expansion of GLCs convinced the then Prime Minister Dr Mahathir firmly believed that the ever expanding GLCs would become calamitous for the government’s finances and in need of reforming. In addition to lack of monitoring and controls, overlapping of functions and political interest and lack of a proper policy guidance were also causes of why the GLCs were being hobbled. However Mahathir chose to neglect these causes and followed after the neo-liberalist policies of the US President Ronald Reagan and UK Prime Minister Margaret Thatcher – privatisation policies.

On 25 February 1983, Mahathir announced the policy of Malaysia Incorporated¹⁰, which made this young nation was no longer a country but considered as a profit-seeking enterprise run by the federal government. Since then Malaysia has embarked on the path of privatisation vigorously. In the Malay language, the United States is known as Amerika Syarikat (Corporation America) while Malaysia is to be known as Persyarikatan Malaysia (Malaysia Incorporated).

⁸ Jomo K.S., *Privatising Malaysia: Rents, Rhetoric, Realities*, Westview Press 1995, p.17.

⁹ *Ibid*, p. 25.

¹⁰ Philip Mathews, *Chronicle of Malaysia: Fifty Years of Headline News, 1963-2013*, Editions Didier Millet 2013, p.165.

According to the Privatisation Master Plan, 424 federal and state GLCs have been studied for privatising purpose, and 246 entities were found privatisable, with 69 privatisable within two years, 107 within two to five years and the remaining beyond five years.¹¹ These GLCs are in waste management, communications, energy, transports, construction, airlines, gaming and ports management sectors. On this background, from 1995 to 1997 the federal government decided to privatise the waste management operations which were divided into three parts, namely waste collection, waste management and waste to energy.

In the waste collection sector, the Peninsular Malaysia was divided into the northern region, central region and southern region classification and their waste collection was entrusted to the private companies Environment Idaman Sdn Bhd, Alam Flora Sdd Bhd and Southern Waste Management Sdn Bhd respectively. In terms of final waste disposal sector, thermal treatment or incinerator was selected as one of two methods, the other was sanitary landfill. As of December 2014, the federal government had built eight sanitary landfills throughout peninsula and plans to upgrade more non sanitary landfills to sanitary landfills in the next few years.¹²

Meanwhile, the federal government had attempted to build 1000-ton incinerators in the state of Selangor in Puchong and Broga but met stiff opposition from the residents of the two said areas resulted in the termination of the former in 2002 and the latter in 2006. Despite encountering set back in promoting mega incinerator, the federal government managed to build four small scale incinerators in Pangkor island, Langkawi island, Cameron Highlands and Tioman island in 2008.

Nevertheless, the four incinerators which operated by XCNT Sdn Bhd encountered various mismanagement and safety problems during construction and operating processes. Moreover, the Ministry of Wellbeing, Housing and Local Government failed to perform its responsibility in selecting the unproven technology provided by XCNT had contributed much to the problems resulted in being ticked off by Parliamentary Public Account Committee of House of Representatives and National Anti Incinerator Coalition (GAIK).¹³

Despite repeated failures it faced, the federal government is now opting for more incinerators. In 2013, the federal government announced that it planned to build three mega incinerators throughout the country. The incinerators were to be located in Kuala Lumpur (1000-ton daily capacity), Melaka (1200 ton) and Johor (800 ton). Particularly, the Kuala Lumpur's incinerator project has entered international tendering process where four joint venture firms were shortlisted, namely UEM Environment Sdn Bhd with Japan's

¹¹ EPU, *Malaysia Privatisation Masterplan*, Prime Minister's Department, 1991, p.35.

¹² Parliamentary Hansard, DN 9.12.2014, p. 12.

