Implementing Goods and Services Tax in Malaysia

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Abstract

External economic factors and Malaysia's domestic fiscal position dictate that the Goods and Services Tax (GST) is likely to be introduced in the upcoming Budget 2014. In this paper, we: 1) assess if GST is a progressive or regressive tax; 2) study the impact of GST on Malaysian households; 3) estimate the total GST raised from households in perfect condition vs. practical circumstance; 4) estimate the expected inflation spike based on the Consumer Price Index; and 5) discuss the wider implications of implementing GST. Despite setting essential items like basic food, public transportation, education and healthcare as exempt or zero rated items, we show that GST is a regressive tax. Using 7% as the standard GST rate, the average household is expected to pay 2.93% of monthly income as GST (RM 104 per month in July 2013 values). Households will pay higher percentage of their income as GST if they are: middle and low income groups (with those earning around RM 2,500 per month paying 3.07%), engaged as technicians, clerical and services workers, farmers and fishermen, in single person household, in young households (less than 24 years old), Bumiputera-led households and households residing in Peninsular Malaysia.

We find that it is not possible to make GST a progressive tax as long as we want to raise the same amount of revenue. We experimented with: 1) a multi-tiered GST system whereby certain items attract higher GST rate than the standard rate; and 2) imposing high GST rate on fewer items, whilst exempting or zero-rating all remaining items. The high GST rate can be levied on transport excluding public transportation (since higher income groups spend more on transport as a proportion of their income) and restaurants and hotels (since they cannot be easily substituted). Both of methods cannot make the highest income household pay a higher tax burden than the middle income household. Indeed, given that a multi-tiered system is complicated to administer, it is not recommended for Malaysia at this stage. The second method, when combined with tax rate reduction for the middle income groups (annual income between RM 30,000 to RM 100,000), might address the regressiveness of GST. Ignoring secondary effects, inflation is expected to spike up by an additional 3.86% and domestic consumption will be negatively affected as households' spending power is reduced. GST is expected to raise RM 7.5 billion (in July 2013 values) annually from households in perfect conditions but lesser since tax collection is imperfect.

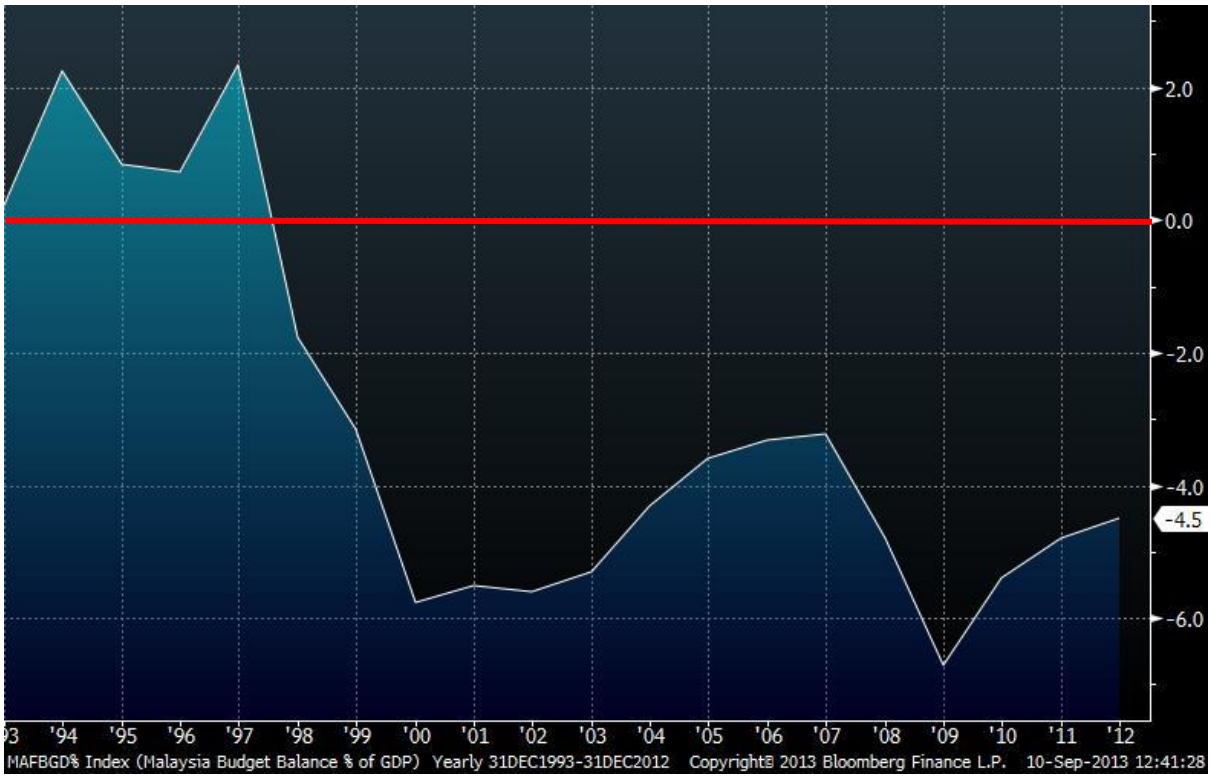
Key words: tax policy, developing country

1. Introduction

Despite assurance from Malaysia's Second Finance Minister, Datuk Seri Ahmad Husni Hanadzlah, in May 2013 that the Government will not implement the Goods and Services Tax (GST) in the near term[1], we believe that the likelihood of GST being introduced in the Budget to be tabled on October 25th 2013 is very high. This is driven by the combination of several external macroeconomic and domestic factors.

Firstly, several international ratings agencies are concerned with Malaysia's mounting fiscal debt. As Malaysia's fiscal budget has been in deficit continuously since 1998 (i.e. below the red line in Figure 1), the fiscal deficit is structural rather than cyclical in nature. In July 2013, Fitch Ratings cut Malaysia's sovereign outlook to negative. This is usually a precursor to an actual credit rating downgrade unless substantive positive measures are undertaken. Although Moody's reiterated Malaysia's rating at stable in August 2013, it warned that the ratings could be at risk given Malaysia's debt situation.

Figure 1: Malaysia's fiscal surplus/deficit as a percent of GDP (source: Economic Planning Unit, Malaysia; Bloomberg)



[1] http://www.thesundaily.com/news/714591

Secondly, loose monetary policy adopted in the US since the financial crisis in 2008 might be reversing soon[2]. The current 10 years US Treasury yield is around 2.6%, but it has averaged 4.7% between 1999 and 2008 – see Figure 2. The normalisation of long term interest rates in the US, which are currently at historic lows, will result in an outflow of capital from emerging markets. Because a significant amount of Malaysian debt securities is held by foreigners (see Figure 3), Malaysia is vulnerable. Since the US Federal Reserve hinted on a reversal in monetary policy in June 2013, foreigners have reduced their holdings of Malaysia Government Securities (red circle in Figure 3) and the yield in Malaysian Government Securities has increased (see red circle in Figure 4). This means that as US interest rates revert to its long term rate, the funding for Malaysia's fiscal deficit will cost more in years to come.

Figure 2: US Government 10 years Treasury yield (source: Bloomberg)

Figure 3: Foreign holding of Malaysian debt securities in RM trillion (Source: Bank Negara, Bloomberg)

[2] After sending signals of tapering its long term asset purchases ('quantitative easing') in June 2013, the Federal Reserve surprised the markets by reaffirming the magnitude of its long term asset purchases at USD 85 billion per month on 18 September 2013. Nevertheless, tapering of quantitative easing is a matter of "when" not "if" since the US economy has been showing signs of growth lately.

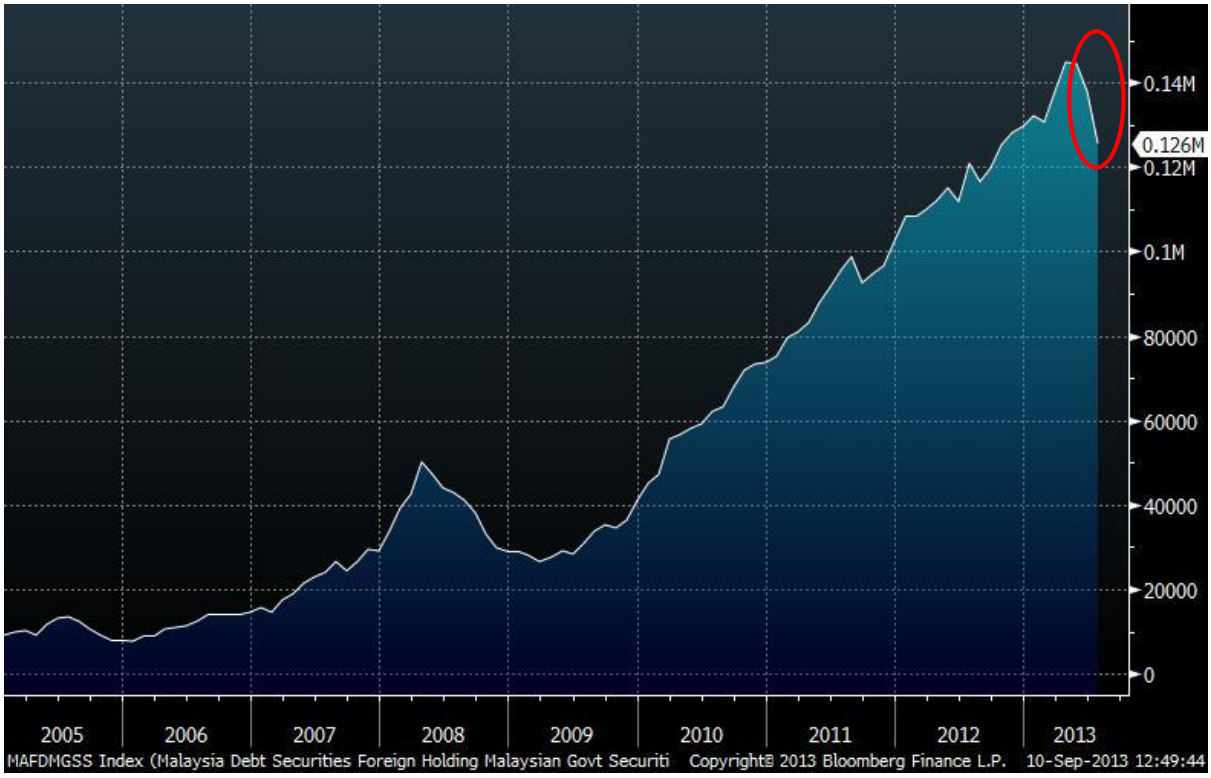


Figure 4: Malaysian Government Bonds 10 year yield (source: Bloomberg)

Thirdly, the combination of the above two external factors will increase the cost of raising new finances, thereby negatively affecting Malaysia's economy and the sustainability of the current fiscal condition. For example, an increase of 1% in yield on a RM1 billion debt will mean an additional RM 10 million in interest payments. Given that the official Malaysian central government debt amounts

to RM 519 billion[3], interest payments will increase significantly as the debts are rolled over, straining the budget further. Besides, since Malaysian sovereign notes act as the benchmark in pricing of Malaysian corporate bonds, the increase in yield will filter down to corporates and households, making the cost of financing higher in Malaysia. Hence, Malaysia will want to defend its credit rating as the increased financing costs will negatively impact the economy.

Fourthly, after Moody's and Fitch Ratings raised concerns about Malaysia's fiscal debts, the Government of Malaysia has issued strong responses and indicated that the Government is committed to reforming the subsidy structure and broadening the tax base. Therefore, to be credible in the financial markets, the Government would have to follow up with concrete actual measures since the expectations have been set in the financial markets. The reduction of fuel subsidy from 4 September 2013 showed that the Government understood the need to reform fuel subsidies. However, Moody's gave only a guarded positive response[4]. This might imply that the financial markets are not convinced that the reduction of fuel subsidy, albeit in the right direction, is sufficient to address the fiscal situation.

Fifthly, tax raising can never be a popular government policy. Hence, the Government is very likely to introduce GST in the first budget after the thirteenth General Elections.

All in all, if the Government does not introduce GST under the above mentioned circumstances, Malaysia's credit ratings will be cut. A credit ratings cut, when combined with the withdrawal of loose monetary policy in the US, will result in significant outflow of foreign capital from Malaysia and an increase in the cost of financing. This will severely impact several infrastructure projects that have been underpinning the growth of Malaysia's economy. Besides, the increased debt servicing costs and loss of credibility in the eyes' of the financial markets will affect Malaysia's fiscal situation in years to come. Hence, the costs of not introducing GST are significantly high.

Our paper does not delve into the motivation, efficiency, appropriateness or suitability of GST as a tax raising mechanism. This has been explained and discussed in other literatures (Cnossen 1991, McGee 1997, Emran and Stiglitz 2007, Keen and Lockwood 2007, Bird 2009, Mansor and Ilias 2013). The inequality and inefficiency of using GST to raise tax is discussed in Emran and Stiglitz (2007). Our paper has five objectives. Firstly, given that the Government has indicated that basic essential items

[3] Bank Negara Malaysia Q2 2013; http://www.bnm.gov.my/index.php?ch=statistic_nsdp and excluding any off balance sheet debt.

[4] http://www.theedgemalaysia.com/in-the-edge-financial-daily-today/253313-moodys-malaysias-fuel-hike-credit-positive.html

are not going to be subject to GST, would GST be a progressive or regressive tax[5]? Can we remedy it? Secondly, what would be the impact of GST on households in Malaysia? Would a certain segment of the Malaysian household feel the pinch harder than another? Thirdly, how much will GST raise from households in perfect conditions vs. in realistic situations when there are leakages in tax collection? Fourthly, what is the expected impact of GST on inflation as measured using the official method of calculating inflation? Fifthly, what are the implications of implementing GST on Malaysia's economy, Ringgit and the welfare packages as indicated by the Government?

