A cross-sectional survey measuring effectiveness of fuel subsidy restructure in Malaysia [version 1; peer review: awaiting peer review]

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Abstract

Background: Out of the MYR 14 billion of fuel subsidy, the top 20% households (T20) in the country enjoy MYR 8 billion compared to MYR 6 billion of the fuel subsidy restructure enjoyed by the low income (B40) households. As the Malaysian government has started to restructure the fuel subsidy scheme in December 2022 when the national economy began to recover post coronavirus 2019 (COVID-19) pandemic, this study is in need as it highlights the key concerns of B40 and middle 40% (M40) households to the government. This research aims to determine key factors affecting fuel subsidy restructure effectiveness from the perspective of B40 and M40 households in Malaysia post COVID-19 pandemic.

Methods: A total of 150 questionnaires were disseminated to Malaysia B40 and M40 households. The questionnaire was completed by 105 households with no missing value. This paper utilized cross-sectional design to examine factors that contribute to fuel subsidy restructure in Malaysia post COVID-19 pandemic.

Results: Efficient targeting and social protection were the most important factor that contribute to the effectiveness of fuel subsidy restructure in Malaysia.

Conclusions: This research serves as the pioneer research to provide valuable insights to the Malaysian government to effectively restructure fuel subsidy initiative towards creating greater social protection, efficient targeting and better governance and administrative capacity in improving the quality of life of the B40 and M40 households.

Keywords
B40, M40, Fuel subsidy restructuring, Efficient targeting, Malaysia
Introduction
According to Ministry of Finance of Malaysia (2022), the Malaysian government spent substantial amount of MYR 14 billion to subsidize fuel in response to the surge in global commodity prices. The government has decided to subsidize fuel to maintain the price of RON 95 and diesel at affordable price of MYR 2.05 per L and MYR 2.15 per L respectively (Ministry of Finance, 2022). The government strives to support this increased spending on fuel subsidy to maintain the well-being of the low income (B40) people and the continuity of small businesses in the country (Ministry of Finance, 2022).

Unfortunately, out of the 14 billion of fuel subsidy, the top 20% households (T20) in the country, was enjoying MYR 8 billion compared to MYR 6 billion of the fuel subsidy restructure enjoyed by the low income households (Ministry of Finance, 2022). As revealed by the finance minister, under today’s blanket fuel subsidy, where everyone in the country enjoys the same flat rate, for every MYR 1 of fuel subsidy, MYR 53 cents go to the T20, while only MYR 15 cents benefit the B40 (Ministry of Finance, 2022).

This study is timely and important as Malaysia’s government is currently revising fuel subsidy mechanism before its implementation. As of today, there is lack of specific research in Malaysia to determine key factors affecting fuel subsidy restructure from the perspective of B40 and M40 households. As the Malaysian government has started to restructure the fuel subsidy scheme in December 2022 when the national economy begins to recover post COVID-19 pandemic (Ministry of Finance, 2022), this study is in need as it highlights the key concerns of B40 and M40 households to the government. As Malaysia government has recently promised that final decision of fuel subsidy restructure will only take place after majority of the people from B40 and M40 households are comfortable with the mechanism or the platform to execute it, this study is timely to propose valuable insights to the government from the perspectives of B40 and M40 households.

Literature review
Fuel subsidy restructure effectiveness
Fuel subsidy restructure effectiveness refers the successfulness of government administration in where a fraction of the price that consumers are supposed to pay to enjoy the use of petroleum products is no longer paid by government to ease the price burden of the consumers, particularly high income households (Aleksandrova & Costella, 2021). The Malaysian government proposes to gradually rationalize fuel subsidy to narrow the spending gap between high income (T20), middle income (M40) and low income (B40) households in the 2010–2015 Malaysia Plan. This fuel subsidy restructure is motivated by rising national budget deficit, increasing national debt and dwindling current account surplus (Institute for Sustainable Development [IISD], 2014).

Given the fact that out of the MYR 14 billion of fuel subsidy, the T20 households enjoyed MYR 8 billion while B40 households enjoyed less than RM6 billion of the fuel subsidy (Ministry of Finance, 2022), it is timely to investigate how B40 and M40 households think about fuel subsidy restructure and factors affecting the effectiveness of fuel subsidy restructure implementation.