¹³ See *Laporan Jawatankuasa Kira-Kira Wang Negara Parlimen Terhadap Pengurusan Loji Insinerator, DR 9 Tahun 2014 Dewan Rakyat Yang Ketiga Belas Penggal Dua*; GAIK, *Hasil Lawatan Pangkor Membukti Insinerator Adalah Tidak Selamat*, 27 September 2014, <https://www.facebook.com/notes/we-anti-kepong-incinerator/hasil-lawatan-pangkor-membukti-insinerator-adalah-tidak-selamat/719644668125880>

Mitsubishi Heavy Industries Ltd, Puncak Niaga with Japan's Hitachi Zosen Corp, MRCB with South Korea's Hyundai Rotem Co, and DRB-Hicom with Japan's Simitomo Corp in September 2014.¹⁴ Besides, in June 2014, KUB Sdn Bhd signed a Memorandum of Understanding with Japanese IHI Enviro Corporation, witnessed by Minister of Wellbeing, Housing and Local Government Abdul Rahman Dahlan, to jointly provide thermal treatment solution for Johor's incinerator project.¹⁵

The commonality between the Kuala Lumpur and Johor's incinerator projects is UMNO linked companies like DRB-Hicom, KUB and UEM are actively bidding the projects. While the Mahathir type privatisation on small scale incinerators has arisen more questions than solutions, here comes another question – UMNOmisation.

UMNOmisation

The British and Americans see privatisation as one of the neo-liberalist tools to further boost productivity and efficiency; however in Malaysia it carries a more private motive. In his attempt to rationalise privatisation policies, Mahathir had explained that the GLCs had low efficiency and that the policy of establishing GLCs were also unable to help the Malay entrepreneurs to control big companies. To resolve these two problems, Mahathir had embarked on a selective patronage system by awarding government projects to a few Malay entrepreneurs whom Mahathir considered more capable to undertake.

This marked the prelude of the UMNO's government big scale involvement into businesses. Henceforth politics and money became linked up as a conjoined twin. In the US the military-industrial complex decides presidential outcomes, while in Malaysia the Umnoputeras (UMNO princelings) holds big sway over the country's politics and economic lifeline.

Flash back to history, the first business chain acquired by UMNO was not construction or financial companies but Utusan Malaysia (a newspaper) in 1961. Subsequently in the 1970s, UMNO through its investment arm Fleet Holdings had acquired the New Strait Times and Berita Harian, both being newspapers as well. This was to enable UMNO to whitewash its politics and business collusion activities and counter any possible attacks. To sum up it was to enable UMNO to seize the high ground of public opinion.

In April 1985, UMNO through Hati Budi Sdn Bhd acquired United Engineering Malaysia (UEM) from the Singapore-based United Overseas Bank Ltd (UOB). UEM was to become UMNO's biggest investment arm. It benefitted commercially from the government projects, including in 1987 the award of the contract to construct and operate the North South Highway project which is its biggest cash generating venture that continues to this day.

¹⁴ The Edge, *Four Firms In Kepong Incinerator Shortlist*, 22 September 2014

¹⁵ The Edge, *KUB Partner Japan Based IHI Enviro, Eying Incineration Projects*, 20 June 2014

The practice of taxpayers' money being channelled from government to UMNO linked companies was so rampant that Mahathir once said openly that the reason for giving the contracts to UEM was because UMNO needed the funds to repay for the RM 360 million cost of constructing its headquarters, the Putra World Trade Centre (The Star, 29 August 1987).

Those businessmen selected by Mahathir, which should more accurately be described as cronies, began to grow into a huge organisation that even included some non-bumiputera beneficiaries. In the 1980s the Berjaya group founder Vincent Tan Chee Yioun obtained the Sports Toto gaming license, the tycoon controlling Maxis and Astro, Ananda Krishnan obtained the Big Sweep Lottery gaming license, while Francis Yeoh's YTL got a big share in Independent Power Producer project. Obviously, this went against the objectives of Tun Abdul Razak's NEP.