In our main analysis, we combine information from two sources. For expenditure data, we rely on the latest Household Expenditure Survey conducted in 2009/10, which covered private households' expenditure in twelve main groups of goods and services in urban and rural areas throughout Malaysia. For income data, we derive an Engel's curve of household income/expenditure using Bank Negara Malaysia estimates of households' marginal propensity to consume across income groups. We do not rely on the Household Income and Basic Amenities Survey 2009/10 because: 1) expenditure level data is not disclosed alongside the income level data, meaning one cannot know the level of expenditure from a given income data, and vice versa; and 2) the number of living quarters being evaluated in both surveys are different.

We adopt a standard GST rate of 7%, exempt some essential items from being liable to GST or assign zero GST to certain items based on the guidance provided by the Ministry of Finance and the Royal Malaysian Customs Department. Then, using the Household Expenditure Survey and our derived household income/expenditure curve, we estimate: 1) the GST payable in Ringgit; and 2) the GST payable as a percent of income (GSTI). Ringgit values throughout the paper are expressed in July 2013[6].

We summarise our seven key findings here:

Firstly, GST is a regressive tax. The highest earning households (average monthly income of RM 30,815) pay 1.56% GSTI; whilst the lowest earning households (average monthly income of RM 605) pay 2.62% GSTI. The worst hit households pay 3.07% GSTI. These households earn an average RM 2,579 per month. Households earning an average monthly income of less than RM 2,579 but more than RM 605 per month pay GSTI of between 3.07% and 2.64%. Whereas households earning an average monthly income of more than RM 2,579 but less than RM 30,815 pay between 2.87% and

[5] A tax is deemed regressive if as a proportion the tax payable is higher for lower income groups vs. higher income groups.

[6] Throughout our paper, we report Ringgit amounts in July 2013 values by re-indexing the March 2010 (the month the Household Expenditure Survey concluded) values upwards using the official Consumer Price Index.

1.56% GSTI. Therefore, the middle and low income households bear higher GST tax burden. As a whole, the average household pays 2.93% GSTI (RM 104 per month).

Secondly, we find that it is not possible to make GST a progressive tax and reduce the GST burden on the low and middle income groups if we want to raise the same amount of tax revenue. We experimented with: 1) a multi-tiered GST system whereby certain items attract higher GST rate than the standard rate; and 2) impose high GST rate on fewer items, whilst exempting or zero-rating all remaining items. The high GST rate can be levied on transport excluding public transportation (since higher income groups spend more on transport as a proportion of their income) and restaurants and hotels (since they cannot be easily substituted). Both of methods cannot make the highest income household pay a higher tax burden than the middle income household. Indeed, given that a multi-tiered system is complicated to administer, it is not recommended for Malaysia at this stage. The second method, when combined with tax rate reduction for the middle income groups (annual income between RM 30,000 to RM 100,000), might address the regressiveness of GST.

Thirdly, households with the following profile will pay a higher GSTI: single person households, young (less than 24 years old) households, households led by Bumiputera, households in Peninsular Malaysia, and households working as clerical workers, skilled agricultural and fishery workers. Nevertheless, male or female led households pay the same GSTI.

Fourthly, big spending, Chinese-led, large households, head of households between 35 to 44 years old and households working as legislators, senior officials, managers and professionals will contribute higher amounts of GST in revenue. This is consistent with GST being a tax on consumption.

Fifthly, GST would raise RM 7.5 billion annually based on 7% GST[7]. By imposing RM 500,000 sales per annum as the threshold for GST registration, excessive administrative burden on small retailers can be avoided. However, the total GST revenue raised annually would fall to RM 7.01 billion. This estimate ignores any fraud that might occur and any demand destruction effect after GST imposition.

Sixthly, ignoring secondary effects, the official inflation based on the Consumer Price Index will spike up by an additional 3.86% after implementing GST at 7%, ceteris paribus. Because GST will alter the spending behaviour of households, the resulting inflation based on the official CPI might differ from

[7] Using 4% standard GST rate, the total GST revenue raised will fall to RM 4.3 billion.

our estimation. Following the introduction of GST, we expect the economy to encounter a period of higher inflation as businesses and consumers adapt.

Finally, domestic consumer spending, which has been underpinning recent economic growth, will fall due to the decrease in households' spending power, resulting in slower GDP growth, ceteris paribus.

Our paper is organised as follows: section 2 describes the source of data and our methodology; in section 3, we calculate the GST payable as a proportion of income and report if GST is a regressive or progressive tax; section 4 evaluate ways to make GST a progressive tax; in section 5, we evaluate alternative ways of implementation, estimate the impact of GST on sub-regional basis in Malaysia, estimate the total tax collected taking into account the practicality of tax collection and perform some robustness tests; section 6 discusses the implications of implementing GST in Malaysia; and section 7 concludes.

2. Data and Methodology

Data is sourced from the Household Expenditure Survey conducted every five years by the Department of Statistics Malaysia. The latest survey was in 2009/2010, carried out between April 2009 and March 2010. A one month period was used to collect data on daily expenditure incurred, whereas the entire 12 months period was used as a reference period for items that were purchased on an infrequent basis, such as consumer durables like refrigerators and washing machines and semi-durables like clothing and footwear.

The survey tracked 24,768 living quarters in East and West Malaysia. Institutional living quarters such as those in hotels and hospitals were excluded from the survey. For every selected living quarter, all households in the particular living quarter were surveyed. The survey data was structured according to six locations – Malaysia, Peninsular Malaysia, Sabah (including W.P. Labuan), Sabah (not including W.P. Labuan), W.P. Labuan and Sarawak. The inclusion or exclusion of W.P. Labuan does not materially change our findings, hence from here on, data based on Sabah (including W.P. Labuan) will be reported. The survey also divided households to urban (population of 10,000 or more at the time of the 2000 Population and Housing Census) and rural (population less than 10,000). The survey was further divided by six social demographic characteristics – expenditure class, household size, ethnic group of head of household, age group of head of household, gender of head of household and occupation of head of household. Expenditure items were classified into twelve main consumer expenditure groups (hereby termed "main CEG") following the United

Nations Classification of Individual Consumption According to Purpose (COICOP).[8] The main CEGs were further broken down into "detailed CEG".

To obtain more reliable estimates, we rely on the "detailed CEG" to determine which expenditure will be subject to GST. Unfortunately, the Ministry of Finance, the Goods and Services Tax Bill 2009 and the Royal Malaysian Customs Department do not provide a list of items that are standard rated, zero rated or exempt from GST. Therefore, we rely on the following principles to determine if the specific detailed CEG will be subject to standard rate GST: 1) the Ministry of Finance states that basic food items like rice, sugar, flour, cooking oil, vegetable, fish and meat, eggs and essential services such as health and education, public transportation, residential property and agricultural land are exempt from GST[9]; and 2) whether a detailed CEG is subject to GST depends on whether it has been value-added. For example, fresh meat and frozen meat have no processes done to enhance its output, and therefore is not subject to GST. Whereas, processed meat and food at restaurants have been value added and therefore is subject to GST. If a good is an essential good and is value-added, the first principle will overrule the second principle and therefore the good will not be subjected to GST. Appendix 1 shows which of the detailed CEG is subject to standard rate GST vs. zero rated and exempt items. We adopt a standard GST rate of 7%, as announced by Idris Jala, the Minister in the Prime Minister's Department[10]. By multiplying the standard rate GST with the expenditure, we estimate the total GST payable by households. We also evaluate alternative GST rates and the results are discussed in sections 4 and 5.

A progressive tax is a tax in which high income taxpayers pay a larger fraction of their income as tax than do low income taxpayers; whilst the reverse is true for a regressive tax. Although the Department of Statistics Malaysia also conducts the Household Income and Basic Amenities Survey 2009/2010 around the same time as the Household Expenditure Survey, the databases of both surveys cannot be easily matched. Firstly, we cannot know the household's income for a given level of income, and vice versa. Therefore this impedes us from calculating the proportion of GST payable out of income (GSTI). Secondly, the sample size differs – there were 47,360 private living quarters in

[8] All monetary expenditure whether in cash or credit and the taxes associated with the purchases of goods and services were included. Any free or concessionaire goods and services such as free food and lodging received by households are considered as expenditure. Goods taken from the household's own farm or shop are imputed at retail prices. The net rental value of owner-occupied house was imputed as rent according to the present market value of similar type of house in the same area.

[9] Ministry of Finance's FAQ
http://www.treasury.gov.my/index.php?option=com_content&view=article&id=1496%3A15-adakah-semua-barang-dan-perkhidmatan-dikenakan-gst&catid=186%3Acukai-barang-dan-pekhidmatan&Itemid=306&lang=en

[10] http://www.nst.com.my/latest/gst-implementation-to-add-up-to-rm27b-to-malaysia-s-income-1.280974

the Household Income and Basic Amenities Survey 2009/2010; whereas the Household Expenditure Survey 2009/2010 had 24,768 private living quarters.

Therefore, in order to evaluate if GST is a progressive or regressive tax, we need to derive a relationship between income and expenditure. Bank Negara Malaysia estimated the Malaysian households' marginal propensity to consume[11] (MPC) across income segments and reported the results in the 'Outlook and Policy in 2013' section of the 2012 Annual Report (the findings are re-produced in Table 1). The MPC shows that for households with monthly income less than RM 1,000, expenditure increases by 0.81 sen for every RM 1 increase in income (hence MPC of 0.81).

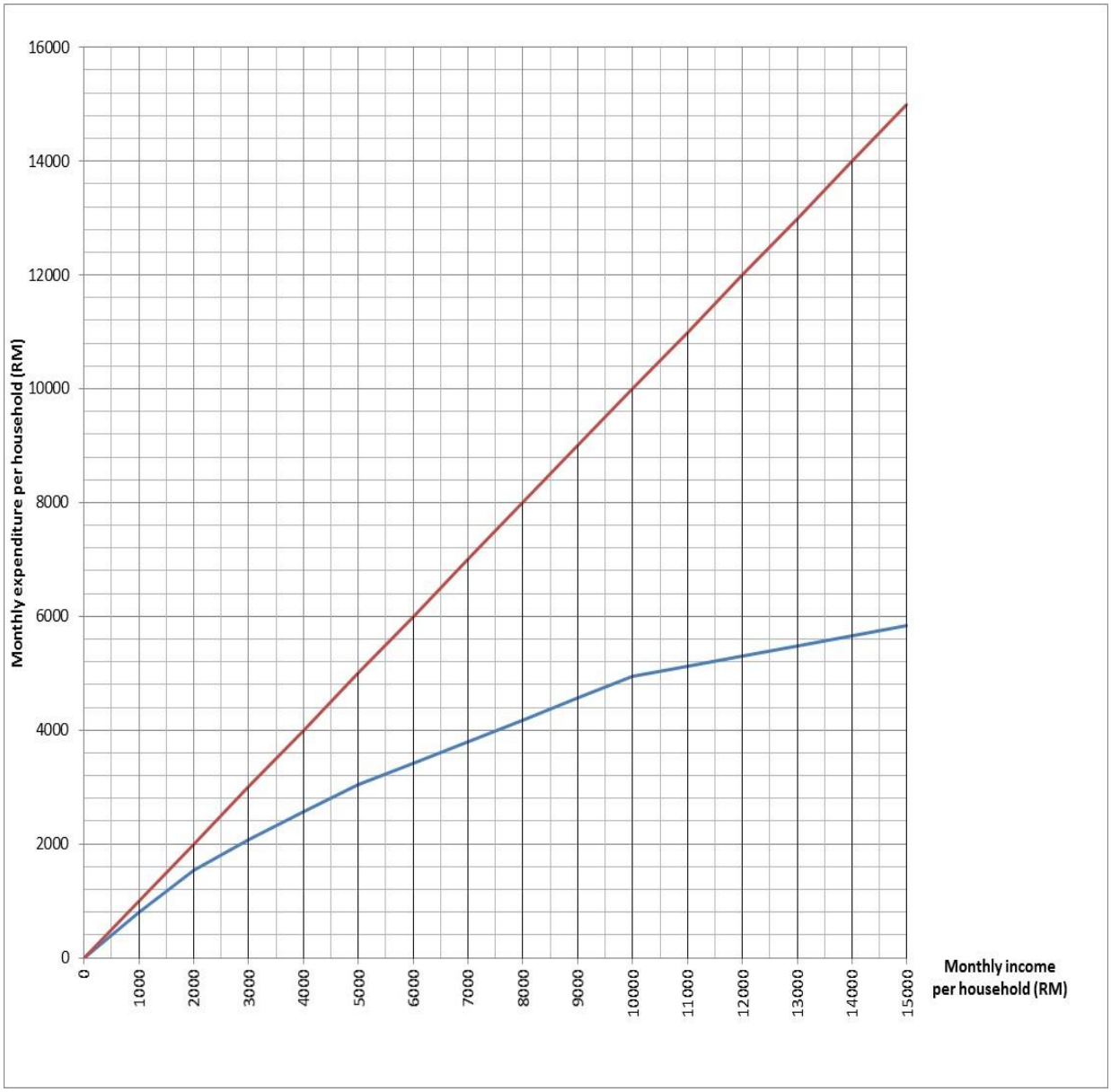
Table 1: Malaysian household marginal propensity to consume across income groups – estimated by Bank Negara Malaysia

Income group	RM0-1000	RM1000-2000	RM2000-3000	RM3000-4000	RM4000-5000	RM5000-10000	Above RM10000
MPC	0.81	0.73	0.54	0.49	0.47	0.38	0.18

The red line in Figure 5 shows the relationship between income and expenditure with an MPC of one. This is because as income increases by one unit, expenditure also increases by one unit. Whereas the blue line in Figure 5 shows the relationship between income and expenditure using MPC estimated by Bank Negara (reproduced in Table 1). The blue line is a concave function because as income increases, expenditure increases less than proportionately and at a decreasing rate.