Social protection
Social protection is an important determinant of fuel subsidy restructure effectiveness. Social protection refers to adequate housing, food, medical care, and financial assistance for daily life (Feltenstein, 2017). Fuel subsidy restructure are considered to be effective if it allows poor households to strive decent standard of living amid the rising of the global fuel prices (Dennis, 2016; Fuje, 2019). The middle income and the low income households are bound to suffer more loss to social protection when fuel subsidy restructure is not provided (Ilyas, Hussain, Ullah, & Xue, 2022). High income households with an average expenditure of MYR 3849.8 will lose MYR 269.5 in social protection when fuel subsidy restructure is implemented while the low income households with MYR 931 of average expenditure, will lose MYR 65.2 of the social protection due to fuel subsidy restructure (Couharde & Mouhoud, 2020). The lowest income household will obviously have substantial difficulties absorbing such a large social protection loss (Hunt, Weber, & Dordi, 2017).

Malaysia has been facing a lot of new challenges post coronavirus 2019 (COVID-19) pandemic in its developmental journey of moving away from the middle income trap (Ministry of Finance, 2022). To propel away from the middle income trap and advances into a high income nation, effective fuel restructure mechanism should be incorporated in the Government Transformation Programme and the New Economic Model, which are premised on bringing the nation towards a high income nation with great inclusiveness and effectiveness in term of social protection (Ministry of Finance, 2022). Adequate social protection should be provided to ensure that all layers in Malaysia society are able to unleash productivity-led growth and sustain inclusive and innovative development post COVID-19 pandemic (Khalid & Salman, 2020). Hence, the following hypothesis is formed and tested in this study:

H1: Social protection positively influences fuel subsidy restructure effectiveness
Governance and administrative capacity

Governance and administrative capacity is another important indicator in measuring the effectiveness of fuel subsidy restructure. According to Lin and Xu (2019), fuel subsidy restructure is considered as ineffective if governments are able to improve governance and administrative capacity on the infrastructure, education and health services of the nation. If governments can invest more on the infrastructure, education and health development of the nation by utilizing saving from the fuel subsidy restructure, then the fuel subsidy restructure are considered to be effective (Kyle, 2018).

According to Kojima (2016), governance and administrative capacity refers to the government’s continuous efforts in monitoring, evaluation and reflection of expenditure on public infrastructure to maintain the effectiveness of the fuel subsidy restructure. One example of governance and administrative capacity is to carefully plan massive transportation expansion projects while implementing fuel subsidy restructure among high income households (Li, Shi, & Su, 2017). Good governance and administration is the key capacity, which lower the cost-of-living of the low income households are most likely to enhance the effectiveness of the fuel subsidy restructure in the country (Institute for Sustainable Development [IISD], 2014).

Improving governance and administrative capacity is essential for economic transformation of the nation, as fuel subsidy needs to be restructured for high income households and well targeted for low income households who need fuel frequently to survive and to improve their well-beings (Ilyas, Hussain, Ullah, & Xu, 2022). For example, fossil fuel subsidy is more important in improving the living conditions of the poor as low income people use fossil fuel more frequently in daily life for cooking and heating (McCulloch, Moerenhout, & Yang, 2021). Good governance and administrative capacity is needed to ensure the standard of living of the low income people while phasing out fuel subsidy gradually in the country. Good governance and administrative capacity can also ensure less environmental pollution and more opportunity for education and economical productive activities following fuel subsidy restructure (McCulloch, Moerenhout, & Yang, 2021). Hence, the following hypothesis is formed and tested in this study:

**H2: Governance and administrative capacity positively influences fuel subsidy restructure effectiveness**

Publicity campaigns

Publicity campaigns aim to educate and promote understanding of the rationale for fuel subsidy restructure to Malaysian households (Couharde & Mouhoud, 2020). The more frequent the publicity campaigns are held, the more effective and transparent is the fuel subsidy restructure (Feltenstein, 2017). A significant barrier to fuel subsidy restructure can be a lack of understanding of fuel subsidy restructure and the inefficiency to promote the benefits of it to Malaysian households (Mundaca, 2017). Educating the citizens about the benefits of fuel subsidy restructure has been an important factor affecting the effectiveness of it in developing countries (Umar & Umar, 2013). Ilyas et al. (2022) discovered that one of the reasons for the failure to implement fuel subsidy restructure in Senegal was the lack of publicity campaigns.

