Income Inequality and Poverty in Malaysia Since May 1969

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Race riots in 1969

• The Colonial period generated ethnic inequality, and the immediate post-Independence govt’s gave little attention to that inequality.
• Ethnic conflict in the decade or so after Independence in 1957.
• Tragic Sino-Malay race riots of May 1969.
• The riots prompted a state of emergency, resignation of PM, and the suspension of Parliament, which lasted two years.
• And a major policy change followed =>
The New Economic Policy (NEP), 1971-91

• The New Economic Policy (announced in 1970) aimed to reduce poverty and promote “national unity.”

• Pro-Malay affirmative action was seen as key instrument.
  • Aim to assure that Bumiputera own 30% of corporations.
  • Preferences were given to the Bumiputera in access to public education through quotas and university scholarships.
  • Some ostensibly “color-blind” policies also favored the Bumiputera, such as the emphasis given to raising the productivity of smallholder agriculture.

• This was “market-friendly affirmative action.” More open economy. Industrial policy favoring labor intensive light manufacturing.

• Redistributive policy seen as inseparable from growth strategy.
Poverty reduction as overarching development goal

• The stated emphasis on poverty reduction goes back to 1957. The change around 1970 is the emphasis given to ethnic inequality.

• Poverty was not the only motivation for the NEP.
  • Ethnically-grounded redistributive policies can be defended from multiple perspectives, including as the means for promoting social solidarity and counteracting discrimination by ethnicity.
  • These goals are relevant to poverty, but also as independent issues.

• Nonetheless, it is clear that in Malaysia around 1970, poverty was a major concern, and ethnic inequality was seen as an important cause.
Continuing debates and unresolved issues
Debates continue 50 years later

• Some observers have seen the efforts to reduce ethnic inequality as crucial to social welfare and (esp.) progress against poverty.

• “The most remarkable achievement of the NEP was in the reduction in poverty” (Khalid, 2014)

• To others, affirmative action (such as in education) has been seen as “a blatant form of racial discrimination” (Raman and Sua, 2010).

• “Admirers have acclaimed it as unleashing pro-poor growth while critics have labeled it with terms like cancer” (Thillainathan and Cheong, 2016)

• “Some (Malays) became rich overnight while others became despicable Ali Babas” (Tunku Abdul Rahman).
Expectation: Targeting poorest ethnic group reduces poverty. *Is that right?*

• Critics of the NEP have pointed to the fact that a large share of inequality is *within* ethnic groups, rather than between them.

• However, this cannot tell us that policies aimed at reducing ethnic inequalities will be ineffective against *poverty*.

• Ethnic redistribution can change inequalities within groups, with ambiguous implications for national poverty measures.

• Clearly, a static decomposition cannot tell us much about how inequality and poverty evolve over time after ethnic redistribution.
The poverty profile may be a poor guide to the poverty impact of reducing ethnic inequality

• The gains to the poorer group may be largely captured by the non-poor within that group, while the poor in the donor group lose out.

Simple example:

• Poorer group has incomes \((1, 2, 3)\) while richer group has \((1, 3, 8)\). The poverty line is 2.5, so the aggregate poverty rate is 50%.

• A 10% “tax” is levied on the richer group, to raise the mean of the poorer group, keeping the relative distribution constant within each.

• New distributions are \((1.2, 2.4, 3.6)\) (mean 2.4) and \((0.9, 2.7, 7.2)\) (mean 3.6).

• Ethnic inequality has been reduced but the poverty rate has stayed the same, at 50%.
Two sets of questions for today

• *How much did lower ethnic inequality contribute to Malaysia’s success against poverty nationally?*

• *Have any gains from ethnic redistribution as a means of reducing poverty been largely exhausted after 50 years? Or is there still some potential left?*

Some answers are offered, but also some messages on data issues for Malaysia
Data
Household surveys

• A lasting legacy of the ethnic riots in 1969 is a governmental commitment to monitoring poverty and inequality.

• Early work focused on 1970 survey (Anand, 1983).

• We now have a comparable series of **18 national household surveys** from 1970 to 2016.

• Two surveys prior to 1970, but not comparable.

• The focus here is on income inequality and income poverty.
Data limitations (galore!)