These UMNOputras (beneficiary of UMNO's largesse) businesses share one or more common features: all the contracts were obtained via government interference, political patronage, without open tender bidding and aided by interest-free government funding. Public information shows that in 1995, 20 percent of the UMNO divisional leaders were millionaires.¹⁶

What is undeniable is that even in the waste management sector Umnonisation has taken hold as well. The company in charge of the northern region's waste collection, Environment Idaman Sdn Bhd, is a subsidiary of UEM; the company in charge of the central region's waste collection is Alam Flora Sdn Bhd, a subsidiary of DRB Hicom Bhd owned by UMNO linked Syed Mokhtar; while for the southern region, the company responsible for waste collection, Southern Waste Management Sdn Bhd, is a subsidiary of LGB group. One of LGB's subsidiaries, Grand Saga Sdn Bhd, was involved in the controversial standoff in Bandar Mahkota, Cheras in the state of Selangor in 2008¹⁷, and the former Minister of Housing and Local Government Ong Ka Ting was appointed as an independent non-executive chairman of Taliworks Corporation, another subsidiary of LGB group in April 2014.¹⁸

In the sector of waste management, the company in charge of the Bukit Tagar sanitary landfill, Selangor, is KUB-Berjaya Enviro Sdn Bhd, a joint venture of UMNO linked KUB Malaysia Berhad¹⁹ and Berjaya Group. While the project to build the incinerators in Pangkor island, Langkawi island and Cameron Highlands was awarded to a company XCNT Sdn Bhd, a company founded by former navy chief Abdul Wahab bin Haji Nawawi.

¹⁶ Terence Gomez, *Political Business: Policies, Power and Patronage in East Asia*, p.42

¹⁷ Malaysiakini, *SPECIAL REPORT: The Grand Saga in Cheras*, 9 May 2008;

<http://www.malaysiakini.com/news/82584>

¹⁸ Taliworks Corporation, <http://taliworks.com.my/profile/directors.html>

¹⁹ Asia Sentinel, *UMNO's Corporate Cornucopia*, 13 October 2010,

<http://www.asiasentinel.com/politics/umnos-corporate-cornucopia/>

Nevertheless, the UMNOisation in waste management sector faced a setback when an operator of waste transfer station at Taman Beringin, Kepong, absconded. As a result the compactor drivers had dumped their rubbish on the Middle Ring Road 2 (MRR2) on 21 December 2014. The operator, Umpan Jaya Sdn Bhd which was founded by Mohd Noordin Mohd Kassim, a former divisional leader of Batu Kawan UMNO division, Penang, faced no legal action KL City Hall.²⁰

Turning waste into wealth

The key for the cronies to get rich is on how to turn the waste to wealth. The federal government's solution is to build incinerators which is the most expensive final waste disposal method. Incinerator or waste to energy technology (WtE) is a popular solution for managing city waste in Europe and Japan. Simply speaking, waste to energy effort sees rubbish as a substitute feedstock for energy generation, which is categorised into three categories, namely combustibles, non combustibles and big size rubbish. In the process of incinerating combustibles, the heat energy released can be used to power a generator to generate electricity. The surplus heat energy can be used for community heating purposes.

In many of the waste treatment technology, compared with landfills, waste separation and recycling and biological digestion technology, waste incineration on the surface sounds like a clean, simple and advanced technology and also easy to be accepted by residents. Further, many experiences have shown that in the views of most people, if wastes are not incinerated then how should it be treated? If the incinerator plants' levels of air pollution can be controlled, why should it be rejected?

Every time waste is collected and transported to the incinerators for processing, the government need to pay a fee to the incinerator plant operators; every ton is estimated to cost around RM 250. Every day the plant's capacity is 1000 tons, which means the government would need to fork up to RM 250,000 daily, annually RM 91.25 million. To cope with this additional expense, the local councils would need to raise land taxes or impose new waste management bill.²¹

If the government allows the incinerator operators to operate for 15 years or more, the operators will be able to amasse RM 500 million and above the amount net of their investments. By convention, the federal government will sign a guaranteed contract with the operators to guarantee their services, the operators will profit handsomely as a result.