Rentschler and Bazilian (2020) discovered that publicity campaigns create wider trust in government and enhance fuel subsidy restructure effectiveness. Ilyas et al. (2022) suggested establishing a publicity committee to promote legitimacy and trust in the fuel subsidy restructure is crucial for the success of the fuel subsidy in the nation. By communicating fuel subsidy restructure plans effectively to the public, governments can reduce the social pressure associated with the rising domestic fuel-price due to subsidy restructure. Public trust can also be improved if fuel subsidy restructure is tied with economic transformation of the country to establish a more rational structure of energy welfare (McCulloch, Moerenhout, & Yang, 2021). Hence, the following hypothesis is formed and tested in this study:

**H3: Publicity campaigns positively influence fuel subsidy restructure effectiveness**

Efficient targeting

Efficient targeting is important for fuel subsidy restructure effectiveness since it allows existing subsidized arrangements to be targeted to the neediest population. According to Loo and Mukaramah (2019), transferring the revenue received from the sales tax on fuel refinery products to the subsidy of the low income population to offset the increase in fuel price serves a great help to reduce the financial burden of the vulnerable populations. In addition, the government may also consider imposing a fuel tax on those with higher incomes, given that consumption rates among those with higher incomes are higher than those with lower incomes (Rentschler & Bazilian, 2020). Efficient targeting for the needy and taxing for the rich approach should be considered to preserve the government from fiscal imbalance (McCulloch, Moerenhout, & Yang, 2021).

Fuel subsidy in Malaysia are targeted to all citizens irrespective of their income. Inefficient targeting has led to wealthy families and organizations consume fuel more frequent than poor families (McCulloch, Moerenhout, & Yang, 2021).
As high income households received more than half of the total subsidies (Schaffitzel, Jakob, Soria, Vogt-Schilb, & Ward, 2020), fuel subsidy in the country needs to be strategized.

Schaffitzel et al. (2020) discover that many countries have switched their subsidy systems from providing subsidy to the fuel distributor to providing a direct transfer to the targeted beneficiary. For instance, India adopted Aadhaar, a scheme based on a user database that can directly link fuel subsidy restructure to targeted recipients’ bank accounts (Kojima, 2016). According to Clarke (2016), fuel subsidy restructure must be carefully assessed to make sure that the targeted recipient can receive affordable, inexpensive and efficient fuel subsidy restructure. Hence, the following hypothesis is formed and tested in this study:

**H4: Efficient targeting positively influences fuel subsidy restructure effectiveness**

**Knowledge gaps**

In Malaysia, there is a lack of public poll inquiring the Malaysian viewpoint on fuel subsidy restructure effectiveness. One of the most recent polls conducted by the government 10 years ago showed that 61% of the Malaysia public supported fuel subsidy restructure (Institute for Sustainable Development [IISD], 2014). As the Malaysian government has started to restructure the fuel subsidy scheme in December 2022 when the national economy begins to recover post COVID-19 pandemic (Ministry of Finance, 2022), this study is in need as it highlights the key concerns of B40 and M40 households to the government.

**Methods**

This research was conducted by a group of researchers who have sound experience in approaching 150 B40 and M40 households at a specific point in time from January 2022 to July 2022. According to World Food Programme (2023), based on experience from many subsidy-related surveys, a sample size of 150 households is considered to be sufficient and representable. The respondents were approached face-to-face, door-to-door to ensure the purpose of this study is clearly communicated to the respondents prior to the data collection.

**Ethics statement**

Ethical approval was obtained for this project from the Research Ethics Committee (REC) Multimedia University (Ethical Approval Number: EA1312021). Written informed consent was obtained from participants for participation and the use of and publication of their anonymized data. A written consent statement was printed on the survey. Respondents were required to tick the written consent form before they started the survey.

**Study design**

This is a quantitative research using primary survey dataset to explore fuel subsidy restructure effectiveness in Malaysia post COVID-19 pandemic (Figure 1).