• 1989: Switch to “Citizens only.” No overlap.
• Household, not per capita, though poverty lines are differentiated.
• Inequality measures are questionable.
• Not computerized prior to 1997 and micro data not publicly available since! Many things we can’t do.
• Published tabulations 1970 onwards + PovcalNet, 1984 onwards, with micro data since 2004, but without ethnic breakdown.
• Official poverty lines not updated (in real terms) for 50 years! No longer relevant to what “poverty” means today in Malaysia.
Ethnic groups

• Three main ethnic groups (99%): Bumiputera, Malaysian-Chinese, Malaysian-Indian (South Asia).

• Bumiputera are majority Malay; many smaller groups esp., Eastern Malaysia (Sabah, Sarawak).

• Relatively homogeneous ethnic groups for Peninsular (west) Malaysia, but Bumiputera is a more heterogeneous group in East Malaysia.
Inequality in Malaysia, 1970-2016
Trend decline in inequality since mid-1970s

Small decline with switch to “Citizens only” but in keeping with recent trend

Trend rate of decline (regression coefficient on time) of -0.25% points per year (s.e.=0.03%)
Toward ethnic relative convergence

Signs of stabilization in recent years

Ratio of group mean to national mean


Chinese
Indian
Bumiputera
But absolute divergence

![Graph showing the absolute gap in household income (MYR, 2010 prices) between Chinese, Indian, and Bumiputera groups from 1960 to 2020.](image)

- **Chinese - Bumiputera**
- **Chinese - Indian**
- **Indian - Bumiputera**
Ethnic redistribution => falling overall inequality

• The total within-group component of the Gini index is $\sum_i s_i s_i^y G_i$. The weights do not sum to unity.
• The total weight has a strong positive trend, rising from 0.39 to 0.50 over 1970-2016.
• Given that the within-group Gini indices are similar, this renders the overall within-group component close to stationary.

• Thus: declining inequality between ethnic groups accounts for the bulk of the overall decline in the Gini index =>
Ethnic redistribution accounts for the bulk of the decline in the Gini index.

The within-group and overlap components remained stable; neither shows a statistically significant trend.
Poverty in Malaysia, 1970-2016
Official poverty measures

Headcount index of poverty (% households below official poverty lines)

Change in poverty line; * uses old line (Ragayah)
Official poverty measures by state

Headcount index of poverty (% households below official poverty lines)

National  Jojor
Kedah   Kelantan
Melaka   NS
Pahang   Pinang
Perak    Perlis
Selangor Terengganu
Sabah    Sarawak
KL
Rates of poverty reduction and rates of growth

Note: Regression coefficients of ln(y) on year; T=17
Malaysia’s official poverty line is lower than expected given Malaysia’s current mean income

- Malaysia’s poverty line made sense in the 1970s.
- But it is well below international standards today.
- Expected line of about $12 rather than $4.*

Absolute and (weakly) relative poverty

Calibrated to be consistent with national lines found in countries with similar average income

Source: Author's calculations using stipulated poverty line and PovcalNet
Malaysia has made some progress in raising the floor, but absolute divergence

Mean or floor ($ per person per day; 2011 PPP)

Overall mean household income per capita

Floor (based on weighted mean income of the poor)

"Nobody left behind"?
(Shared Prosperity Vision 2030)

Note: Poverty line = $4.00 at 2011 PPP (20% poverty rate in 1984)
(Less progress in raising the floor globally)

\[
E(y^*_\text{min}|y) = \$1.00
\]

Overall mean

No sign that the new Millennium raised the floor

Mean consumption in $ per person per day
Falling poverty rates for all three ethnic groups
Rising % of the poor are Bumiputera
A decomposition analysis of Malaysia’s progress against poverty 1970-2016
Proximate causes 101: Growth and redistribution

- Poverty measure can be written as $H = H[M/Z, I(\pi)]$

- Growth in the mean will reduce the poverty measure if the following two conditions hold:
  1. growth is distribution-neutral on average: changes in inequality are uncorrelated with growth rates) and
  2. the poverty line ($Z$) has an elasticity less than unity (absolute or weakly relative measure)
Falling inequality has been important for progress against both absolute and (especially) relative poverty

• **Official (absolute) measures**: 75% of the reduction in absolute poverty in Malaysia since 1984 is attributable to growth in mean household income, with 25% due to falling inequality.
  
  o Recall that the NEP started in 1971; the share attributable to inequality may well be higher if the PovcalNet series had also started in 1970.