Figure 5: Income and expenditure lines using Bank Negara's estimates of MPC (blue) and a constant MPC of one (red)

[11] Marginal propensity to consume (MPC) measures the amount of consumption upon receiving an additional one unit of income. In a graph of income (y-axis) and expenditure (x-axis), the MPC is represented by the slope of the line.



There are kinks in Figure 5, hence we find the best smoothed out lines using polynomial relationships of order 2. As the level of concavity changes when income increases, we use four separate lines to describe the relationship between income and expenditure – see Figure 6. Using these equations, we would be able to know the amount of expenditure for any given level of income, and vice versa. Table 2 shows the income level and the estimated expenditure based on our polynomial equation and based on Bank Negara Malaysia's MPC. We calculate the difference between using our polynomial equations and using the MPC method and find that differences do not exceed 3%. Hence, we use our derived income/expenditure relationship to estimate income. Because Bank Negara estimated MPC using data for Malaysia, the line represents only the income/expenditure relationship for the whole of Malaysia, and not the sub-regions of Malaysia or sub-segments of the households.

Figure 6: Smoothed out income and expenditure line using Bank Negara's MPC

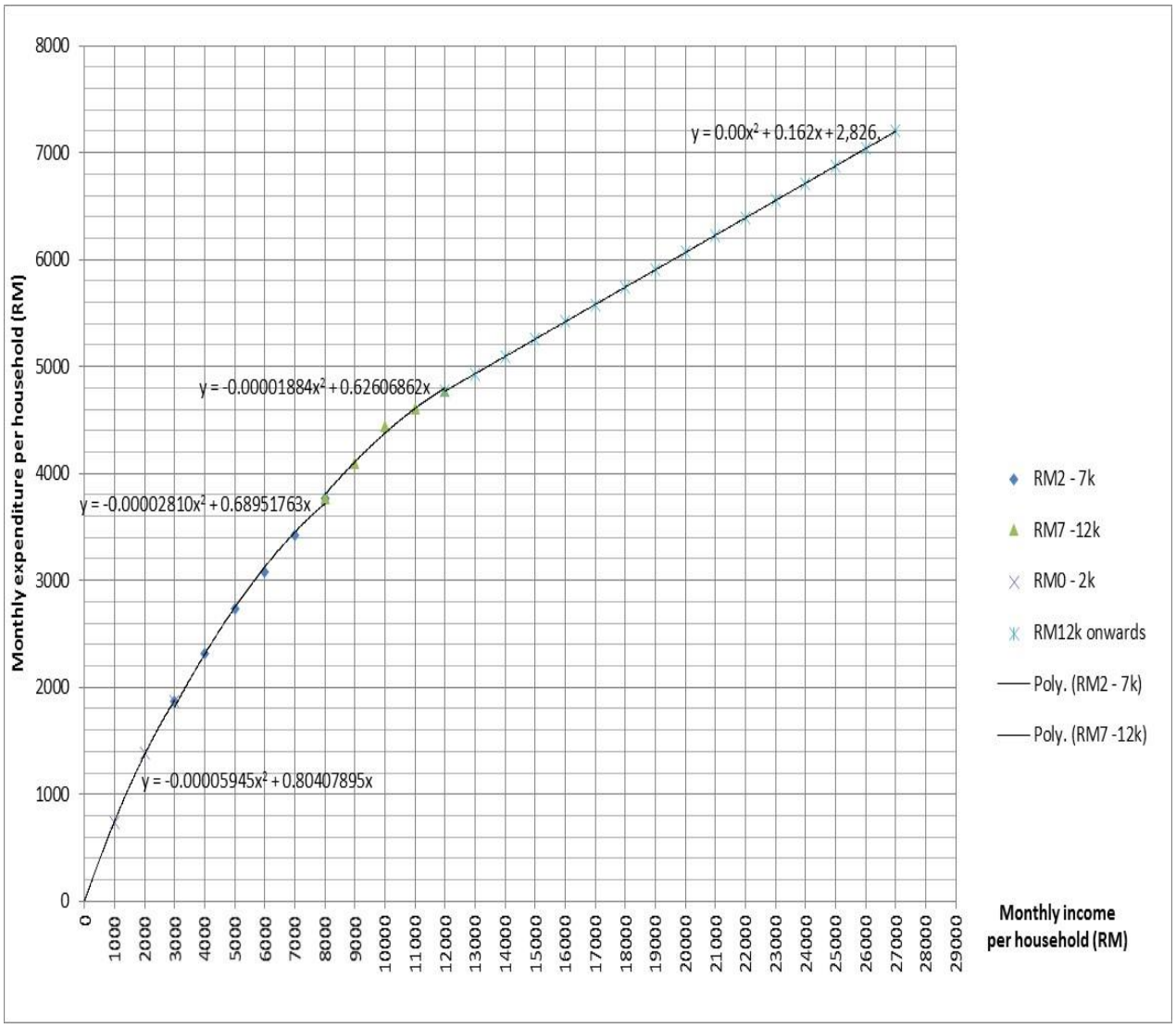


Table 2: Estimated expenditure from polynomial equations of order 2 vs. values calculated from Bank Negara's estimated MPC

Income	Expenditure (estimated from polynomial equations of order 2)	Expenditure (using Bank Negara's MPC)	Difference	% Difference
1000	827	810	-17	-2.1%
2000	1523	1540	17	1.1%
3000	2017	2080	63	3.0%
4000	2565	2570	5	0.2%
5000	3050	3040	-10	-0.3%
6000	3473	3420	-53	-1.5%
7000	3833	3800	-33	-0.9%
8000	4225	4180	-45	-1.1%
9000	4565	4560	-5	-0.1%

10000	4862	4940	78	1.6%
11000	5118	5120	2	0.0%
12000	5332	5300	-32	-0.6%
13000	5480	5480	0	0
14000	5660	5660	0	0
15000	5840	5840	0	0
16000	6020	6020	0	0
17000	6200	6200	0	0
18000	6380	6380	0	0
19000	6560	6560	0	0
20000	6740	6740	0	0
21000	6920	6920	0	0
22000	7100	7100	0	0
23000	7280	7280	0	0
24000	7460	7460	0	0
25000	7640	7640	0	0
26000	7820	7820	0	0
27000	8000	8000	0	0

Since the Household Expenditure Survey was conducted in 2009/2010, the amount of GST in Ringgit reflects 2009/2010 prices. The Consumer Price Index (CPI) was used to re-index the expenditure values from March 2010 (survey concluded in that month) to July 2013 prices (latest available CPI index); whereas the average annual income growth rate between 2009 and 2012 from the Household Income and Basic Amenities Surveys was used to re-index the income values from March 2010 to July 2013.

3. GST – a regressive or progressive tax?

Descriptive statistics

According to the Household Expenditure Survey 2009/2010, an average Malaysian household spends RM 2,356 per month (inflation adjusted to July 2013). Table 3 shows the effective GST rate on different categories of expenditure and shows that the top two categories that contribute to GST are transport (22.2%) and restaurant and hotels (17.3%). The Household Expenditure Survey documents the expenditure segment of the households and we use these to help interpret and explain the burden of GST.

Table 3: Total GST raised and effective GST rate by categories of expenditure in Malaysia

Categories	Effective GST %	Total GST RM collected (in July 2013 value)	% of Total GST RM collected
Food and non-alcoholic beverages	1.49%	513,598,871	6.8%

Alcoholic beverages and tobacco	7.00%	258,672,174	3.4%
Clothing and footwear	7.00%	407,232,329	5.4%
Housing, water, electricity, gas and other fuels	1.66%	637,778,449	8.5%
Furnishings, household equipment and routine household maintenance	7.00%	484,183,787	6.4%
Health	0.00%	-	0.0%
Transport	6.58%	1,671,360,319	22.2%
Communication	7.00%	672,977,671	9.0%
Recreation services and culture	6.88%	539,243,932	7.2%
Education	0.00%	-	0.0%
Restaurants and hotels	7.00%	1,300,405,905	17.3%
Miscellaneous goods and services	7.00%	1,032,779,964	13.7%
Total		7,518,233,403	100.0%

According to the Tenth Malaysia Plan and reported in Table 4, 83% of Malaysian households reside in Peninsular Malaysia. However, they contribute 87% of the total GST revenue. Whereas, Sabah contributes 5% to GST revenue raised, but with 9% of households residing there. Sarawak's contribution in GST revenue is 8%, proportionate to the number of households residing there. Therefore, Peninsular Malaysia contributes the bulk of GST revenue and pay higher GST per household.

Table 4: GST raised by region in Malaysia

Location	No. of households	% of households	Total GST RM raised	% of Total GST RM raised
Malaysia	6,024,500	100%	6,990,761,461	100%
Peninsular Malaysia	4,998,200	83%	6,108,251,199	87%
Sabah (including W.P. Labuan)	515,900	9%	374,906,574	5%
Sarawak	510,400	8%	555,477,606	8%

Analysis by income and expenditure level and by occupation

A tax is deemed regressive if as a proportion of income, the tax payable is higher for lower income groups vs. higher income groups. Table 5 reports that the GST payable and GSTI across monthly income and expenditure classes. The line in Figure 7 shows that as expenditure (and income) increases, GSTI initially rises but then falls rapidly – hence GST is a regressive tax hitting the low and middle income groups more than the higher income groups.

Applying a GST rate of 7% and assigning certain basic food and services as zero rated or exempt, an average household will pay RM 104 per month, equivalent to 2.93% GST on income (GSTI). Table 5 shows that the lowest income households (who earn RM 605 monthly and contribute RM 12.76 GST) pay GSTI at 2.62%. Whereas the highest income households (who earn RM 30,815 monthly and contribute RM 407.66 GST) pay the lowest GSTI at 1.56%. Generally, the middle income (around RM 5,000 per month earnings) and low income (around RM 1,500 per month earnings) households pay higher GSTI than the upper and upper middle income households. The worst hit segment is the household earning around RM 2,579 per month as they will pay 3.07% GSTI.

The upper and upper middle income households tend to be legislators, senior officials and managers and professionals. Table 6 shows that these households earn between RM 8,497 and RM 10,114; and spend between RM 3,883 and RM 4,374 per month. Although the upper and upper middle income groups in these professions contribute the most in GST tax revenue per household, they enjoy the lowest GSTI of 2.53% to 2.67% (Table 6). This is significant as these GSTI rates are close to those paid by the lowest-earning households (2.62%).

For households in the lowest earning group (less than RM605 per month), the proportion of expenditure on food and non-alcoholic beverages and housing, water, electricity, gas and other fuels is 33.9% and 36.5% respectively. Despite having 70% of their expenditure on categories with low effective GST rate (1.49% on the food and non-alcoholic beverages, 1.66% on housing expenditure – see Table 3), GST is still a regressive tax. Therefore, although the Government stipulated that basic goods, essential items, public transportation, healthcare and education are zero rated or exempt from GST, implementing GST will hit the middle and low income households harder compared to the higher income groups.

To understand why GST is a regressive tax, we look further into the Household Expenditure Survey. Table 7 presents the income and expenditure profile alongside the GSTI and effective GST rate on categories of expenditure where households spend most of their expenditure. We choose 4 subgroups of households: 1) the two lowest earning households classes (who spend less than RM 600 per month); 2) the income class suffering the highest GSTI (3.07% and earns RM 2,579 per

month); 3) the upper middle income class who pay similar or less GSTI than the lowest earning households and who are likely to be the legislators, senior managers and professionals; and 4) the highest earning households who enjoy the lowest GSTI of 1.56%.

Looking across the categories of expenditure in Table 7, we find that the proportion of income spent on three categories – food and non-alcoholic beverages; housing, water, electricity, gas and other fuels; and restaurants and hotels – decreases as the income/expenditure increases. On the other hand, expenditure on transport increases as income/expenditure increases. Using the amount reported in the Household Expenditure Survey (numbers not reported here), we find that the upper middle income class and highest earning households spend at least 20 times more on transport compared to those on the lowest income groups.

Delving further into the expenditure pattern of households earning around RM 2,500 per month, we find that these households are mostly likely skilled agricultural and fishery workers (who earn RM 2,343 per month – see Table 6) or single person households (who earn RM 2,414 per month – see Table 10). The skilled agricultural and fishery workers tend to spend more on transport (7.8% of total income); whereas single person households tend to spend more restaurants and hotels (9.4% of total income). To reduce the degree of GST being a regressive tax, we evaluate some possibilities in section 4.