**Sampling and pre-testing**

In this research, purposive sampling was used to recruit suitable survey respondents. Purposive sampling refers to selecting target respondents based on characteristics of a population and the objective of the study. Purposive sampling was used to select suitable B40 and M40 households. The target household for this study must have households with income less than MYR 4850 (B40 households) and between MYR 4850 and MYR 10959 (M40 households). B40 and M40 households are targeted in this study as they are the most affected households of fuel subsidy restructure. From January 2022 to July 2022, a questionnaire was developed and distributed face-to-face to 150 B40 and M40 households of three states that have the largest population of fuel subsidy beneficiaries in Malaysia: Selangor, Johor and Kuala Lumpur, according to Ministry of Finance (2022). In order to address survey bias, the questionnaire was meticulously checked by one independent academic and two independent industry experts, who have no personal relationship with any of the

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**Figure 1. Research framework.**

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Independent Variables  
- Social Protection  
- Governance and Administrative Capacity  
- Publicity Campaigns  
- Efficient Targeting

**H1-H4**

Dependent Variable  
Fuel Subsidy Restructure Effectiveness
authors, to avoid leading questions, ambiguous questions and double-barrel questions. Researchers has no conflict of interest with any of the survey participants. Ethical clearance is applied before the data collection and clearly explained to the respondents prior to the data collection.

Pre-testing validation was conducted face-to-face to ensure that the target respondents are originated from B40 and M40 households. By collecting data face-to-face, it results in lower error as all doubts can be explained at the first place. When error and survey bias are low, the data will be reliable and generalizable.

Data collection
A total of 150 questionnaires were disseminated to households. The target household for this study must have households with income less than MYR 4850 (B40 households) and between MYR 4850 and MYR 10959 (M40 households).

Data collection period of this study was from September 2021 to November 2022. The data was collected through a self-administered questionnaire. Data was collected face-to-face from B40 and M40 households of three states that have the largest population of fuel subsidy beneficiaries in Malaysia: Selangor, Johor and Kuala Lumpur immediately after they have answered the questionnaire. Questionnaires with incomplete responses were discarded from the data analysis.

Questionnaire consists of 30 questions measuring fuel subsidy restructure, social protection, governance and administrative capacity, public campaign and efficient targeting. Respondents were requested to rate each question using on a five Likert scale basis, with 1-strongly disagree, 2-disagree, 3-moderate, 4-agree and 5-strongly agree. Please refer to the underlying data and extended data for the details of the questionnaire (Yuen, 2023a, 2023b).

Analysis
This study used statistical software package, IBM SPSS Statistics version 23.0 to process and analyze the data, IBM SPSS Statistics Version 23.0 was employed for data screening for Common Method Variance (CMV) was used in data screening to eliminate bias caused by the variations in responses to the questionnaire. IBM SPSS Statistics Version 23.0 was also utilized to perform multiple linear regression analysis to examine the most important factors affecting the effectiveness of fuel subsidy reform in Malaysia. The open source alternative to IBM SPSS Statistics is PSPP, which provides equivalent analytical capability.

The R-square value of the multiple linear regression analysis is a statistical measure used to determine how close the data are to the fitted regression. The higher the R-squared, the better the model.

Results
Descriptive statistics in Table 1 indicates that one hundred and five B40 and M40 households completed the questionnaire with no missing value. Out of 105, 56 were M40 households and 49 were B40 households. The dataset for this study can be found in the underlying data (Yuen, 2023a). B40 households with income less than MYR 4850 and M40 households earn income between MYR 4850 and MYR 10959.

Inferential statistics in Table 2 indicate that M40 households were more likely to welcome fuel subsidy restructure in Malaysia (mean rating=4.04) compared to B40 households (mean rating=3.89). There was a significant difference in terms of the perception of subsidy restructure effectiveness. M40 households perceive the current government effort to rationalize fuel subsidy as significantly more effective compared to B40 households.

Compared to B40 households (mean rating=3.84), M40 households (mean rating=4.01) gave significantly higher rating on the importance of efficient targeting in influencing the effectiveness of fuel subsidy restructure. M40 households were also more inclined to think social protection is more significantly important (mean rating=3.97) in influencing the effectiveness of the fuel subsidy restructure.

<table>
<thead>
<tr>
<th>Table 1. Descriptive statistics.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Households</strong></td>
</tr>
<tr>
<td>B40 Households</td>
</tr>
<tr>
<td>M40 Households</td>
</tr>
</tbody>
</table>
B40 and M40 households are equally concerned about the importance of governance and administrative capacity in influencing the effectiveness of the fuel subsidy restructure.