• **New (weakly-relative) measures**: The same decomposition, but using the relative lines, indicates that 43% of the fall in poverty over the same period was attributable to falling inequality (a pro-poor shift in distribution at a given mean), with 57% due to growth in the mean, holding the Lorenz curve constant.
A new decomposition for rate of poverty reduction

Rate of poverty reduction =

aggregate effect of economic growth
+ ethnic-redistribution
+ intra-group distributional shifts not due to growth
+ population composition effect

• If all ethnic groups see the same rate of growth in mean income then the ethnic redistribution component goes to zero.

• If no changes in inequality within group, and all have same rate of population growth, then only overall rate of growth matters to rate of poverty reduction.
A new decomposition for rate of poverty reduction

• On noting that $H = \sum_{i=1}^{4} s_i H_i$ (where $s_i \equiv n_i/n$) it is readily verified that:

$$\frac{dH}{H} = \sum_{i=1}^{4} s_i^H (\eta_i \frac{d\mu_i}{\mu} + \gamma_i dI_i + \frac{ds_i}{s_i}) \quad (s_i^H \equiv s_i H_i/H)$$

• Then:

$$\frac{dH}{H} = \left(\sum_{i=1}^{4} s_i^H \eta_i\right) \frac{d\mu}{\mu} \text{ (aggregate growth)}$$

$$+ \sum_{i=1}^{4} s_i^H \eta_i \left(\frac{d\mu_i}{\mu_i} - \frac{d\mu}{\mu}\right) \text{ (ethnic-redistribution)}$$

$$+ \sum_{i=1}^{4} s_i^H \gamma_i dI_i \text{ (intra-group distributional shifts not due to growth)}$$

$$+ \sum_{i=1}^{4} s_i^H \frac{ds_i}{s_i} \text{ (population composition)}$$

• If all ethnic groups see the same rate of growth in mean income then the ethnic redistribution component goes to zero.

• If no changes in inequality within group, and all have same rate of population growth, then only overall rate of growth matters to rate of poverty reduction.
Are the components independent?

- The main caveat: NEP may have reduced Malaysia’s rate of economic growth, which one would expect to be poverty reducing.
- Possibly the loss of growth dominated the gains from ethnic redistribution.
- However, the evidence is weak; the mean growth rate was no lower in the NEP period, though we do not know the counterfactual.
- It appears to be more plausible that the NEP complemented growth strategy. **No more growth over longer term without NEP.**
- Then the decomposition used here understates the contribution of lower ethnic inequality to poverty reduction.
- Also, the **population component** holds distribution and the mean constant. There may well be indirect demographic effects not identified here.
Calibration

• Regression-based estimates of $\eta_i$. Levels and differences in logs + IVE using national accounts to address correlated measurement errors.

• Sensitivity tests to range of values.

• Benchmark values of $\eta_i$ of -2 for the Bumiputera, and -3 for each of the Chinese and Indians, and 0 for “others.”

• The first two components of the decomposition can then be calculated.

• The last term, due to changes in population composition by ethnicity, is non-parametric and so can be calculated directly from the data.

• The intra-group distributional term not attributable to growth can then be determined residually.
Elasticities by ethnic group

<table>
<thead>
<tr>
<th></th>
<th>Bumiputera</th>
<th>Chinese</th>
<th>Indian</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Log headcount index</td>
<td>Difference in logs</td>
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</tr>
<tr>
<td>Log real mean</td>
<td>-2.325*** (0.374)</td>
<td>-1.958*** (0.683)</td>
<td>-3.969*** (0.403)</td>
<td>-3.003*** (0.645)</td>
</tr>
<tr>
<td>R²</td>
<td>0.889</td>
<td>0.043</td>
<td>0.935</td>
<td>0.366</td>
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<tr>
<td>N</td>
<td>17</td>
<td>16</td>
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Note: These elasticities should not be confused with Kakwani’s (1993) elasticities of poverty measures w.r.t the mean, which hold inequality constant.
Decomposition of the rate of poverty reduction

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<tr>
<th>% per annum (% of total)</th>
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<td>Base year share weights</td>
<td>Final year share weights</td>
<td>Mean</td>
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<tr>
<td>Aggregate growth</td>
<td>-8.273 (83.25)</td>
<td>-7.209 (72.54)</td>
<td>-7.741 (77.90)</td>
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<td>Ethnic redistribution</td>
<td>-0.814 (8.20)</td>
<td>-1.176 (11.83)</td>
<td>-0.995 (10.01)</td>
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<td>Intra-group distributional shifts not due to growth</td>
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<td>-1.459 (14.68)</td>
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<td>Population composition</td>
<td>0.139 (-1.40)</td>
<td>0.376 (-3.79)</td>
<td>0.257 (-2.59)</td>
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<td>Total</td>
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After 50 years of affirmative action has the potential been exhausted?
Ethnic redistribution effect

• Consider again the theoretical scenario of a redistribution of income from group $j$ to group $i$, holding the overall mean constant.