Table 5: GST payable (RM) and GST payable as a percentage of income (GSTI) across different income and expenditure classes for Malaysia

Expenditure	Less than RM500	RM500 – 599	RM600 – 699	RM700 – 799	RM800 – 899	RM900 – 999	RM1000 – 1999	RM2000 – 2999	RM3000 – 3999	RM4000 – 4999	RM5000 and over
GST (RM)	12.76	18.56	22.92	27.64	32.59	36.33	63.79	116.00	170.91	225.35	407.66
Expenditure (RM)	421.06	594.03	699.88	808.28	916.61	1022.63	1590.77	2620.62	3691.89	4784.18	8084.56
Income (RM)	605.49	867.23	1031.63	1203.55	1379.24	1555.17	2579.15	5014.71	7876.98	11543.41	30814.80
GSTI (%)	2.62%	2.66%	2.76%	2.85%	2.93%	2.90%	3.07%	2.87%	2.69%	2.42%	1.56%

Figure 7: GST payable (RM) and GST payable as a percentage of income (GSTI) across different expenditure classes for Malaysia

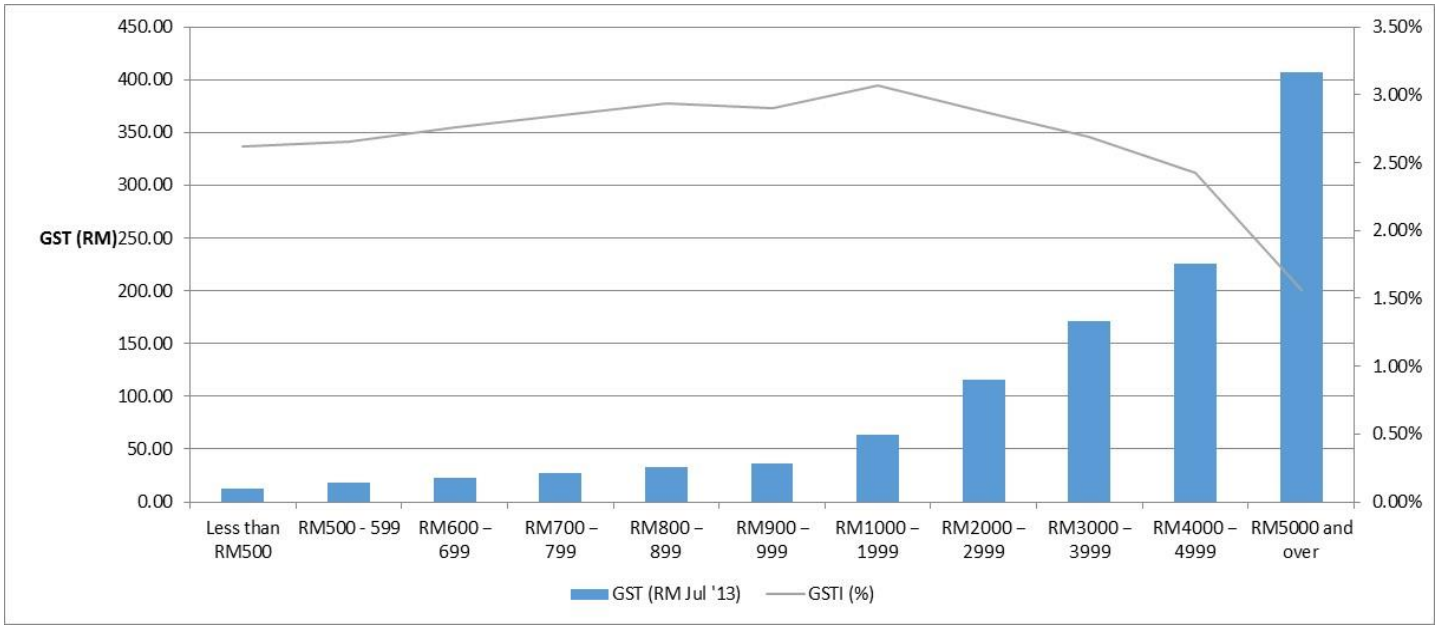


Table 6: GST payable (RM) and GST payable as a percentage of income (GSTI) across different occupation for Malaysia

	Legislators, senior officials and managers	Professionals	Technicians and associate professionals	Clerical workers	Services workers and shop and market sales workers	Skilled agricultural and fishery workers	Craft and related workers	Plant and machine-operators and assemblers	Elementary occupations	Occupation not elsewhere classified
GST (RM)	205.95	182.97	132.33	108.38	95.01	58.01	88.40	87.22	69.44	79.19
Expenditure (RM)	4374.36	3883.23	2844.03	2407.88	2164.02	1467.10	2049.24	2007.20	1673.56	1966.30
Income (RM)	10114.10	8496.77	5549.06	4528.26	3994.11	2342.90	3750.51	3662.47	2984.14	3577.38
GSTI (%)	2.53%	2.67%	2.96%	2.97%	2.95%	3.07%	2.93%	2.96%	2.89%	2.75%

Table 7: Expenditure as a proportion of income across different income/expenditure classes in Malaysia (source: Household Expenditure Survey 2009/10 and authors' calculation)

Monthly expenditure		Spending less than RM500	Spending RM500 - 599	Spending RM1000 – 1999	Spending RM3000 – 3999	Spending RM4000 – 4999	Spending RM5000 and over
GSTI (%)		2.62%	2.66%	3.07%	2.69%	2.42%	1.56%
Income (RM Jul '13)		605	867	2579	7877	11543	30815
Categories	Effective GST rate	Proportion of total income spent on					
Food and non-alcoholic beverages	1.49%	22.0%	22.3%	15.2%	7.4%	6.0%	2.5%
Housing, water, electricity, gas and other fuels	1.66%	23.9%	21.6%	14.2%	9.6%	7.9%	4.6%
Restaurants and hotels	7.00%	7.4%	5.5%	5.9%	5.4%	4.5%	2.5%
Transport	6.58%	2.0%	2.9%	6.7%	6.4%	6.0%	5.8%
Alcohol beverages and tobacco	7.00%	1.3%	1.5%	1.4%	0.9%	0.7%	0.3%

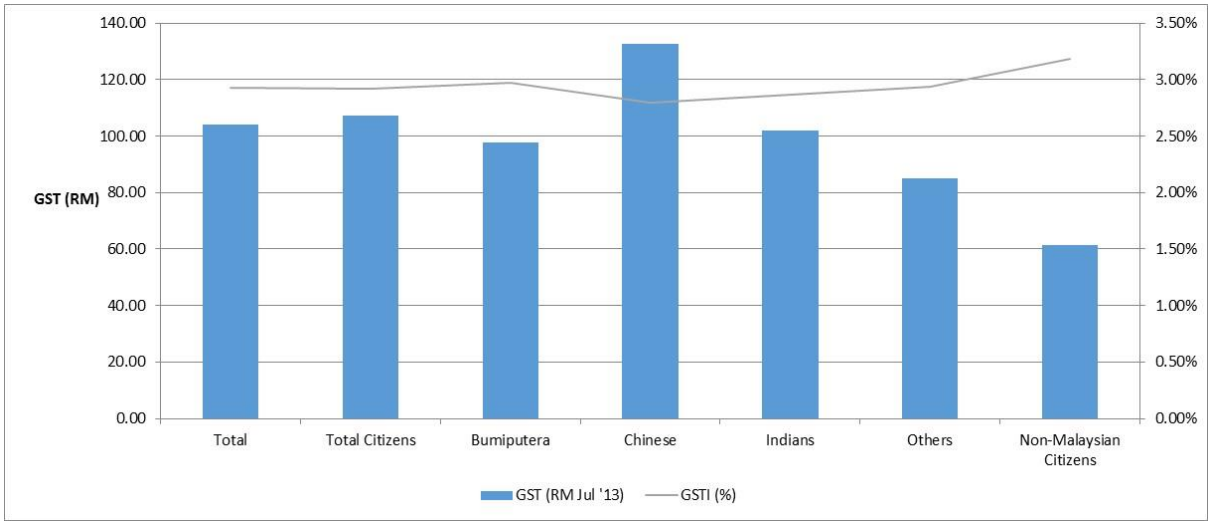
Analysis by ethnic group

Table 8 shows that Bumiputera-led households pay 2.98% GSTI and Chinese led households pay 2.79% GSTI. Non-Malaysian households suffer the highest GSTI (3.19%). The reason for the uneven GSTI is due to GST being a regressive tax. The Chinese led households earn 46% more than Bumiputera-led households; and Bumiputera-led households make 70% more than non-Malaysian households. Since the marginal propensity to consume falls as income rises, expenditure increases at a slower rate as income rises. Therefore, even though Chinese led households spend more and pay more GST in Ringgit, GSTI is lower – see Figure 8.

Table 8: GST payable (RM) and GST payable as a percentage of income (GSTI) across ethnic groups for Malaysia

	Total	Total Citizens	Bumiputera	Chinese	Indians	Others	Non-Malaysian Citizens
GST (RM)	104.00	107.35	97.59	132.65	101.92	84.91	61.48
Expenditure (RM)	2355.64	2423.58	2200.28	2984.49	2356.34	1969.50	1495.01
Income (RM)	4411.83	4563.47	4072.08	5898.92	4413.39	3584.01	2395.48
GSTI (%)	2.93%	2.92%	2.98%	2.79%	2.87%	2.94%	3.19%

Figure 8: GST payable (RM) and GST payable as a percentage of income (GSTI) across ethnic groups for Malaysia



We investigate if spending pattern could explain the uneven GSTI across ethnic groups. From the Household Expenditure Survey 2009/10, we extract the categories where households spend more than 10% of their total expenditure and calculate the proportion of the expenditure over the estimated income. We present the percentage alongside the effective GST rate (after exempting or setting zero rates for essential items) in Table 9. We find that the spending pattern cannot explain why non-Malaysians pay higher GSTI than Bumiputera-led households; and why Bumiputera-led

households pay higher GSTI than Chinese led households. For example, comparing across all three ethnic groups, we find that although non-Malaysian households spend more of their total income on low effective GST rate items (39.2% on food and housing related expenses) and less of their total income on high effective GST rate items (15.3% on transport, restaurants and hotels), they still pay higher GSTI. Likewise, comparing Bumiputera and Chinese led households, Bumiputera-led households spend more of their total income on low effective GST items (28.7% vs. 26.2% on food and housing related expenses) and less on restaurants and hotels (6.9% vs. 7.5%) compared to the Chinese led households. Therefore, we conclude that the tendency to spend less as income increases dominates the effect of differences in spending pattern, resulting in GST being a regressive tax.

Table 9: Proportion of income by expenditure categories and their respective GST rates sorted by 3 ethnic groups in Malaysia (source: Household Expenditure Survey 2009/10 and authors' calculation)

Categories	Effective GST rate	Proportion of total income spent on		
		Bumiputera	Chinese	Non-Malaysian
Food and non-alcoholic beverages	1.49%	14.8%	10.6%	18.8%
Housing, water, electricity, gas and other fuels	1.66%	14.0%	15.6%	20.5%
Total		28.7%	26.2%	39.2%
Transport	6.58%	11.1%	8.6%	5.7%
Restaurants and hotels	7.00%	6.9%	7.5%	9.5%
Total		17.9%	16.1%	15.3%

Household size and age analysis

Table 10 shows that GST hits the single person households hardest (GSTI of 3.58%) but GSTI falls gradually as the size of the household (and income) increases. According to the Household Expenditure Survey, the average household size is 4.13. It is typical for a four-person household structure to consist of families with parents and children and/or elderly person to care for. With this profile, the income earner, and hence the head of the household, is likely to be in the age range of 35-64. This is substantiated by the Household Expenditure Survey 2009/2010 which found the monthly income/expenditure of a four to five-persons household virtually matches the monthly income/expenditure of those in the 35-64 years old range – monthly income around RM 5,000 and expenditure around RM 2,500. Therefore, the four to five-persons household and the 35-64 years old age range are analysed simultaneously, and regarded as the average middle-income household in Malaysia. Table 10 and Table 11 shows that the GSTI burden for 35-64 year olds and four to five-persons households is between 2.86% and 2.93%.

Table 11 shows that households in the 35 to 64 age range have the highest monthly household income (RM 4,702 and RM 4,769) and expenditure (RM 2,485 and RM 2,514) and pay the highest

GST amount of about RM 111 per month among all age groups in Malaysia. However, the GSTI for 35-64 year olds is lower (between 2.93% and 2.86%) compared to the under 24 year olds because: 1) the 35-64 year olds earn more than those under 24 years old. Hence with the income and expenditure relationship being a concave function, their expenditure is proportionately less than their income; and 2) the proportion of expenditure on food and beverages away from home is 43-52% less than households below 24 years old,. The GSTI range for 35-64 year olds is consistent with our earlier finding that the GSTI for an average household is 2.93%.

Table 11 show the monthly income and expenditure across different age groups. We note that the income/expenditure of under 24 year olds and over 65 year olds are fairly similar (RM 3,127 / RM 1,745 vs. RM 3,197 / RM 1,780). Yet, the GSTI suffered differs – under 24 year olds suffer 3.25% vs. 2.75% for the over 65 year olds. Thus, although the effect of the concave relationship between income and expenditure is strong, in this case, spending pattern does alter the tax burden. The elderly pay lower GSTI because they spend proportionally 57% more on food and non-alcoholic drinks, and 49% less on food and beverages away from home as compared to those below 24 years old.

Table 10 shows that the single person households suffer the highest GSTI (3.58%). Their expenditure of RM 1,505 per month is quite similar to those under 24 year olds. In addition to having lower earnings, these households spend a higher proportion of their expenditure on alcohol beverages and tobacco and food and beverages away from home – resulting in high GSTI. Therefore, we can conclude that under 24 years old adults in single person households, who might have just entered the workforce, pay the highest GSTI rate among all age groups due to their expenditure pattern.

Table 10: Monthly expenditure, GST (RM & %) payable by household size in Malaysia

	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten and over
GST (RM)	69.68	84.58	97.59	111.19	118.98	117.13	115.21	117.25	128.71	139.65
Expenditure (RM)	1504.93	1946.28	2223.28	2506.43	2667.12	2669.26	2673.77	2688.74	2909.36	3181.39
Income (RM)	2414.26	3535.93	4121.77	4751.07	5123.84	5128.89	5139.54	5174.95	5710.37	6410.02
GSTI (%)	3.58%	2.97%	2.94%	2.91%	2.88%	2.84%	2.78%	2.81%	2.80%	2.71%

Table 11: Monthly expenditure, GST (RM & %) payable by age group in Malaysia

	<24	25-34	35-44	45-64	>65
GST (RM)	81.75	103.07	111.10	109.82	70.82
Expenditure (RM)	1745.38	2254.53	2484.70	2514.31	1780.15
Income (RM)	3127.22	4189.64	4701.58	4769.09	3197.05
GSTI (%)	3.25%	3.05%	2.93%	2.86%	2.75%

Analysis by gender

The GSTI incurred by male and female-led households are similar – 2.92% and 2.91% respectively. The monthly GST payable by female-led households in Malaysia is on average less as compared to male-led households (RM 81 vs. RM 108).

4. Making GST a progressive tax (or less regressive)

Section 3 shows that GST is a regressive tax. We assess if it is possible to make GST to be a progressive tax or change it to be less regressive, with the important caveat that a similar amount of tax revenue must be raised.

Implementing multi-tiered GST rates

We evaluate the method used by some countries, such as the UK and Norway, where there are two GST rates – a standard and a reduced rate. In the UK, the standard rate is 20%, while the reduced rate is 5%, with some goods exempted from GST or zero rated.