²⁰ MalayMailOnline, Despite cronyism claims, DBKL defends firm behind MRR2 trash debacle, 24 December 2013, <http://www.themalaymailonline.com/malaysia/article/despite-cronyism-claims-dbkl-defends-firm-behind-mrr2-trash-debacle>

²¹ NST, Govt proposes separate bills for solid waste management, quit rent, 25 November 2014, <http://www.nst.com.my/node/56354>

Amongst one of the interesting stakes is that once the incinerator plant is built up and operating, the plant has to be provided with waste continuously. As a result, if any decision or move to implement rubbish separation and recycling is proposed, which will reduce raw material of incinerator – rubbish, it will not receive the full support from the federal government as it will compromise on its agreement to provide enough waste for the incinerator plant to burn off.

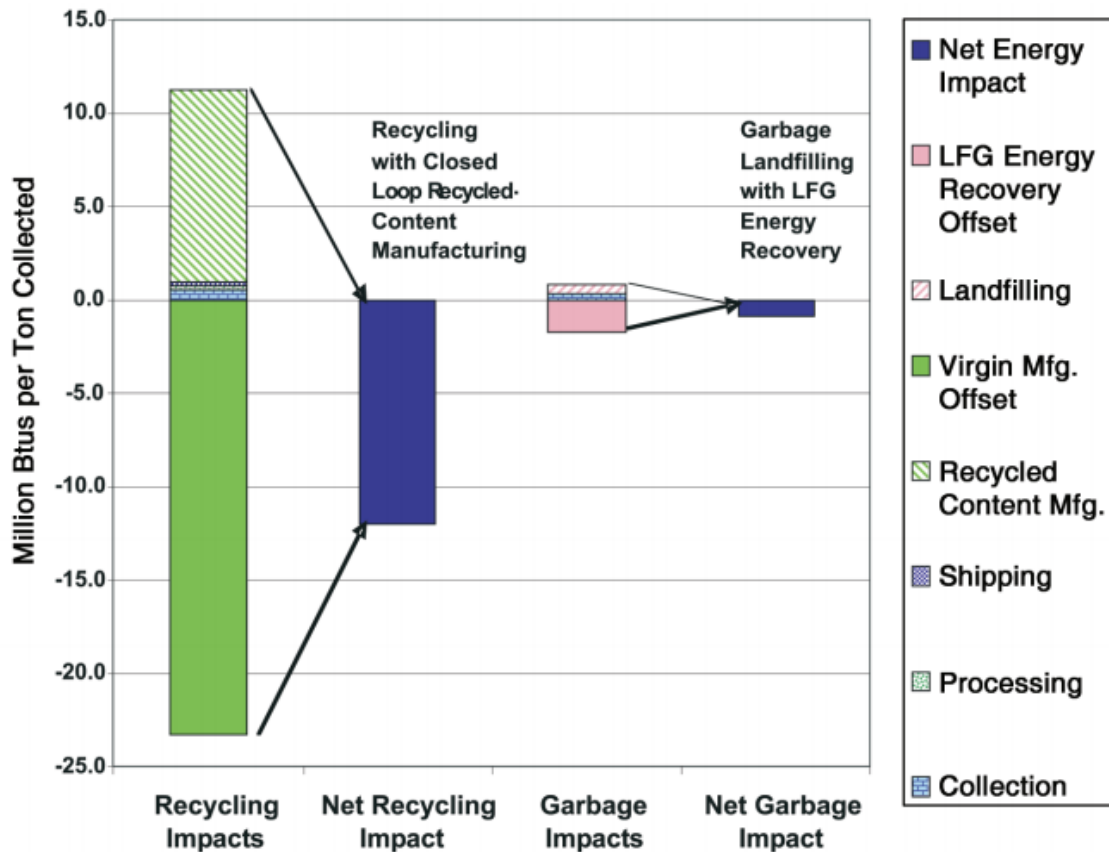
WtE vs WtW

In handling the city's waste management issue, other than the above mentioned waste to energy (WtE) efforts, there is also the concept of waste to wealth. In waste to wealth efforts, waste is viewed as a form of displaced treasure. After going through waste separation, non-organic waste can be managed using re-use or recycling. As for the organic waste, they can be converted to become fertiliser and bio-gas to produce energy.

The unique point about waste to wealth efforts is the simple methods and technologies utilised relative to waste to energy efforts and also how it involved the residents' direct participation in these efforts.