Multiple linear regression analysis was conducted to determine the predictive influence of the key factors affecting fuel subsidy restructure effectiveness. Multiple linear regression is more powerful than correlational analysis as it analyses the correlation and directionality of all tested factors before proposing a comprehensive model. From the perspectives of both M40 and B40 households, multiple linear regression results in Table 3 show that efficient targeting was the most important factor (Standardized Beta Coefficient=0.368) that contributes to the effectiveness of fuel subsidy restructure in Malaysia. Social protection was the second most important factor (Standardized Beta Coefficient=0.314) that contributes to the effectiveness of fuel subsidy restructure. Governance and administrative capacity was the third most important factor (Standardized Beta Coefficient=0.128) while publicity campaign was the fourth most important factor (Standardized Beta Coefficient=0.115) that contributes to the effectiveness of fuel subsidy restructure. All four factors studied in this research are found to be significantly influence the effectiveness of fuel subsidy restructure. All these four factors explain 62.3% of the variance in fuel subsidy restructure effectiveness. Hence, H1 to H4 are supported.

Discussion and recommendation
This study aims to determine key factors affecting fuel subsidy restructure effectiveness from the perspective of B40 and M40 households in Malaysia post COVID-19 pandemic. Efficient targeting was perceive the most important factor affecting the effectiveness of fuel subsidy restructure post COVID-19 pandemic because the high income households continue to enjoy fuel subsidy while B40 and M40 families are losing jobs and income due to the pandemic (Ilyas et al., 2022). The middle income (M40) households were the most significantly affected households of fuel subsidy restructure as this households of household receive the least financial and economic assistance from the government and society, especially post COVID-19 pandemic (Kyle, 2018; Ministry of Finance, 2022). This explains why M40 households

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**Table 2. B40 Households’ and M40 Households’ perceptions on fuel subsidy restructure.**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Households</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-statistics</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel subsidy restructure effectiveness</td>
<td>B40</td>
<td>178</td>
<td>3.8910</td>
<td>0.62348</td>
<td>2.342</td>
<td>0.020**</td>
</tr>
<tr>
<td></td>
<td>M40</td>
<td>122</td>
<td>4.0492</td>
<td>0.53832</td>
<td>0.136</td>
<td></td>
</tr>
<tr>
<td>Governance and administrative capacity</td>
<td>B40</td>
<td>178</td>
<td>3.9517</td>
<td>0.63221</td>
<td>1.494</td>
<td>0.136</td>
</tr>
<tr>
<td></td>
<td>M40</td>
<td>122</td>
<td>4.0574</td>
<td>0.55476</td>
<td>0.028**</td>
<td></td>
</tr>
<tr>
<td>Efficient targeting</td>
<td>B40</td>
<td>178</td>
<td>3.8427</td>
<td>0.66484</td>
<td>2.138</td>
<td>0.033**</td>
</tr>
<tr>
<td></td>
<td>M40</td>
<td>122</td>
<td>4.0049</td>
<td>0.63217</td>
<td>0.050**</td>
<td></td>
</tr>
<tr>
<td>Social protection</td>
<td>B40</td>
<td>178</td>
<td>3.9978</td>
<td>0.57243</td>
<td>1.961</td>
<td>0.047**</td>
</tr>
<tr>
<td></td>
<td>M40</td>
<td>122</td>
<td>4.1262</td>
<td>0.54679</td>
<td>0.028**</td>
<td></td>
</tr>
<tr>
<td>Publicity campaign</td>
<td>B40</td>
<td>178</td>
<td>3.8978</td>
<td>0.71977</td>
<td>0.683</td>
<td>0.495</td>
</tr>
<tr>
<td></td>
<td>M40</td>
<td>122</td>
<td>3.9508</td>
<td>0.56411</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 3. Key factors that contribute to the effectiveness of fuel subsidy restructure in Malaysia post COVID-19 pandemic.**

<table>
<thead>
<tr>
<th>Ranking of importance</th>
<th>Factor</th>
<th>Beta coefficient</th>
<th>Standardized beta coefficient</th>
<th>p-value</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Social protection</td>
<td>0.510</td>
<td>0.314</td>
<td>***</td>
<td>0.623</td>
</tr>
<tr>
<td>3</td>
<td>Governance and administrative capacity</td>
<td>0.220</td>
<td>0.128</td>
<td>0.028**</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Publicity campaign</td>
<td>0.200</td>
<td>0.115</td>
<td>0.050**</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Efficient targeting</td>
<td>0.570</td>
<td>0.368</td>
<td>***</td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable: Fuel Subsidy Restructure Effectiveness.