We introduce multi-tiered GST rates and vary the composition of items subject to GST. Our main analysis in sections 2 and 3 adopts 7% across all standard rated items and zero rate for other essential items like food, education and healthcare. In our evaluation here, we keep 0% for essential items like basic food, medical and educational expenses; reduce the standard rate GST; but impose higher rate on transport (excluding public transportation). This is because: 1) as income increases, the proportion of spending on transport also increases (see Table 7); and 2) transport is one of the largest category of expenditure, hence levying tax on it will raise revenue. Go, Kearney, Robinson and Thierfelder (2005) found that by increasing tax on items normally consumed by the higher income groups, GST will be less regressive and more progressive.

We experimented this multi-tiered GST system using three scenarios: 1) transport (excluding public transportation) is GST rated at 18% and the standard GST rate is 4%; 2) transport (excluding public transportation) is GST rated at 25% and the standard GST rate is 2%; and 3) transport (excluding public transportation) is GST rated at 21% and the standard GST rate is 3%.

Table 12 Panel A reports GSTI under base case 7% GST rate, GSTI under different multi-tiered system and the change vs. the base case. From Table 12 Panel A, we see that GST has become less regressive because GSTI has increased in the top two groups of income earners; and GSTI has fallen for all remaining income groups – see also the 'Change vs. base' row. Figure 9 plots the GSTI over the

different expenditure/income groups. We find that the multi-tiered GST can make GST less regressive because of all the lines, the GSTI line for the base case GST 7% (blue line) is generally higher for the lower income groups (left side of the graph) but lower for the highest income group (right side of the graph). From Figure 9, we find that scenario 2 which imposes 25% GST on transport (excluding public transportation) and 2% on standard items will make GST less regressive because of all lines, its GSTI (grey line) is the lowest for the lower income groups and highest in the highest income group.

We report in Table 12 Panel B the total revenue raised in perfect vs. when tax collection is simplified; the expected inflation spike as measured by the Consumer Price Index (both methodologies are elaborated in section 5); and the contribution from the top two sources of GST revenue. Table 12 Panel B shows that the revenue raised are within the base case scenario of RM 7.5 billion but inflation/CPI is expected to spike up more than the base case of 3.86%. By imposing high GST rate on transport, transport as a category contributes more than 50% of the total GST revenue (right most column in Table 12 Panel B).

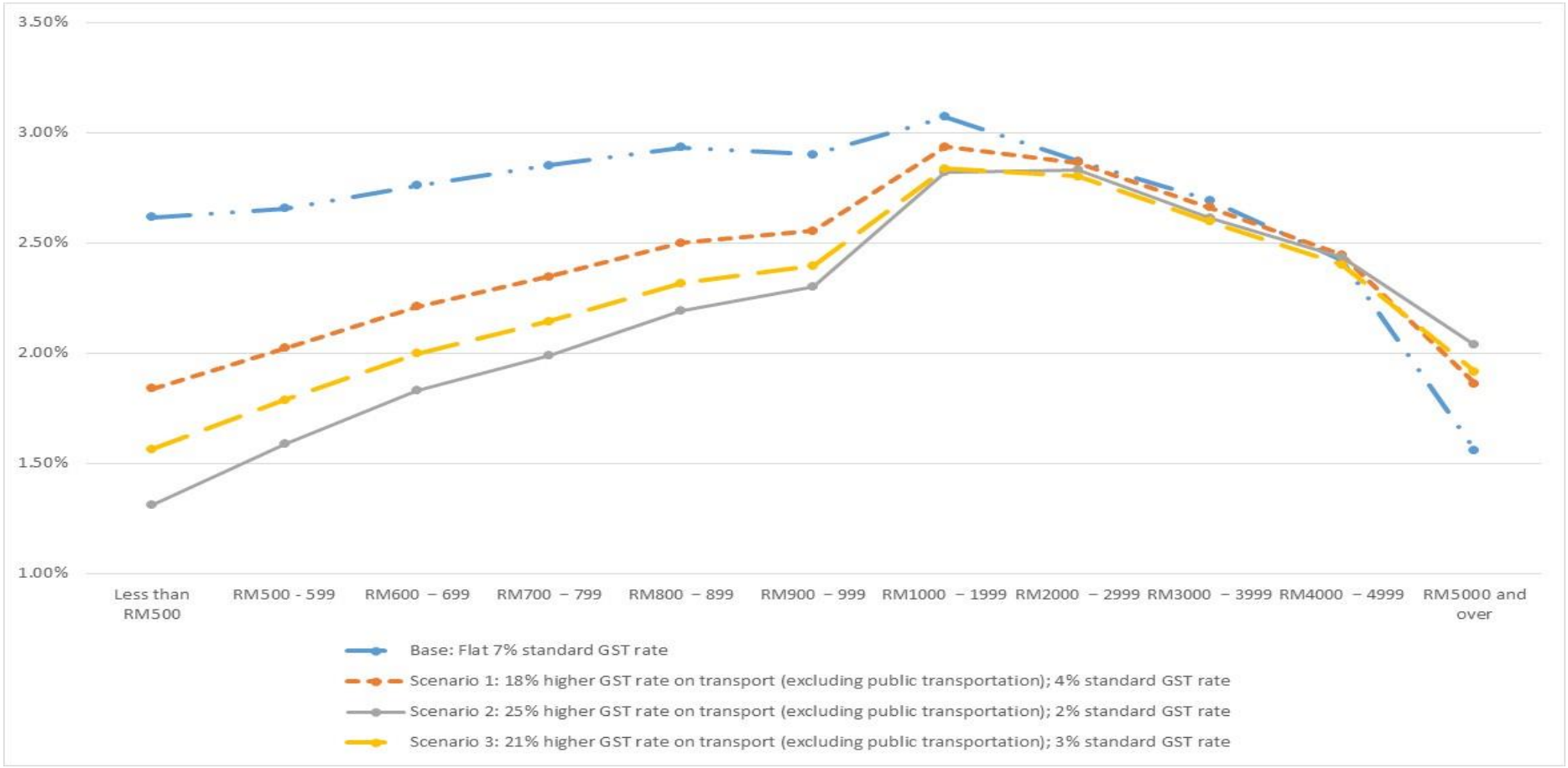
Table 12: GSTI, total tax revenue raised, expected inflation/CPI spike when implement multi-tiered GST vs. base case GSTI

Panel A:	Expenditure	Less than RM500	RM500 - 599	RM600 – 699	RM700 – 799	RM800 – 899	RM900 – 999	RM1000 – 1999	RM2000 – 2999	RM3000 – 3999	RM4000 – 4999	RM5000 and over
	Expenditure (RM)	421	594	700	808	917	1023	1591	2621	3692	4784	8085
	Income (RM)	605	867	1032	1204	1379	1555	2579	5015	7877	11543	30815
Base: Flat 7% standard GST rate	GSTI (%)	2.62%	2.66%	2.76%	2.85%	2.93%	2.90%	3.07%	2.87%	2.69%	2.42%	1.56%
Scenario 1: 18% higher GST rate on transport (excluding public transportation); 4% standard GST rate	GSTI (%)	1.84%	2.02%	2.21%	2.35%	2.50%	2.55%	2.94%	2.86%	2.66%	2.45%	1.86%
	Change vs. base	-0.78%	-0.63%	-0.55%	-0.51%	-0.43%	-0.35%	-0.13%	-0.01%	-0.03%	0.02%	0.30%
Scenario 2: 25% higher GST rate on transport (excluding public transportation); 2% standard GST rate	GSTI (%)	1.31%	1.59%	1.83%	1.99%	2.19%	2.30%	2.82%	2.83%	2.61%	2.43%	2.04%
	Change vs. base	-1.30%	-1.07%	-0.93%	-0.86%	-0.74%	-0.60%	-0.25%	-0.04%	-0.08%	0.01%	0.48%
Scenario 3: 21% higher GST rate on transport (excluding public transportation); 3% standard GST rate	GSTI (%)	1.56%	1.79%	2.00%	2.14%	2.32%	2.40%	2.84%	2.80%	2.60%	2.40%	1.92%
	Change vs. base	-1.05%	-0.87%	-0.76%	-0.71%	-0.62%	-0.51%	-0.24%	-0.07%	-0.10%	-0.02%	0.36%

Panel B:

		Total GST Revenue (RM)	Total GST Revenue with tax collection simplification (RM)	Additional spike in inflation/CPI (%)	Top 2 sources of GST Revenue
Base: Flat 7% standard rate	GST Revenue (RM)	7,518,233,403	7,012,419,148	3.86%	Transport (22%); Restaurant and hotels (17%)
Scenario 1: Higher 18% rate on transport (excluding public transportation); remaining 4% standard rate	GST Revenue (RM)	7,638,854,012	7,024,326,241	4.17%	Transport (56%); Restaurant and hotels (10%)
	Change vs. base	120,620,609	11,907,093	0.30%	
Scenario 2: Higher 25% rate on transport (excluding public transportation); remaining 2% standard rate	GST Revenue (RM)	7,639,679,164	6,960,425,503	4.32%	Transport (78%); Restaurant and hotels (5%)
	Change vs. base	121,445,762	(51,993,645)	0.46%	
Scenario 2: Higher 21% rate on transport (excluding public transportation); remaining 3% standard rate	GST Revenue (RM)	7,519,883,708	6,884,617,673	4.18%	Transport (66%); Restaurant and hotels (7%)
	Change vs. base	1,650,305	(127,801,475)	0.31%	

Figure 9: GSTI using multi-tiered GST vs. base case GSTI, segregated by expenditure classes



Although this multi-tiered GST system can make GST to be less regressive and raise fairly similar amount of GST revenue in Ringgit, Tanzi and Zee (2000) has argued that the administrative burden of a multi-tiered GST system is high, complicated to account for and require a higher level of manpower. Hence, Malaysia is recommended to adopt a single tier standard rate GST regime initially. Nevertheless, we show that it is possible to shift the tax revenue profile towards taxing consumption rather than taxing income without GST being an overly regressive tax – a policy that can be pursued in the future so that income taxes can be reduced.

Increasing the standard GST rate from 7% but limiting the scope of chargeable goods

We evaluate if a higher standard rate can be imposed on a limited number of goods, with the rest of goods and services exempt from GST or zero rated. This regime has the benefit of simplifying the tax administration as the number of goods and services chargeable is lower, hence lower administrative burden and involve fewer entities. Besides, it can be targeted at certain undesirable expenditure, expenditure on goods and services that cannot be easily substituted, or expenditure where the higher income earners proportionately spend more of their income. However, this system will not broaden the tax base widely and will affect certain industries negatively.

In our analysis here, we experimented with three scenarios: 1) impose 16% GST on transport (excluding public transportation), alcoholic beverages and tobacco, restaurant and hotels, while everything else is zero rated or GST exempt; 2) set 17.5% GST on transport (excluding public transportation), restaurant and hotels, while everything else is zero rated or GST exempt. So alcoholic beverages and tobacco are zero rated despite having negative externalities because their consumption falls as income increases (see Table 7); and 3) levy 29% GST on transport (excluding public transportation and motorcycles), alcoholic beverages and tobacco, hotels, while everything else is zero rated or GST exempt. We re-introduced alcoholic beverages and tobacco because of their undesirable effect on health but exclude restaurants as the occasional meal at the restaurant will increase the enjoyment in life.

We report our findings in similar layout as in the multi-tiered GST section. Table 13 Panel A shows that compared to the base case of 7% GST rate across all items, imposing higher GST on fewer items can make GST less regressive – GSTI has increased in the highest income group and GSTI has fallen for all other income groups with the GSTI falling more in the lower income groups. This can be seen from the 'Change vs. base' row in Table 13 Panel B. We plot the GSTI over different income/expenditure groups in Figure 10. We find that of all lines, the base case GST 7% line (the

blue line) is generally higher for the lower income groups and lower for the highest income group. Hence, targeting fewer items with higher GST rate can help make GST less regressive.

Table 13 Panel B shows that the total revenue raised in perfect conditions is within the base case scenario of RM 7.5 billion. However, after taking into account the need to simplify tax collection, some GST revenue will be uncollected. We find that in scenarios 1 and 3 (when alcohol and tobacco are included), a significant amount of GST revenue will not be collected. This is because alcohol and tobacco are purchased from retailers unlikely to be registered for GST – we will discuss this further in section 5. For example, in scenario 3 Table 13 Panel B, the total GST revenue is expected to increase RM 445 million vs. the base case. However, after taking into account the practicality of tax collection, total GST revenue is expected to fall by RM 9 million.

Figure 10 shows that the third scenario of imposing 29% GST rate (the yellow line) certainly makes GST least regressive. However, there are several reasons against its implementation: 1) tax collection and administration will be more complex as alcohol and tobacco are sold in many outlets. Hence, taking into account the practicality of tax collection, a significant amount of GST revenue is not collected (about RM 454 million). Leaking too much tax revenue will increase the need to set a higher GST rate to maintain the same tax revenue vs. the base case; 2) 29% GST rate is very high and is unlikely to be accepted by tax paying households; 3) the expected additional increase in inflation will be higher (4.63% vs. base case of 3.86%); 4) imposing higher tax on alcohol and tobacco will encourage even more smuggling; and 5) the GST revenue is highly reliant on transport, which contributes 85% of total revenue.

Therefore, scenario 2 where 17.5% GST is imposed on transport (excluding public transportation) and restaurants and hotels, whilst all other items are zero rated or exempt from GST is more realistic. The grey line in Figure 10 shows that most low income groups will pay lower GSTI than the top two highest earning groups. Besides, the expected additional inflation increase is less (3.01% vs. the base case of 3.86%), businesses involved transportation, restaurants and hotels are usually larger and more likely to be able to cope with the tax collection, total GST collected is more evenly spread between transport (56%) and restaurants and hotels (43%), and the total GST collected is almost the same as the base case.