To decide on whether WtE or WtW is the better option to deal with waste, there are two critical points to consider. First is to compare the energy input vs energy output comparison, which is to consider whether the capital outlay and energy harvesting is better compared with other alternatives. Secondly, what would be the effect of the plant on the local society's environment, economy and sustainable development.

According to Jeffrey Morris who did a study on comparing energy savings per household for recycling versus WtE in Washington State, recycling saves more energy relative to WtE because the upstream extraction/manufacturing energy savings (see the bar chart below: the upward pointing, lighter shade positive bars) from avoided virgin-content product manufacturing compared with recycled-content manufacturing are substantially larger than the additional energy (the downward pointing darker shade negative bars) used in the waste management system for recycling collection, processing and shipping to end-use markets.



For example, the study showed that the amount of energy that could be generated by incinerating materials that were recycled curb side each month in the Urban East of Washington State in 2002 would be about 138,000 Btus per household compared with energy conserved totaling about 269,000 Btus per household from using those recycled materials in place of virgin resources to manufacture products – a difference of almost 2 to 1.²²

The study concluded that recycling recoverable items found in household and business consumed less energy and imposes lower environmental burdens than disposal of solid waste materials via landfilling or incineration, even after accounting for energy that may be recovered from waste materials at either type disposal facility.

With regards to sustainability of WtE and WtW, a report of Environmental Protection Agency, United States, shows reduction and recycling efforts are greener than combustion and landfill management. After comparing source reduction, recycling, composting, combustion and landfill methods, the report concludes the findings as following:

- *Source reduction, in general, represents an opportunity to reduce Green House Gases (GHG) emissions in a significant way. For many materials, the reduction in energy-related CO2 emissions from the raw material acquisition and manufacturing process, and the*

²²Jeffrey Morris, *Comparative LCAs for Curbside Recycling Versus Either Landfilling or Incineration with Energy Recovery*, The International Journal of Life Cycle Assessment, July 2005.

absence of emissions from waste management, combine to reduce GHG emissions more than other options do.

- *For most materials, recycling represents the second best opportunity to reduce GHG emissions. For these materials, recycling reduces energy-related CO₂ emissions in the manufacturing process (although not as dramatically as source reduction) and avoids emissions from waste management. Paper recycling increases the sequestration of forest carbon.*
- *Composting is a management option for food discards and yard trimmings. The net GHG emissions from composting are lower than landfilling for food discards (composting avoids CH₄ emissions), and higher than landfilling for yard trimmings (landfilling is credited with the carbon storage that results from incomplete decomposition of yard trimmings). Overall, given the uncertainty in the analysis, the emission factors for composting or combusting these materials are similar.*
- *The net GHG emissions from combustion of mixed MSW are lower than landfilling mixed MSW (under national average conditions for landfill gas recovery). Combustors and landfills manage a mixed waste stream; therefore, net emissions are determined more by technology factors (e.g., the efficiency of landfill gas collection systems and combustion energy conversion) than by material specificity. Material-specific emissions for landfills and combustors provide a basis for comparing these options with source reduction, recycling, and composting.²³*

All in all, WtW which encompasses waste reduction, recycling, reuse and zero waste management is more sustainable than WtE. Further, in terms of level of participation, individual household can easily get involved in WtW model easily and generate wealth from recycling.

It is worth noting that a Malaysian scholar Agamuthu Pariatamby did an analysis on the wealth that could be generated from recycling effort. Citing Kuala Lumpur as a case study, Agamuthu contended approximately 672.3 tonnes or 22% of the total waste stream were recyclable items, with paper contributing 41% of the total recyclable items of about 3,000 tonnes/day. If properly recycled, the recovered resource would yield as much as RM 55,260 daily.²⁴

²³U.S. EPA, *Solid Waste Management and Greenhouse Gases, A Life-Cycle Assessment of Emissions and Sinks 3rd edition*, 2006.

²⁴AgamuthuPariatamby, *Municipal Solid Waste Management in Malaysia-Changes for Sustainability, Municipal Solid Waste Management in Asia and the Pacific Islands: Challenges and Strategic Solutions*, Springer 2014, p. 211.