***Significant at 0.01 level.

**Significant at 0.05 level.
express greater concern on the importance of efficient targeting in determining the effectiveness of fuel subsidy restructure compared to the low income households.

Social protection was the second most important factor affecting the effectiveness of fuel subsidy restructure in Malaysia from the perspective of B40 and M40 households. The Malaysian government should provide social protection measures such as cash transfers to manage the adverse risks of fuel subsidy restructure for vulnerable households to increase B40 and M40 households’ acceptance of restructure. The effectiveness of fuel subsidy restructure depends on social protection mechanisms for fuel pricing (Lin & Xu, 2019). Lump-sum transfers, which are paid uniformly to B40 and M40 households every year funded by fuel subsidy restructure revenues, are a significantly more equitable and efficient way of social protection (Khalid & Salman, 2020). Besides reducing poverty rates, universal transfer can also enhance the resilience of B40 and M40 households towards coping the economic challenges post COVID-19 pandemic (Schaffitzel et al., 2020).

Governance and administrative capacity was the third most important factor affecting the effectiveness of fuel subsidy restructure in Malaysia from the perspective of B40 and M40 households. Government should strengthen fuel subsidy governance and administrative capacity by introducing post COVID-19 relief measures that incentivize B40 and M40 households to reduce their fuel consumption. Good governance and administrative is in need to support fuel usage to households to compensate fossil-fuel heating cost (Mundaca, 2017). Potential savings in fuel restructure subsidy should not be whittled away and discriminated in favour of car owners, as opposed to motorcycle owners (Fuje, 2019). Good governance and administrative capacity is also important to ensure that B40 and M40 consumers reap benefits from the saving relocation of fuel subsidy restructure to cope with higher fuel prices successfully in the long run.

Publicity campaign was the fourth most important factor affecting the effectiveness of fuel subsidy restructure in Malaysia from the perspective of B40 and M40 households. The government needs to ensure public trust in the fuel subsidy restructure through clear and broad public communication before deciding the appropriate timing of subsidy restructure. Explaining the need for change and the compensating measures clearly to the public through mass media and social media before the fuel subsidy restructure is introduced. Clear communication to the poor and middle income households who will be most affected by the subsidy restructure can help minimize public opposition to fuel subsidy restructure because B40 and M40 households who receive subsidized fuel are often not even aware that government in fact subsidizes their consumption (Kojima, 2016; McCulloch, Moerenhout, & Yang, 2021).

Unique contributions of this research
This research is the pioneer research in Malaysia that provides comprehensive information and valuable recommendations that contribute to the effectiveness of petrol subsidy restructure post COVID-19 pandemic. This research helps Malaysia government to effectively restructure fuel subsidy initiative towards creating greater social protection, efficient targeting and better governance and administrative capacity in improving the quality of life of the B40 and M40 households. Comprehensive insights and recommendations are provided to assist the Malaysian government to analyze their impact of fuel subsidy restructure on B40 and M40 households to effectively plan and communicate the fuel subsidy restructure mechanism in the next few years.

Data availability
Underlying data

This project contains the following underlying data:

- FuelSubsidyRestructuredata.xlsx (Survey data)

Extended data

This project contains the following extended data:

- Questionnaire.docx

Data are available under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0).
References

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Institute for Sustainable Development [IISD]: Lessons Learned: Malaysia’s 2013 Fuel Subsidy Reform. 2014.
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Publisher Full Text

Publisher Full Text

Publisher Full Text

Publisher Full Text

Publisher Full Text

Ministry of Finance: Largest ever Subsidy of RM77.3 bln for 2022 to Reduce Cost of Living for the People. 2022.
Reference Source

Publisher Full Text

Publisher Full Text

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World Food Programme: Selection of Households or Individuals within Locations. 2023.
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