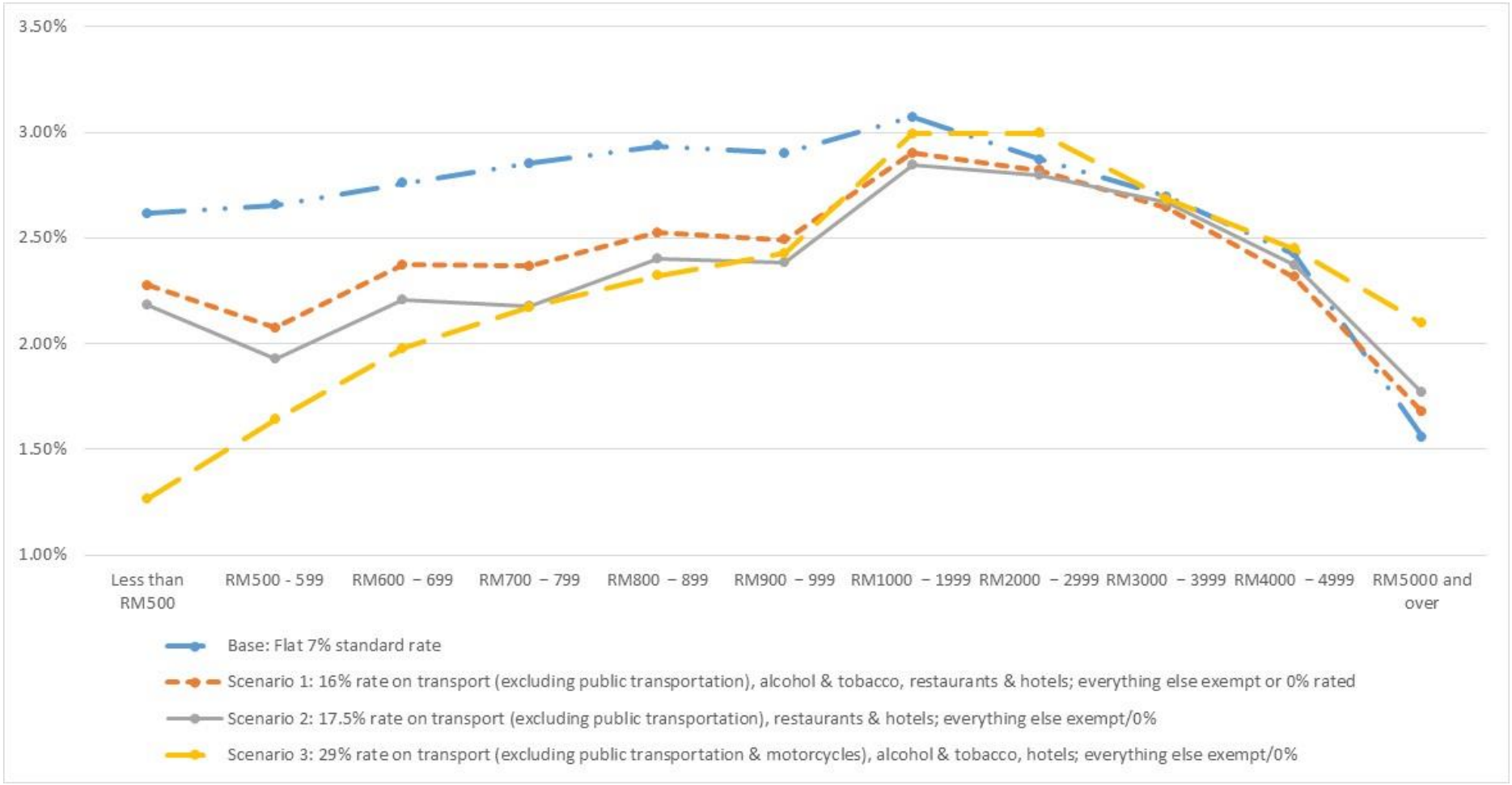
Table 13: GSTI, total tax revenue raised, expected inflation/CPI spike when higher GST rate is imposed on fewer items vs. base case GSTI

Panel A:	Expenditure	Less than RM500	RM500 - 599	RM600 – 699	RM700 – 799	RM800 – 899	RM900 – 999	RM1000 – 1999	RM2000 – 2999	RM3000 – 3999	RM4000 – 4999	RM5000 and over
	Expenditure (RM)	421	594	700	808	917	1023	1591	2621	3692	4784	8085
	Income (RM)	605	867	1032	1204	1379	1555	2579	5015	7877	11543	30815
Base: Flat 7% standard rate	GSTI (%)	2.62%	2.66%	2.76%	2.85%	2.93%	2.90%	3.07%	2.87%	2.69%	2.42%	1.56%
Scenario 1: 16% rate on transport (excluding public transportation), alcohol & tobacco, restaurants & hotels; everything else exempt or 0% rated	GSTI (%)	2.28%	2.08%	2.37%	2.37%	2.52%	2.49%	2.90%	2.82%	2.64%	2.31%	1.68%
	Change vs. base	-0.34%	-0.58%	-0.39%	-0.49%	-0.41%	-0.41%	-0.17%	-0.05%	-0.05%	-0.11%	0.12%
Scenario 2: 17.5% rate on transport (excluding public transportation), restaurants & hotels; everything else exempt/0%	GSTI (%)	2.18%	1.93%	2.21%	2.18%	2.40%	2.38%	2.84%	2.80%	2.67%	2.37%	1.77%
	Change vs. base	-0.43%	-0.73%	-0.55%	-0.67%	-0.53%	-0.52%	-0.23%	-0.07%	-0.02%	-0.05%	0.21%
Scenario 3: 29% rate on transport (excluding public transportation & motorcycles), alcohol & tobacco, hotels; everything else exempt/0%	GSTI (%)	1.27%	1.64%	1.98%	2.17%	2.32%	2.43%	2.99%	2.99%	2.68%	2.45%	2.10%
	Change vs. base	-1.35%	-1.02%	-0.78%	-0.68%	-0.61%	-0.47%	-0.08%	0.12%	-0.01%	0.03%	0.54%

Panel B:

		Total GST Revenue (RM)	Total GST Revenue with tax collection simplification (RM)	Additional spike in inflation/CPI (%)	Top 2 sources of GST Revenue
Base: Flat 7% standard rate	GST Revenue (RM)	7,518,233,403	7,012,419,148	3.86%	Transport (22%); Restaurant and hotels (17%)
Scenario 1: 16% rate on transport (excluding public transportation), alcohol & tobacco, restaurants & hotels; everything else exempt or 0% rated	GST Revenue (RM)	7,383,859,195	6,854,141,165	3.10%	
	Change vs. base	(134,374,208)	(158,277,983)	-0.76%	Transport (51%); Restaurant and hotels (40%)
Scenario 2: 17.5% rate on transport (excluding public transportation), restaurants & hotels; everything else exempt or 0% rated	GST Revenue (RM)	7,429,415,561	7,022,551,743	3.01%	
	Change vs. base	(88,817,842)	10,132,596	-0.85%	Transport (56%); Restaurant and hotels (43%)
Scenario 3: 29% rate on transport (excluding public transportation & motorcycles), alcohol & tobacco, hotels; everything else exempt or 0% rated	GST Revenue (RM)	7,963,377,421	7,003,263,491	4.63%	
	Change vs. base	445,144,019	(9,155,657)	0.76%	Transport (85%); Alcohol & tobacco (13%)

Figure 10: GSTI using higher GST rate on fewer items vs. base case GSTI, segregated by expenditure classes



Our analysis in this section shows that it is not possible to make GST to be a progressive tax whilst raising the same amount in revenue. By targeting transport, GST can be a progressive tax on the two extremes on the income/expenditure scale. However, those earning around RM 2,500 to RM 8,000 per month will still pay higher GSTI compared to the highest earning group. This is because their expenditure on transport as a proportion of income is even higher than the highest income group. Therefore, to remedy this, the Government can consider granting refundable tax credits or lowering the income tax rate around the RM 30,000 to RM 100,000 annual income band – equivalent to RM 2,500 and RM 8,333 income per month[12].

Of all the six scenarios evaluated, the imposition of 17.5% GST rate on limited items and zero-rating everything else is the least regressive and practical of all. However, given that 17.5% GST is higher than 7%, there will be resistance in its implementation. So, if 7% is introduced on a broad range of items as analysed in section 3, the Government should consider reducing income tax rates and granting refundable tax credits to encourage people to register on the tax system. It is possible that a combination of tax policies can help make GST less regressive, whilst at the same time raise tax revenue and broaden the tax base by moving taxation towards consumption rather than income.

5. Robustness and Sensitivity Analysis

Leakages in GST revenue collection

The first form of GST revenue collection leakage occurs due to simplification in tax administration. Even if a good is subject to standard rate GST, it might not be practically feasible to collect. To avoid administrative burden on businesses and the Royal Malaysian Customs Department, the Ministry of Finance has proposed that businesses taking less than RM 500,000 in annual sales revenue need not be registered for GST. This policy will focus GST collection on businesses making the most sales. As such, this will avoid a small provision shop having to set up a bookkeeping system to account for input and output GST; and the Royal Malaysian Customs Department having to audit the GST accounts of these small entities. Hence, GST on items subject to standard rate GST (e.g. clothes) purchased from the small provision shop will not be channelled to the Government. The second form of leakage is from fraud. Harrison and Krelove (2005) identify that one avenue of fraud might occur because exporters suffer input GST whilst exports are GST exempt, hence GST refunds are due

[12] In the Assessment year 2012, the individual relief per annum is RM 9,000 and the first RM 2,500 is tax free. There are also other reliefs such as Life Insurance and EPF (max RM 6,000), medical etc. So the income chargeable to tax is less.

from the Government.[13] Our paper attempts to estimate the amount of GST not collected due to the simplification of tax collection and not from fraud.

To estimate the amount of GST not collected, we ascertain the amount of sales chargeable to GST which falls below the RM 500,000 annual sales threshold. We adopt two approaches. Firstly, the Preliminary Report Census of Distributive Trade 2009 reports the annual sales turnover for different establishment types that engaged in retail and motor vehicles trade in Malaysia. We calculate the average annual sales by each establishment type to ascertain if it falls within the RM 500,000 threshold.

Table 14 shows that the average revenue of 'provision stores' and 'other retail sale in non-specialized stores n.e.c' fall below the threshold to be registered for GST, hence no GST will be collected from sales made through these establishments. Eliminating these two types of establishment, the remaining 9,403 establishments, accounting for 73% of all retail sales, are registered for GST. Table 15 shows that the average motor vehicles sales made by each establishment exceed the threshold. Hence, all motor vehicles and related services establishments are required to be GST registered. Going through the detailed CEGs, we re-estimate the amount of GST that will be collected, recognising the practicality of purchasing that type of goods from the type of retail establishment. For example, musical instruments are not commonly purchased from provision stores, whereas toiletries are. Our analysis shows that the total GST that can be collected after accounting for the practicality of GST collection is RM 7.01 billion.

Table 14: Retail revenue by establishment (source: The Preliminary Report Census of Distributive Trade 2009, authors' calculation)

Establishment Type	No. of establishments	Total revenue (RM)	Average revenue per establishment (RM)	GST register?	% of total revenue
Provision stores	49,046	12,337,857	251,557	No	26%
Supermarket	966	6,152,019	6,368,550	Yes	13%
Mini market	5,261	4,933,926	937,830	Yes	10%
Convenience stores	1,125	1,218,923	1,083,487	Yes	3%
Department stores	873	3,963,681	4,540,299	Yes	8%
Department store and supermarket	724	18,891,632	26,093,414	Yes	39%

[13] Keen (2007) suggests several fraud prevention measures such as reverse charging and opening separate VAT accounts.

including hypermarket					
Newsagent and miscellaneous goods store	454	234,446	516,401	Yes	0%
Other retail sale in non-specialized stores n.e.c	2,944	539,753	183,340	No	1%

Table 15: Motor vehicles and related services sale by establishment (source: The Preliminary Report Census of Distributive Trade 2009, authors' calculation)

Type of business	No. of establishments	Total revenue (RM)	Average revenue per establishment (RM)
Sale of motor vehicles	3,529	58,665,777	16,623,910
Maintenance and repair of motor vehicles	18,819	9,613,953	510,864
Sale of motor vehicles parts and accessories	10,583	19,732,513	1,864,548
Sale, maintenance and repair of motorcycles and related parts and accessories	10,468	9,183,874	877,328

The second approach attempts to improve on the first approach by allowing the proportion of retail trade made through GST registered retailers to vary across the different categories of detailed CEGs. This is because it is unreasonable to assume each detailed CEG will have similar purchasing pattern according to establishment. For example, cereal products may be more commonly purchased in supermarkets, whereas spices may be more commonly purchased in provision stores. The difference in purchasing pattern will result in different proportions of GST collected for each detailed CEGs. Therefore, we adopt detailed data on purchasing pattern for retail goods and services from Euromonitor.

Euromonitor separates retail goods into six types of establishments – modern grocery retailers, traditional grocery retailers, non-grocery retailers, non-store retailing, non-retail channels and other store-based retailing. Similar to the first approach, the average sales turnover per establishment was calculated to determine whether an establishment type is registered for GST, with RM 500,000 being the threshold. For establishment types where average sales turnover per establishment was not available, they are assumed to be not registered for GST. This is justifiable because these establishment typically consist of internet retailing and direct selling, of which average sales turnover per establishment is difficult to quantify.

Using Euromonitor's data, the total GST revenue to be collected is RM 6.98 billion annually. There is only a small difference (0.5% apart) between these two approaches, thereby justifying the usage of the data from the Preliminary Report Census of Distributive Trade 2009. Hence, we show that potentially 6-7% of the total GST revenue cannot be collected due to practical reasons. After taking into account GST fraud, the actual amount raised will be even less.