In contrast, WtE model has high entry threshold which hinders individual from taking part in it. For example, a proposed WtE plant in Kepong, Kuala Lumpur cost nearly RM 800 million, which allows companies with huge capital reserve become the sole participants.²⁵

Conclusion

The people need to rethink the three prong approaches. Nowadays the state governments are only responsible for religious, land management, land tax, urban planning and waste management matters. Waste management now constitutes one third of local governments' business. Any further federalisation will weaken the state and local governments' remaining powers.

In actuality, the reasons why the local governments are not efficient in their waste management is not due to the lack of intervention and support of the federal government but due to the lack of checks and balances and oversight.

The problem is not because the federal government is more efficient, which proven in XCNT and Umpan Jaya cases as aforesaid, compared with the local governments but it is because there is no decentralisation and accountability on the part of the local governments. Here, the lack of local government elections is a key factor.

Furthermore, even if there are local government elections, it is no guarantee that it will solve the problem once and for all. To create a quality and efficient civil service is another challenge. Looking at the Malaysian situation, the federal government's push for federalisation is moving towards centralisation of powers rather than solving the actual problems. With centralisation of powers, it will be more conducive in pushing for privatisation and Ummomisation measures.

Secondly, will privatisation necessarily bring benefits? Many cases of privatisation in Malaysia has shown two results, namely certain companies getting legal monopolies and resulting in price increase which further aggravates the gap between the rich and poor.

Monopolies will give the operators the power to decide prices. Often times the federal government, due to the legally binding nature of the contract, will allow the operators to increase prices and pass the cost to the people and increase land assessment taxes. The rich will not be affected, but the middle and lower income citizens' disposable income will be affected.

²⁵ The Edge, Puncak bids for Kepong incinerator job, 13 August 2014, <http://www.theedgemaalaysia.com/business-news/302458-highlight-puncak-bids-for-kepong-incinerator-job.html>
25 Dec 2016

Of course, when a privatisation plan is run smoothly, such as by introducing open tender biddings and having a competitive and transparent governance mechanism, it can reduce the impact of privatisation.

However, waste management should be the responsibility of the local government because they know local issues more profoundly than officers who sit in Putrajaya; in fact their responsibilities even include taking care of the city's cleanliness and health issues and also reducing the living pressures of the middle and lower income citizens.

Thirdly, Umnonisation will only benefit those who are well connected with political decision makers, especially those who are connected with UMNO mainly, such as the "Umnoputras". Corruption, money politics, cronyism and abuse of power will flourish as result. What is even more important, exclusivity of Umnonisation will sideline those companies that are competitive. Not only will administrative efficiency not improve, but will actually slide down. The case of Umpan Jaya Sdn Bhd management not performing their duties mentioned earlier is a good example.

Fourthly, the Malaysian authorities (be it the Federal government or Local Councils) must be careful in selecting the waste management method. Particularly, environmental issues and sustainability of the methods should be given great consideration. The Waste to Energy (WtE) is a popular method which is being chosen by many countries to handle the issue of rapid pilling up of garbage.

Disposing garbage through burning and landfilling are relatively easier compared with other methods such as recycling and source reduction, but the disadvantages of the former are also substantial. Although the Waste to Wealth (WtW) which needs full residential participation is considered difficult to be implemented in a short time period, its long term benefits will outweigh the shortfalls of WtE.

As what have been discussed in this paper, waste management in Malaysia involves not only professional technical solutions but also the issue of political business which is in dire need for improvement. A paradigm shift of waste management models is recommended, with the previous focus on federalizing, privatizing, injecting political business into the equation and treating waste as energy sources to focus on that of decentralizing, deprivatising, delinking political-linked business and treating waste as source of wealth.

Furthermore, it is important for the decision makers not to repeat the same mistake made by the Ministry for selecting the wrong waste management technologies. Despite the fact that the second approach needs more efforts and time to optimize recycling rate to curb municipal waste, it is worthwhile for the authority to consider it for the sake of the people and environment.

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