• The **ethnic redistribution effect** is defined as the impact on the national poverty rate of an increase in the mean of group $i$ at the expense of group $j$, holding the overall mean constant.
Ethnic redistribution effect

• Consider again the theoretical scenario of a redistribution of income from group $j$ to group $i$, holding the overall mean constant:

$$s_i^y \frac{d \mu_i}{\mu_i} + s_j^y \frac{d \mu_j}{\mu_j} = 0 \quad (s_i^y \equiv s_i \mu_i / \mu)$$

• Then we have:

$$\frac{dH}{H} = s_i^H \frac{dH_i}{H_i} + s_j^H \frac{dH_j}{H_j} = s_i^H \eta_i \frac{d \mu_i}{\mu_i} + s_j^H \eta_j \frac{d \mu_j}{\mu_j}$$

• Solving we have:

$$dH = \left( s_i H_i \eta_i - s_j H_j \eta_j \frac{s_i^y}{s_j^y} \right) \frac{d \mu_i}{\mu_i}$$

• Term in parentheses = “ethnic redistribution effect i.e., the impact on the national poverty rate of an increase in the mean of group $i$ at the expense of group $j$, holding the overall mean constant.”
Ethnic redistribution effects (semi-elasticities)

% point change in national poverty rate from a 1% gain in recipient mean income coming from the donor group holding overall mean constant
Ethnic redistribution elasticities over time

-2.0 -1.6 -1.2 -0.8 -0.4 0.0 0.4 1960 1970 1980 1990 2000 2010 2020

Chinese to Indians

Chinese to Bumiputera

-2.0 -1.6 -1.2 -0.8 -0.4 0.0 0.4 1960 1970 1980 1990 2000 2010 2020

Redistributive elasticity

• In proportionate terms, pro-Bumiputera redistribution is no less important today than 1970!
Conclusions
Ethnic redistribution and poverty reduction

• Malaysia has seen enormous progress against poverty.
  • The official poverty rate has gone from about 50% to virtually zero, although the old official poverty line is probably too low by prevailing standards.
  • The alternative (weakly-relative) measure of poverty proposed here shows a similar pattern over time. Near halving of the poverty rate over 1984-2016.

• And more success than many countries in managing inequality.
  • The Gini index of household incomes fell from 0.56 in 1976 to 0.40 in 2016.
  • This was largely due to progress in reducing ethnic inequality.

• The paper finds that the reduction in overall inequality played a non-negligible role in the country’s success at reducing poverty, in combination with economic growth.
Poverty reduction in part through ethnic redistribution, but only part

- Progress in reducing ethnic inequality has played a non-negligible role in reducing national poverty over these 50 years.
- Using the official poverty measures, about 10% of the overall rate of poverty reduction is accountable to reduced ethnic inequality.
- Using the proposed relative poverty measure it would probably rise to about 17%.
- However, overall economic growth has been the more important driver quantitatively.
- Changes in the ethnic composition of the population tended to be poverty increasing, though this effect turns out to be small.
As an antipoverty policy, ethnic redistribution has largely run its course, but be careful about reversal

• The impact on the national poverty rate of redistribution from the Chinese to the Bumiputera was high around the time that the NEP was introduced.

• Over time, the effect declined considerably. The semi-elasticities are now close to zero, at least as judged by the official poverty lines.

• So in this sense, the scope for ethnic redistribution as an instrument of poverty reduction has largely been exhausted.

• However, even now, quite sizable elasticities of national poverty to inequality-reducing ethnic redistribution.

• And the elasticities have stayed high—indeed, they have increased.

• Even small reductions, or increases, in ethnic inequality can still matter.
Thank you for your attention!
Terima kasih kerana memberi perhatian!