Standard GST rate set at 4%, instead of 7%

The Government hinted on setting the standard GST rate at 4% several years ago. Hence, we re-ran our analysis in section 3 using standard GST rate at 4% rather than 7%. We find that the total revenue raised will fall to RM 4.3 billion. Taking into account the practicality of GST collection but ignoring fraud, the total raised is expected to fall to RM 4.0 billion. The average household will pay GSTI of 1.67%. This translates to RM 59.43 per month. Our findings in section 3 that GST is a regressive tax, and the findings across occupation, gender, ethnic group, age and size of household remain the same.

Impact of GST on sub regions of Malaysia

The analysis in section 3 covers the whole of Malaysia. In this section, we analyse the impact of GST on households across different regions in Malaysia – urban/rural; Sabah, Sarawak and Peninsular Malaysia. In section 3, we overcame the problem of not having income data that corresponds with the expenditure level by relying on Bank Negara Malaysia's estimates of the marginal propensity to consume (MPC) across different income groups. We used the MPC to derive our income/expenditure relationship. However, as the MPC covers the whole of Malaysia, it is unreasonable to assume that the same relationship applies to rural and urban areas as well as to Sabah, Sarawak and Peninsular Malaysia given the disparity in their social economic development.

Because we cannot reliably estimate expenditure/income or GSTI for the sub-regions in Malaysia, we use the proportion of expenditure payable as GST (GSTE) to discuss the impact.

Figure 11 shows the GSTE across ethnic groups in rural/urban sub regions of Malaysia. Apart from rural Sabah, we find that the influence of sub region is more dominant as the GSTE rates are similar among all ethnic groups within the same location, but differ across location. This might imply that households residing in the same sub region adopt fairly similar lifestyles, thus incurring fairly similar GSTE. Besides, although rural households in Peninsular Malaysia spend on average RM 800 less than their urban counterparts, the GSTE discrepancy between them is small, implying that their spending mix are on categories with similar effective GST rates.

Figure 11: Ratio of GST payable to expenditure (GSTE) in sub regional Malaysia segregated by ethnic group

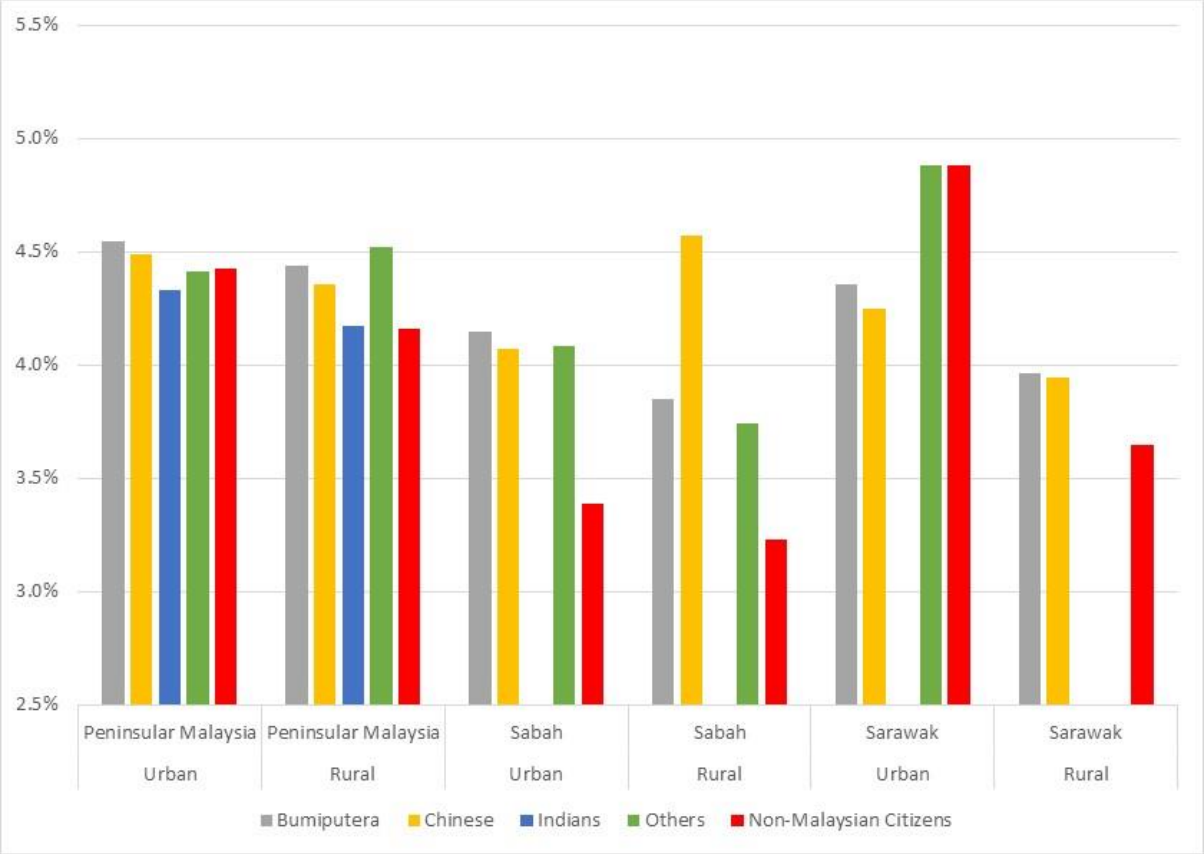


Figure 12 and Figure 13 plots the GSTE by age and size of the household. Figure 12 shows that GSTE falls as the head of the household gets older. Likewise, we find in Figure 13 that GSTE falls as household size increases, but GSTE then starts to increase for urban Peninsular Malaysia and urban Sarawak households that have more than eight persons. Rural Sabah (dark blue lines in Figure 12 and Figure 13) exhibits different behaviour to the other sub regions.

Figure 12: Ratio of GST payable to expenditure (GSTE) in sub regional Malaysia segregated by age

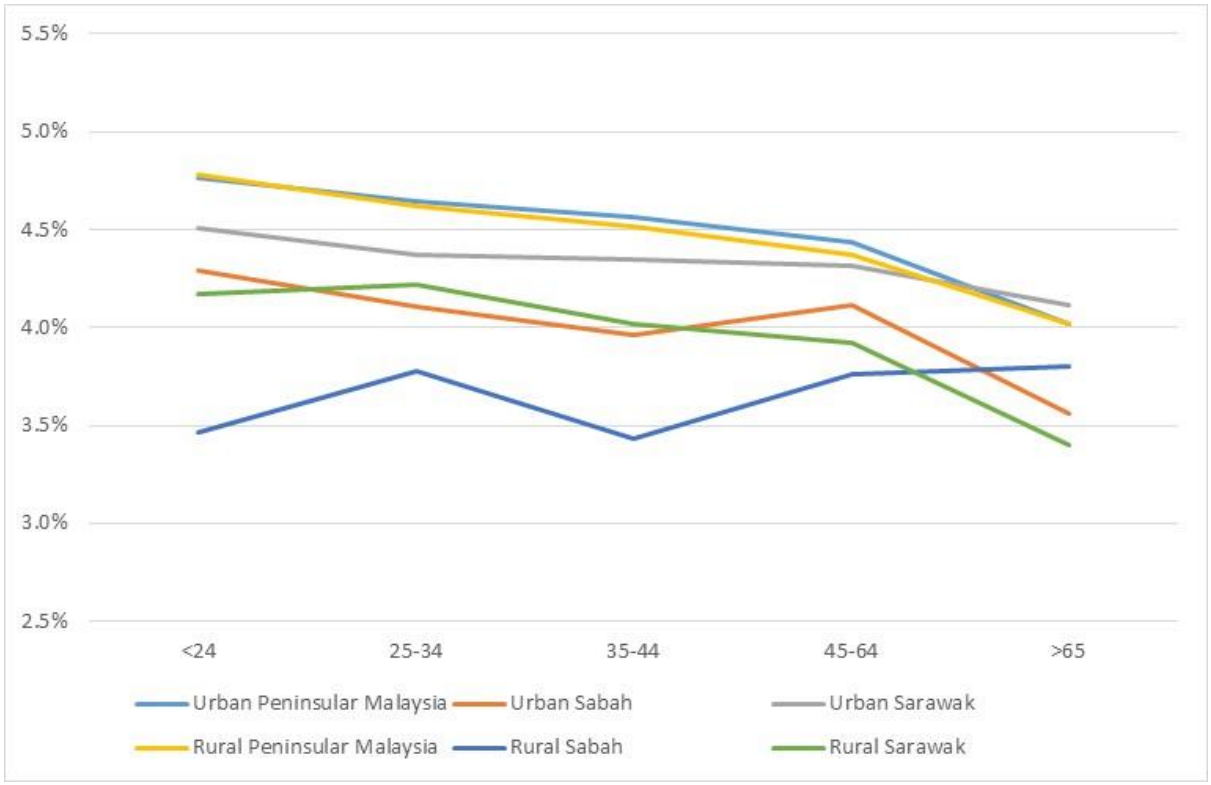
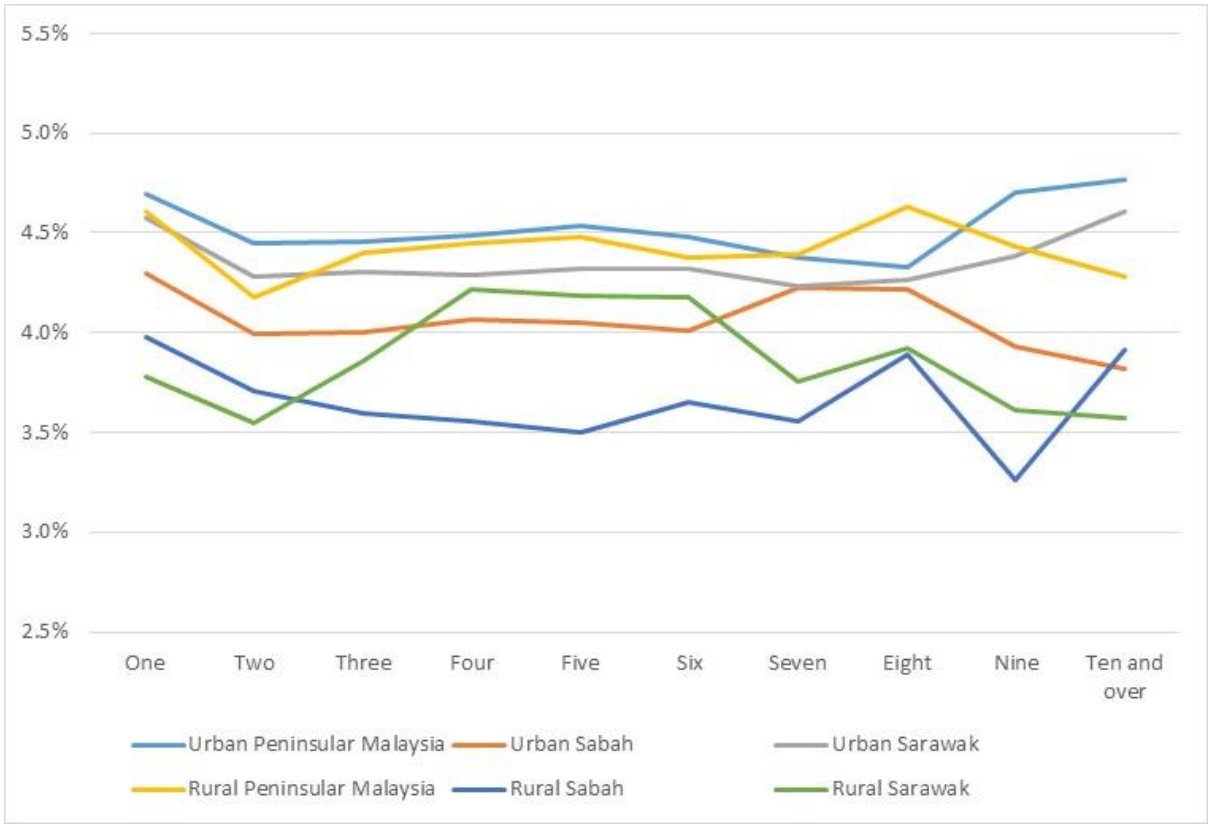


Figure 13: Ratio of GST payable to expenditure (GSTE) in sub regional Malaysia segregated by size of household



Range estimates incorporating standard errors

The household survey data was collected with 95% confidence level. Using the reported standard errors from the Household Expenditure Survey 2009/2010 on the twelve main CEGs, we re-computed the range of GST estimates. The total GST revenue raised ranges between RM 7.2 billion to RM 7.9 billion annually.

Alternative specification to income/expenditure relationship

In section 3, we used our polynomial equation of second order to estimate the level of income for a given expenditure. Although the specification adopted has minimal estimation error relative to the income level as predicted using Bank Negara Malaysia's marginal propensity to consume, the income estimates are less than the income level found in the Household Income and Basic Amenities Survey 2009/10. We adopt the relationship in section 3 as our main results because using Bank Negara Malaysia's marginal propensity to consume allows us to construct the well-established concave relationship between income and expenditure.

Nevertheless, we evaluate alternative specification, we reduced the Household Expenditure Survey's expenditure by 10% and re-fitted the polynomial equation. This revised income/expenditure relationship results in income estimates that are closer to the Household Income and Basic Amenities Survey 2009/10. We re-ran our computation and found that overall, all our findings are robust. For example, GST remains a regressive tax. For households whose income is around RM 2,500 per month, instead of suffering GSTI of 3.07%, they pay 2.7% - which is still the highest across all income segments; and substantially below GSTI of 1.31% paid by the highest income group. Likewise the findings across occupation, gender, ethnic group, age and size of household remains the same.

Different standard GST rates in East and West Malaysia

Our last scenario analysis involves the possibility of introducing different GST tax rates in East and West Malaysia. Although the administrative burden of a dual rate system is high, if it is imposed on services that cannot be easily arbitraged between East and West Malaysia (e.g. expenditure on restaurant and hotels), then "smuggling" should not occur between the two regions. Besides, since such policy which differ by region has been implemented before, e.g. the minimum wage in West and East Malaysia are different, it is possible that such differential GST rate can be implemented.

We set the standard GST rate for Peninsular Malaysia at 7%, and the standard GST rate for Sabah and Sarawak at 6%. Our results show that with a 1% decrease in GST imposed on East Malaysia,

there is only a 1.2% reduction in total GST payment collected (total amount: RM 7.4 billion). Hence, it is not a recommended policy unless the rate differential is higher.

6. Implications

Our analysis thus far has focused on evaluating if GST is a regressive or progressive tax and the remedial actions, the impact of GST on different segments of the Malaysian households and on estimating total revenue raised taking into account leakages. Nevertheless, the impact of implementing GST is wide ranging.

Inflation

Using the official Consumer Price Index (CPI) and ignoring secondary effects, inflation is expected to spike up by an additional 3.86% upon the introduction of GST, ceteris paribus.[14] This increase is calculated based on the weights on the CPI basket. For example, the typical household spends RM3.20 in 'Restaurants and Hotels' and RM30.30 in 'Food and non-alcoholic beverages' (out of an expenditure basket of RM100). After the introduction of GST at 7%, this is expected to increase to RM3.424 and RM30.75 respectively. The expected additional inflation is calculated assuming that the spending pattern of households remains the same. The expected additional inflation is slightly lower than the findings from a study in Canada where each 1% increase in costs induced by taxes leads to approximately a 1% increase (or sometimes a bit more) in the price paid by consumers (Bird and Smart 2009).

Nevertheless, households are likely to alter their spending pattern due to price increases and the reduction in their spending power. Therefore, the degree of higher inflation is difficult to estimate accurately a priori and the economy is expected to encounter a period of high rate of inflation as consumers and businesses adapt dynamically to higher prices. Besides, the Government has indicated that the Sales and Services Tax will be abolished after the implementation of GST. Hence as argued by Cnossen (1991), the inflationary effect from GST implementation is difficult to disentangle during this transition process.

Malaysia has traditionally adopted price controls to control inflation. Measures available include the Anti Profiteering Act, enforcement action through the National Pricing Council and making the hypermarkets act as price setters. Heavier fines and penalties can also be imposed to ensure that

[14] We also analysed three other scenarios: 1) If 4% is the standard GST rate, inflation will increase by an additional 2.21%. 2) If 20% is imposed on alcoholic beverages and tobacco; and restaurant and hotels; and 7% levied on the remaining standard rated items, inflation is expected to spike up by an additional 4.57%. 3) If 20% is imposed on alcohol and tobacco; and restaurants and hotels while all other items are exempt/zero rated, then inflation is expected to spike up by 1.08%.

businesses comply with the prices and rules. Whilst these measures are aimed at changing the profit-centred attitude and unethical practices of the businesses, prolonged implementation of these in an era of high inflation will result in the withdrawal of labour and capital from the production of these goods. This is because unprofitable businesses are unsustainable in the long run, and capital and labour might be reallocated to the production of other profitable goods which are not subject to price controls.

Fiscal deficit

GST is expected to raise RM 7.5 billion from households, ceteris paribus.[15] This is lower than the RM 20 - 27 billion that the Government expects to raise[16] because our study focuses on households and we do not include GST raised from businesses[17]. Nevertheless, this will go towards plugging the Federal Government fiscal deficit and help allay the concerns of international rating agencies. However, introducing GST so soon after the reduction in fuel subsidies in September 2013 (which will save subsidy or cause consumers to pay additionally RM 3.3 billion in 2014[18]) will severely impact households' spending power and cause demand reduction in the short term. On the other hand, introducing GST gradually will not help address the deteriorating fiscal condition and might demonstrate weak resolve from the Government in addressing a pressing issue. Hence, it is possible that the financial markets will not be convinced that Malaysia's fiscal position is secure. In any case, GST should form part of a wider fiscal reform.

Besides, under the overwhelming wave of withdrawal of foreign capital from emerging markets due to tapering of quantitative easing in the US, it is possible that the introduction of GST will only make small marginal impact on investors' confidence in Malaysia and the cost of debt financing might continue to increase with Ringgit Malaysia continuing to depreciate and import inflation.

GDP growth

Introducing GST will have a negative impact on GDP growth, ceteris paribus. This is because since the financial crisis in 2008, growth in the Malaysian economy has been driven much more by domestic consumption. For example, Bank Negara's second quarterly bulletin 2013 noted that firm domestic demand has continued to support demand amid weak demand from the economies in the West.

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[15] GST raised from business are not included in our analysis.

[16] Idris Jala, the Minister in the Prime Minister's Department, said that GST could raise RM 20 billion to RM 27 billion at maturity. http://www.nst.com.my/latest/gst-implementation-to-add-up-to-rm27b-to-malaysia-s-income-1.280974

[17] Using 10% GST rate, Narayanan (2007) estimates that RM 14 billion, RM 15.4 billion and RM 17.5 billion will be raised in 2005, 2006 and 2007 respectively.

[18] http://www.theedgemalaysia.com/in-the-edge-financial-daily-today/253313-moodys-malaysias-fuel-hike-credit-positive.html

Hence, the reduction in disposal income after introducing GST in Malaysian households will negatively impact domestic consumption. The negative impact on domestic consumption might be countered by the improvement in export competitiveness resulting from a depreciated Ringgit. Since it is impossible to predict if implementing GST will be perceived positively or negatively by the foreign exchange markets a priori, the net effect of demand destruction vs. improved export competitiveness is difficult to predict a priori.

Government welfare cash hand outs

The Government has promised to increase cash hand outs to the lower income household to help alleviate the burden of GST. If this materialises, the negative impact of GST on the economy will be reduced. This is because lower income groups have a higher marginal propensity to spend – see Table 1. For example, households earning less than RM 1,000 per month will, on average, spend RM 0.81 out of RM 1 of additional income; whereas households earning more than RM 10,000 per month will spend an additional RM 0.18 out of any additional RM 1 income. Therefore, any welfare cash hand outs will filter very quickly to the economy, providing a temporary boost to consumption.

Whilst distributing cash hand outs might alleviate the effect of demand destruction in the short term and address the welfare aspect of implementing GST, its impact will weaken over time especially when inflation erodes the purchasing power of the hand outs. Of course, the amount of cash hand outs can be continuously increased. However, this is not a sustainable policy to help the lower income group as it will accentuate a dependency culture and certainly not conducive in building a knowledge led economy which is based on innovation and entrepreneurships, and not on government hand outs.

In addition, any cash hand outs might be politicised by tying the welfare of a segment of Malaysian households on the political fortune of any political party. Hence, we recommend that any welfare package be channelled through the income tax authorities by providing refundable tax credits or income tax rate reduction. This will also encourage more people to be registered on the tax system.

Asset (property) prices

We only discuss the case of property prices and not financial asset prices[19]. The impact of GST on property prices is unclear a priori. Due to the higher costs of building materials and professional services, the replacement costs of building will increase. Although the Government has indicated

[19] The analysis of the impact of GST on financial assets goes beyond this paper because the economics driver for equities and fixed income assets are unique and different.

that residential properties and land are not subject to GST, higher construction costs might lead to higher property prices.

The Government has not provided any guidance if commercial properties are subject to GST. If Malaysia adopts a principle similar to that as adopted in the UK where commercial properties can elect to be subject to GST, then commercial properties elected for GST will need to include GST in the sale price. The increased prices will put a dampener on transactions as any buyer will have to pay GST at the time of purchase, but will be able to recoup the GST paid on expenses incurred in the purchase of the commercial building. Since the amount of GST on the property value exceeds the GST incurred on the purchase expenditure, there will be a cash flow issue. Besides, if a commercial building elects to be subject to GST, GST will be chargeable on the rental of the commercial building. This will increase the cost of doing business and reduce the demand for commercial properties.

Nevertheless, the influence of GST on property prices is expected to be marginal as the supply and demand factor, loan-to-value limits and market sentiment will dominate property prices. However, the impact of GST could be indirect, e.g. any interest rate increase (if it is used to defend a depreciating Ringgit due to a ratings cut) will severely impact property prices since speculators in the property market might have overextended during the current era of low interest rates.

7. Conclusion

Malaysia's fiscal deficit is structural in nature. The ratings agencies have fired the first warning shots and the window for fiscal reform is rapidly closing. Whilst the Government has not capitalised on the low interest rates era in the US to undertake fiscal improvements in Malaysia, there is still room to restore stability provided measures are taken expeditiously, and with clarity and credibility.

Any half-hearted fiscal reform and use of creative accounting methods are unlikely to inspire investors' confidence and might spur further Ringgit depreciation. Although Ringgit's depreciation might restore Malaysia's current account surplus (which has fallen from 18% of GDP in Q1 2009 to 4.61% of GDP in Q2 2013) by making exports more competitive, it will not improve the standard of living in Malaysia as Ringgit's purchasing power is eroded. This, together with subsidies reduction and broadening of the tax base via GST, will impact Malaysian households negatively.

GST is a regressive tax. The implementation of an ill-thought out welfare system is likely to lead to inflation, abuse, wastage and possibly accentuate a dependency culture. Although cash hand outs can be a quick fix and might be a politically savvy move, this might not be conducive in spurring economic growth led by innovation, knowledge and entrepreneurship.

Appendix 1: Treatment of detailed consumer expenditure groups ("detailed CEG") - subject to exemption, zero rate or standard rate GST

Subject to standard rate GST	**Subject to zero rate GST or GST exempt**
Food and non-alcoholic beverages	
1. Biscuits	1. Rice
2. Other products made from cereals and grains	2. Flour and other cereals
3. Processed meat	3. Bread and bakery products
4. Processed fish and seafood	4. Fresh meat
5. Margarine, peanut butter, etc	5. Frozen meat
6. Preserved fruit	6. Fresh fish
7. Preserved vegetables	7. Fresh seafood
8. Chocolate, sweets and ice cream	8. Fresh and reconstituted milk
9. Jam, honey, etc.	9. Evaporated/condensed milk
10. Other foods	10. Milk powder and other dairy products
11. Coffee	11. Eggs
12. Tea, cocoa, etc.	12. Butter, fat and prepared animal oils
13. Mineral water, soft drinks, fruits and vegetable juices	13. Oils
	14. Fresh fruit
	15. Coconut and nuts
	16. Fresh vegetables
	17. Potatoes and other tubers
	18. Sugar
	19. Spices
	20. Sundry goods
Alcoholic beverages and tobacco	
1. Alcoholic beverages	
2. Tobacco	
Clothing and footwear	
1. Clothing materials	
1. Garments	
1. Other articles of clothing and clothing accessories	
2. Cleaning, repair and hire of clothing	

3. Shoe and other footwear	
4. Repair and hire of footwear	
Housing, water, electricity, gas and other fuels	
1. Materials for the maintenance and repair of the dwelling	1. Actual rent paid by tenants
2. Services for the maintenance and repair of the dwelling (including materials)	2. Imputed rent
3. Water supply	
4. Refuse collection	
5. Sewage collection	
6. Other services relating to the dwelling not elsewhere classified	
7. Electricity	
8. Gas	
9. Liquid fuels	
10. Other fuels	
Furnishings, household equipment and routine household maintenance	
1. Furniture and furnishings	
2. Carpets and other floor coverings	
3. Repair of furniture, furnishings and floor coverings	
4. Household textiles	
5. Cooking appliances	
6. Air-conditioning	
7. Washing machines	
8. Refrigerators and freezers	
9. Other major household appliances	
10. Small electric household appliances	
11. Repair of household appliances	
12. Glassware, tableware and household utensils	
13. Major tools and equipment	
14. Small tools and miscellaneous accessories	
15. Non-durable household goods	
16. Domestic services and household services	

Health	
	1. Pharmaceutical products
	2. Other medical products
	3. Therapeutic appliances and equipment
	4. Medical services
	5. Dental services
	6. Paramedical services
	7. Government hospital
	8. Government corporate hospital
	9. Private hospital
Transport	
1. Motorcars	1. Passenger transport by railway
2. Motorcycles	2. Passenger transport by road
3. Bicycles	3. Passenger transport by air
4. Spare parts and accessories for personal transport equipment	4. Passenger transport by waterway
5. Fuels and lubricants for personal transport equipment	
6. Repair and maintenance of personal transport (including parts)	
7. Other services in respect of personal transport equipment	
8. Other transport charges	
Communication	
1. Postal services	
1. Telephone and telefax equipment	
2. Telephone and telefax services	
Recreation services and culture	
1. Television, video cassette recorders, etc.	1. Books
2. Photographic and cinematographic equipment	
3. Information processing equipment	
4. Recording media	
5. Repair of audio-visual, photographic and information processing equipment	

6. Major durables for outdoor recreation	
7. Musical instruments	
8. Maintenance and repair of other major durables for recreation and culture	
9. Games, toys and hobbies	
10. Sports equipment	
11. Garden, plants and flowers	
12. Pets and related products	
13. Veterinary and other services for pets	
14. Other non durables	
15. Entertainment, recreation and sports	
16. Cultural services	
17. Lotteries and other gambling	
18. Newspapers	
19. Magazines and periodicals	
20. Writing and drawing equipment and supplies	
21. Packaged tours	
Education	
	1. Pre-primary and primary education
	2. Secondary education
	3. Post-secondary: non-tertiary education
	4. Tertiary education: diploma level and above
	5. Education: not definable level
Restaurants and hotels	
1. Expenditure in restaurants and cafés	
2. Accommodation services	
Miscellaneous goods and services	
1. Hairdressing salons and personal grooming establishments	
2. Electric appliances for personal care	

3. Other appliances, articles and products for personal care	
4. Jewellery, rings and precious stones	
5. Watches	
6. Other personal effects	
7. Social protection	
8. Life insurance	
9. Insurance connected with the dwelling	
10. Insurance connected with accident and health	
11. Insurance for motor vehicles	
12. Financial services	
13. Other services	

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